

RECEIVED

3:34 pm, Sep 04, 2007

Alameda County
Environmental Health

August 31, 2007

Mr. Barney Chan
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health, Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: Work Plan for Additional Interim Corrective Actions
2836 Union Street, Oakland, California
Alameda County Environmental Health Case No. RO0002901

Dear Mr. Chan:

INTRODUCTION AND BACKGROUND

On behalf of the property owner (Estate of Larry M. Wadler), Stellar Environmental Solutions, Inc. (SES) is providing to Alameda County Health Care Services Agency, Department of Environmental Health (ACDEH) this work plan for interim corrective actions. Previous corrective action for contaminated soil excavation in October 2006 was halted at the perimeter of the onsite building. The property owners have since expressed a desire to pursue additional excavation, which would entail removing a portion of the building (a more aggressive measure than the previously recommended soil vapor extraction) to move the site more rapidly toward closure. The property owners have chosen to remove the garage portion of the onsite building so that the underlying hydrocarbon fuel-contaminated soil located at approximately 5 to 11 feet below ground surface (bgs) can be accessed and excavated.

An estimated 80 to 90 percent of the contaminated soil onsite was removed during the October 2006 corrective action; the remaining 10 to 20 percent is predominantly located beneath the foundation of the existing building. TVH as gasoline (TVHg)-contaminated soil exists to the north, at concentrations of 790 to 270 milligrams per kilogram (mg/kg) (which is above the Regional Water Quality Control Board, San Francisco Bay Region [Water Board] Environmental Screening Levels [ESLs]), but this soil is not accessible (i.e., it cannot be removed) because it is over the property line. To the south-southwest (beneath the onsite building), an estimated 30 to 40 cubic yards of TVHg-contaminated soil remains. Unfortunately, the highest concentrations appear to be in the area that could not previously be excavated because of the overlying garage

structure. Maximum residual TVHg contamination in soil occurs from 6 to approximately 10.5 feet bgs in this area; it is represented by the 2006 excavation wall samples (W1 at 6 feet bgs and W6 at 6 feet bgs)—at concentrations of 1,100 mg/kg and 1,700 mg/kg, respectively. An 8.5-foot-deep soil sample from MW-5B had measured concentrations of 930 mg/kg of TVHg and 640 mg/kg of ethyl benzene. The estimated volume of contaminated soil assumes attenuation of the southern extent of the soil mass approximately halfway between MW-5B and BH-14. Bore BH 14 showed only 17 mg/kg of methyl tertiary-butyl ether (MTBE) at 15 feet bgs.

ACDEH is the lead regulatory agency for the case, acting as a Local Oversight Program (LOP) for the Water Board. There are no ACDEH or Water Board cleanup orders for the site; however, all site work has been conducted under the oversight of ACDEH. ACDEH has assigned the site to its fuel leak case system (RO #2901), and a case officer has been assigned. The case has been assigned No. T0600105641 in the State Water Resources Control Board's GeoTracker system. Electronic uploads of required data/reports are submitted to both agencies.

The site has been granted a Letter of Commitment (and has been receiving financial reimbursement) from the California Underground Storage Tank Cleanup Fund.

Attachment A (Figures and Tables) contains: a site location map; a site plan showing the proposed excavation; tabular summaries of previous analytical results; figures and cross-sections showing the former underground storage tank (UST); soil sampling locations; monitoring wells; and the soil and groundwater contaminant distribution.

TECHNICAL OBJECTIVES AND PROPOSED SCOPE OF WORK

The Responsible Party proposes to implement interim corrective actions to remove the remaining contaminant mass and reduce the overall long-term impact to groundwater, to move the site toward regulatory closure. The corrective actions will consist of two general activities: 1) removal (by excavation) of contaminated soils (in this case, residual contaminated soil underlying the service bay garage portion of the onsite building); and 2) dewatering of the excavation and ORC[®] inoculation.

The scope of work is as follows: 1) fieldwork preparation and permitting; 2) abandonment of monitoring well MW-5B; 3) removal of the contaminant source, confirmation sampling, dewatering, backfilling, and inoculation with ORC[®]; and 4) technical reporting.

Task 1: Fieldwork Preparation

SES will perform the following pre-fieldwork planning and permitting activities for the proposed borehole program:

- Obtain work plan concurrence from ACDEH, or proceed with the proposed investigation if ACDEH does not respond within the 60-day lead agency review period stipulated by California Code of Regulations, Title 23, Division 3, Chapter 16, Underground Tank Regulations.
- Obtain the necessary subcontractors: driller, hazardous excavator, and State of California Environmental Laboratory Accreditation Program (ELAP)-certified laboratory.
- Notify Underground Service Alert to mark utilities in the work area.
- Obtain necessary excavation permit from the City of Oakland for removal of the garage portion of the building.
- Obtain a borehole drilling permit from the Alameda County Public Works Agency for abandonment of monitoring wells MW-5A and MW-5B.
- Notify the Bay Area Air Quality Management District as required by Regulation 8 Rule 40.

Removal of the garage portion of the onsite building will be performed by the property owners. This work will not be overseen by SES, and no reimbursement for this work will be sought through the State of California Underground Storage Tank Cleanup Fund (State Fund), as it is exempted from reimbursement.

Task 2: Monitoring Well Abandonment

After the garage part of the building is removed and before excavation, the proper decommissioning of monitoring wells MW-5A and MW-5B is required. Monitoring well 5A will be abandoned during excavation activities because the total depth of the well (12.58 feet bgs) is close to the anticipated depth of the excavation. The deeper monitoring well MW-5B will be abandoned, to its total depth of 25.39 feet bgs, prior to excavation activities.

Task 3: Contaminated Soil Removal, Confirmation Sampling, Dewatering, Backfilling, and ORC[®] Inoculation

Contaminated Soil Removal. Contaminated soil will be removed with a backhoe (or equivalent) and temporarily stockpiled on and covered with plastic sheeting. A photoionization detector (PID) will be used to field-screen excavated soil to help determine when the limits of soil

contamination have been reached. Based on previous investigations, we anticipate that a depth of approximately 10 to 11.5 feet will be reached.

An additional estimated 50 to 75 cubic yards of overburden non-contaminated to lightly contaminated soil will be removed when the highly contaminated soil is exposed. We will attempt to segregate the inferred non-contaminated soil from the contaminated soil, so that some of the excavated soil might be reused as excavation backfill following stockpile sampling and analysis.

Contaminated soil removed during excavation will be sampled, analyzed, profiled, and transported to a local non-hazardous landfill.

Confirmation Sample Analyses. We propose to collect four to six excavation confirmation sidewall and floor soil samples, in the unsaturated zone, to document residual (post-excavation) soil contaminant concentrations. Excavation soil and samples will be analyzed by an ELAP-certified analytical laboratory. All samples will be analyzed for the following site chemicals of concern:

- TVHg—by U.S. Environmental Protection Agency (EPA) Method 8015M
- benzene, toluene, ethylbenzene, and xylenes (BTEX) and MTBE—by EPA Method 8260
- two lead scavengers (EDB and EDC) and five fuel oxygenates (TAME, ETBE, DIPE, TBA, and ethanol)—by EPA Method 8260

Backfilling. Base rock (gravel) will be emplaced at the bottom of the excavation (sufficient to bridge infiltrating groundwater, likely 5 to 6 feet thick) to allow for sufficient compaction. The upper 5 feet of the excavation will be backfilled with a low-permeability (high silt/clay unit) material and/or clean excavated overburden soil, designed to act as a cap. The excavated area will be finished with asphalt surfacing.

Dewatering Contaminated Groundwater. SES will be prepared to pump infiltrating groundwater from the excavation, which will: 1) result in contaminant mass removal; and 2) allow for easier excavation backfilling. That water will be pumped to an onsite temporary holding tank.

As discussed in our December 2006 Corrective Action Investigation Report (October 2006 Corrective Action) and subsequent groundwater monitoring reports, significant contaminant mass removal can be achieved by dewatering. The primary means of dewatering will be pumping from the backfill dewatering well that was installed during the October 2006 corrective action, as this proposed excavation will be adjacent to and in hydraulic connection with the

October 2006 excavation. Pumping may also be conducted from the open excavation, but only as necessary to keep the excavation dry. Pre-pumping and post-pumping grab-groundwater samples will be collected to evaluate the effectiveness of the corrective action. SES will then pump the standing groundwater and subsequent flush of infiltrating groundwater from the excavation, which will: 1) result in contaminant mass removal; and 2) allow for easier inoculation of the ORC[®] compound and excavation backfilling. That water will be pumped to an onsite temporary holding tank. We estimate that up to 4,000 gallons of groundwater will be initially pumped, depending on groundwater infiltration. We estimate that 1 to 3 pounds of gasoline will be removed. Future additional groundwater pumping (and/or removal of light non-aqueous phase liquid) might be appropriate if site conditions warrant.

Inoculation with ORC[®]. We anticipate reaching a depth of approximately 10 to 11 feet, which is estimated to be a groundwater depth of 2 to 3 feet. A pre-purging sample will be collected as described above. Base rock (gravel) will be emplaced at the bottom of the excavation (sufficient to bridge infiltrating groundwater, likely 2 to 5 feet thick) to allow for sufficient compaction. Approximately 300 pounds of ORC[®] product will be spread over the base of the excavation; the gravel layer with ORC[®] on top will then be overlain by additional gravel up to approximately 6 feet bgs. If the overburden is clean, it will be used above the 6-foot depth; if it is not clean, additional clean backfill will be used.

Management of Investigation-Derived Waste. Project waste will be managed as follows:

- Soil. Waste soil from the excavation and well abandonment will be stockpiled and covered with visqueen and temporarily stored onsite and profiled. We anticipate that it will be sent to a local non-hazardous (Class II) landfill.
- Water. This non-hazardous water will be properly sampled, profiled, and disposed of at a permitted wastewater treatment facility.

Task 4: Technical Reporting

We will prepare the following technical documentation reports and uploads.

Corrective Action Documentation Report. This report will include the following elements:

- Summary of historical UST removal and sampling activities, and initial site characterization results
- Technical objectives of the program
- Discussion of sampling protocols/methods
- Tabular summary of analytical results, including the first groundwater monitoring event and corrective action results

- Figure(s) showing site layout, well locations, and corrective action features
- Evaluation of site hydrogeologic conditions
- Discussion of analytical results in the context of estimated contaminant mass removed and residual contaminant concentrations
- Technical appendices (e.g., laboratory reports, well elevation data, borehole logs, permits, waste transport documentation, photodocumentation)

In accordance with requirements by the State Water Board and ACDEH, the reports will be uploaded (as electronic files) to both the GeoTracker system and the ACDEH ftp system.

Electronic Data Reporting. All required electronic data for previous investigations has been uploaded to the GeoTracker system. The following GeoTracker electronic uploads will be made for proposed work data:

- “Field Point IDs” –sample names
- “GeoMap” – site plan showing sampling and corrective action locations
- “Geo Report” – electronic format reports
- Electronic Data Deliverable (EDD) – analytical laboratory reports for proposed samples

Monitoring Well Quarterly Sampling Report. Quarterly groundwater monitoring events will continue as previously scheduled with the next (fourth event) monitoring event to be conducted in early October. In addition to a discussion of the sampling activities and findings for the fourth event, the report will be an annual summary, and will evaluate hydrochemical and groundwater flow direction trends. The report will also evaluate the potential for site closure, and the need to conduct any additional site characterization activities to close data gaps (if appropriate).

ESTIMATED SCHEDULE

The property owner will proceed with the work as soon as practical following receipt of ACDEH’s concurrence with this work plan. We anticipate completing the work in the following sequence:

- Remove garage portion of onsite building.
- Abandon monitoring well MW-5B.
- Perform soil excavation and dewatering.
- Emplace backfill and inoculate with ORC[®].
- Prepare technical documentation report.

- Complete groundwater monitoring annual summary report (fourth quarterly event due in October) combined with corrective action documentation.

SES anticipates that the technical report will be submitted within 10 to 12 weeks following ACDEH's notice to proceed.

TEAM QUALIFICATIONS

Stellar Environmental Solutions, Inc. has completed dozens of similar projects, including numerous projects under the oversight of ACDEH. Our team will consist of:

- Stellar Environmental Solutions, Inc. (owner's consultant responsible for overall project coordination, geologic evaluation, sampling, data evaluation, and report certification by a California Registered Geologist);
- Hazardous substances removal certified contractor; and
- Analytical laboratory with a current California ELAP certification.

We trust that this submittal meets your agency's needs. We will contact you in the near future to confirm your receipt of this work plan. In the interim, please contact the undersigned directly if you have any questions.

We 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 our knowledge.

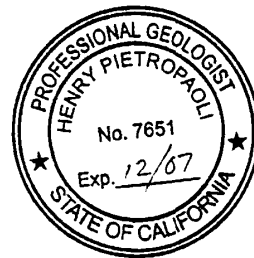
Sincerely,



Henry Pietropaoli, R.G., R.E.A.
Project Manager



Richard S. Makdisi, R.G, R.E.A.
Principal



cc: Estate of Larry M. Wadler (Property Owner and Responsible Party)

Attachment: Figures showing UST layout and previous borehole sampling locations and results, and tables of previous analytical results

Stellar Environmental Solutions, Inc.

ATTACHMENT A

Figures and Tables

Figures

Site Location Map

Site Plan Showing Proposed Excavation

Cross-Sectional Figures

Former UST & Borehole Sampling Locations and Results



SITE LOCATION ON U.S.G.S. TOPOGRAPHIC MAP

**2836 Union Street
Oakland, CA**

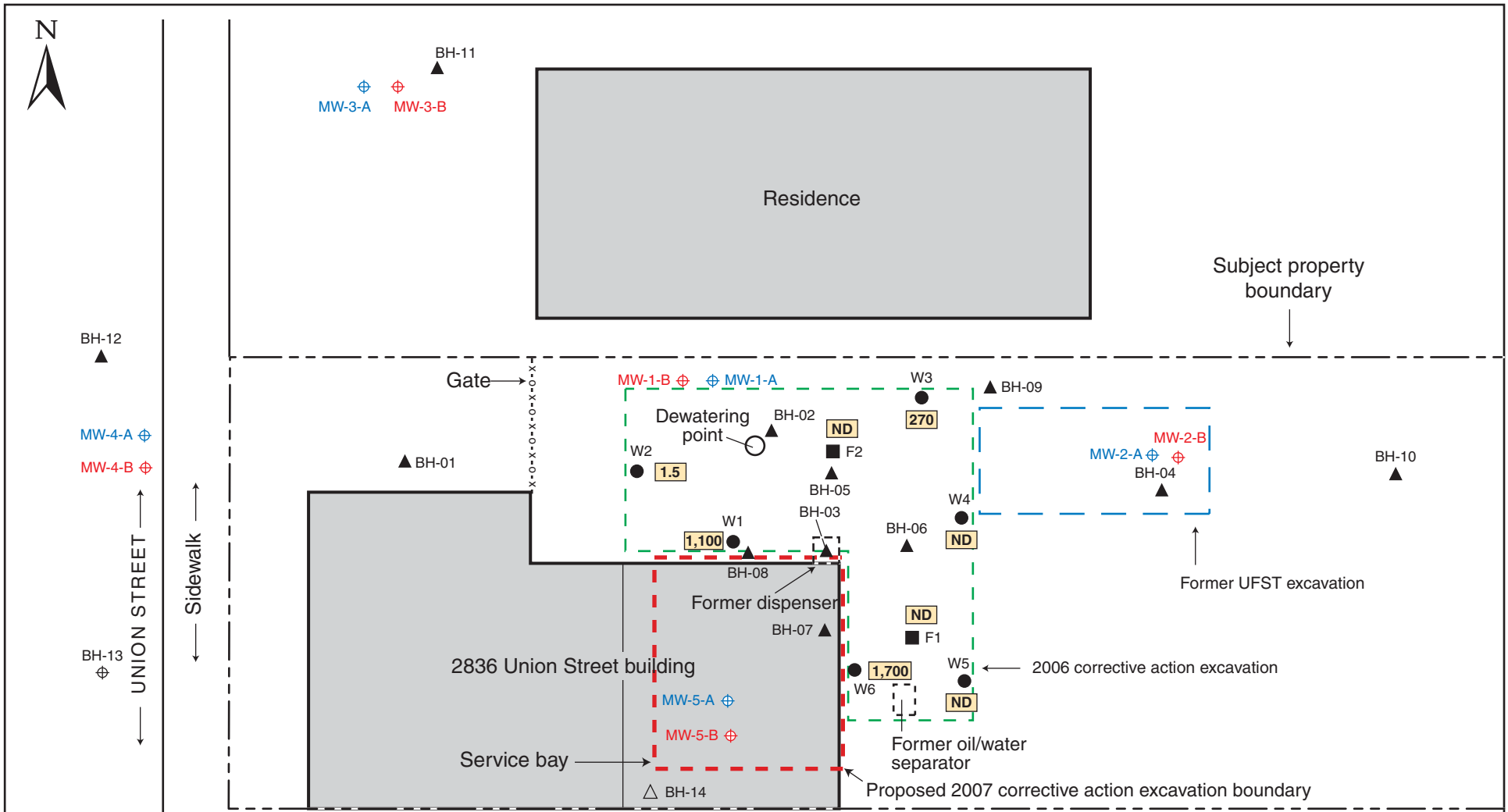
By: MJC

NOVEMBER 2005

Figure 1



2005-65-01



LEGEND

- | | | |
|----------------------------------|--|---|
| <p>Residence</p> <p>↓</p> | <p>MW-1-A
⊕ Groundwater monitoring well; 10'-13' deep screened interval</p> <p>MW-1-B
⊕ Groundwater monitoring well; 19'-25' deep screened interval</p> <p>BH-01
▲ Previous exploratory borehole</p> | <p>△ BH-14 2007 Exploratory borehole</p> <p>■ F1 2007 Excavation floor sample; floor samples collected 11' deep</p> <p>● W1 2007 Excavation wall sample; floor samples collected 6'-7' deep; concentration of TPH-gas in mg/kg</p> <p>ND = TPH-gas not detected</p> |
|----------------------------------|--|---|

0 10
SCALE IN FEET (approx.)

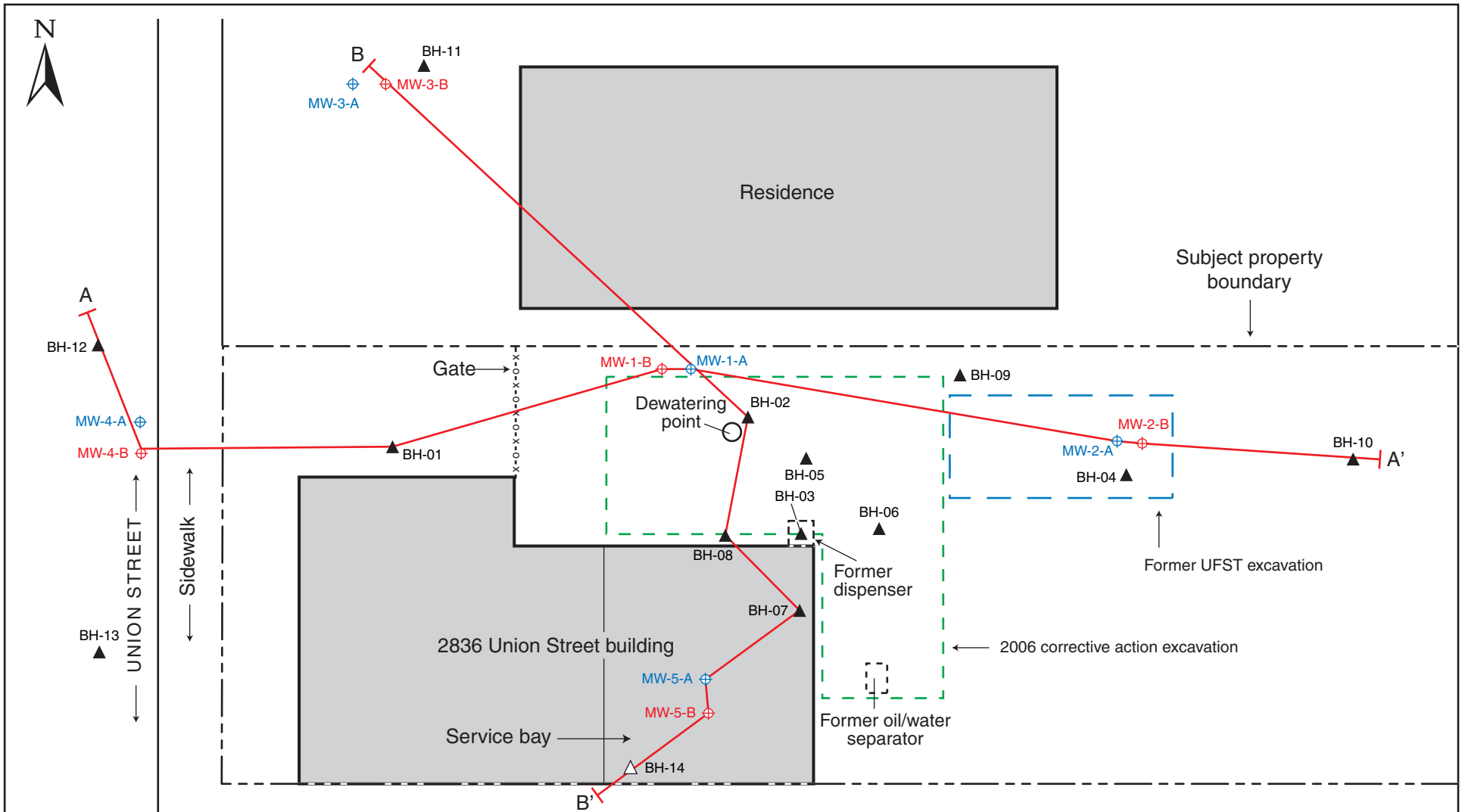
PROPOSED 2007 CORRECTIVE ACTION EXCAVATION
2836 Union Street, Oakland, CA

Figure 1

by: MJC AUGUST 2007

2005-65-57





SCALE IN FEET (approx.)

LEGEND

- MW-1-A Groundwater monitoring well; 10'-13' deep screened interval
- MW-1-B Groundwater monitoring well; 19'-25' deep screened interval
- A-A' Cross-section A-A'
- BH-14 Exploratory borehole drilled during this investigation
- BH-01 Previous exploratory borehole (November 2005 and April 2006)

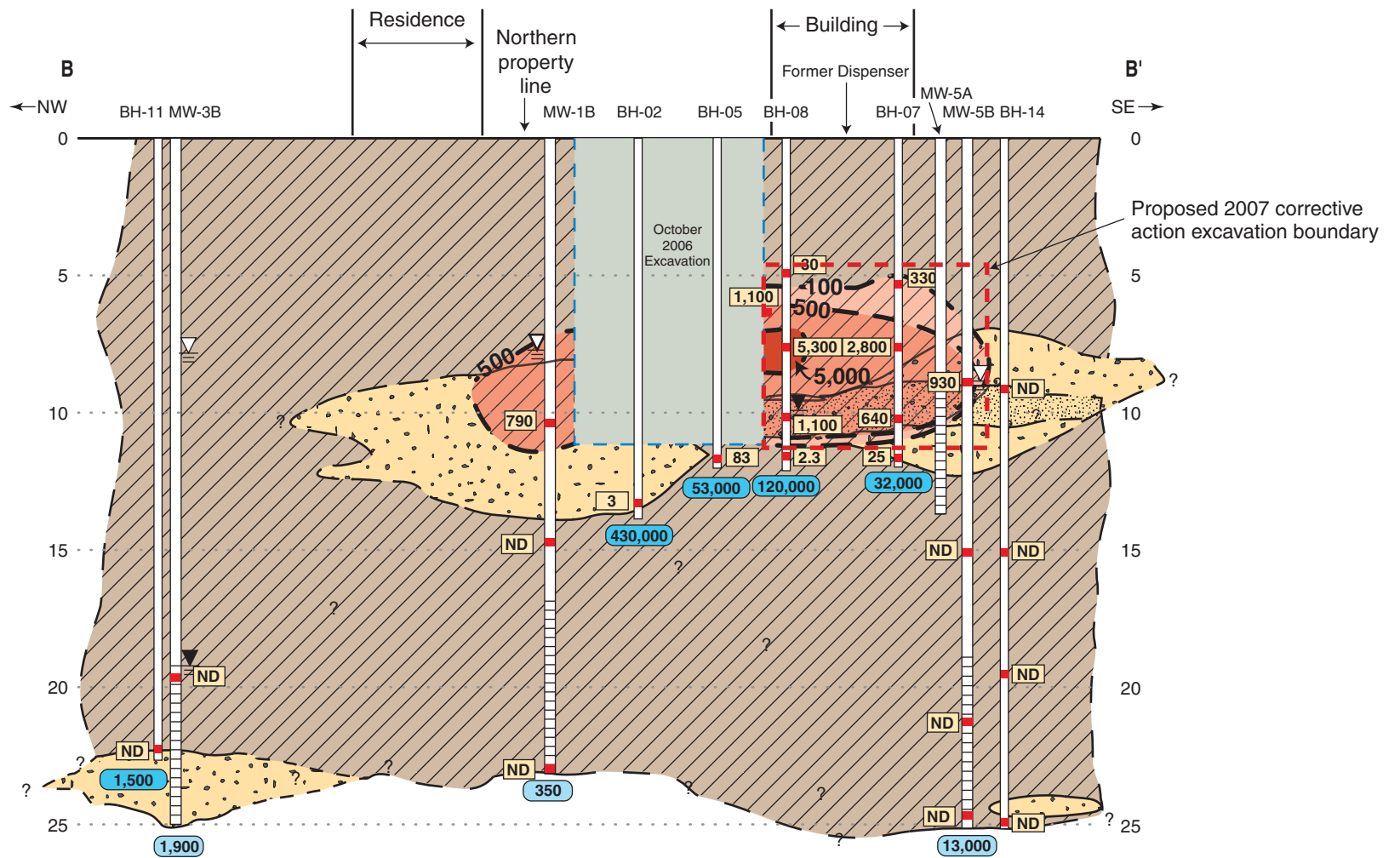
SITE PLAN SHOWING LOCATIONS OF SOIL BORINGS
2836 Union Street, Oakland, CA

Figure 2

by: MJC NOVEMBER 2006

2005-65-47





LEGEND

- Water level during drilling
 - Equilibrated water level
 - Silt/clay
 - Sand/gravel
 - 1,100** Groundwater gasoline concentration (µg/L) (Oct. 2006)
 - 1,200** Groundwater gasoline concentration (µg/L) (Nov. 2005 or Apr. 2006)
 - ND** Soil gasoline concentration, mg/Kg (Nov. 2005, Apr. 2006 or Oct. 2006)
 - ND** = Not detected
 - BH-01 Exploratory Boring BH-01
 - Monitoring well screened interval
 - 500** Gasoline in soil contour (mg/Kg)
- Note: former dispenser is projected into section (approx. 7' from south)

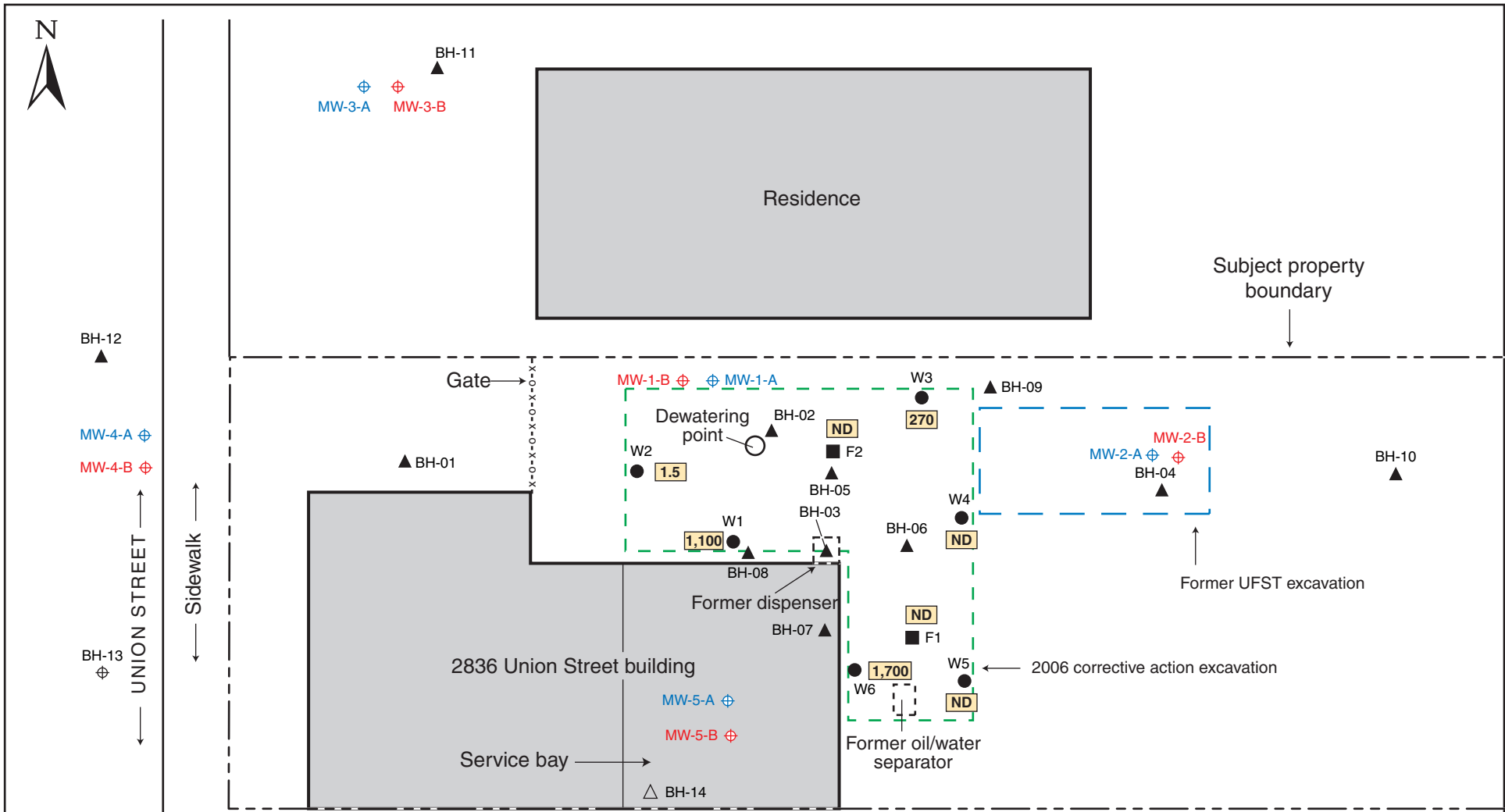
0 10
HORIZ. SCALE IN FT.
(approx.)

GEOLOGIC CROSS SECTION B-B'
2836 Union Street, Oakland, CA

Figure 4

by: MJC

NOVEMBER 2006



LEGEND

- ⊕ MW-1-A Groundwater monitoring well; 10'-13' deep screened interval
- ⊕ MW-1-B Groundwater monitoring well; 19'-25' deep screened interval
- ▲ BH-01 Previous exploratory borehole
- △ BH-14 Exploratory borehole drilled during this investigation
- F1 Excavation floor sample; floor samples collected 11' deep
- W1 Excavation wall sample; floor samples collected 6'-7' deep; concentration of TPH-gas in mg/kg
- ND = TPH-gas not detected

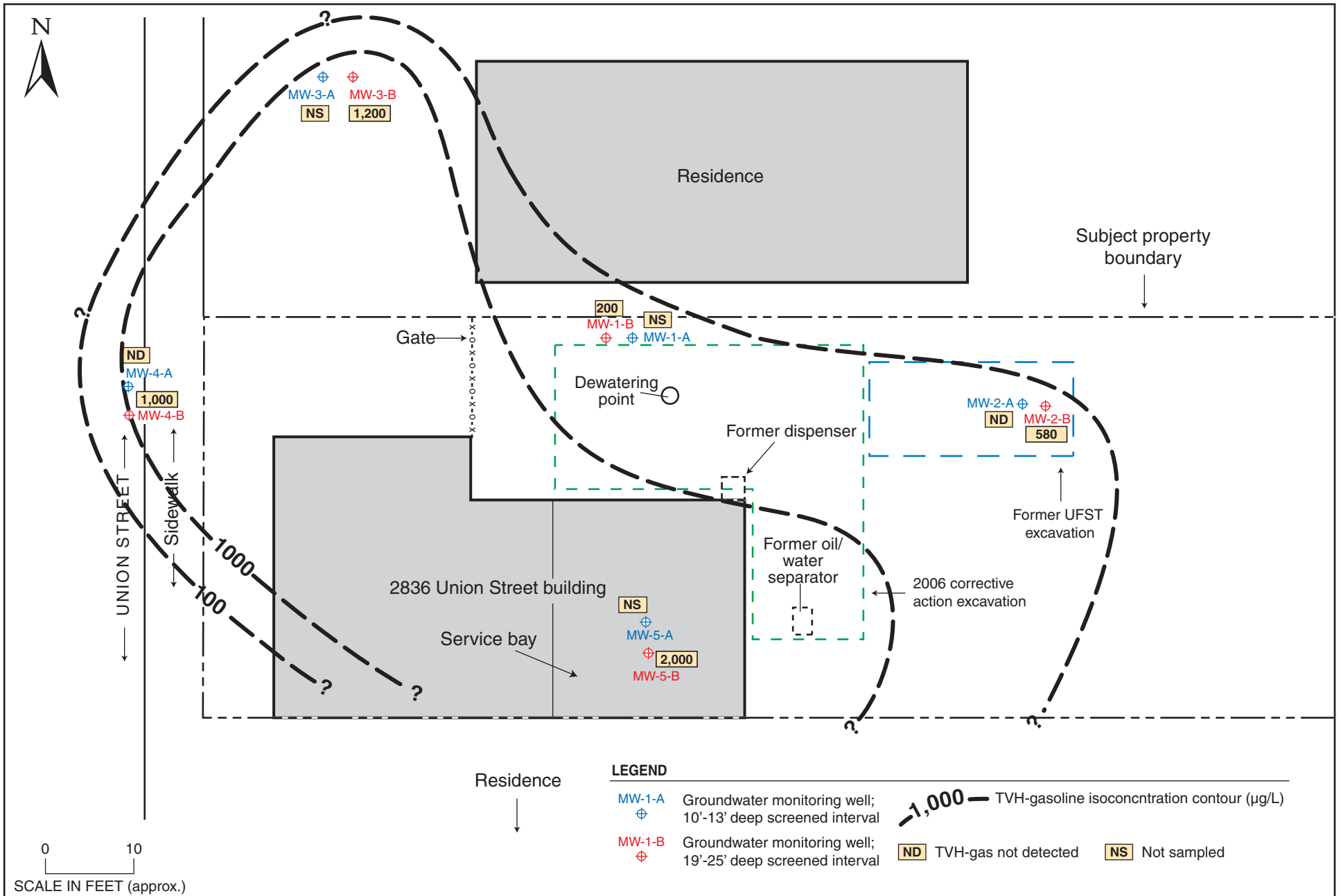
0 10
SCALE IN FEET (approx.)

2005-65-44



EXCAVATION CONFIRMATION SOIL SAMPLE ANALYTICAL RESULTS
2836 Union Street, Oakland, CA

Figure 6
 by: MJC
 NOVEMBER 2006



TVH-GASOLINE PLUME — JULY 12, 2007
2836 Union Street, Oakland, CA

Figure 4

by: MJC

JULY 2007

Tables

Previous Analytical Results

Table 1
Soil Analytical Results – Petroleum and Aromatic Hydrocarbons
2836 Union Street, Oakland, California

Sample ID	Sample Location	Sample Depth (feet)	TVHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
July 1998 UFST Removal Excavation Soil Samples								
7751-E	CF - excavation sidewall	8.5	< 0.5	< 0.005	< 0.005	< 0.005	< 0.01	< 0.005
7751-W	CF - excavation sidewall	8.5	7.2	< 0.005	0.012	0.065	0.021	< 0.005
7751-DISP	beneath dispenser, unsaturated zone	2.0	2,100	2.8	16	15	93	5.1
November 2005 Borehole Soil Samples								
BH-01-8'	CF: upper water-bearing zone	8	< 1.0	< 0.005	< 0.005	< 0.005	< 0.01	< 0.021
BH-01-17'	clay aquitard	17	< 1.0	< 0.005	< 0.005	< 0.005	< 0.01	< 0.021
BH-02-8.5'	CF: upper water-bearing zone	8.5	31	0.093	< 0.005	0.75	0.55	< 0.022
BH-02-13.5'	clay aquitard	13.5	3.0	0.012	< 0.005	0.057	0.134	0.024
BH-03-2.5'	unsaturated zone	2.5	220	0.47	6.7	3.10	17.9	< 0.26
BH-03-7'	unsaturated zone	7	920	1.8	19	16	81	< 0.66
BH-03-14.5'	clay aquitard	14.5	< 1.0	< 0.005	< 0.005	0.019	0.021	< 0.02
BH-04-10.5'	saturated zone -UFST excav. backfill	10.5	< 0.93	< 0.005	< 0.005	< 0.005	0.007	< 0.019
BH-04-14.5'	clay aquitard	14.5	< 1.0	< 0.005	< 0.005	< 0.005	< 0.01	< 0.02
April 2006 Borehole Soil Samples								
BH-05-5'	unsaturated zone	5	310	0.32	< 0.25	3.8	7.9	< 0.25
BH-05-7.5'	CF: upper water-bearing zone	7.5	2,600	< 3.1	37	35	161	< 3.1
BH-05-10'	saturated zone (upper)	10	2,800	< 5.0	< 5.0	85	150	< 5.0
BH-05-11.5'	clay aquitard	11.5	83	< 0.2	< 0.2	2.7	0.83	< 0.2
BH-06-5'	unsaturated zone	5	8.6	0.170	< 0.017	0.22	< 0.017	< 0.017
BH-06-7.5'	CF: upper water-bearing zone	7.5	1,300	0.025	< 0.025	0.38	0.034	< 0.025
BH-06-10'	saturated zone (upper)	10	9.2	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048
BH-07-5'	unsaturated zone	5	330	0.34	2.20	2.40	11.9	< 0.25

Table 1 (continued)

Sample ID	Sample Location	Sample Depth (feet)	TVHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
April 2006 Borehole Soil Samples — continued								
BH-07-7.5'	CF: upper water-bearing zone	7.5	2,800	< 4.2	10	43	196	< 4.2
BH-07-10'	clay aquitard	10	640	< 0.17	< 0.17	2.30	1.20	< 0.17
BH-07-11.5'	clay aquitard	11.5	25	< 0.005	< 0.005	0.012	0.0243	0.0057
BH-08-5'	unsaturated zone	5	30	0.21	< 0.13	1.1	1.36	0.22
BH-08-7.5'	CF: upper water-bearing zone	7.5	5,300	< 6.3	88	79	380	< 6.3
BH-08-10'	saturated zone (upper)	10	1,100	< 2.0	11	18	86	< 2.0
BH-08-11.5'	clay aquitard	11.5	2.3	0.67	0.096	0.26	0.54	0.0098
BH-09-11.5'	unsaturated zone	11.5	< 0.97	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048
BH-09-19.5'	CF: lower water-bearing zone	19.5	< 0.92	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048
BH-10-7.5'	CF: upper water-bearing zone	7.5	< 0.99	< 0.0045	< 0.0045	< 0.0045	< 0.0045	< 0.0045
BH-11-22'	CF: lower water-bearing zone	22	< 1.1	< 0.0049	< 0.0049	< 0.0049	< 0.0049	< 0.0049
BH-12-20.5'	CF: lower water-bearing zone	20.5	< 1.0	< 0.0046	< 0.0046	< 0.0046	< 0.0046	< 0.0046
BH-13-20.5'	CF: lower water-bearing zone	20.5	< 1.0	< 0.0048	< 0.0048	< 0.0048	< 0.0048	< 0.0048
<i>ESLs</i> ^(a)			100	0.04	2.0	3.0	1.5	0.023

Notes:

^(a) ESLs = Water Board Environmental Screening Levels for residential or commercial/industrial sites where groundwater is a potential drinking water resource.

CF = capillary fringe

TVHg = total volatile hydrocarbons as gasoline

MTBE = methyl tertiary-butyl ether

All concentrations are in milligrams per kilogram (mg/kg). Samples in **bold-face type** exceed the ESL criterion.

Table 3
Groundwater Analytical Results –
Petroleum and Aromatic Hydrocarbons
2836 Union Street, Oakland, California

Sample ID	TVHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE
July 1998 UFST Removal Excavation Grab-Groundwater Sample						
7561-GW ^(a)	4,200	15	4.0	140	170	150
November 2005 Borehole Groundwater Samples						
BH-01-GW	830	0.76	< 0.50	< 0.50	< 0.50	24
BH-02-GW	430,000	6,700	350	14,000	31,000	< 200
BH-03-GW	73,000	530	440	4,400	5,540	< 200
BH-04-GW	7,200	< 0.5	< 0.5	18	1.2	< 2.0
April 2006 Borehole Groundwater Samples						
BH-05-GW	53,000	570	680	4,600	3,270	60
BH-06-GW	5,000	82	5.2	290	35.5	14
BH-07-GW	32,000	230	120	1,600	2,560	43
BH-08-GW	120,000	1,200	9,300	4,400	20,400	120
BH-09-GW	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BH-10-GW	< 50	< 0.5	< 0.5	< 0.5	< 0.5	3.7
BH-11-GW	1,500	< 8.3	< 8.3	< 8.3	< 8.3	< 8.3
BH-12-GW	1,200	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
BH-13-GW	940	< 4.2	< 4.2	< 4.2	< 4.2	< 4.2
ESLs ^(b)	100	1.0	40	30	13	5.0
MCLs	no level published	1.0	40	30	20	5.0

Notes:

^(a) This sample had no detectable lead (< 0.05 mg/L).

^(b) ESLs = Water Board Environmental Screening Levels for residential or commercial/industrial sites where groundwater is a potential drinking water resource.

MCLs = California Maximum Contaminant Levels.

TVHg = total volatile hydrocarbons as gasoline.

MTBE = methyl tertiary-butyl ether

All concentrations are in micrograms per liter (µg/L). Samples in **bold-face type** exceed the ESL or MCL criterion.

Table 2
Soil Sample Analytical Results – September/October 2006
2836 Union Street, Oakland, California

Sample ID	PID (ppmv)	Sample Depth (feet)	TVHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Total Lead
Borehole Soil Samples									
MW 2B-12	4.8	12-12.5	<0.96	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	NA
MW 2B-17	1.3	17-17.5	<0.91	<4.5	<4.5	<4.5	<4.5	4.9	NA
MW 2B-24	0.1	23-24	<0.98	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	NA
MW 1B-10	0	10-10.5	790	<130	<130	1,100	130	<130	NA
MW 1B-15	0	15-15.5	<0.88	< 4.4	< 4.4	< 4.4	< 4.4	31	NA
MW 1B-23	0	23-23.5	<0.88	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	NA
MW 3B-19	0	19-19.5	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	NA
BH 14-8.5	0	8.5-9	<0.93	<4.6	<4.6	<4.6	<4.6	<4.6	NA
BH 14-15	0	15-15.5	<0.91	<4.5	<4.5	<4.5	<4.5	17	NA
BH 14-19.5	0	19-19.5	<0.94	<4.7	<4.7	<4.7	<4.7	<4.7	NA
BH 14-24.5	0	24.5-25	< 0.86	< 4.3	< 4.3	< 4.3	< 4.3	< 4.3	NA
MW 4B-17	0	17-17.5	<0.93	<4.6	<4.6	<4.6	<4.6	<4.6	NA
MW 5B-8.5	24	8.5-9	930	<130	<130	640	<130	<130	NA
MW 5B-15	0.4	15-15.5	<0.94	<4.7	<4.7	<4.7	<4.7	7.2	NA
MW 5B-21.5	3.2	21.5-22	<0.94	<4.7	<4.7	<4.7	<4.7	<4.7	NA
MW 5B-24	5.2	24.24.5	<0.89	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5	NA

Table 2 continued

Sample ID	PID (ppmv)	Sample Depth (feet)	TVHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Total Lead
Excavation Wall Samples									
W1	250	6	1,100	2.6	44	34	200	<10	<10
W2	45	6	1.5	< 0.005	< 0.0091	< 0.012	0.038	< 0.005	NA
W3	120	6	270	<0.10	0.36	7.4	0.93	<1.0	<1.0
W4	30	7	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA
W5	36	6	<1.1	<5.3	<5.3	<5.3	<5.3	NA	NA
W6	1518	6	1,700	<250	<250	17,000	35,400	NA	NA
Excavation Floor Samples									
F1	6	11	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA
F2	14	11.5	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	NA
Stockpile Comp			840	<250	<250	5000	14,800	NA	13
Soil ESLs			<i>100</i>	<i>0.04</i>	<i>2.0</i>	<i>3.0</i>	<i>1.5</i>	<i>0.023</i>	<i>50^(a)</i>

Notes:

ESLs = Water Board Environmental Screening Levels for residential or commercial/industrial sites where groundwater is a potential drinking water resource.

MTBE = methyl *tertiary*-butyl ether

NA = not analyzed for this constituent

PID = photoionization detector (readings in ppmv)

ppmv = parts per million by volume air

TVHg = total volatile hydrocarbons as gasoline.

Samples in **bold-face type** exceed the ESL criterion.

All concentrations are in milligrams per kilogram (mg/kg).

Table 3
September-October 2006 Groundwater Sample Analytical Results
2836 Union Street, Oakland, California

Sample	TVHg	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
Monitoring Wells						
MW-1A	NS	NS	NS	NS	NS	NS
MW-1B	350	<1.3	<1.3	<1.3	<1.3	2.7
MW-2A	80	<0.5	<0.5	<0.5	<0.5	<0.5
MW-2B	NS	NS	NS	NS	NS	NS
MW-3A	NS	NS	NS	NS	NS	NS
MW-3B	1,900	<10	<10	<10	<10	<10
MW-4A	NS	NS	NS	NS	NS	NS
MW-4B	1,100	<2.5	<2.5	<2.5	<2.5	<2.5
MW-5A	NS	NS	NS	NS	NS	NS
MW-5B	13,000	9.6	0.6	21	1.9	37
Excavation Dewatering (a)						
EGW-1 (onset of pumping)	21,000	140	370	1,100	1,970	110
EGW-2 (920 gallons removed)	49,000	310	930	1,700	4,500	NA
EGW-3 (4200 gallons removed)	5,200	110	75	240	470	NA
Groundwater ESLs	100 / 500	1.0 / 46	40 / 130	30 / 290	13 / 13	5.0 / 1,800
MCLs	100	1.0	40	30	20	5.0

Notes:

(a) Sample collected from temporary excavation dewatering point.

ESLs = Water Board Environmental Screening Levels for residential or commercial/industrial sites where groundwater is a potential drinking water resource.

MCLs = Maximum Contaminant Levels

MTBE = methyl *tertiary*-butyl ether

NA = not analyzed for this constituent

NS = not sampled

TVHg = total volatile hydrocarbons as gasoline

Samples in **bold-face type** exceed the ESL criterion.

All concentrations are in micrograms per liter (µg/L).