



January 16, 2009
Project No. 609.004

Alameda County Environmental Health Services
Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Attention: Ms. Barbara Jakub, Hazardous Materials Specialist

Subject: Work Plan for Additional Site Investigation, 2250 Telegraph Avenue, Oakland,
California

Dear Ms. Jakub:

On behalf of Buttner Properties, Fugro West, Inc. (Fugro) presents this Work Plan to conduct additional site investigation at the property located at 2250 Telegraph Avenue in Oakland, California. The location of the site is shown on Plate 1. Fugro previously prepared a Work Plan in February 2004 describing a soil, soil vapor, and groundwater investigation to supplement existing data. Responding to comments from Alameda County Environmental Health (ACEH) staff which required expanding the study, Fugro submitted work plan addendum letters dated August 5, 2004 and October 14, 2005. In their letter, dated July 31, 2008, ACEH generally approved the scope of work, however subsequent discussions with ACEH in late October and November 2008, have resulted in a request that the scope of work be re-evaluated to determine if the scope of field work could be reduced.

Given the number of revisions to the initial work plan, we are presenting herein a revised scope of work to conduct the soil, soil vapor, and groundwater investigation, revised to include work only on the existing property at 2250 Telegraph Avenue. Future work on the adjacent property, if needed would be conducted during a subsequent phase of work.

ADDITIONAL SITE INVESTIGATION

A review of soil and groundwater data collected during source removal activities, site characterization and monitoring well installation studies, and groundwater monitoring events conducted onsite since March 1994, indicates that the site may be impacted by releases that occurred both onsite and those which have occurred by other offsite sources. The plumes become commingled on site, and data suggests that the characteristics of the plumes have not changed significantly during the last fifteen years. Previous risk assessment activities have also confirmed that no significant risks are posed to the ongoing commercial use of the property.

The data however, does suggest that the lateral and vertical extent of impacted soil in the vicinity of the former waste oil tank, dispenser islands and on the east side of the property should be further defined, and soil vapor data should be collected to compare with established





screening levels. There is also a request from ACEH to update the preferential pathway studies which have been conducted to date, and to conduct sufficient record review and field reconnaissance to identify the location of historic well locations and other potential subsurface conduits.

Field Activities

Fugro will conduct a soil and groundwater investigation and a soil-gas vapor survey at the locations shown on Plate 2. The selected areas will provide necessary data to further define the limits of impacted soil, and address whether or not the impacted soil poses a risk to human health due to volatilization of vapors into indoor air spaces, and whether impacts to groundwater pose a significant risk to potential future users of the Site.

Before beginning field work, Fugro will obtain necessary drilling permits from Alameda County Public Works Agency. Fugro will also clear all sampling boring locations by contacting Underground Service Alert and by contracting with a private utility locator. A Geoprobe direct push type rig and a limited access rig will be used during this investigation to obtain the soil, groundwater, and soil-gas vapor samples. The limited access rig will be used at the Site to complete soil, groundwater, and soil-gas vapor borings within the interior of the building, and other restricted access areas of the Site.

The scheduling of this work requires that the existing tenant vacate the premise. As the existing tenant is an automotive repair business, this work further requires that all vehicles be removed from the Site to allow un-impeded access to conduct field activities. The property owner is required to provide sufficient lead time to the tenant to make the necessary arrangements to vacate the site.

Soil Gas Sampling

Using direct-push methodologies provided by a state-licensed drilling contractor, seven soil-gas probes will be installed at the locations illustrated on Plate 2. The site is entirely covered by concrete slabs and asphalted surfaces. The probes will extend to 5 feet bgs using an expendable point, an expendable point holder, a PRT adapter, and polyethylene tubing. The expendable point is placed in the expendable point holder, which in turn is attached to the drive rod, and driven to 5 feet bgs. The drive rod and expendable point holder are retracted approximately 6 to 12 inches, separating the expendable point from the point holder, and creating the desired void in the soil. A PRT adapter and tubing are advanced down the inner rods and secured to the expendable point holder. The tubing at the surface is attached to the Vacuum/Volume System on the Geoprobe rig to purge the line.

Probes will be allowed to stabilize undisturbed for approximately 30 minutes prior to purging and sampling. Each probe will be fitted with a flow regulator and particulate filter placed in-line to maintain a 100-200 cc (ml) per min flow rate and prevent influx of soil particles into samples containers while purging or collecting soil gas samples.



In accordance with a request from ACEH, isopropyl alcohol will be used as a tracer to check for leaks in the soil vapor sampling train. A cotton ball will be placed between the drilling rod and the tubing as a field QC leak check measure.

Fugro will collect vapor samples on the intake side of the vacuum pump or collect the vapor sample using the negative vacuum provided by the Summa canister, and record the initial and final vacuum readings at the time of collection. At the completion of sampling, each Summa canister will maintain a negative pressure to confirm no leakage during transport.

After each sample collection, the drive rods and other sampling components will be decontaminated with a non-phosphate detergent and a distilled water double rinse prior to the next reuse. The polyethylene tubing will be discarded after each sample location. Each probe will then be backfilled with neat cement grout.

Soil-gas sample containers will be transported to a state-certified analytical laboratory for analysis under the appropriate chain of custody documentation. Samples will not be refrigerated and will be shielded from exposure to sunlight prior to analyses. Analytical testing will be conducted on a standard turnaround basis. The testing program will consist of the following:

- Total petroleum hydrocarbons as gasoline (TPHg);
- Total petroleum hydrocarbons as diesel (TPHd);
- Benzene, toluene, ethylbenzene, xylenes (BTEX), and Methyl tert butyl ether (MTBE); and
- Carbon Dioxide, methane, oxygen and isopropyl-alcohol content.

Soil-gas samples will be collected in one day and field QC samples will include one duplicate QC sample and one trip blank for this portion of the investigation.

Soil and Grab Groundwater Sampling

Soil and grab groundwater samples will be collected from companion probes installed at each soil-gas vapor sampling location, as well as five additional boring locations as shown on Plate 2.

The Geoprobe subcontractor will push the sampling rod equipped with sample tubes to a depth of 15 feet bgs and the soil will be continuously collected for field and laboratory analysis. During Geoprobe installation, soil cores will be screened in the field using visual and olfactory methods, as well as an Organic Vapor Meter (OVM). Soil samples with the highest OVM reading from each location will be submitted for chemical analysis. In addition, samples that appear to bracket the impacted zone, and those that appear to adequately represent soil conditions will also be submitted for chemical analysis. In accordance with a request from ACEH, Fugro will submit for analysis soil samples from depths of 5 to 6 feet, 10 to 11 feet, and at 15 feet bgs from the three borings near the former waste oil tank area. The ends of all sample tubes will be wrapped with Teflon tape and caps, and then placed into an ice-filled chest.



Up to 40 soil samples will be submitted to a State of California certified analytical laboratory under chain of custody documentation for the following analysis:

- Total Volatile Hydrocarbons as gasoline (TVHg) using EPA Method 5030/8260b;
- Total extractable hydrocarbons as diesel and motor oil (TEHd and TEHmo) using EPA Methods 8015m, with silica gel cleanup;
- Lead scavengers (1,2,-dichloroethane and 1,2-dibromoethane) using EPA Method 5030/8260b;
- Five fuel oxygenates (MTBE, TAME, ETBE, TBA, and DIPE) using EPA Method 5030/8260b; and
- BTEX using EPA Method 5030/8260b.

Up to six selected samples, judged to be representative of vadose zone soils, will also be submitted to a certified laboratory for various soil properties testing including:

- Total organic carbon;
- Grain-size distribution;
- Bulk density;
- Moisture content; and
- Porosity.

Grab groundwater samples will be obtained from the Geoprobe holes from pre-cleaned 1-inch diameter machine slotted well screens placed into the holes. If this study is not conducted to correlate with the groundwater monitoring program, the four onsite wells will also be sampled to provide comparison of data.

Depending on field conditions, Fugro will attempt to remove one casing volume of water prior to sample collection from the probes, and the wells will be purged of three casing volumes. Water samples will be obtained using new disposable bailers.

The groundwater samples will be collected and retained in pre-cleaned laboratory-supplied containers, stored in cooled ice-chests, and transported to a state-certified analytical laboratory under chain-of-custody documentation. These samples will be analyzed for the following:

- TVHg using EPA Methods 5030/8015m;
- TEHd and TEHmo using EPA Method 8015m with silica gel clean up;
- BTEX and MTBE using EPA Method 5030/8260b;
- Lead scavengers (1,2,-dichloroethane and 1,2-dibromoethane) using EPA Method 5030/8260b;



- Five Fuel Oxygenates (MTBE TAME, ETBE, TBA, and DIPE) using EPA Method 5030/8260b; and
- Total Dissolved Solids using EPA Method 160.1.

Following sample collection, the temporary casings will be removed and the probe holes will be backfilled with cement grout and patched to match existing conditions.

Risk Assessment

Once the analytical results are received, a tiered screening level assessment will be conducted using the soil-gas vapor data and cumulative groundwater data. The data will be initially compared to established environmental screening values, and will then be used to generate indoor air concentrations for inhalation pathway evaluation using the CalEPA modified version of the USEPA Johnson and Ettinger (J&E) excel-based indoor air model.

Data Evaluation and Report Preparation

The results of the investigation, as well as the risk evaluation and preferential pathway study will be presented in a comprehensive written report. The report will include at a minimum the following items:

- Analytical data reports from the current study,
- Tabulated comprehensive analytical data for soil, groundwater, and soil-gas vapor. For comparison purposes, the tabulated analytical data will be compared to the most updated version of the Regional Water Quality Control Board's Environmental Screening Levels (ESLs) and other state criteria including California Human Health Screening Levels (CHHSLs).
- Groundwater concentration contour plates for the primary contaminants detected. The plates will also include groundwater flow direction, hydraulic gradient and rose diagram,
- Conclusions regarding the lateral and vertical limits of soil, groundwater, and soil-gas vapor impacts,
- Conclusions regarding whether or not the impacted soil and groundwater poses a risk to human health due to volatilization of vapors into indoor air spaces,
- Results of the preferential pathway study, and
- Scope of remedial alternatives and future investigations, if any are warranted.

In accordance with reporting requirements, Fugro will upload PDF copies of the final report to the ACEH ftp website. Fugro will also send electronic copies of all attached tables in a Microsoft excel format to ACEH. Copies of required report, tables, and site plan will also be uploaded to the Geotracker database.



Ongoing Groundwater Monitoring

Fugro will continue to conduct ongoing groundwater monitoring of the six project wells on a semi-annual basis in accordance with the groundwater monitoring program. Four wells are located onsite and two are located offsite in heavily travelled right of ways. The City of Oakland requires a traffic plan, lane closure and specific permits for each offsite monitoring event. In addition, there are date restrictions which preclude conducting any work within the right of ways during certain times of the year. The monitoring events will be conducted to maximize the number of wells sampled during each event.

For each event, the depth to water will be measured, and at least three casing volumes of water will be removed while monitoring pH, temperature, and conductivity parameters. Once water levels stabilize to within 80 percent of their initial levels, the wells will be sampled with clean disposable bailers. Groundwater samples will be placed in the laboratory-prepared containers, stored in cooled ice-chests, and transported to a state-certified analytical laboratory under chain-of-custody protocol. Groundwater samples will be analyzed for the same constituent list as used for the grab groundwater samples outlined herein.

The monitoring reports will be submitted to ACEH and uploaded to the Geotracker database as required. Groundwater concentration contour plates for the primary contaminants detected. The plates will also include groundwater flow direction, hydraulic gradient and rose diagram.

CLOSING STATEMENT

The property owner has been requested by the UST Cleanup FUND to submit a long range (18 month) investigation schedule, inclusive of agency approval of required studies for their review by January 30, 2009. As such, we respectfully request an expedited review of the revised scope of work.

Pending **written** approval of the scope of work described herein from ACEH, Fugro, on behalf of Buttner Properties, will implement this Additional Site Investigation. Completion of the field work will be slated for sometime in the summer to fall 2009 time frame to ensure that all approvals are received from ACEH and the UST Cleanup FUND, and to provide sufficient time for the existing tenant to vacate the premise for ease of access.

If you should have any questions or comments, please feel free to contact the undersigned at (510) 267-4401 or (916) 773-2600.



Sincerely,
FUGRO WEST, INC.

A handwritten signature in cursive script that reads "Karen A. Emery".

Karen A. Emery
Project Geologist

A handwritten signature in cursive script that reads "Jeriann Alexander".

Jeriann Alexander, P.E., R.E.A.
R.E.A. No. 03130 (exp. 7/09)
Civil Engineer 40469 (exp. 3/09)



KAE/JNA:jna

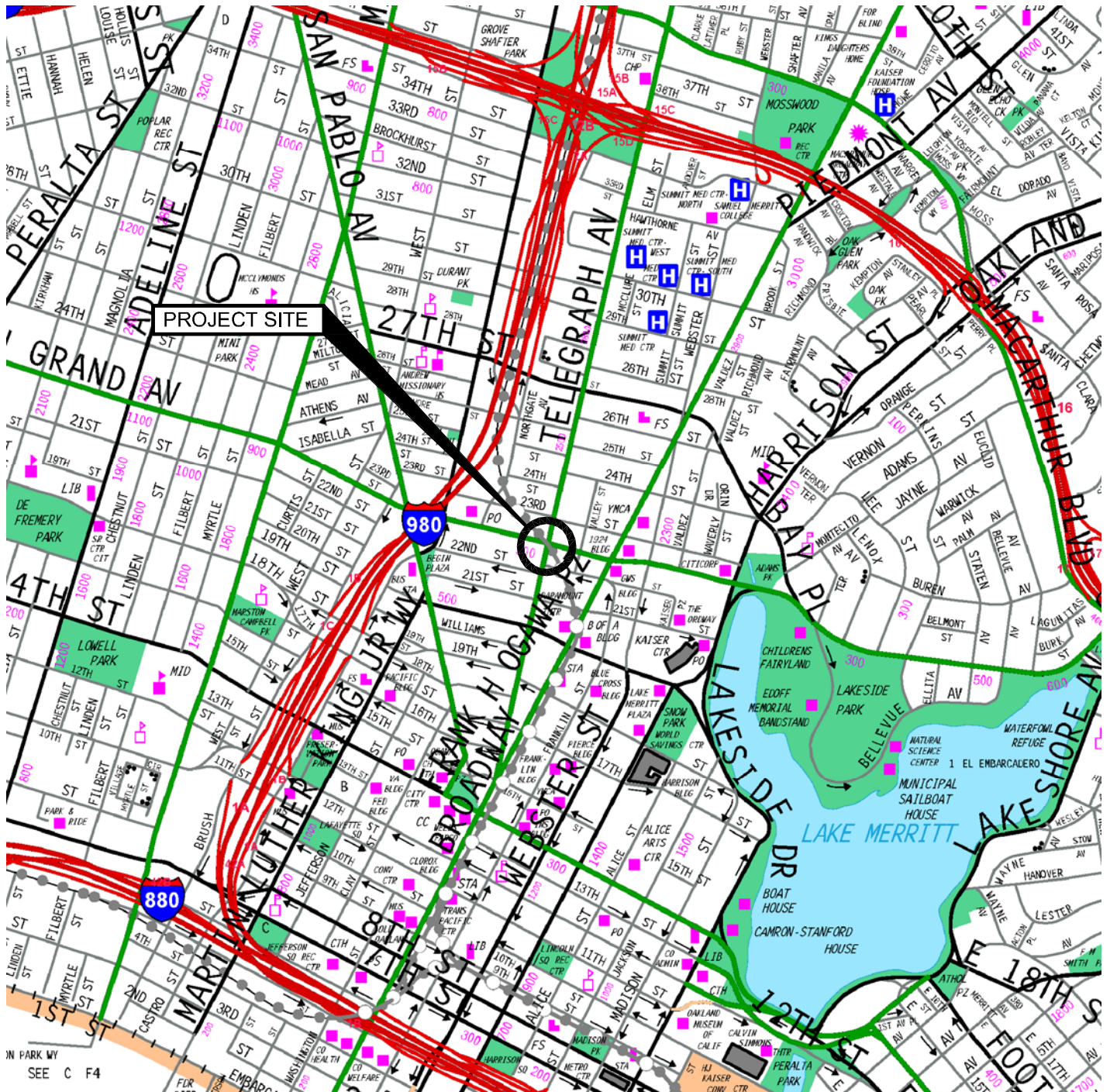
Attachments: Plate 1 – Vicinity Map
Plate 2 – Site Plan

Distribution: (1) Addressee (via email and mail)
(1) Ms. Marianne Robison, Buttner Properties
(1) Mr. Tim Robison, Ph.D.
(1) Ms. Helen Robison

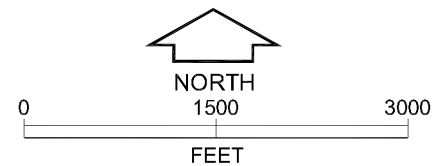
PLATES



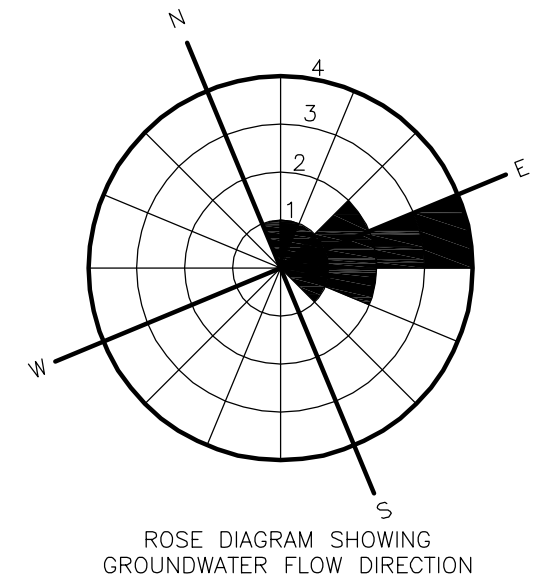
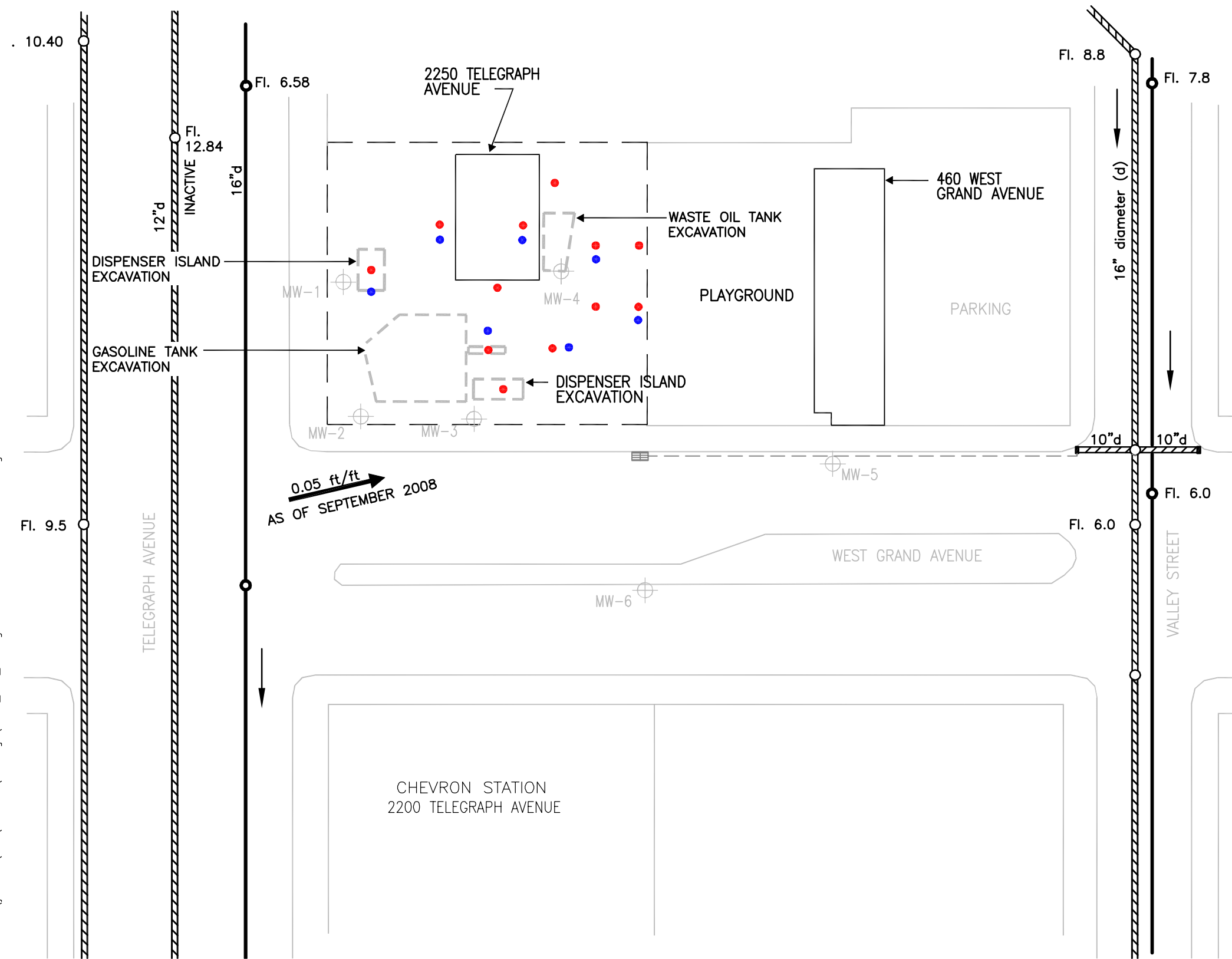
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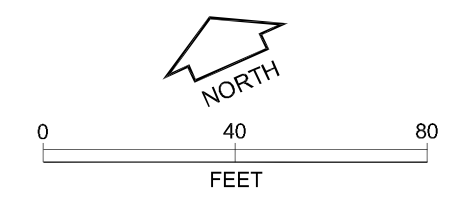
SOURCE: This Site Vicinity Map is based on The Thomas Guide Digital Edition 2003, Bay Area Metro, Alameda, Contra Costa, Marin, San Francisco, San Mateo, and Santa Clara Counties.



VICINITY MAP
2250 Telegraph Avenue
Oakland, California



- LEGEND**
- APPROXIMATE LOCATION OF BORING
 - APPROXIMATE LOCATION OF PROPOSED SOIL-GAS BORING
 - STRUCTURE
 - - - LIMITS OF EXCAVATION
 - ⊕ MONITORING WELL LOCATION



PROPOSED SAMPLING LOCATIONS
2250 Telegraph Avenue
Oakland, California

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