

Transportation Terminals Company
PO Box 882682
San Francisco, CA 94188-2682

Date: 4/11/2008
From: Bob Lawlor
To; Haz. Materials Specialist, Alameda Co. Environmental Health
Subject: 15651 Worthley Drive, San Lorenzo CA R02558

Perjury Statement

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.

Bob Lawlor



General Partner

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1:48 pm, Apr 23, 2008

Alameda County
Environmental Health

Environmental Restoration Services

Site Investigations * Fuel Tank Closures and Installations * Site Remediation * Regulatory Reporting

Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Second Floor
Alameda, CA 94502

April 9, 2008

Attn: Haz Mat. Specialist for : 15651 Worthley Dr., San Lorenzo

Re: Proposed Investigative Workplan

Environmental Restoration Services (ERS) is pleased to submit to following Workplan of for your review.

1.0 INTRODUCTION

On April 30, 2003 , one 12000 gallon underground tank last containing diesel was removed at the subject site (Figure 2) by ERS. Analytical results of a groundwater sample recovered from the excavation showed elevated levels of diesel constituents.

ERS treated the affected groundwater within the open excavation, has de-watered the excavation and sampled the re-charge. ERS has also sampled soil imported from off-site for backfilling purposes, and was granted a permit to discharge the treated groundwater to the sanitary sewer. When permission had been granted to use the imported soil as backfill, ERS de-watered the excavation one additional time, and sampled the re-charge, and backfilled the excavation using existing and imported soil. Under a discharge permit granted by the Oro Loma Sanitary District (OLSD), ERS has discharged all of the affected groundwater to the sanitary sewer.

This Workplan first reviews the site background, describes the tank removal, sampling protocols and the analytical results and remedial actions, and then proposes an additional investigative scope of work, as requested by the Alameda County Health Care Services Agency (ACHCSA)

1.1 Site Location

The site is located in a commercial district of San Lorenzo, California on property at 15651 Worthley Dr. (Figure 1).

500 Santa Cruz Avenue * Menlo Park California 94025 * Phone 408/655-9434 * Fax 650/325-3238

1.2 Background

On April 30, 2003, one 12,000 gallon underground tank last containing diesel was removed.

1.3 Site History

1.3.1 Description of Site

The site is occupied by a trucking terminal. About 20% of the site is occupied by the present structures, with the remaining area covered by asphalt and concrete driving surfaces.

2.0 SITE DESCRIPTION

2.1 Site Description

The site is located approximately 200 feet southeast of the corner of Grant Ave. and Worthley Dr.. An approximate 1500 square foot office and trucking terminal is located down the center portion of the parcel with an approximate 2000 square foot truck repair building located in north corner of the parcel. The majority of the remaining property is paved.

2.2 Vicinity Map

A vicinity map is given in Figure 1 which includes the location of any known hydraulic influences. San Lorenzo Creek lies approximately 1600 feet northwest of the site and San Francisco Bay lies approximately 2700 feet northwest of the site. A site map is given in Figure 1 which includes information on adjacent streets.

2.3 Depth to Groundwater

Depth to groundwater based groundwater elevation within the existing excavation at the site and from groundwater borings, is approximately three and one half to four feet below ground surface (bgs.)

2.4 Soil Profile

Previous boring logs show predominantly high plasticity clays starting at the ground surface, becoming a silty clay at approximately three feet bgs., becoming a silty fine sand or clay silt.

2.5 Waste Removal

One tank has been removed from the site.

3.0 PROPOSED INVESTIGATIVE SCOPE OF WORK

The ACHCSA believes that the lab analysis from October 2006 groundwater sample points and the October 2003 recharge sample, does not accurately reflect the quality of the groundwater within and outside of the former tank excavation, and further believes that the October 2006 informal groundwater gradient determination does not accurately reflect the groundwater gradient at the site. The investigative scope of work therefore will be comprised of installing three groundwater monitoring wells at on-site locations and sampling the groundwater at each well location. Groundwater samples and gradient data will be obtained by personnel of Entech Analytical Labs of Santa Clara, CA..

Monitoring well MW-1 will be placed within the former tank excavation to monitor the groundwater quality within the tank pit. The tank pit excavation was backfilled with the existing pea gravel overburden to a depth of approximately 3 feet bgs.. From this depth, to the sub-grade, the excavation was backfilled with pre-tested imported baserock. Monitoring wells MW-2 and MW-3 will be placed approximately 20 feet to the southwest and northwest of the former tank location. The proposed well locations are shown in Figure 2.

3.1 Monitoring Well Installation and Groundwater Sampling

Prior to initiating drilling, a subsurface drilling permit will be obtained from the Alameda County Public Works Agency (ACPWA). ACHCSA will be notified a minimum of 72 hours prior to drilling.

Prior to mobilization of the drill rig on-site, and prior to leaving the site, all associated equipment and well installation equipment will be thoroughly cleaned to removed all soil, oil, grease, mud, tar, etc. The cleaning process will consist of high pressure steam cleaning of the drilling equipment and a high-pressure hot water final rinse. Before drilling the boring, all drilling equipment will be steam-cleaned.

A nominal 8-inch diameter boring will be advanced using a hollow stem auger. Soils will be visually logged and samples collected every five feet. In addition, field instrument and visual observations of petroleum hydrocarbons will be noted on the logs. For wells MW-2 and MW-3, two soil samples, one from the capillary fringe (approximately 4 feet) and from the bottom (approximately 10 feet). These samples will be analyzed for TPH as diesel, MTBE and BTEX. For well MW-1, one from the imported base rock backfill (approximately 2 feet bgs.) will be recovered. This sample will be analyzed for Total Extractable Petroleum Hydrocarbons (TEPH), TPH as gasoline, MTBE, BTEX and LUFT 5 Metals.

Based on the anticipated groundwater depth of approximately 3.5 feet in the vicinity of the site, it is expected that the borings will be terminated, and the monitor wells constructed, at a depth of approximately 10 feet below ground surface. The final choice of screened interval will be selected by the site engineer on the basis of geologic field observations during drilling. The well casing and screens for the monitor well will be constructed with 2-inch diameter, Schedule 40, flush-joint threaded material.

2.6 Previous Investigative and Remedial Work

On April 30, 2003, permission was given by the Health Inspector Robert Weston of the ACHSA to remove the tank from the excavation. The pea-gravel backfill material surrounding the tanks did appear to be stained and emit an odor. The tank was transported to the ECI T.S.D. facility in Richmond.

On April 30, 2003, after removal of the UST, ERS recovered one soil sample ("West SW @4") from the western excavation sidewall at approximately 4' bgs., and one groundwater sample from the excavation ("Pit GW"). The results of the analysis indicated levels of TPH/d, BTEX and fuel oxygenates below the varying detection limit for both samples, with the exception of TPH/d concentrations in groundwater sample "Pit GW" at 2560 parts per million (ppm).

On May 1, 2003 the groundwater within the excavation was inoculated with Solmar L-100 hydrocarbon consuming microbes. The groundwater within the excavation was aerated using a submersible electric pump.

On June 5, 2003, the excavation was dewatered of approximately 5000 gallons and stored on-site within a 5000 gallon aboveground storage tank (AST) and as groundwater was recharging into the excavation, a grab water sample was recovered. The analytical results of the groundwater recharge sample indicated no BTEX above the detection limit and 0.52 parts per million of TPH/d.

On June 5, 2003, one sample was obtained from the water contained in the tank and tested per Oro Loma Sanitary District (OLSD) waste discharge requirements. The analytical results were below discharge limits and a discharge permit was obtained from the OLSD.

On October 1, 2003 the 5000 gallons of groundwater within the AST and approximately 2000 gallons of groundwater within the excavation, was disposed of to the sanitary sewer. On October 1, 2003, as groundwater was recharging into the excavation prior to backfill, a grab water sample was recovered. The analytical results of the groundwater recharge sample indicated no TPH/d above the analytical detection limit. On October 1, 2003, prior to backfill, ERS also recovered one soil sample ("East-SW @4") from the eastern excavation sidewall at approximately 4' bgs.. The analytical results of the soil sample indicated no TPH/d or BTEX above the analytical detection limit.

On October 17, 2006, six borings were advanced at the site using a small diameter push rig (Geo-Probe) to a depth of approximately 8 feet. The borings were located around the former tank location, as shown in Figure 2. Groundwater samples were recovered from each boring. Analytical results did not indicate TPH-diesel, BTEX or MTBE concentrations above the detection limits at any of the sampling points.

The PVC screens will consist of factory-milled 0.020 inch slots. The screens will be installed at the interval from approximately 3.5 to 10 feet below ground surface. A sand pack of clean washed Monterey 2/12 sand will be placed adjacent to the entire screened interval and will be extended a recommended minimum distance of six inches above the top of the screen. The sand pack will be placed by carefully pouring sand down the annulus between the hollow stem and the well casing. The auger will be raised periodically and an auger flight removed to allow the sand to fill the annulus between the casing and the borehole wall.

A one foot thick bentonite pellet seal will be placed above the sand pack. The seal will be placed in the same manner as the sand pack. The bentonite will be hydrated with water at the quantity of 1 gallon per pound of bentonite. The bentonite will be hydrated three times and allowed to swell for a minimum of 45 minutes.

The annulus above the bentonite seal will be grouted with a cement/bentonite grout. The bentonite content of the grout will be approximately three percent by weight. The grout will consist of clean water mixed with Portland cement and powdered bentonite. The grout will be placed in the same manner as the sand pack, or after the auger flights are entirely withdrawn from the borehole.

Well completion will consist of a locking PVC cap and subsurface traffic-rated utility box set at or slightly above grade in concrete.

3.2 Monitor Well Development and Sampling

3.2.1 Monitor Well Development

After the concrete and cement/bentonite grout have set for a minimum of 24 hours, the new wells will be developed by surging, and bailing with clean equipment in order to prepare the well for collection of a representative groundwater sample. A minimum of five casing volumes will be purged from the wells, or until the water is relatively clear. Electrical conductivity (EC), pH, and temperature will be measured periodically to ensure that these parameters stabilize during the course of development. Water generated during development will be stored separately, on-site, in labeled 55gallon drums pending analytical results.

3.2.2 Sampling Procedure

A groundwater sample will be obtained from monitoring wells MW1 through MW3.

Each new monitor well will be sampled after the water level has re-equilibrated from development. Groundwater samples will be collected as follows:

All groundwater well samples and depth to water measurements will be obtained from employees of Entech Analytical Labs of Santa Clara, Ca.. Each well will be bailed until the volume of water withdrawn is equal to at least three casing volumes. To assure that a representative groundwater sample is collected periodic measurements of the temperature, pH and specific conductance will be made. The sample will be collected only when the temperature, pH, and/or specific conductance reach relatively constant value and the well has recharged to a minimum of 80% of its per purge volume.

A hand operated bailer will be used for evacuating the well casing (purging) of the monitor well. Water samples will be collected using a new disposable bailer. An effort will be made to minimize exposure of the sample to air.

Sample containers will be obtained directly from the analytical laboratory or other approved source. To ensure that the analytical laboratory has a sufficient volume of sample for analyses a duplicate sample will be collected. This sample will not be analyzed except as deemed necessary by the laboratory. The duplicate sample will require that a double volume of water is collected. Both samples will be labeled identically. Sample containers will be labeled with self-adhesive tags. Field personnel will label each tag, using waterproof ink, with the following information:

Sampling location; Project name; Date and time samples were collected; Treatment (preservatives, filtered, etc.); Name of sampler.

Subsequent to collection, the samples will immediately be stored on ice in an appropriate ice chest. Samples will be transported under Chain-of-Custody procedures to State Certified Laboratory on the day after their collection. A field log book or individual log sheet shall be maintained throughout the sampling operations.

Sample bottles, bottle caps, and septa will be protected from solvent contact or other contamination. Sampling equipment will be cleaned after its use at each sampling location. Thermometers, pH electrodes, and conductivity probes will also be cleaned after sampling of each well.

Care shall be taken to collect all excess water resulting from the sampling and cleaning procedures. The excess water will be contained in a pre-labeled 55-gallon drum on-site pending receipt of laboratory analyses.

3.2.3 Laboratory Analyses

The following analyses will be performed by Entech on groundwater samples obtained from monitoring wells MW-2 and MW-3:

TPH-diesel (EPA Method 8015M)
BTEX, MBTE, Fuel Oxygenates (EPA Method 8260B)

The following analyses will be performed by Entech on groundwater samples obtained from monitoring well MW-1:

Total Extractable Petroleum Hydrocarbons (TEPH) (EPA Method CATFH)
LUFT 5 Metals (EPA Method 6010)
TPH/g, BTEX, MTBE (EPA Method 8260B)

3.3 Groundwater Gradient Determination

In order to obtain an accurate estimation for groundwater gradient, the top of each well casing will be surveyed to an accuracy of 0.01 feet. Elevations will be determined relative to MSL. The final choice of bench mark will be selected by the site engineer on the basis of proximity to the site.

Approximately 24 hours after sampling the borings, the water levels in each of the casings will be measured within a five-minute period. The water surface elevations in the wells will be calculated using the survey data. An estimated horizontal hydraulic gradient will be calculated based on accurately determined casing locations and depth to water measurements.

4.0 REPORTING

All documents created during the investigation including boring logs, sampling field notes, chains of custody, and laboratory reports will be included in a Report of Findings to be submitted to the ACHCSA.

If you have any questions regarding these comments or scope of work, or wish to add to or alter the scope of this investigation, please do not hesitate to call Ben Halsted at 408-655-9434 so I may resubmit any revisions.

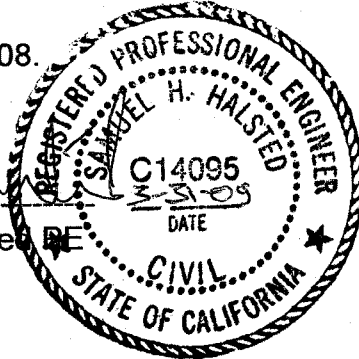
Respectfully submitted this 9th day of April, 2008.



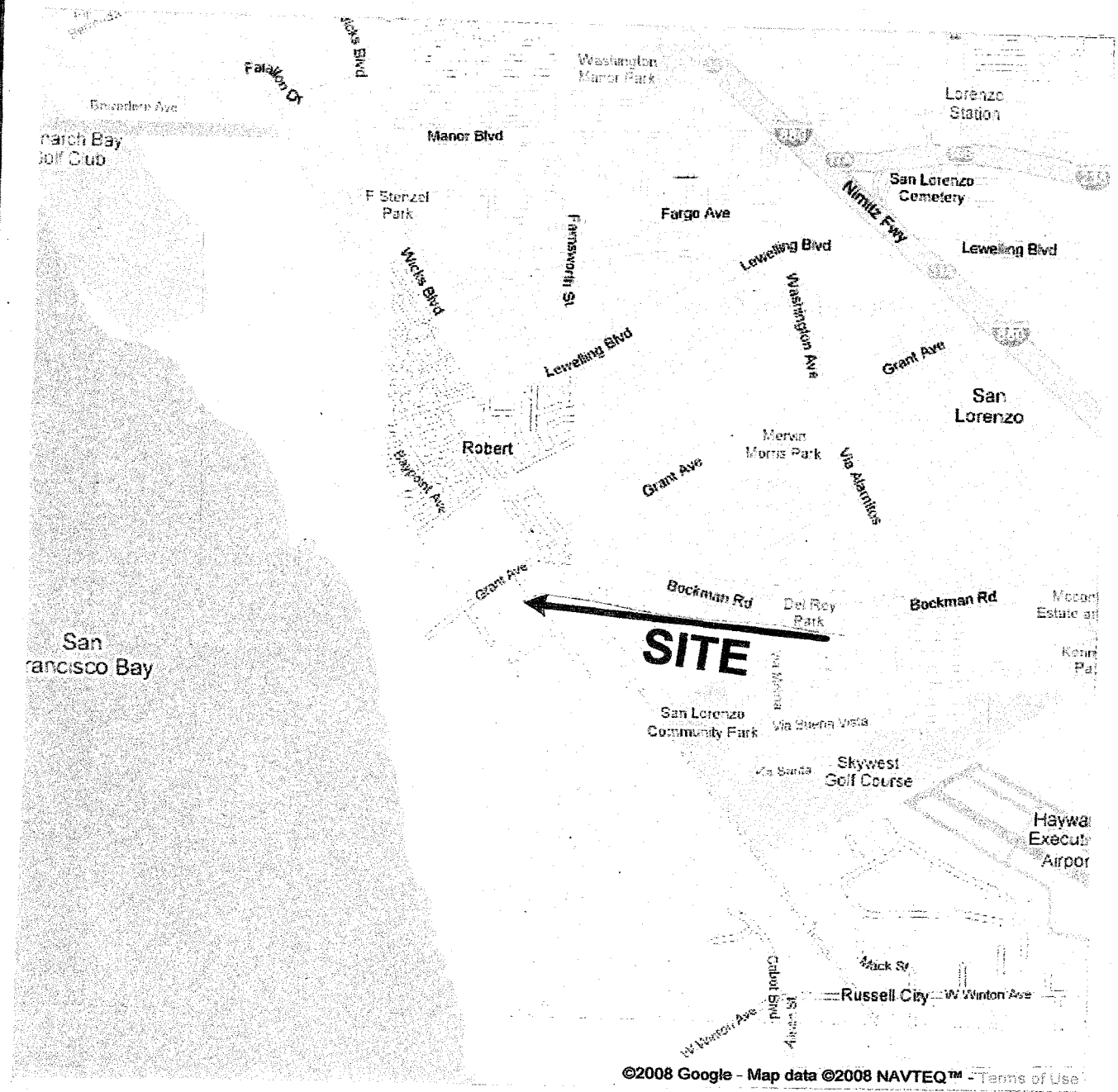
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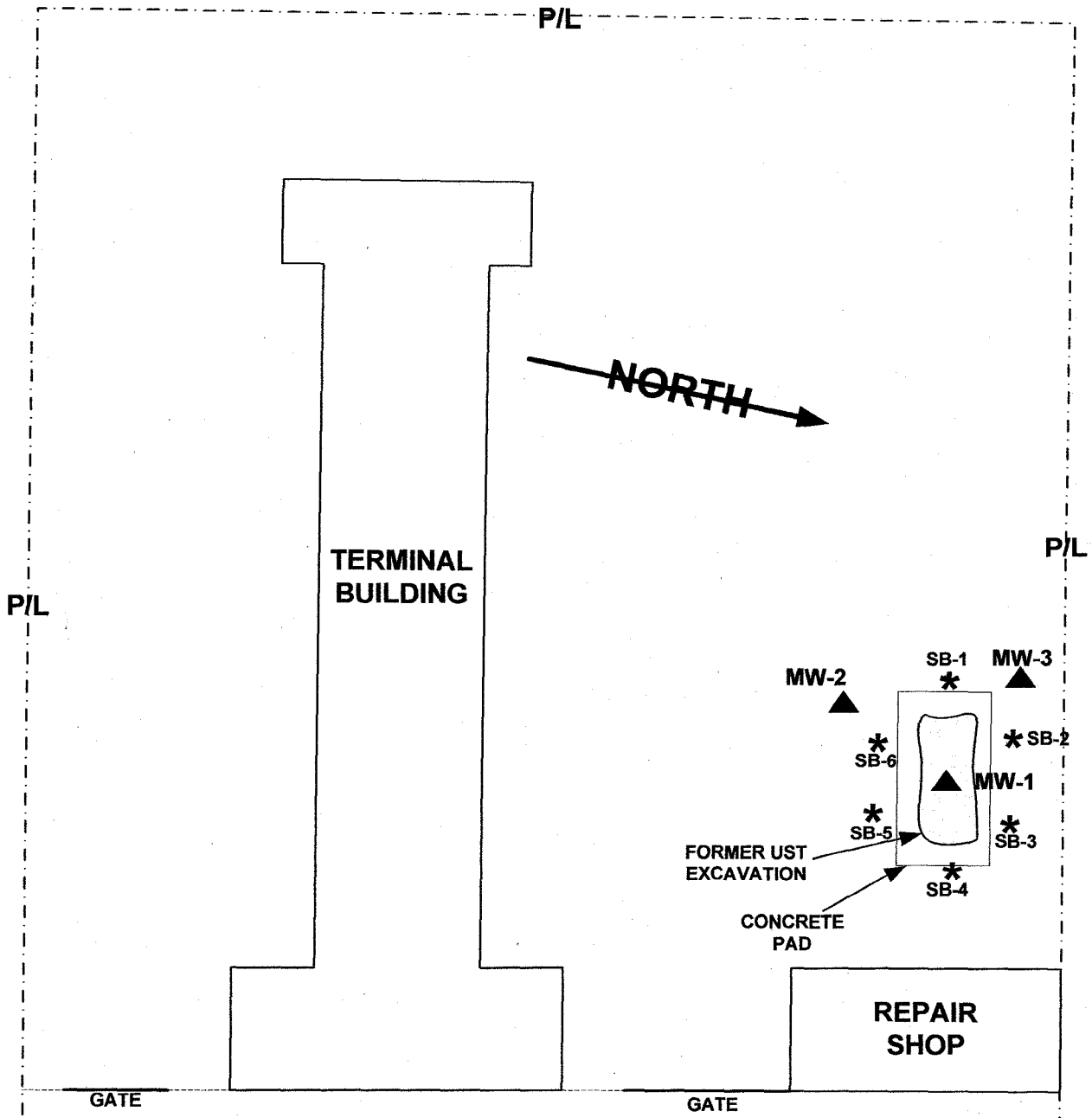


FIGURES



©2008 Google - Map data ©2008 NAVTEQ™ - Terms of Use

VICINITY MAP		
15651 Worthley Dr., San Lorenzo, CA		
	SCALE: 1"= 2000'	BY:
<i>Environmental Restoration Services</i>		FIGURE 1
500 Santa Cruz Ave., Menlo Park, CA 94025		



WORTHLEY DR.

- * 2007 Boring Locations
- ▲ Proposed Monitoring Well Locations

<h1 style="margin: 0;">SITE PLAN</h1>		
<i>15651 Worthley Dr., San Lorenzo, CA</i>		
DATE 4/2/08	SCALE: 1"=40'	BY:
<i>Environmental Restoration Services</i>		FIGURE 2
<i>500 Santa Cruz Ave., Menlo Park, CA 94025</i>		