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Alameda County
Environmental Health

May 31, 2007

Mr. Steven Plunkett
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

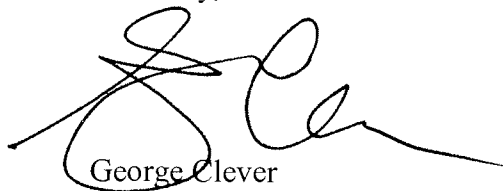
Subject: **Work Plan for Soil and Grab Groundwater Investigation**
Fuel Leak Case No. RO0002822
Watergate Office Towers
2000 Powell Street
Emeryville, California

Hines

Dear Mr. Plunkett:

This letter transmits the Work Plan for Soil and Grab Groundwater Investigation prepared by Geomatrix Consultants, Inc., on behalf of Hines for the property located at 2000 Powell Street in Emeryville, California. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document are true and correct to the best of my knowledge.

Sincerely,



George Clever



Dan Poritzky

May 31, 2007
Project 12924.000

Mr. Steven Plunkett
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Work Plan for Soil and Grab Groundwater Investigation
Fuel Leak Case No. RO0002822
Watergate Office Towers
2000 Powell Street
Emeryville, California

Dear Mr. Plunkett:

Geomatrix Consultants, Inc. (Geomatrix), has prepared this work plan on behalf of Hines (the property owner) to conduct soil and grab groundwater sampling activities in the vicinity of two former underground storage tanks (USTs) and associated dispensers located at 2000 Powell Street in Emeryville, California (the site; Figure 1). This document has been developed to respond to the request for a work plan for a soil and groundwater investigation in a letter dated March 26, 2007 from Alameda County Environmental Health (ACEH) to Hines.

BACKGROUND

Based on information obtained from the Phase I Environmental Site Assessment (ESA) conducted by Geomatrix on behalf of Hines in December 2006, the site is located within a commercial office complex built upon a peninsula in the San Francisco Bay. Beginning in the 1930s, non-engineered fill, consisting of debris and industrial waste, was placed to construct the peninsula. Reportedly, the thickness of the fill ranges from 16 to 22 feet, and overlies young Bay Mud. The fill material includes concrete and wood debris, roofing shingles, tar paper, linoleum, asbestos, asphalt, and roofing scraps/debris. Subsurface investigations on the peninsula were conducted in 1989 (Figure 2). Soil and groundwater sampling results indicated that the peninsula's subsurface is impacted with petroleum hydrocarbons, metals, semi-volatile and volatile organic compounds (SVOCs and VOCs), and asbestos. Previous environmental investigation reports have attributed the source of the subsurface impacts to the fill material. The following table presents chemical results of soil samples collected from borings and groundwater samples collected from wells that were installed for the purpose of assessing background conditions on the peninsula.



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Background Chemical Concentrations in Soil and Groundwater¹

Sample ID	Sample Date	Constituents Detected						
		TPHg ²	TPHd ³	Oil & Grease	Benzene	Toluene	Ethyl-benzene	Xylenes
Soil Samples (milligrams per kilogram)								
MW-1	Jan-89	1,100	1,500	9,000	0.14	7	6.6	86
MW-2	Jan-89	44	170	40,000	0.26	0.48	0.50	7.2
MW-3	Jan-89	ND ⁴	12	12	ND	ND	ND	ND
MW-4	Jan-89	3	89	21,000	0.1	0.72	0.14	1.6
MW-5	Jan-89	ND	27	11,000	ND	ND	ND	ND
Groundwater Samples (micrograms per liter)								
MW-1	Jan-89	2,500	290	1,400	4	430	9	140
	May-89	7,700	11,000	3,800,000	47	680	35	550
MW-2	Jan-89	67	< 50	<1,000	1.1	0.57	< 0.5	0.9
	May-89	130	430	7,200	14	0.84	< 0.3	1.2
MW-3	Jan-89	<50	540	<1,000	<0.5	<0.5	<0.5	0.64
	May-89	30	420	6,100	1.4	0.52	<0.3	0.3
MW-4	Jan-89	120	540	3,500	0.93	7.9	1.9	6.9
	May-89	150	500	7,200	1.7	3.9	1.1	3.8
MW-5	Jan-89	< 50	270	<1,000	< 0.5	1.1	< 0.5	1.8
	May-89	34	390	5,000	< 0.3	< 0.3	< 0.3	0.84

Notes:

1. Source: Assessment of Environmental Conditions, Watergate Towers, Emeryville, California, Golder Associates, Inc., June 16, 1997
2. TPHg – total petroleum hydrocarbons quantified as gasoline
3. TPHd – total petroleum hydrocarbons quantified as diesel
4. ND – not detected

The site formerly contained two underground storage tanks (USTs), two fuel dispensers, and associated piping located south of Tower III (Figure 2). The USTs and fuel dispensers were removed in 1998 and the associated fuel pipelines were reportedly rinsed and abandoned in-place. Analytical results of samples collected during UST removal activities indicated the presence of low concentrations of petroleum hydrocarbons in soil from the excavated tank pit. Analytical results of a water sample collected from the UST excavation indicated that the water in the excavation was impacted with total TPHg, benzene, toluene, ethylene, and xylenes (collectively BTEX) at concentrations of 30,000, 1,000, 6,900, 380, and 4,500 micrograms per liter, respectively. Additionally, TPHg was detected in a shallow soil sample collected adjacent to the former fuel dispensers at a concentration of 27,000 milligrams per kilogram.



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The UST removal report, submitted to ACEH on September 18, 1998 by Golder Associates¹, recommended no further action in regard to the former USTs and fuel dispensers, stating that “petroleum hydrocarbons detected in soil and groundwater are derived from site fill materials and represent background conditions.” However, ACEH did not authorize regulatory closure at that time. ACEH, in a letter issued on March 26, 2007, requested that additional investigation be conducted to evaluate potential impacts from the former UST system.

Proposed Subsurface Investigation Activities

Because it is understood that the entire peninsula is composed of undocumented fill with unknown chemical impacts, ACEH, Hines, and Geomatrix have agreed to focus this environmental investigation on the former USTs and associated fuel dispensers. As such, the objective of the proposed investigation is to evaluate whether an environmental impact specific to the former USTs and fuel dispensers exist on the site.

Geomatrix proposes the collection of soil and groundwater samples from three targeted locations in the vicinity of the former USTs and fuel dispensers. Proposed soil and groundwater sampling locations are shown on Figure 3. One boring will be advanced immediately downgradient of the approximate location of the former UST excavation, and two borings will be advanced in the area of the former fuel dispensers. These two borings will be located in the driveway of the current parking garage. The locations of these borings will require the investigation to be conducted at night or on the weekend.

Prior to conducting field activities, Geomatrix will prepare a site-specific health and safety plan, obtain the necessary drilling permits, notify Underground Service Alert (USA), and contract with a private utility locator to screen each proposed boring location for underground utilities.

Borings will be advanced by a licensed drilling contractor using a hydraulically-powered direct push drilling rig with a dual-tube continuous sampling system. All soil borings will be advanced to approximately 15 feet bgs or 5 feet below first observed water, to allow for the collection of soil and groundwater samples. Lithologic logs will be prepared by a Geomatrix field geologist in accordance with ASTM International Standard D2488 and the Uniform Soil Classification System.

Recovered soil will be screened in the field with an organic vapor meter equipped with a photoionization detector (PID) or equivalent device. Up to two soil samples will be collected from each boring location and submitted for laboratory analysis. These samples will be

¹ *Removal of Two 10,000 Gallon Capacity Underground Storage Tanks, Watergate Towers Property, 2200 Powell Street, Emeryville, California, Golder Associates Inc., September 18, 1998.*



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selected on the basis of PID readings and/or observations of significant staining or odors. If there is no evidence of impacts observed in the field, soil samples will be collected at approximately 3 feet bgs and directly above the soil/groundwater interface. Soil samples will be collected in new, clean, butyrate liners and sealed at each end with Teflon® sheets, plastic end caps, and silicone tape.

Based on previous water level measurements at the site, groundwater ranges in depth from approximately 5 to 10 feet bgs. Grab groundwater samples will be collected by placing a temporary well point in the borehole and retracting the drive casing approximately 5 feet to expose the well screen. The temporary well point will consist of ¾-inch diameter Schedule 40 polyvinyl chloride casing with 5 feet of factory-slotted well screen. The screen will be installed across the interface of the saturated/unsaturated zone. The sample will be collected using a peristaltic pump equipped with new, clean polyethylene tubing. Grab groundwater samples will be decanted into laboratory-supplied containers.

Soil and grab groundwater samples will be labeled, sealed in plastic bags, and stored in an ice-chilled cooler prior to delivery to a California Department of Health Services-certified laboratory under Geomatrix chain-of-custody procedures. For quality assurance/quality control purposes, one groundwater matrix spike/matrix spike duplicate (MS/MSD) sample, one soil MS/MSD sample, equipment blank samples for both soil and water, and one blind duplicate groundwater sample will be collected. Additionally, a trip blank will accompany each cooler submitted to the laboratory.

Following completion of sampling activities, each boring will be grouted to ground surface according to the requirements specified by the permitting agency. Borings will be completed at ground surface to match existing conditions.

Analytical testing of soil and grab groundwater samples will be conducted by a state-certified analytical laboratory. The soil and grab groundwater samples will be analyzed for TPHg, BTEX, and methyl tert-butyl ether using U.S. Environmental Protection Agency Method 8260B.

Reporting

Once the analytical results have been received, Geomatrix will conduct internal validation of the data and prepare a report documenting the findings of the soil and grab groundwater investigation. The report also will include recommendations for additional investigation, if necessary. In addition to electronically submitting the report to ACEH, a copy of the report will be uploaded to the State Water Resources Control Board's Geotracker database.



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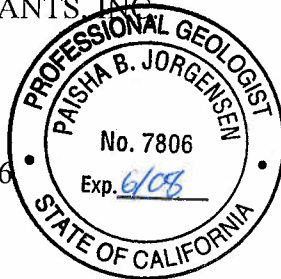
Proposed Schedule

Upon approval of this work plan, Geomatrix will proceed with subcontractor contracting and scheduling. Based on subcontractor availability, an attempt will be made to complete the field activities for the soil and groundwater investigation within four weeks following work plan approval. We expect analytical testing will take approximately one week. We anticipate submittal of the final investigation report to ACEH within three weeks of receipt of the analytical results.

Sincerely yours,

GEOMATRIX CONSULTANTS, INC.

Paisha Jorgensen, PG #7806
Project Geologist



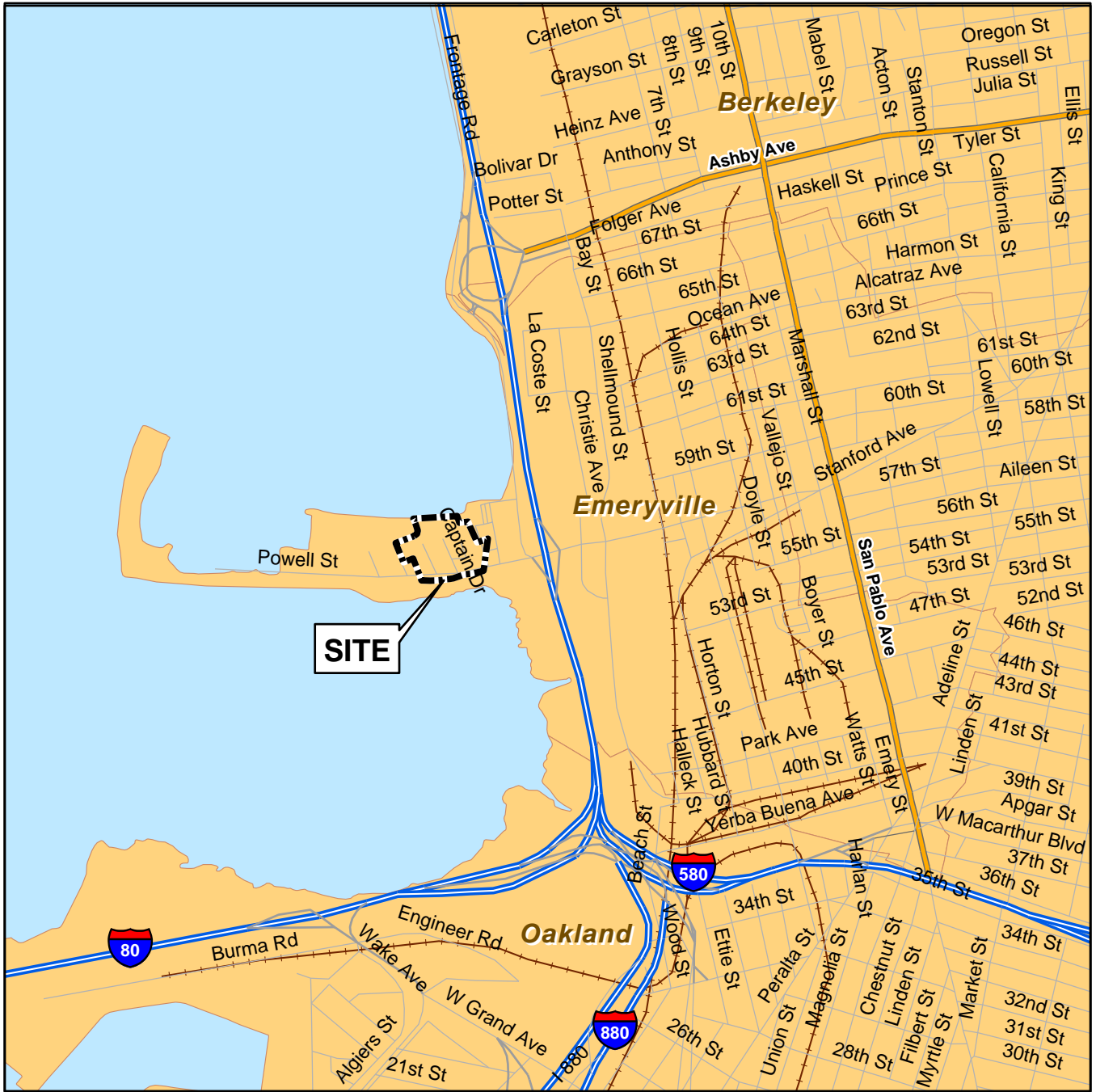
Susan M. Gallardo, PE #38154
Principal Engineer

pbj/smg/smm

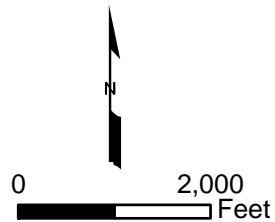
Attachments: Figure 1 – Site Location Map
Figure 2 – Previous Sampling Locations
Figure 3 – Proposed Sampling Locations

cc: Mr. Dan Poritzky, Hines
Mr. George Clever, Hines

Figures



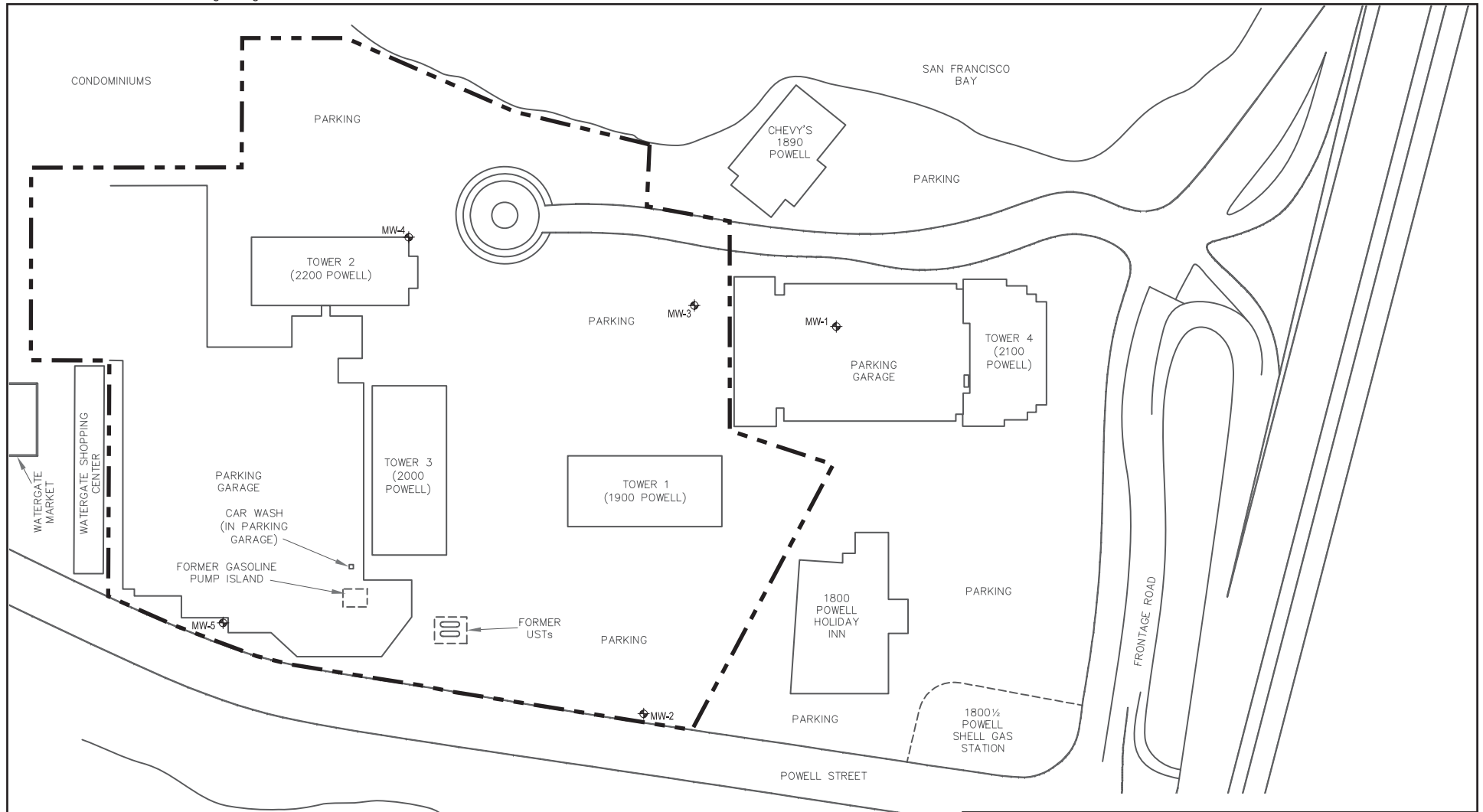
Basemap from Streetmap 2003 (Environmental Systems Research Institute, Inc. [ESRI], 2003).



SITE LOCATION MAP
 1900, 2000, 2200 Powell Street
 Emeryville, California

By: _	Date: 05/23/2007	Project No. 12924.000
 Geomatrix		Figure 1

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EXPLANATION

--- Property boundary

◆ Monitoring well

Note:

Basemap from URS Phase I ESA, dated September 28, 2006.



Not to Scale

**PREVIOUS SAMPLING LOCATIONS
2000 Powell Street
Emeryville, California**

By: _	Date: 05/23/2007	Project No. 12924.000
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Figure **2**

