Site Management Completion Report
5885 Hollis Street
Emeryville, CA 94608
January 5, 2007
RO0002621

Appendix A – Site Management Plan and Approval Letter

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

December 8, 2005

Mr. Fillmore Marks
Marks Management Company
505 Sansome St., Ste 1400
San Francisco, CA 94111-3118

Mr. Geoffrey Sears
Wareham Development
1120 Nye St., Suite 400
San Rafael, CA 94901

Dear Messrs. Marks and Sears:

Subject: SLIC Site RO0002621, Emeryville Industrial Court, 5885 Hollis St., Emeryville, CA 94608

Alameda County Environmental Health (ACEH) staff has reviewed the files for the subject site including the November 30, 2005 *Response to Letter Dated 28 October 2005 and Work Plan for Post-Excavation Soil and Groundwater Sampling 5885 Hollis Street Emeryville, California* by Treadwell and Rollo. The letter report addresses the technical comments in the County's October 28, 2005 letter. We approve of the proposed development and the Site Management Plan with the clarifications in the November 30, 2005 letter report with the following technical comments on the Work Plan Post-Excavation Soil and Groundwater Sampling.

TECHNICAL COMMENTS

1. We request that all MTBE analysis on soil and water samples be run by EPA Method 8260 to avoid false positive detections, which potentially occur while using EPA Method 8020. We also request that those samples taken where TPHg is a contaminant of concern also analyze for the other oxygenates, TAME, ETBE, DIPE, TBA and ethanol and the lead scavengers, EDB and EDC.
2. We concur with the proposed locations for the post-excavation soil samples, however, we request that additional samples be taken and analyzed in the following areas; loading rack (at least one) and along the southern border of this property and the current Chevron station (at least four). These are areas of potential and known contaminant releases and where commingle plumes may exist. We also recommend that additional sampling be done in other contaminated areas observed during the excavation.
3. We understand that the groundwater dewatering system will be composed of approximately 30 extraction wells, manifold to a Baker tank and that wells will be able to sample well from specific "areas". This is desirable as this would be useful information to determine where impacted areas are, whether off-site releases have impacted the site and where future monitoring should be located. We recommend, at a minimum, groundwater sampling be done in the southeast, southwest and northern portions of the site where contamination has been identified and any other locations where soil contamination is subsequently identified. As noted previously, analysis should be according to item 1.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) now request submission of reports in electronic form. The electronic copy is intended to replace the need for a paper copy and is expected to be used for all public information requests,

regulatory review, and compliance/enforcement activities. Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all reports is required in Geotracker (in PDF format). Please visit the State Water

Resources Control Board for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "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." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this case meet this requirement.

If you have any questions, please call me at (510) 567-6765.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

cc: files, D. Drogos
Mr. Ignacio Dayrit, City of Emeryville, 1333 Park Ave., Emeryville, CA 94608
Mr. Glenn Leong, Treadwell & Rollo, 501 14th ST., 3rd Floor, Oakland, CA 94612
12_8_05 5885 Hollis St

SITE MANAGEMENT PLAN
5885 HOLLIS STREET
Emeryville, California

Wareham Development
San Rafael, California

14 July 2005
Project No. 4069.01

Treadwell&Rollo
Environmental and Geotechnical Consultants

14 July 2005
Project 4069.01

Ms. Donna Drogos
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Subject: Site Management Plan
5885 Hollis Street
Emeryville, California

Dear Ms. Drogos:

On behalf of Wareham Development, Treadwell & Rollo has prepared the enclosed Site Management Plan (SMP) for the proposed development of the 5885 Hollis Street property for your approval. Correspondence in 2000 and 2001 with Susan Hugo of the Alameda County Health Care Services Agency indicated that there were several environmental issues to be addressed prior to redevelopment of the property (under STID#6687). The previous redevelopment plan, by Marks Management, was for commercial use. Marks Management, the current property owner, is no longer planning on implementing their redevelopment plan. Wareham Development intends to purchase the property and demolish the existing buildings and construct a multi-story office building (likely to be laboratory space) with a sub-grade, mechanically-ventilated parking garage at the Site.

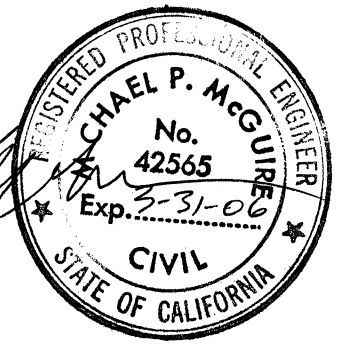
The enclosed SMP has been prepared to address concerns raised by the Alameda County Health Care Services Agency in 2001 regarding the Marks Management Development, as well as issues identified during Treadwell & Rollo's 2005 Phase II Environmental Site Assessment conducted during Wareham Development's due diligence period. A copy of the 3 March 2005 Phase II Environmental Site Assessment Report is also included for your review, although the data from the 2005 report is incorporated into the SMP.

.Please call me at (510) 874-4500 at extension 554 (Glenn) if you have any questions.

Sincerely yours,
TREADWELL & ROLLO, INC.

Glenn M. Leong
Senior Scientist

Michael P. McGuire, P.E.
Principal Engineer



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cc: Geoff Sears, Wareham Development
Ignacio Dayrit, City of Emeryville

SITE MANAGEMENT PLAN
5885 HOLLIS STREET
Emeryville, California

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San Rafael, California

14 July 2005
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Treadwell&Rollo
Environmental and Geotechnical Consultants

Treadwell&Rollo

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SITE MANAGEMENT PLAN
5885 HOLLIS STREET
Emeryville, California

1.0 INTRODUCTION

This Site Management Plan (SMP) has been prepared by Treadwell & Rollo Inc. (Treadwell & Rollo) on behalf of Wareham Development for use during the redevelopment of the property located at 5885 Hollis Street in Emeryville, California (the Site), as shown on Figures 1 and 2. The SMP is intended to fulfill the redevelopment requirements provided by the Alameda County Health Care Services Agency (ACHCS) to Marks Management Company (the current property owner) in a letter dated 16 January 2001 regarding chemical concentrations in soil and groundwater at the Site. Marks Management previously considered a redevelopment plan at the Site that included construction of a two-story building with an above ground four-level parking structure. Marks Management is no longer pursuing the previously proposed commercial development. Wareham Development intends to purchase the property and demolish the existing buildings and construct a multi-story building with a mechanically ventilated sub-grade parking garage at the Site. The current plan is for the building to include commercial use, including laboratory space, but residential use has not been completely ruled out for the Site.

1.1 Purpose and Scope

The purpose of this SMP is to provide risk management measures to mitigate worker and Site user and neighbor risks associated with the presence of petroleum hydrocarbons and benzene in subsurface soil and groundwater underneath the Site during and after construction. The measures include procedures and protocols for the identification, handling, management, and disposal of hazardous materials encountered in Site soil and groundwater during redevelopment. The procedures and protocols are designed to facilitate compliance with applicable federal, state, and local laws and regulations regarding hazardous and industrial waste management.

1.2 Project Responsibilities and Points of Contact

Unless otherwise noted in this document, Wareham Development will be responsible for implementation of the procedures and protocols outlined in this document. Wareham may designate construction/excavation responsibilities to an excavation contractor. Primary contact for the Wareham Development will be Mr. Geoff Sears.

2.0 SITE BACKGROUND

The following subsections describe Site location, Site geology and hydrogeology, and development plans.

2.1 Site Location and Characteristics

The Site is approximately 220 feet by 500 feet in plan dimension and is bounded by Hollis Street to the east, 59th Street to the north, Peladeau Street to the west, and a Chevron Service Station and Powell Street to the south (Figure 1). The Site is currently occupied by four buildings: a one-story concrete building that occupies 5805 through 5885 Hollis Street, a one-story concrete building that occupies 5810 through 5890 Peladeau Street, and two one-story metal framed buildings that occupy the remainder of 5805 Hollis Street. The remaining area is asphalt paved parking (Figure 2).

2.2 Site Geology and Hydrogeology

Approximately 3 to 6 inches of asphalt over aggregate base cover the paved portions of the Site. The aggregate base is generally underlain by clays and clayey sands. Fine to course sands have been encountered at shallow intervals up to 3 feet below ground surface (bgs). Clay observed from the surface to 13 feet bgs apparently becomes stiffer (based on visual observations) with increasing depth.

Groundwater was measured at between 9 and 10 feet bgs in boring TR-31 (Figure 3). This approximate groundwater depth may not represent a stabilized level, as the actual groundwater level in a test boring can take from several hours to days to stabilize.

2.3 Development Plans

The development plans for the Site are still being completed at this time, but conceptually include either commercial/laboratory space or multi-family residential constructed over sub-grade parking. It is likely that the parking area will occupy much of the Site footprint. With the exception of raised beds for landscaping, no exposed soil is anticipated for the development.

3.0 HISTORICAL SITE USE AND ENVIRONMENTAL INVESTIGATIONS

Previous land use and environmental investigation information was derived from the following documents:

- Weiss Associates, 1995. *Environmental Site Assessment, Emeryville Industrial Court.* March 14.
- Environmental Resolutions, Inc., 2000. *Phase I Environmental Site Assessment, Former Unocal Distribution Plant 9926-999, 5885 Hollis Street, Emeryville, California*. June 22.
- Treadwell & Rollo, Inc., 2000a. *Environmental Site Characterization, 5885 Hollis Street, Emeryville, California*. May 12.
- Treadwell & Rollo, Inc., 2005. *Phase II Environmental Site Assessment, 5885 Hollis Street, Emeryville, California.* March 3.

Prior to 1917, the Site and vicinity appeared to be vacant land. Union Oil Company of California occupied the site from 1917 to 1964. Intermountain Terminal Company, an affiliate of Pacific Intermountain Express Company, owned the property from 1964 to 1974. In 1974, the

Marks Management Company purchased the property and the current buildings, with the exception of the portions of the 5805 building, which was constructed in 1985.

Union Oil Company of California reportedly used the property (including the Chevron service station property to the south of the Site) as a distribution facility, which contained many above- and underground petroleum storage tanks, a garage along Hollis Street, and an auto repair shop along Peladeau Street. Along the southeastern portion of the Site, a total of 40,000-gallons of lubricating oil were reportedly stored in aboveground tanks. Figure 2 indicates the approximate locations of some of the tanks and other features of the Union Oil operations.

During the remodeling of one of the buildings in 1985 and more recently during the widening of 59th Street and the replacement of an underground utility in 1999, petroleum hydrocarbons were discovered in the soil with total petroleum hydrocarbons as diesel (TPHd) detected at a maximum concentration of 13,000 milligrams per kilogram (mg/kg) and total petroleum hydrocarbons as motor oil (TPHmo) at 15,000 mg/kg. The excavated soil was reportedly transported and disposed of at a regulated landfill.

In 1990, an unknown 10,000-gallon underground gasoline storage tank was reportedly located and removed from the Site by a tenant (S. B. Thomas). No records were found in regards to the removal of the underground storage tank. However, according to the property owners, soil contamination was noted during the tank removal and the affected soil was disposed at a regulated landfill.

In April 2000, Treadwell & Rollo performed a subsurface investigation for Marks Management Company that included the collection of soil and grab groundwater samples. In January 2005, Treadwell & Rollo performed a subsurface investigation for Wareham Development that included the collection of soil and grab groundwater samples. Figure 3 presents the sampling locations for the 2000 and January and June 2005 investigations. The results of these investigations are summarized below.

3.1 2000 Investigation

The April 2000 investigation included collection of soil samples from 17 exploratory borings and collection of groundwater grab samples from four exploratory borings. The investigation was conducted to provide additional soil and groundwater data for a proposed development at the Site that was to include demolishing the existing buildings and the construction of a two-story office building with a four-level garage.

3.1.1 Soil Results

Results of the soil sample analyses indicated the presence of:

- total recoverable petroleum hydrocarbons (TRPH) up to 9,900 mg/kg,
- total petroleum hydrocarbons as gasoline (TPHg) up to 160 mg/kg,
- total petroleum hydrocarbons as diesel (TPHd) up to 360 mg/kg,
- total petroleum hydrocarbons as motor oil (TPHmo) up to 6,600 mg/kg
- benzo(a)pyrene up to 660 micrograms per kilogram (ug/kg),
- carbon disulfide up to 17 ug/kg,
- total chromium up to 97 mg/kg,
- lead up to 150 mg/kg,
- nickel up to 110 mg/kg; and,
- zinc up to 110 mg/kg.

The maximum concentration of TRPH and TPHmo were each detected in sample TR-1-4.0, which is located near the northeast corner of the Site near 59th Street. The maximum detected concentration of TPHg was detected at TR-12, which is located near the former oil pump area near the southwest corner of the Site. When encountered elsewhere, TRPH, TPHg, and TPHmo were generally at concentrations one order of magnitude lower. The only volatile organic

compound (VOC) detected at or above the laboratory reporting limits in the soil samples analyzed was carbon disulfide in sample TR-18-15 at a concentration of 17 ug/kg. Benzo(a)pyrene, the only semi-volatile organic compounds (SVOC) detected, was found in 5 of the 9 soil samples analyzed in concentrations ranging from 540 to 600 ug/kg. Figure 4 present the TPHg and TPHmo concentrations in soil.

3.1.2 Groundwater Results

Grab groundwater samples collected from four of the soil borings in 2000 indicated the presence of:

- TRPH up to 9,900 ug/L,
- TPHg up to 3,300 ug/L,
- TPHd up to 700 ug/L,
- TPHmo up to 1,400 ug/L

TPHg was detected in the groundwater collected from boring TR-1 and TR-12 at concentrations of 98 and 3,300 ug/L, respectively. TPHd was also detected in groundwater samples from these borings at concentrations of 130 and 700 ug/L, respectively.

TRPH and motor oil were detected in the groundwater samples collected from borings TR-6 and TR-12 at concentrations of 6,600 and 9,900 ug/L, respectively. TPHmo was detected in the groundwater samples collected from borings TR-6 and TR-9 at concentrations of 1,400 and 420 ug/L, respectively. Grab groundwater samples were not analyzed for benzene, toluene, ethylbenzene or xylenes in the 2000 investigation.

The results of the 2000 investigation, together with the 1995 Weiss Associates Environmental Site Assessment, were submitted by Marks Management Company to the Alameda County Health Care Services Agency (ACHCSA) for review related to their proposed development of the Site. In a letter dated 23 June 2000, ACHCSA indicated several issues would need to be

addressed prior to development of the Site. Treadwell & Rollo submitted a letter dated 8 August 2000 that addressed the identified issues.

In January 2001, a meeting was held between ACHCSA, Marks Management, their architect, the City of Emeryville, and Treadwell & Rollo to discuss changes in the development plan documented in a letter prepared by Treadwell & Rollo dated 8 December 2000. The revision to the plan included excavation of the entire site to a depth of approximately 10 feet bgs. The following issues were identified by ACHCSA to be addressed prior to development of the Site:

- Potential future groundwater intrusion into the basement of the building.
- Evaluate and demonstrate that the proposed construction activities will not create migration of on-site and off-site contamination during construction and after completion of the development.
- Evaluate vapor seepage into the basement/building and identify human health risks to the occupants of the proposed building.
- Provide to ACHCSA site development specifics, including proposed site configuration and excavation depths.
- Development of a human and environmental risk assessment for the proposed use of the Site, including development of a site conceptual model identifying sources of releases, chemicals of potential concern, routes of exposure (including vapor seepage), and sensitive receptors.
- Development of a short-term and long-term risk management plan to address construction health and safety, soil and groundwater management, dust control, stormwater prevention, institutional controls, and other protocols for handling soil and groundwater.
- Collect confirmation samples for chemicals in soil and groundwater.

- Preparation contingency plan for unexpected conditions encountered during construction.
- A report after completion of development that documents soil and/or groundwater disposed off-site and results of confirmation soil and groundwater sampling.

Copies of the ACHCSA and Treadwell & Rollo correspondence are included in Appendix A.

3.2 January 2005 Investigation

The objective of the January 2005 investigation was to further assess whether hazardous substances or petroleum products that affected soil and/or groundwater beneath the site. The information developed in the ESA prepared by Weiss Associates (1995) and the 2000 investigation indicates that activities from the Union Oil Company distribution facility, the Intermountain Terminal Company truck storage area and parts warehouse and a Chevron Service Station located immediately adjacent to the Site to the south have likely affected soil and groundwater at the Site. In addition, the Site is potentially underlain by artificial (imported) fill material, which frequently contains elevated concentrations of lead. Therefore, the 2005 investigation included advancing nine environmental soil borings (TR-19 through TR-22, TR-25, and TR-28 through TR-31 shown on Figure 2), with the collection of soil samples and the collection of grab groundwater samples from four borings. Soil and groundwater samples were selectively analyzed for TPHd, TPHmo, TPHg, benzene, toluene, ethylbenzene and total xylenes (BTEX), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and total lead.

Five additional sampling locations were proposed based on previous site operations, but were inaccessible in January 2005 due to lack of Site access.

3.2.1 Soil Results

TPHd was detected in 17 of 18 soil samples analyzed and ranged from less than 1.0 mg/kg in TR-19 (at 6.0 feet bgs) to a maximum of 1,100 mg/kg in TR-31 (at 2.5 feet bgs). All detections of TPHd were reported with one or more laboratory analytical qualifiers including “individual

samples may exhibit a chromatographic pattern which does not resemble the laboratory standard for diesel fuel", "lighter hydrocarbons may have contributed to the analytical concentration", and "heavier hydrocarbons may have contributed to the analytical concentration". TPHmo was detected in 14 of 18 soil samples analyzed and ranged from less than 5.0 mg/kg in several samples to a maximum of 2,700 mg/kg in TR-31 (at 2.5 feet bgs). Several detections of TPHmo were reported with one or more laboratory qualifiers that indicate that lighter or heavier hydrocarbons may have contributed to the analytical concentration.

TPHg was detected in seven of 18 soil samples analyzed and ranged from less than 1.0 mg/kg in several samples to a maximum of 2,100 mg/kg in TR-25 (at 6.0 feet bgs). Several detections of TPHg were reported with a laboratory qualifier indicating the sample exhibits chromatographic pattern which does not resemble the laboratory standard. Figure 4 present the TPHg and TPHmo concentrations in soil.

Total lead was detected in all four soil samples analyzed. Total lead concentrations in the samples ranged from 5.6 mg/kg in TR-28 (at 2.0 feet bgs) to a maximum of 14 mg/kg in TR-25 (at 2.0 feet bgs). No total lead concentrations were greater than ten times the STLC for lead, therefore no soluble lead tests were performed.

PCBs were detected in one soil sample analyzed. Aroclor-1260 was detected in soil sample TR-25 (at 2.0 feet bgs) at a concentration of 11 micrograms per kilogram (ug/kg). This concentration is below the residential surface soil ESL for PCBs of 220 ug/kg.

3.2.2 Groundwater Results

Groundwater was measured in one boring (TR-31) at 9.88 feet bgs, although this was not a stabilized water level measurement. TPHd was detected in three of four groundwater samples analyzed and ranged from 270 ug/L in TR-31 to 640 ug/L in TR-30. All TPHd detections had laboratory qualifiers indicating that both lighter and heavier hydrocarbons contributed to the total analytical concentration. TPHmo was also detected in three of four samples analyzed and ranged

from 340 ug/L in TR-29 to a maximum of 1,500 ug/L in TR-31. The TPH-MO detection in TR-29 had a laboratory qualifier indicating that lighter hydrocarbons contributed to the total analytical concentration.

TPHg was only detected in TR-25 with a concentration of 150,000 ug/L. This concentration is in excess of the residential groundwater ESL of 500 ug/L, and may suggest the presence of free-phase hydrocarbons in the subsurface. Benzene was also detected in TR-25 at a concentration of 2,500 ug/L. Toluene was detected in three of four samples analyzed and ranged from 0.56 ug/L in TR-29 to a maximum of 0.85 ug/L in TR-30. Ethylbenzene was detected in TR-25 at a concentration of 3,600 ug/L. Xylenes were detected in all four groundwater samples analyzed. In sample TR-25, total xylenes (the sum of the meta, para, and ortho isomers) were detected at a concentration of 1,720 ug/L. In the remaining three samples, m,p-xylenes were detected at concentrations ranging from 0.57 ug/L in TR-31 (GW) to 0.85 ug/L in TR-30 (GW).

3.3 June 2005 Investigation

Site access was granted in June 2005 at sampling at locations along the south end of the Site. Each of these locations are within the existing Site buildings. Because of the elevated concentrations of TPHg and benzene in groundwater detected at TR-25 during the January 2005 investigation, additional sampling in the area was considered necessary to evaluate the extent of benzene and TPHg in groundwater. The June 2005 investigation included soil and groundwater sampling near the TR-23, TR-24, TR-26, and TR-27 locations previously proposed.

The investigation plan included the collection of groundwater samples and soil samples near the groundwater interface from four locations by advancing a borehole to at least two feet below the groundwater surface. Because the sample locations are within existing buildings, the borings were advanced using hand augering equipment. At boring locations TR-26 and TR-27, an obstruction was encountered approximately 4 feet below ground surface. It appears that the obstruction was concrete and may be a second building slab or foundation. Therefore, no

groundwater samples and only shallow soil samples were collected at TR-26 and TR-27. The laboratory data for the June 2005 investigation are included in Appendix B.

3.3.1 Soil Results

TPHd was detected in the 5 soil samples analyzed and ranged from 46 mg/kg in TR-24 (at 4.0 feet bgs) to a maximum of 2,100 mg/kg in TR-26 (at 4.0 feet bgs). All detections of TPHd were reported with one or more laboratory analytical qualifiers including "individual samples may exhibit a chromatographic pattern which does not resemble the laboratory standard for diesel fuel", "lighter hydrocarbons may have contributed to the analytical concentration", and "heavier hydrocarbons may have contributed to the analytical concentration".

TPHg was detected in three of the five soil samples analyzed and ranged from 2.3 mg/kg in TR-23 (at 4.0 feet bgs) to a maximum of 390 mg/kg in TR-23 (at 9.0 feet bgs). Several detections of TPHg were reported with a laboratory qualifier indicating the sample exhibits chromatographic pattern which does not resemble the laboratory standard. Figure 4 includes the TPHg concentrations in soil.

Benzene was detected only in TR-23 at 97 ug/kg at 4 feet bgs and at 200 ug/kg at 9 feet bgs. Other petroleum-related chemicals detected in the soil samples from TR-23 and TR-26 include the following:

- Ethylbenzene up to 600 ug/kg
- m,p-Xylenes up to 190 ug/kg
- o-Xylenes up to 22 ug/kg
- Isopropylbenzene up to 180 ug/kg
- Propylbenzene up to 480 ug/kg

- 1,3,5-Trimethylbenzene up to 69 ug/kg
- 1,2,4-Trimethylbenzene up to 250 ug/kg
- Sec-Butylbenzene up to 42 ug/kg
- N-Butylbenzene up to 290 ug/kg
- Naphthalene up to 310 ug/kg

The mix of petroleum related chemicals were also detected in the groundwater samples collected from TR-23 and TR-24, as discussed in Section 3.3.2.

3.3.2 Groundwater Results

The groundwater samples collected from borings TR-23 and TR-24 indicated the presence of TPHd at 8,400 ug/L and 6,800 ug/L, respectively. The TPHd results had laboratory qualifiers indicating that both lighter and heavier hydrocarbons contributed to the total analytical concentration. TPHg was detected at 28,000 ug/L at TR-23 and 91,000 ug/L at TR-24. These concentrations are in excess of the residential groundwater ESL of 500 ug/L, and may suggest the presence of free-phase hydrocarbons in the subsurface. Benzene was also detected at 4,300 ug/L in TR-23 and 2,500 ug/L in TR-24. Other petroleum-related chemicals detected in TR-23 and TR-24 include the following:

- Toluene up to 21 ug/L
- Ethylbenzene up to 990 ug/L
- m,p-Xylenes up to 380 ug/L
- o-Xylenes up to 380 ug/L
- Isopropylbenzene up to 210 ug/L

- Propylbenzene up to 240 ug/L
- 1,3,5-Trimethylbenzene up to 290 ug/L
- 1,2,4-Trimethylbenzene up to 160 ug/L
- Sec-Butylbenzene up to 70 ug/L
- Naphthalene up to 710 ug/L
- Acetone up to 35 ug/L

4.0 TIER 1 ENVIRONMENTAL RISK ASSESSMENT

A Tier 1 Environmental Risk Assessment was developed to identify potential risks to human health and environmental resources associated with chemicals in soil and groundwater under the proposed land use. Included in this risk evaluation are the following subsections:

- Site Setting
- Summary of chemical characterization information
- Description of the exposure assessment methodology used in the risk evaluation, including the exposure setting and exposure pathways
- Evaluation of risk

4.1 Site Setting

Section 2.0 of this SMP presents a description of the Site location, current use, and development plans. The Site is currently under commercial land use and is occupied with four buildings: a one-story concrete building that occupies 5805 through 5885 Hollis Street, a one-story concrete building that occupies 5810 through 5890 Peladeau Street, and two one-story metal framed buildings that occupy 5805 Hollis Street. The remaining area is asphalt paved parking

(Figure 2). The surrounding area consists primarily of commercial land use (including laboratory space), with multi-family residential located within 1 block of the Site.

Groundwater was measured at the Site at 9.88 feet bgs in boring TR-31. This groundwater depth may not represent a stabilized level, as the actual groundwater level in a test boring can take from several hours to days to stabilize. The San Francisco Bay is located over 2000 feet to the west of the Site. Drinking water at the Site and in the surrounding areas is supplied by the East Bay Municipal Utility District from off-site sources.

4.2 Chemicals of Potential Concern

As noted in Section 3.0, TPHd, TPHmo, and TPHg are present in soil in isolated areas of the Site, with TPHg and benzene present near the southern portion of the Site. The list of chemicals of potential concern (COPC) for soil and groundwater were first developed using any chemical with a single detection. Tables 1 through 3 summarize the soil and groundwater data.

For metals in soil, the maximum concentration was compared to background levels of metals in soil (LBNL 2002) to evaluate which metals are present at the Site at or below background levels. The representative background levels were generally arithmetic mean concentrations. Where an arithmetic mean was not developed, the next available value from a list of values was selected (either a 95^{th} percentile, 99^{th} percentile, or median value). If the maximum concentration of a metal in soil did not exceed the background concentration, then the metal was not evaluated further. Tables 1 and 2 present the soil data, as well as the background data used for the metals evaluation.

Following the evaluation of background concentrations of metals, the maximum concentrations of chemicals in soil and groundwater were then used as representative chemical concentrations to evaluate potential human health risks. The use of the maximum concentration likely results in an overestimate of potential exposure and risk at the site, but is consistent with the highly conservative approach incorporated into this risk evaluation.

4.3 Exposure Assessment

Exposure may occur when a person comes into contact with a chemical in the environment. The amount of exposure is dependent upon the amount of the chemical in a specific environmental medium (e.g., soil, groundwater, and/or air), and the frequency, duration and mode of contact with the chemical. The Site is in a highly-urbanized setting, with most of the surface covered with concrete or asphalt. The Site is not adjacent to surface water or shoreline habitat; therefore, an evaluation of potential exposures and risks to terrestrial or ecological receptors is not applicable.

Future land use may include residential development and/or commercial land use. Therefore, this screening-level risk evaluation included an evaluation of potential exposure to a residential receptor and a commercial/industrial receptor.

In general terms, receptors are representative types of potentially exposed populations. Each receptor is evaluated based upon hypothetical exposures developed from an assumed combination of Site conditions, potential population activity patterns, chemical properties, chemical distribution and concentrations, and exposure to the chemical(s). In formal terms, receptors are sets of assumptions that describe "what if" scenarios, but are not actual persons. The assumptions were intended to describe what EPA terms reasonable maximum exposure. Each receptor addresses several "what if" questions that are unlikely to all apply to a single individual. In this way, receptors provide a useful tool for addressing a number of issues at once; however, they do not reflect predictions of actual exposures to any one individual, but are considered conservative points of reference.

The implementation of site-specific health and safety protocols and engineering controls will preclude significant construction worker exposures. Figure 5 presents the potentially complete exposure pathways for the construction worker if no health and safety controls are implemented for the construction worker.

Of the remaining potential site receptors, the residential receptor is the most sensitive receptor due to consideration of children exposures and the expected full-time theoretical exposure. The evaluation of a residential receptor is considered a conservative upper limit of potential exposure and risks for other potential receptors at the Site.

Domestic water in the area is and will continue to be supplied by the East Bay Municipal Utility District from off-site sources. Consequently, the domestic use of groundwater at the site was not considered a complete exposure pathway. Because of no domestic use of groundwater and the no surface water is present at the Site, no direct contact with groundwater is assumed.

The COPCs include TPH-related VOCs as well as non-VOCs. Potential exposure to a residential receptor under unrestricted land use includes direct contact with soil, as well as inhalation exposures from subsurface emissions of VOCs from soil and groundwater to an indoor air environment.

For purposes of this risk evaluation, the residential and commercial/industrial receptors were evaluated for potential exposure to chemicals in soil by including the following exposure pathways:

- Incidental ingestion of soil
- Direct dermal contact with soil
- Inhalation of airborne particles as dust
- Inhalation of VOCs in indoor air from subsurface emissions (VOCs only) from soil
- Inhalation of VOCs in indoor air from subsurface emissions (VOCs only) from groundwater

The only potentially complete exposure pathway evaluated for groundwater was inhalation of VOCs in indoor air from subsurface emissions. These five exposure pathways were evaluated

for the risk evaluation, but the proposed Site development would actually result in preclusion of direct contact with soil.

Under the proposed Site development, the only complete exposure pathways for residential and commercial/industrial receptors would include:

- Inhalation of VOCs in indoor air from subsurface emissions (VOCs only) from soil
- Inhalation of VOCs in indoor air from subsurface emissions (VOCs only) from groundwater

Although these exposure pathways are included in the risk evaluation, exposure will be mitigated by the mechanical ventilation of the lowest level of the garage underlying the occupied areas of the proposed Site development. As noted in Section 5.5.2, subsurface vapor intrusion will also be mitigated by a membrane-based waterproofing system to be installed beneath the lowest level of the parking garage to address potential groundwater intrusion.

The Site development-based exposure pathways are illustrated in the Site Conceptual Model presented in Figure 5. Although not included in the risk evaluation, the non-health and safety protocol-based construction worker exposure pathways are also included in Figure 5.

4.4 Risk Evaluation Results

The risk evaluation included a comparison between the maximum soil and groundwater concentrations and residential land use Environmental Screening Levels (ESLs)[1]. The ESLs were developed by the San Francisco Bay Regional Water Quality Control Board based upon residential land use, with an objective of protection of human health. Based upon the results of

[1] California Regional Water Quality Control Board. 2005. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater.

the exposure assessment in Section 4.0 and assuming the Site is not capped by asphalt, concrete or building foundations, the following ESLs were used in the risk evaluation:

- Direct Exposure Screening Levels, Residential and Commercial Exposure Scenario (Table K-1 and K-2)
- Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (Table E-1a)
- Soil Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (E-1b)
- Environmental Screening Levels for Shallow Soils, Groundwater is Not a Current or Potential Source of Drinking Water (Table B)

The direct exposure screening levels were developed by the RWQCB by integrating exposure from incidental ingestion of soil, dermal contact with soil, and inhalation of fugitive dust emissions from soil. The soil and groundwater screening levels for potential vapor intrusion concerns were developed by the RWQCB by using a computer program of the Johnson and Ettinger model (1991) to estimate indoor air concentrations via vapor intrusion into a theoretical building to evaluate inhalation exposures. The model assumes that the theoretical building has a slab-on-grade foundation and has high permeability vadose zone soils. The environmental screening levels for shallow soil where groundwater is not a current or potential source of drinking water are a summary of levels based upon various potential environmental concerns.

Tables 1 and 2 present the soil data, as well as the screening levels used in the risk evaluation. Table 3 presents the groundwater data, as well as the screening levels used in the risk evaluation. A lead in soil screening level of 255 mg/kg was used in the residential risk evaluation. This value was the 2003 lead in soil ESL for residential land use, and was based upon DTSC's screening level for school sites (2001). The DTSC value of 255 mg/kg value was based on a residential exposure that assumes no consumption of homegrown produce cultivated in lead-affected soil. The lead in soil ESL for residential land use was revised by the RWQCB in 2005 to 150 mg/kg, which is the Cal EPA Human Health Screening Levels (2004) (based on a

residential exposure that assumes consumption of homegrown produce cultivated in lead-affected soil). According to the RWQCB (2005), the 255 mg/kg lead in soil level is appropriate for schools and high-density housing areas, which is consistent with the land use at the proposed development (i.e., no residential gardens fore cultivation of produce). The lower value of 150 mg/kg is appropriate for potential exposures that assume the presence of single family homes. Therefore, the lead in soil screening value of 255 mg/kg was used to evaluate potential residential exposures for the Site.

Comparison of the chemical concentrations in soil to the ESLs indicates that TPHg, TPHd, TPHmo and TRPH in soil exceed the residential and commercial direct contact ESLs. Benzo(a)pyrene in soil also exceeds the residential and commercial direct contact ESLs. No metals exceed the residential or commercial ESLs. Consequently, potential residential and commercial risks exist if the TPHg-, TPHd-, TPHmo-, TRPH-, and benzo(a)pyrene-affected soil remains uncovered and available for exposure.

Comparison of the chemical concentrations of volatile organic compounds in soil to the ESLs indicates that benzene exceeds the residential ESLs for potential vapor intrusion concerns. Consequently, potential residential risks exist if the benzene in soil remains under the proposed development or if the potential inhalation exposures are not mitigated.

Comparison of the groundwater data to the ESLs indicates that TPHg, TPHd, TPHmo and TRPH in groundwater exceed the general water quality ESLs. Benzene in groundwater exceeds the groundwater ESL for protection of indoor air quality at TR-23, TR-24 and TR-25, which are all located near the southwest corner of the Site. Consequently, potential residential and commercial indoor risks exist if the benzene in groundwater remains under the proposed development or if the potential inhalation exposures are not mitigated.

An additional hypothetical risk for the property is potential exposure through groundwater intrusion. Although typical residential or commercial direct contact with groundwater is not expected under future land use following redevelopment, potential groundwater intrusion into the

proposed building could result in standing groundwater in the parking level (the lowest levels of the building). If the standing groundwater contained benzene, then the parking garage users may be subject to potential inhalation exposures.

Due to lack of habitat in a highly urbanized environment, no ecological risks were considered applicable. Because there is no surface water at the Site and drinking water at the Site is and will be supplied from off-site sources, the only potential exposure pathway for groundwater is inhalation of VOCs from indoor air vapor intrusion from volatilization of chemicals.

5.0 SHORT-TERM AND LONG TERM RISK MANAGEMENT MEASURES

The Tier 1 Environmental Risk Assessment indicated that selected areas of soil were affected by TPH and benzo(a)pyrene that would represent a potential residential and commercial risk if left uncovered. Benzene in groundwater in the southwest corner of the Site represents a potential vapor intrusion risk for residential and commercial indoor air inhalation exposures if the benzene concentrations are not reduced or the potential exposure is unmitigated. Potential groundwater intrusion into the Site building may represent an inhalation risk if benzene -affected groundwater intrudes into the subsurface parking structure to be built beneath the new building at the Site

As part of the proposed development, construction activities will likely require excavation of soil to account for building foundations and the sub-grade mechanically ventilated parking garage. Because foundation designs have not been finalized for the development, the final excavation depth cannot be determined at this time. Based on soil conditions and potential building type, it is speculated that soil excavation depths may reach 12 feet bgs. Construction dewatering may be required. During the planned subsurface activities, the chemicals in soil and groundwater pose risk management and potential health and safety concerns. These concerns, as well as the concerns from the Tier 1 Environmental Risk Assessment, will be addressed through the implementation of protocols and procedures in this SMP. The SMP includes the following short-term and long-term risk management measures to minimize adverse exposure of Site construction and maintenance workers, nearby residents, off-site workers and pedestrians to

hazardous materials during Site development activities and to on-site occupants following development of the Site:

- Construction Worker Health and Safety Recommendations
- Soil Management Measures
- Post-Excavation confirmation soil and groundwater sampling
- Stormwater Pollution Controls
- Groundwater Management
- Site Encapsulation
- Mechanical Ventilation of Parking Garage
- Maintenance Requirements
- Contingency Plan
- Completion Report
- Restriction on Future Groundwater Use

5.1 Construction Worker Health and Safety Recommendations

There are potential health and safety risks associated with the petroleum hydrocarbons and benzo(a)pyrene detected in site soils, as well as volatile organic compounds and petroleum hydrocarbons detected in groundwater. There is the potential for chemicals in soil to affect construction workers at the Site. The routes of potential exposure to the chemicals in soil are: (1) dermal (skin) contact with the soil; (2) inhalation of volatile emissions and dusts; and (3) ingestion of the soil. The greatest potential for human exposure to the chemicals in soil will be during soil excavation operations.

The routes of potential exposure to the petroleum hydrocarbons and volatile organic compounds in groundwater are: (1) dermal (skin) contact with groundwater; and (2) inhalation of emissions

from exposed water. The greatest potential for human exposure to the volatile organic compounds in water will be during deep soil excavation operations and dewatering activities.

The abovementioned health risks to on-Site construction workers will be minimized by developing and implementing a comprehensive health and safety plan (HSP), which will be prepared by a certified industrial hygienist. Wareham Development (through their construction contractor) will be responsible for establishing and maintaining proper health and safety procedures to minimize construction worker exposure to site contaminants.

At a minimum, the HSP will include: (1) health and safety training requirements for on-Site personnel; (2) personal hygiene and monitoring equipment to be used during construction to protect and verify the health and safety of the construction workers; (3) additional precautions to be undertaken to minimize direct contact with hazardous substances, including implementation of dust control measures; and (4) a description of the procedures to mitigate any potential health risk to bystanders during subsurface activities. The HSP will be submitted to ACHCSA and the City of Emeryville for review and approval prior to the start of any construction activities.

A Site health and safety officer (HSO) or designee will be onsite during excavation activities to ensure that all health and safety measures are maintained. The HSO will have the authority to direct and, if necessary, stop all construction activities in order to ensure compliance with the HSP.

5.2 Soil Management Measures

Depending on the final building design, soil at the Site may be excavated to 12 feet bgs for a subterranean parking level beneath the proposed building. The proposed construction activities will disturb limited amounts of native soil during the construction of the new foundations, elevator pits, utility lines, and sanitary sewer lines. No native soil will be used as backfill material within the top two feet in the landscape areas or within the utility trenches.

All soil handling activities shall comply with the Bay Area Air Quality Management District Regulation 8, Rule 40, including covering of trucks hauling soil on- and off-site. Soil disturbed during construction activities will be stockpiled at locations to be determined prior to any site activities. It is anticipated that the stockpiles will contain at a maximum about 500 cubic yards of soil and will be placed to a maximum height of about 7 feet.

Stockpiles will have one layer of 10-mil polyethylene sheeting (or equivalent), such as Visqueen, on the bottom and one layer of 10-mil polyethylene sheeting (or equivalent) as a covering at all times except when the material is being handled. The top sheeting will be adequately secured so that all surface areas are covered. Temporary berms will be constructed around the stockpile area to control precipitation run-on and run-off during wet weather.

Section 5.5 presents storm water pollution control information that is also applicable to soil stockpiles. In accordance with CCR Title 22, Section 66262.34, no hazardous wastes will be accumulated and stored on the Site longer than 90 days. The site will be secured by fencing at all times and temporary fencing will also be placed around the stockpiles.

The excavation contractor will establish appropriate soil stockpile locations on the Site to properly segregate, cover, moisture control, and profile the excavated soil. Soil profiling criteria will depend on which landfills the soil will be sent to. These procedures will be established by the excavation contractor and coordinated with the proposed landfills prior to initiating soil excavation. It is not anticipated that soil will be reused at the Site for construction-related activities.

The excavation contractor, on behalf of Wareham Development, will be responsible for tracking final soil dispositions. Although the currently available data indicates that no hazardous waste is anticipated from the excavations, any excavated soil considered hazardous waste will be tracked using the Uniform Hazardous Waste Manifest System (USEPA Form 8700-22), as applicable. Soil not considered hazardous waste will be tracked using nonhazardous bills of ladings. These two systems will be used to comply with appropriate state and local requirements.

The excavation contractor will arrange for transportation of all wastes off-site. Hazardous and non-hazardous waste will be transported to the appropriate disposal facility using a permitted, licensed, and insured transportation company. Transporters of hazardous waste must meet the requirements of 40 CFR 263 and 22 CCR 66263. All trucks transporting bulk hazardous waste will be properly lined and covered with compatible materials. Trucks will be decontaminated prior to any use other than hauling contaminated materials unless the contaminated material was already double-contained.

If soil to be exported off-site is considered a hazardous waste, an appropriate USEPA Generator Identification Number will be recorded on the hazardous waste manifests used to document transport of hazardous waste off-Site. The hazardous waste transporter, disposal facility, and U.S. Department of Transportation (DOT) waste description required for each manifest will be determined on a case-by-case basis. A description of the number of containers being shipped, the type of container, and the total quantity of waste being shipped will also be included on each manifest.

The excavation contractor will be responsible for accurate completion of the hazardous waste manifests and nonhazardous bills of lading. Records of all wastes shipped off-site will be maintained by Wareham Development and will be made available for inspection on request. The final destination of wastes transported off-site will be documented in the Completion Report (Section 5.10).

The following records will be kept by Wareham Development for the indicated length of time:

- Copies of uniform hazardous waste manifests signed by the designated waste disposal facility will be retained for at least five years from the date the waste was accepted by the initial transporter.
- All records pertaining to the characterization of hazardous or nonhazardous waste will be retained for a minimum of three years.

5.3 Post-Excavation Confirmation Soil and Groundwater Sampling

Once the soil excavation has been completed, confirmatory soil and groundwater samples will be collected and analyzed. The soil and groundwater samples will be analyzed for the following: TPHg, TPHd, and TPHmo by EPA Method 8015M; volatile organic compounds (VOCs) by EPA Method 8260; semi-volatile organic compounds by EPA Method 8270; and California Title 22 metals. The analytical results of the confirmation sampling will be presented in our certification report.

5.4 Storm Water Pollution Controls

Storm water pollution controls will be implemented to minimize storm water runoff and sediment transport from the Site. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared by the excavation contractor prior to soil-related activities. The SWPPP will identify Best Management Practices (BMPs) for activities as specified by the California Storm Water Best Management Practices Handbook (Stormwater Quality Task Force, 1993) and/or the Manual of Standards for Erosion and Sediment Control Measures (ABAG, 1995). The BMPs will include measures guiding the management and operation of the Site to control and minimize potential contribution of Site pollutants to storm runoff.

5.5 Groundwater Management

Groundwater may be encountered during construction activities. Additionally, due to the likely depth of the floor of the sub-grade parking level, there is a potential for groundwater intrusion into the parking level. The following subsections describe the protocols related to construction-phase dewatering and groundwater intrusion management.

5.5.1 Construction-Phase Dewatering

In the event that groundwater must be collected or otherwise extracted to prevent its intrusion into temporary construction pits or new structures, the groundwater will be removed by mechanical devices such as pumps, placed in an appropriate container, and tested to evaluate the

concentration of chemicals present. The groundwater will be disposed in accordance with all applicable local, state and federal regulations.

Discharge of extracted groundwater to the storm drain will require prior approval of the RWQCB. Discharge of extracted groundwater to the sanitary sewer will require prior approval from the East Bay Municipal Utility District (EBMUD). Transport and disposal of the groundwater at an appropriate off-Site facility will be subject to the facility-specific requirements. All relevant documentation related to construction-phase dewatering will be included in the Completion Report (Section 5.10).

5.5.2 Groundwater Intrusion Management

Since it is likely that below-grade structures extend into groundwater, groundwater intrusion management measures will be necessary. The proposed redevelopment will include installation of a membrane-based waterproof barrier underneath the floor of the parking garage to prevent groundwater intrusion. The membrane material will be compatible with the chemical concentrations detected in groundwater at the Site. The membrane-based waterproofing will eliminate the need for collection of groundwater for off-site discharge. Although not its primary purpose, the waterproofing membrane may also mitigate potential vapor intrusion from the subsurface into the parking garage.

5.6 Site Encapsulation

Potential future site occupant direct contact risks from TPH and benzo(a)pyrene in the soil will be mitigated by encapsulating the soil with the concrete floor slab and exterior walls of the garage and the waterproofing. The concrete floor slab and exterior walls will be considered the soil cap. The encapsulation will sufficiently reduce potential exposures through inhalation of dusts and incidental ingestion of soil and dermal contact with soil by providing a physical barrier, thereby eliminating the exposure pathway between the contaminants in soil and the future Site users.

5.7 Mechanical Ventilation of Parking Garage

The lowest level of the parking garage will be mechanically ventilated for vehicle exhaust as part of its normal operation. Incidentally, any potential vapors that reach the parking garage from subsurface emissions would be ventilated out of the garage, precluding potential vapor transport to occupied areas of the proposed building.

The membrane-based waterproofing for the below-grade structures (Section 5.5.2) and the mechanically ventilated garage together will mitigate potential inhalation of VOCs in indoor air in occupied areas from subsurface emissions from soil and groundwater will be mitigated.

5.8 Maintenance Requirements

The objective of these maintenance requirements is to ensure that the long-term risk management plan measures, specifically encapsulating soil beneath the floor slab, will remain effective during the building's and parking garage's use and occupancy period. The Site owner and operator will maintain this risk management plan, maintenance work plans, and maintenance records in a readily accessible on-site location and shall be responsible for informing any employee or contractor who will perform below grade construction of the environmental conditions, soil management concerns, and health and safety requirements stipulated in this SMP.

These measures will also be enforced during any post-development construction activities such as utility line repair, building expansion, and other activities that may disturb the underlying contaminated soil. To maintain the integrity of the encapsulation layer and to protect future site workers, who may disturb the encapsulation layer, the following procedures must be adhered to by the owner and/or operator of the site:

- Notify the ACHCSA and City of Emeryville of any proposed activity expected to disturb the integrity of the encapsulating layer or soil, thirty (30) calendar days before work commences. In cases of emergency, the ACHCSA and City of Emeryville shall be

notified within 24 hours and the work should commence in accordance with the mitigation measures described in this risk management plan.

- Prepare a specific work plan that includes a description of the proposed construction activities, soil management plan, and health and safety plan.
- Direct any contractor or employee who disturbs the encapsulating layer and is engaged in any excavation or earth movement at the property to comply with the appropriate local, State, and Federal regulations.
- Direct any contractor or employee engaged in any activities that involve penetrating the encapsulating layer to repair the disturbed area as soon as is practical.
- Direct any contractor or employee engaged in any activities that involve penetrating the membrane-based waterproofing to repair the membrane as soon as practical.
- Control dust by wetting and protect exposed or excavated soil from storm run-on and run-off during the period of excavation, soil movement, or exposure.
- Perform periodic inspections of the garage mechanical ventilation system.
- Determine by appropriate testing whether any excess material removed from the site is hazardous pursuant to State or Federal hazardous criteria. This material must be managed in accordance with all appropriate regulations.
- Provide the ACHCSA and the City of Emeryville with a report that describes the maintenance activities related to the encapsulating layer or excavation of soil.

5.9 Contingency Plan

If underground storage tanks, sumps, and/or associated piping are uncovered during the excavation activities, the following contingency plan will be followed. ACHCSA and the City of Emeryville will be notified and the underground storage tank, sump, and/or associated piping will be removed and properly disposed. The removal will be performed by a licensed contractor in accordance with current Federal and State regulations. In addition, confirmation soil and

groundwater samples will be collected. A tank closure report with be prepared and submitted to ACHCSA and the City of Emeryville.

If unknown areas of suspected petroleum hydrocarbons or other hazardous materials are discovered during the excavation activities, the following contingency plan will be followed. The impacted areas will be excavated, stockpiled on and covered with plastic sheeting, soil samples will be collected and tested for appropriate chemical constituents (petroleum hydrocarbons, volatile organic compounds, semivolatile organic compounds, and metals), and reported to ACHCSA and City of Emeryville. Based on the results of the testing, the soil will be properly disposed of off-site in accordance with the soil management procedures contained in this SMP.

5.10 Completion Report

A Completion Report will be prepared by a third party (other than the excavation contractor) that summarizes the soil and groundwater management activities and any subsequent investigative activities that were completed during redevelopment. Field notes and photographs will be included, as appropriate. The report will also contain laboratory analytical results and figures, as appropriate, to provide detail regarding the amount and type of contamination encountered during various activities.

This report will present a chronology of the construction events, a summary of analytical data, and a description of all mitigation activities at the site. It will also include a certification statement that indicates the mitigation activities have been performed in accordance with this SMP. The Completion Report will be submitted to the ACHCSA for review and approval within 60 days of the completion of all earthwork performed as part of the development project.

5.11 Restrictions on Future Groundwater Use

Chemicals are known to be present within the Site in shallow groundwater at concentrations that exceed U.S. and California maximum contaminant levels (MCLs) for drinking water. Groundwater within the Site will be restricted for all uses, including, but not limited to, drinking, irrigation, and industrial uses. This requirement will be implemented as a deed restriction on the Site.

6.0 LIMITATIONS

Treadwell & Rollo prepared this Site Management Plan in accordance with our proposal to Wareham Development., dated 30 December 2004. All conclusions and recommendations in this report concerning the property are the professional opinions of the Treadwell & Rollo, Inc., personnel involved with the project, and this report should not be considered a legal interpretation of existing environmental regulations. Opinions presented herein apply to site conditions existing at the time of our assessment, and cannot necessarily be taken to apply to site changes or conditions of which we are not aware and have not had the opportunity to evaluate.

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TABLES

TABLE 1
SUMMARY OF SOIL SAMPLE DATA - ORGANICS
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	Sample Depth	TPHd mg/kg	TPHmo mg/kg	TPHg mg/kg	TRPH mg/kg	VOCs by 8010 ug/kg	Benzene ug/kg	Acetone ug/kg	2-Butanone ug/kg	Isopropyl benzene ug/kg	Propyl benzene ug/kg	Ethyl benzene ug/kg	m,p-Xylenes ug/kg	o-Xylenes ug/kg
TR-1-4.0	4/6/2000	4	ND	6,600	110	9,900	--	--	--	--	--	--	--	--	--
TR-1-7.0	4/6/2000	7	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-1-9.0	4/6/2000	9	ND	ND	ND	ND	ND	< 5	< 100	< 20	< 5	< 5	< 5	< 5	< 5
TR-1-12.0	4/6/2000	12	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-1-15.0	4/6/2000	15	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-2-3.0	4/6/2000	3	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-2-5.0	4/6/2000	5	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-2-7.0	4/6/2000	7	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-2-10.0	4/6/2000	10	ND	46	ND	36	--	--	--	--	--	--	--	--	--
TR-2-15.0	4/6/2000	15	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-4-3.0	4/5/2000	3	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-4-5.0	4/5/2000	5	360	ND	99	420	< 500	< 10000	< 2000	< 500	< 500	< 500	< 500	< 500	< 500
TR-4-8.0	4/5/2000	7	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-4-11.0	4/5/2000	10	30	35	9.4	86	--	--	--	--	--	--	--	--	--
TR-5-3.0	4/5/2000	3	ND	93	ND	140	--	--	--	--	--	--	--	--	--
TR-5-4.0	4/5/2000	4	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-5-6.0	4/5/2000	6	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-5-8.0	4/5/2000	8	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-5-10.0	4/5/2000	10	ND	15	ND	ND	--	--	--	--	--	--	--	--	--
TR-5-15.0	4/5/2000	15	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-6-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-6-5.0	4/5/2000	5	ND	250	ND	300	ND	--	--	--	--	--	--	--	--
TR-6-8.0	4/5/2000	8	ND	ND	ND	ND	--	< 5	< 100	< 20	< 5	< 5	< 5	< 5	< 5
TR-6-10.0	4/5/2000	10	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-6-15.0	4/5/2000	15	--		--	--	--	--	--	--	--	--	--	--	--
TR-7-3.0	4/5/2000	3	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
TR-7-5.0	4/5/2000	5	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-7-8.0	4/5/2000	8	ND	ND	1.0	ND	--	< 5	< 100	< 20	< 5	< 5	< 5	< 5	< 5
TR-7-10.0	4/5/2000	10	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-7-15.0	4/5/2000	15	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-8-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-8-5.0	4/5/2000	5	6.8	ND	ND	ND	--	< 5	< 100	< 20	< 5	< 5	< 5	< 5	< 5
TR-8-8.0	4/5/2000	8	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-8-10.0	4/5/2000	10	7.8	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-8-15.0	4/5/2000	15	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-9-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-9-5.0	4/5/2000	5	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-9-8.0	4/5/2000	8	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-9-10.0	4/5/2000	10	ND	ND	ND	ND	--	< 5	< 100	< 20	< 5	< 5	< 5	< 5	< 5
TR-9-15.0	4/5/2000	15	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-10-3.0	4/6/2000	3	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-10-5.0	4/6/2000	5	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-10-8.0	4/6/2000	8	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
TR-10-10.0	4/6/2000	10	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-10-15.0	4/6/2000	15	ND	180	ND	330	--	--	--	--	--	--	--	--	--
TR-11-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-11-5.0	4/5/2000	5	21	17	1.7	ND	ND	--	--	--	--	--	--	--	--
TR-11-8.0	4/5/2000	8	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-11-10.0	4/5/2000	10	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-11-15.0	4/5/2000	15	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-12-3.0	4/5/2000	3	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--

TABLE 1
SUMMARY OF SOIL SAMPLE DATA - ORGANICS
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	Sample Depth	TPHd mg/kg	TPHmo mg/kg	TPHg mg/kg	TRPH mg/kg	VOCs by 8010 ug/kg	Benzene ug/kg	Acetone ug/kg	2-Butanone ug/kg	Isopropyl benzene ug/kg	Propyl benzene ug/kg	Ethyl benzene ug/kg	m,p-Xylenes ug/kg	o-Xylenes ug/kg
TR-12-5.0	4/5/2000	5	2.9	ND	27	ND	--	--	--	--	--	--	--	--	--
TR-12-8.0	4/5/2000	8	ND	ND	ND	ND	--	< 5	< 100	< 20	< 5	< 5	< 5	< 5	< 5
TR-12-10.0	4/5/2000	10	30	ND	160	100	--	--	--	--	--	--	--	--	--
TR-12-15.0	4/5/2000	15	ND	ND	19	ND	--	--	--	--	--	--	--	--	--
TR-13-3.0	4/6/2000	3	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-13-5.0	4/6/2000	5	ND	ND	ND	30	ND	--	--	--	--	--	--	--	--
TR-13-8.0	4/6/2000	8	ND	39	ND	52	--	--	--	--	--	--	--	--	--
TR-13-10.0	4/6/2000	10	ND	ND	ND	ND	--	< 5	< 100	< 20	< 5	< 5	< 5	< 5	< 5
TR-13-15.0	4/6/2000	15	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-14-3.0	4/6/2000	3	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-14-5.0	4/6/2000	5	ND	ND	ND	ND	--	< 5	< 100	< 20	< 5	< 5	< 5	< 5	< 5
TR-14-8.0	4/6/2000	8	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-14-10.0	4/6/2000	10	2.3	ND	1.2	ND	--	< 5	< 100	< 20	< 5	< 5	< 5	< 5	< 5
TR-14-15.0	4/6/2000	15	4.0	ND	1.4	ND	--	--	--	--	--	--	--	--	--
TR-15-3.0	4/6/2000	3	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-15-5.0	4/6/2000	5	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-15-8.0	4/6/2000	8	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-15-10.0	4/6/2000	10	1.3	ND	1.0	ND	--	--	--	--	--	--	--	--	--
TR-15-15.0	4/6/2000	15	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-16-3.0	4/6/2000	3	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-16-5.0	4/6/2000	5	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
TR-16-8.0	4/6/2000	8	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-16-10.0	4/6/2000	10	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-16-15.0	4/6/2000	15	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-17-3.0	4/6/2000	3	ND	ND	ND	37	--	--	--	--	--	--	--	--	--
TR-17-5.0	4/6/2000	5	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-17-8.0	4/6/2000	8	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-17-10.0	4/6/2000	10	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-17-15.0	4/6/2000	15	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-18-3.0	4/5/2000	3	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-18-5.0	4/5/2000	5	ND	ND	ND	ND	--	--	--	--	--	--	--	--	--
TR-18-8.0	4/5/2000	8	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-18-10.0	4/5/2000	10	ND	ND	ND	ND	ND	< 5	< 100	< 20	< 5	< 5	< 5	< 5	< 5
TR-18-15.0	4/5/2000	15	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-19-2.5'	1/20/05	2.5	97 H Y	910	< 1.0	--	--	--	--	--	--	--	--	--	--
TR-19-6.0'	1/20/05	6.0	< 1.0	< 5.0	< 1.1	--	--	--	--	--	--	--	--	--	--
TR-20-2.0'	1/20/05	2.0	65 L Y	26 H	15	--	--	--	--	--	--	--	--	--	--
TR-20-6.0'	1/20/05	6.0	320 L	22 L	500 Y	--	--	--	--	--	--	--	--	--	--
TR-21-2.0'	1/20/05	2.0	1.7 H Y	< 5.0	< 1.0	--	--	--	--	--	--	--	--	--	--
TR-21-6.0'	1/20/05	6.0	69 H L	42 L	19	--	--	--	--	--	--	--	--	--	--
TR-22-2.0'	1/20/05	2.0	5.5 H Y	32	< 1.0	--	--	--	--	--	--	--	--	--	--
TR-22-6.0'	1/20/05	6.0	8.5 H Y	10 H L	1.7 L Y	--	--	--	--	--	--	--	--	--	--
TR-23-4.0'	6/20/05	4.0	250 H, Y	--	2.3 Y	--	--	97	42	14	8.3	13	< 5	< 5	< 5
TR-23-9.0'	6/20/05	9.0	61 L Y	--	390 Y	--	--	200	36	23	180	480	600	190	22
TR-24-4.0'	6/15/05	4.0	46.0	--	< 1.1	--	--	< 5	35	< 10	< 5	< 5	< 5	< 5	< 5
TR-25-2.0'	1/20/05	2.0	11 H Y	62	< 1.1	--	--	--	--	--	--	--	--	--	--
TR-25-6.0'	1/20/05	6.0	44 H L Y	16	2,100 Y	--	--	--	--	--	--	--	--	--	--
TR-26-4.0	6/15/05	4.0	2100 H L Y	--	140	--	--	< 23	< 91	< 45	< 23	< 23	< 23	< 23	< 23
TR-27-2.0	6/15/05	2.0	61 H Y	--	< 1.0	--	--	< 5	21	< 10	< 5	< 5	< 5	< 5	< 5
TR-28-2.0'	1/20/05	2.0	4.3 H Y	54	< 0.93	--	--	--	--	--	--	--	--	--	--
TR-28-6.0'	1/20/05	6.0	140 H L Y	280	160 Y	--	--	--	--	--	--	--	--	--	--

TABLE 1
SUMMARY OF SOIL SAMPLE DATA - ORGANICS
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	Sample Depth	TPHd mg/kg	TPHmo mg/kg	TPHg mg/kg	TRPH mg/kg	VOCs by 8010 ug/kg	Benzene ug/kg	Acetone ug/kg	2-Butanone ug/kg	Isopropyl benzene ug/kg	Propyl benzene ug/kg	Ethyl benzene ug/kg	m,p-Xylenes ug/kg	o-Xylenes ug/kg
TR-29-2.0'	1/20/05	2.0	160 H Y	1,600	< 1.0	--	--	--	--	--	--	--	--	--	--
TR-29-6.0'	1/20/05	6.0	2.8 H Y	6.6 L	< 1.1	--	--	--	--	--	--	--	--	--	--
TR-30-2.0'	1/20/05	2.0	65 H Y	510	< 1.1	--	--	--	--	--	--	--	--	--	--
TR-30-6.0'	1/20/05	6.0	63 L	< 5.0	2.8 H Y	--	--	--	--	--	--	--	--	--	--
TR-31-2.5'	1/20/05	2.5	1,100 H L Y	2,700	< 1.0	--	--	--	--	--	--	--	--	--	--
TR-31-6.0'	1/20/05	6.0	3.1 H L Y	< 5.0	< 1.1	--	--	--	--	--	--	--	--	--	--
Representative concentration			2100	6600	2100	9900	ND	200	42	23	180	240	600	190	22
TTLC			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
STLC (TCLP) (ug/L)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ESL (Table K-1/E-1b) Residential			400	1000	400	1000	NA	180	1400000	490000	NA	NA	390000	310000	310000
ESL (Table K-2/E-1b) Commercial			750	4600	450	4600	NA	510	3300000	1300000	NA	NA	390000	420000	420000
Representative Concentration vs. Residential ESL			**Exceeds ESL**	**Exceeds ESL**	**Exceeds ESL**	**Exceeds ESL**	**ND**	**Exceeds ESL**	**Less than ESL**	**Less than ESL**	**NA**	**NA**	**Less than ESL**	**Less than ESL**	**Less than ESL**
Representative Concentration vs. Commercial ESL			**Exceeds ESL**	**Exceeds ESL**	**Exceeds ESL**	**Exceeds ESL**	**ND**	**Less than ESL**	**Less than ESL**	**Less than ESL**	**NA**	**NA**	**Less than ESL**	**Less than ESL**	**Less than ESL**

TABLE 1
SUMMARY OF SOIL SAMPLE DATA - ORGANICS
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	Sample Depth	1,3,5-Trimethylbenzene ug/kg	1,2,4-Trimethylbenzene ug/kg	sec-Butylbenzene ug/kg	para-Isopropyltoluene ug/kg	n-Butylbenzene ug/kg	Naphthalene ug/kg	Carbon Disulfide by 8260 ug/kg	Other VOCs by 8260 ug/kg	Benzo(a)pyrene by EPA 8270 ug/kg	Other SVOCs by 8270 ug/kg	Aroclor-1260 ug/kg	Other PCBs ug/kg
TR-1-4.0	4/6/2000	4	--	--	--	--	--	< 6600	--	--	< 6600	ND	--	--
TR-1-7.0	4/6/2000	7	--	--	--	--	--	--	--	--	--	--	--	--
TR-1-9.0	4/6/2000	9	< 5	< 5	< 5	< 5	< 5	< 5	< 5	ND	--	--	--	--
TR-1-12.0	4/6/2000	12	--	--	--	--	--	--	--	--	--	--	--	--
TR-1-15.0	4/6/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-2-3.0	4/6/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-2-5.0	4/6/2000	5	--	--	--	--	--	--	--	--	--	--	--	--
TR-2-7.0	4/6/2000	7	--	--	--	--	--	--	--	--	--	--	--	--
TR-2-10.0	4/6/2000	10	--	--	--	--	--	--	--	--	--	--	--	--
TR-2-15.0	4/6/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-4-3.0	4/5/2000	3	--	--	--	--	--	< 330	--	--	< 330	ND	--	--
TR-4-5.0	4/5/2000	5	< 500	< 500	< 500	< 500	< 500	< 500	< 500	ND	--	--	--	--
TR-4-8.0	4/5/2000	7	--	--	--	--	--	--	--	--	--	--	--	--
TR-4-11.0	4/5/2000	10	--	--	--	--	--	--	--	--	--	--	--	--
TR-5-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-5-4.0	4/5/2000	4	--	--	--	--	--	--	--	--	--	--	--	--
TR-5-6.0	4/5/2000	6	--	--	--	--	--	--	--	--	--	--	--	--
TR-5-8.0	4/5/2000	8	--	--	--	--	--	--	--	--	--	--	--	--
TR-5-10.0	4/5/2000	10	--	--	--	--	--	--	--	--	--	--	--	--
TR-5-15.0	4/5/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-6-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-6-5.0	4/5/2000	5	--	--	--	--	--	< 3300	--	--	< 3300	ND	--	--
TR-6-8.0	4/5/2000	8	< 5	< 5	< 5	< 5	< 5	< 5	< 5	ND	--	--	--	--
TR-6-10.0	4/5/2000	10	--	--	--	--	--	--	--	--	--	--	--	--
TR-6-15.0	4/5/2000	15	--	--	--	--	--	< 330	--	--	--	--	--	--
TR-7-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	< 330	ND	--	--
TR-7-5.0	4/5/2000	5	--	--	--	--	--	--	--	--	--	--	--	--
TR-7-8.0	4/5/2000	8	< 5	< 5	< 5	< 5	< 5	< 5	< 5	ND	--	--	--	--
TR-7-10.0	4/5/2000	10	--	--	--	--	--	--	--	--	--	--	--	--
TR-7-15.0	4/5/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-8-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-8-5.0	4/5/2000	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	ND	--	--	--	--
TR-8-8.0	4/5/2000	8	--	--	--	--	--	--	--	--	--	--	--	--
TR-8-10.0	4/5/2000	10	--	--	--	--	--	--	--	--	--	--	--	--
TR-8-15.0	4/5/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-9-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-9-5.0	4/5/2000	5	--	--	--	--	--	--	--	--	--	--	--	--
TR-9-8.0	4/5/2000	8	--	--	--	--	--	--	--	--	--	--	--	--
TR-9-10.0	4/5/2000	10	< 5	< 5	< 5	< 5	< 5	< 5	< 5	ND	--	--	--	--
TR-9-15.0	4/5/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-10-3.0	4/6/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-10-5.0	4/6/2000	5	--	--	--	--	--	--	--	--	--	--	--	--
TR-10-8.0	4/6/2000	8	--	--	--	--	--	< 330	--	--	< 330	ND	--	--
TR-10-10.0	4/6/2000	10	--	--	--	--	--	--	--	--	--	--	--	--
TR-10-15.0	4/6/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-11-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-11-5.0	4/5/2000	5	--	--	--	--	--	< 330	--	--	< 330	ND	--	--
TR-11-8.0	4/5/2000	8	--	--	--	--	--	--	--	--	--	--	--	--
TR-11-10.0	4/5/2000	10	--	--	--	--	--	--	--	--	--	--	--	--
TR-11-15.0	4/5/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-12-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1
SUMMARY OF SOIL SAMPLE DATA - ORGANICS
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	Sample Depth	1,3,5-Trimethylbenzene ug/kg	1,2,4-Trimethylbenzene ug/kg	sec-Butylbenzene ug/kg	para-Isopropyltoluene ug/kg	n-Butylbenzene ug/kg	Naphthalene ug/kg	Carbon Disulfide by 8260 ug/kg	Other VOCs by 8260 ug/kg	Benzo(a)pyrene by EPA 8270 ug/kg	Other SVOCs by 8270 ug/kg	Aroclor-1260 ug/kg	Other PCBs ug/kg
TR-12-5.0	4/5/2000	5	--	--	--	--	--	< 330	--	--	< 330	ND	--	--
TR-12-8.0	4/5/2000	8	< 5	< 5	< 5	< 5	< 5	< 5	< 5	ND	--	--	--	--
TR-12-10.0	4/5/2000	10	--	--	--	--	--	--	--	--	--	--	--	--
TR-12-15.0	4/5/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-13-3.0	4/6/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-13-5.0	4/6/2000	5	--	--	--	--	--	< 330	--	--	550	ND	--	--
TR-13-8.0	4/6/2000	8	--	--	--	--	--	--	--	--	--	--	--	--
TR-13-10.0	4/6/2000	10	< 5	< 5	< 5	< 5	< 5	< 5	< 5	ND	--	--	--	--
TR-13-15.0	4/6/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-14-3.0	4/6/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-14-5.0	4/6/2000	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	ND	570	ND	--	--
TR-14-8.0	4/6/2000	8	--	--	--	--	--	--	--	--	--	--	--	--
TR-14-10.0	4/6/2000	10	< 5	< 5	< 5	< 5	< 5	< 5	< 5	ND	--	--	--	--
TR-14-15.0	4/6/2000	15	--	--	--	--	--	< 330	--	--	540	ND	--	--
TR-15-3.0	4/6/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-15-5.0	4/6/2000	5	--	--	--	--	--	--	--	--	--	--	--	--
TR-15-8.0	4/6/2000	8	--	--	--	--	--	--	--	--	--	--	--	--
TR-15-10.0	4/6/2000	10	--	--	--	--	--	< 330	--	--	590	ND	--	--
TR-15-15.0	4/6/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-16-3.0	4/6/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-16-5.0	4/6/2000	5	--	--	--	--	--	--	--	--	--	--	--	--
TR-16-8.0	4/6/2000	8	--	--	--	--	--	--	--	--	--	--	--	--
TR-16-10.0	4/6/2000	10	--	--	--	--	--	< 330	--	--	600	ND	--	--
TR-16-15.0	4/6/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-17-3.0	4/6/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-17-5.0	4/6/2000	5	--	--	--	--	--	--	--	--	--	--	--	--
TR-17-8.0	4/6/2000	8	--	--	--	--	--	--	--	--	--	--	--	--
TR-17-10.0	4/6/2000	10	--	--	--	--	--	--	--	--	--	--	--	--
TR-17-15.0	4/6/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-18-3.0	4/5/2000	3	--	--	--	--	--	--	--	--	--	--	--	--
TR-18-5.0	4/5/2000	5	--	--	--	--	--	< 330	--	--	< 330	ND	--	--
TR-18-8.0	4/5/2000	8	--	--	--	--	--	--	--	--	--	--	--	--
TR-18-10.0	4/5/2000	10	< 5	< 5	< 5	< 5	< 5	< 5	< 5	ND	--	--	--	--
TR-18-15.0	4/5/2000	15	--	--	--	--	--	--	--	--	--	--	--	--
TR-19-2.5'	1/20/05	2.5	--	--	--	--	--	--	--	--	--	--	--	--
TR-19-6.0'	1/20/05	6.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-20-2.0'	1/20/05	2.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-20-6.0'	1/20/05	6.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-21-2.0'	1/20/05	2.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-21-6.0'	1/20/05	6.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-22-2.0'	1/20/05	2.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-22-6.0'	1/20/05	6.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-23-4.0'	6/20/05	4.0	< 5	< 5	< 5	< 5	< 5	< 5	< 5.0	ND	--	--	--	--
TR-23-9.0'	6/20/05	9.0	69	250	42	57	290	310	< 4.7	ND	--	--	--	--
TR-24-4.0'	6/15/05	4.0	< 5	< 5	< 5	< 5	< 5	< 5	<4.6	ND	--	--	--	--
TR-25-2.0'	1/20/05	2.0	--	--	--	--	--	--	--	--	--	--	11	ND
TR-25-6.0'	1/20/05	6.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-26-4.0	6/15/05	4.0	< 23	< 23	< 23	< 23	< 23	< 23	< 23	ND	--	--	--	--
TR-27-2.0	6/15/05	2.0	< 5	< 5	< 5	< 5	< 5	< 5	< 4.5	ND	--	--	--	--
TR-28-2.0'	1/20/05	2.0	--	--	--	--	--	--	--	--	--	--	< 9.6	ND
TR-28-6.0'	1/20/05	6.0	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 1
SUMMARY OF SOIL SAMPLE DATA - ORGANICS
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	Sample Depth	1,3,5-Trimethylbenzene ug/kg	1,2,4-Trimethylbenzene ug/kg	sec-Butylbenzene ug/kg	para-Isopropyltoluene ug/kg	n-Butylbenzene ug/kg	Naphthalene ug/kg	Carbon Disulfide by 8260 ug/kg	Other VOCs by 8260 ug/kg	Benzo(a)pyrene by EPA 8270 ug/kg	Other SVOCs by 8270 ug/kg	Aroclor-1260 ug/kg	Other PCBs ug/kg
TR-29-2.0'	1/20/05	2.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-29-6.0'	1/20/05	6.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-30-2.0'	1/20/05	2.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-30-6.0'	1/20/05	6.0	--	--	--	--	--	--	--	--	--	--	--	--
TR-31-2.5'	1/20/05	2.5	--	--	--	--	--	--	--	--	--	--	--	--
TR-31-6.0'	1/20/05	6.0	--	--	--	--	--	--	--	--	--	--	--	--
Representative concentration			69	250	42	57	290	310	0	35	600	ND	11	ND
TTLC			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17000	17000
STLC (TCLP) (ug/L)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1700	1700
ESL (Table K-1/E-1b) Residential			NA	NA	NA	NA	NA	NA	NA	NA	38	NA	220	NA
ESL (Table K-2/E-1b) Commercial			NA	NA	NA	NA	NA	NA	NA	NA	130	NA	740	NA
Representative Concentration vs. Residential ESL			**NA**	**NA**	**NA**	**NA**	**NA**	**Less than ESL**	**Less than ESL**	**NA**	**Exceeds ESL**	**ND**	**Less than ESL**	**ND**
Representative Concentration vs. Commercial ESL			**NA**	**NA**	**NA**	**NA**	**NA**	**Less than ESL**	**Less than ESL**	**NA**	**Exceeds ESL**	**ND**	**Less than ESL**	**ND**

-- = not analyzed
< 1 = indicates not detected at the indicated laboratory detection limit
ESL = Environmental Screening Levels established by the SFBRWQCB
H = Laboratory flag indicating heavier hydrocarbons contributred to quantitation
L = Laboratory flag indicating lighter hydrocarbons contributred to quantitation
mg/kg = milligrams per kilogram
NA = Not available
ND = Not detected at or greater than laboratory detection limit which varies, see laboratory report
PCBs = Polychlorinated Biphenyls
SFBRWQCB = San Francisco Bay Regional Water Quality Control Board
STLC = Soluble Threshold Limit Concentration
Table K-1: ESL for Direct Exposure, Residential, 2005.
Table K-2: ESL for Direct Exposure, Commercial/Industrial, 2005.
TCLP = Toxic Characteristic Leaching Procedure
TPHd = Total Petroleum Hydrcarbons quantified as diesel fuel
TPHg = Total Petroleum Hydrocarbons quantified as gasoline
TPHmo = Total Petroleum Hydrocarbons quantified as motor oil
TTLC = Total Threshold Limit Concentration
ug/kg = micrograms per kilogram (parts per billion)
Y = Laboratory flag indicating sample exhibits chromatographic pattern which does not resemble standard

TABLE 2
SUMMARY OF SOIL SAMPLE DATA - METALS
5885 Hollis Street
Emeryville, California

Sample Number	Sample Date	Sample Depth	Cadmium	Chromium	Lead	Nickel	Zinc
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
TR-1-4.0	4/6/2000	4	ND	24	150	21	110
TR-1-7.0	4/6/2000	7	--	--	--	--	--
TR-1-9.0	4/6/2000	9	--	--	--	--	--
TR-1-12.0	4/6/2000	12	--	--	--	--	--
TR-1-15.0	4/6/2000	15	--	--	--	--	--
TR-2-3.0	4/6/2000	3	--	--	--	--	--
TR-2-5.0	4/6/2000	5	ND	45	8.9	32	40
TR-2-7.0	4/6/2000	7	--	--	--	--	--
TR-2-10.0	4/6/2000	10	ND	50	ND	41	41
TR-2-15.0	4/6/2000	15	ND	26	ND	37	48
TR-4-3.0	4/5/2000	3	--	--	--	--	--
TR-4-5.0	4/5/2000	5	ND	30	5.8	31	40
TR-4-8.0	4/5/2000	7	--	--	--	--	--
TR-4-11.0	4/5/2000	10	ND	45	ND	56	54
TR-5-3.0	4/5/2000	3	--	--	--	--	--
TR-5-4.0	4/5/2000	4	--	--	--	--	--
TR-5-6.0	4/5/2000	6	--	--	--	--	--
TR-5-8.0	4/5/2000	8	--	--	--	--	--
TR-5-10.0	4/5/2000	10	ND	49	9.7	70	57
TR-5-15.0	4/5/2000	15	--	--	--	--	--
TR-6-3.0	4/5/2000	3	--	--	--	--	--
TR-6-5.0	4/5/2000	5	ND	55	150	38	86
TR-6-8.0	4/5/2000	8	--	--	--	--	--
TR-6-10.0	4/5/2000	10	--	--	--	--	--
TR-6-15.0	4/5/2000	15	--	--	--	--	--
TR-7-3.0	4/5/2000	3	ND	28	ND	23	26
TR-7-5.0	4/5/2000	5	--	--	--	--	--
TR-7-8.0	4/5/2000	8	--	--	--	--	--
TR-7-10.0	4/5/2000	10	--	--	--	--	--
TR-7-15.0	4/5/2000	15	--	--	--	--	--
TR-8-3.0	4/5/2000	3	--	--	--	--	--
TR-8-5.0	4/5/2000	5	--	--	--	--	--
TR-8-8.0	4/5/2000	8	--	--	--	--	--
TR-8-10.0	4/5/2000	10	ND	43	8.3	56	49
TR-8-15.0	4/5/2000	15	--	--	--	--	--
TR-9-3.0	4/5/2000	3	--	--	--	--	--
TR-9-5.0	4/5/2000	5	--	--	--	--	--
TR-9-8.0	4/5/2000	8	--	--	--	--	--
TR-9-10.0	4/5/2000	10	ND	8.8	7.6	25	39
TR-9-15.0	4/5/2000	15	--	--	--	--	--
TR-10-3.0	4/6/2000	3	ND	47	ND	35	31
TR-10-5.0	4/6/2000	5	--	--	--	--	--
TR-10-8.0	4/6/2000	8	--	--	--	--	--
TR-10-10.0	4/6/2000	10	--	--	--	--	--
TR-10-15.0	4/6/2000	15	ND	37	ND	110	61
TR-11-3.0	4/5/2000	3	--	--	--	--	--
TR-11-5.0	4/5/2000	5	ND	30	10	64	40
TR-11-8.0	4/5/2000	8	--	--	--	--	--
TR-11-10.0	4/5/2000	10	--	--	--	--	--
TR-11-15.0	4/5/2000	15	--	--	--	--	--
TR-12-3.0	4/5/2000	3	ND	17	6.8	14	28
TR-12-5.0	4/5/2000	5	ND	35	8.2	64	52
TR-12-8.0	4/5/2000	8	--	--	--	--	--
TR-12-10.0	4/5/2000	10	--	--	--	--	--
TR-12-15.0	4/5/2000	15	--	--	--	--	--
TR-13-3.0	4/6/2000	3	--	--	--	--	--
TR-13-5.0	4/6/2000	5	--	--	--	--	--
TR-13-8.0	4/6/2000	8	ND	97	28	99	73
TR-13-10.0	4/6/2000	10	--	--	--	--	--
TR-13-15.0	4/6/2000	15	--	--	--	--	--
TR-14-3.0	4/6/2000	3	--	--	--	--	--
TR-14-5.0	4/6/2000	5	ND	18	ND	15	20
TR-14-8.0	4/6/2000	8	--	--	--	--	--
TR-14-10.0	4/6/2000	10	ND	32	ND	33	36
TR-14-15.0	4/6/2000	15	--	--	--	--	--
TR-15-3.0	4/6/2000	3	--	--	--	--	--
TR-15-5.0	4/6/2000	5	ND	39	ND	64	42
TR-15-8.0	4/6/2000	8	--	--	--	--	--
TR-15-10.0	4/6/2000	10	--	--	--	--	--
TR-15-15.0	4/6/2000	15	--	--	--	--	--
TR-16-3.0	4/6/2000	3	--	--	--	--	--
TR-16-5.0	4/6/2000	5	--	--	--	--	--
TR-16-8.0	4/6/2000	8	--	--	--	--	--
TR-16-10.0	4/6/2000	10	--	--	--	--	--
TR-16-15.0	4/6/2000	15	--	--	--	--	--
TR-17-3.0	4/6/2000	3	ND	28	ND	12	19

TABLE 2
SUMMARY OF SOIL SAMPLE DATA - METALS
5885 Hollis Street
Emeryville, California

Sample Number	Sample Date	Sample Depth	Cadmium	Chromium	Lead	Nickel	Zinc
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
TR-17-5.0	4/6/2000	5	--	--	--	--	--
TR-17-8.0	4/6/2000	8	--	--	--	--	--
TR-17-10.0	4/6/2000	10	ND	39	ND	53	39
TR-17-15.0	4/6/2000	15	--	--	--	--	--
TR-18-3.0	4/5/2000	3	ND	26	9.4	21	26
TR-18-5.0	4/5/2000	5	--	--	--	--	--
TR-18-8.0	4/5/2000	8	--	--	--	--	--
TR-18-10.0	4/5/2000	10	ND	37	6.4	83	48
TR-18-15.0	4/5/2000	15	--	--	--	--	--
TR-19-2.5'	1/20/05	2.5	--	--	--	--	--
TR-19-6.0'	1/20/05	6.0	--	--	--	--	--
TR-20-2.0'	1/20/05	2.0	--	--	--	--	--
TR-20-6.0'	1/20/05	6.0	--	--	--	--	--
TR-21-2.0'	1/20/05	2.0	--	--	--	--	--
TR-21-6.0'	1/20/05	6.0	--	--	--	--	--
TR-22-2.0'	1/20/05	2.0	--	--	--	--	--
TR-22-6.0'	1/20/05	6.0	--	--	--	--	--
TR-25-2.0'	1/20/05	2.0	--	--	14	--	--
TR-25-6.0'	1/20/05	6.0	--	--	--	--	--
TR-28-2.0'	1/20/05	2.0	--	--	5.6	--	--
TR-28-6.0'	1/20/05	6.0	--	--	--	--	--
TR-29-2.0'	1/20/05	2.0	--	--	9.2	--	--
TR-29-6.0'	1/20/05	6.0	--	--	--	--	--
TR-30-2.0'	1/20/05	2.0	--	--	11	--	--
TR-30-6.0'	1/20/05	6.0	--	--	--	--	--
TR-31-2.5'	1/20/05	2.5	--	--	--	--	--
TR-31-6.0'	1/20/05	6.0	--	--	--	--	--
Maximum			ND	97	150	110	110
Background			5.6	58	7	46	64
Representative concentration			ND	97	150	110	110
TTLC			100	2500	1000	2,000	5,000
STLC (TCLP) (mg/l)			1	5	5	20	250.0
ESL (Table K-1) Residential			1.7	2300.0	255	150	4,700
ESL (Table K-2) Commercial			7.4	290000.0	750	1,000	58,000
Representative Concentration vs. Residential ESL			ND	Less than ESL	Less than ESL	Less than ESL	Less than ESL
Representative Concentration vs. Commercial ESL			ND	Less than ESL	Less than ESL	Less than ESL	Less than ESL

Notes:
mg/kg = milligrams per kilogram (parts per million)
ND = Not Detected Above Laboratory Reporting Limits
-- = Not Analyzed or Not Applicable

ESL for Chromium is based on Chromium III
ESL for Lead is based on no ingestion of homegrown produce
ESL = Environmental Screening Levels established by the SFBRWQCB
SFBRWQCB = San Francisco Bay Regional Water Quality Control Board
Table K-1: ESL for Direct Exposure, Residential, 2005.
Table K-2: ESL for Direct Exposure, Commercial/Industrial, 2005.
TTLC = Total Threshold Limit Concentration
STLC = Soluble Threshold Limit Concentration
TCLP = Toxic Characteristic Leaching Procedure
BKG = Maximum detected concentration is less than background and not evaluated further

Background = Average Concentrations from LBNL, 2002. If no average concentration available, then value was selected from the following 95th percentile, 99th percentile, and median of detected concentrations (in order, depending upon available values).

LBNL = Lawrence Berkeley National Laboratory, 2002, Analysis of Background Distributions of Metals in the Soil at Lawrence Berkeley National Laboratory. Environmental Restoration Program. June

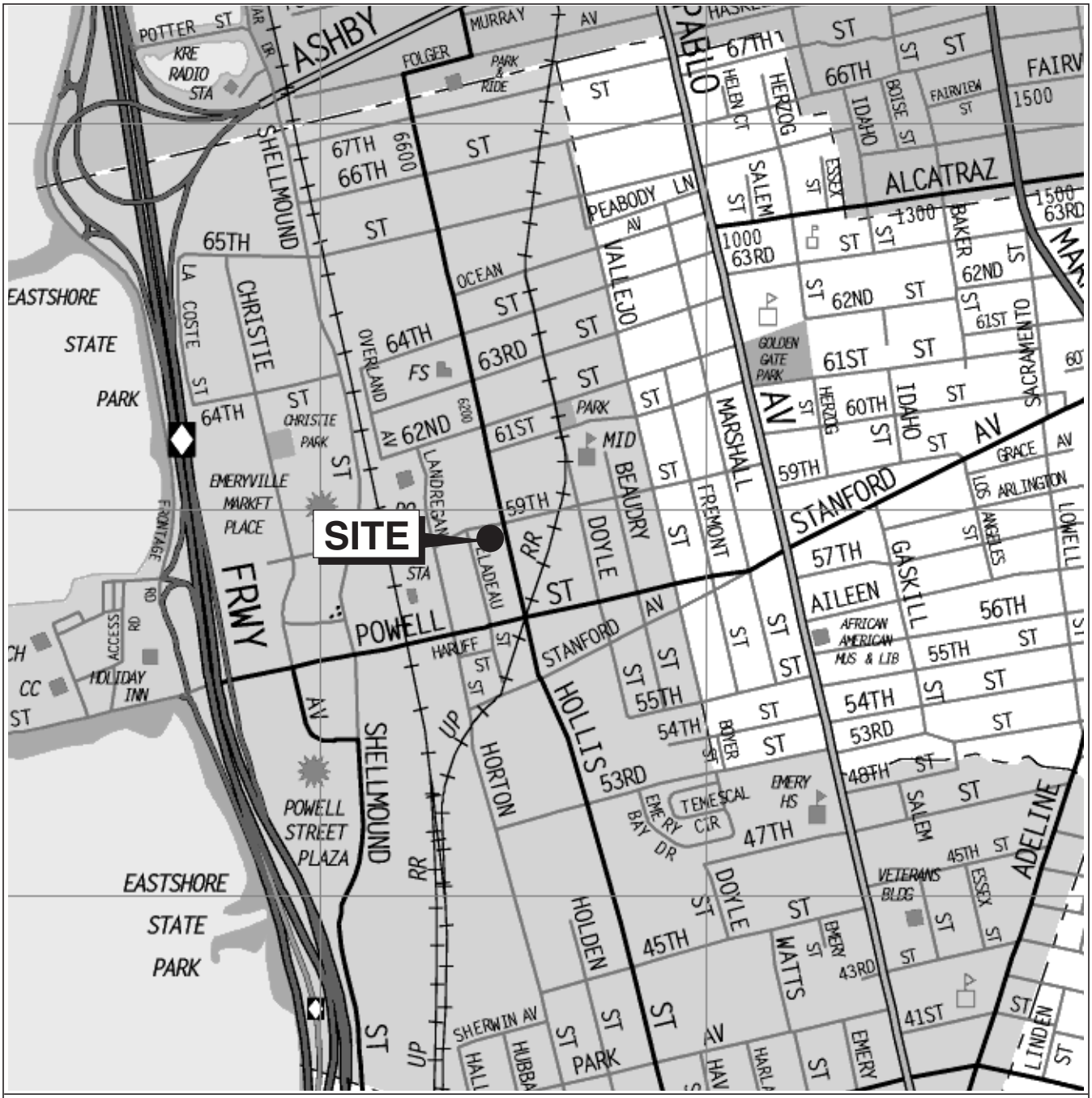
TABLE 3
SUMMARY OF GROUNDWATER SAMPLE DATA - ORGANICS
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	TPHd ug/l	TPHmo ug/l	TPHg ug/l	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	m,p-Xylene ug/l	o-Xylene ug/l	Isopropylbenzene ug/l	Propylbenzene ug/l	1,3,5-Trimethylbenzene ug/l	1,2,4-Trimethylbenzene ug/l	sec-Butylbenzene ug/l	Naphthalene ug/l	Acetone ug/l	Other VOCs ug/l
TR-1	4/6/2000	130	ND	98	--	--	--	--	--	--	--	--	--	--	--	--	ND (8010)
TR-6	4/5/2000	ND	1,400	ND	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 100	ND (8260)
TR-9	4/6/2000	ND	420	ND	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-12	4/6/2000	700	ND	3,300	--	--	--	--	--	--	--	--	--	--	--	--	ND (8010)
TR-23 (GW)	6/20/2005	8,400 L Y	--	28,000	4,300	< 25	990	300	< 25	120	240	45	160	< 25	380	< 500	ND (8260)
TR-24 (GW)	6/15/2005	6800 L	--	91000 Y	2500	31	950	380	380	210	110	290	43	70	710	35	**
TR-25 (GW)	1/20/05	NA	NA	150,000 Y	2,500	< 10	3,600	1,100	620	--	--	--	--	--	--	--	--
TR-29 (GW)	1/20/05	280 H Y	340 L	< 50	< 0.5	0.61 C	< 0.5	0.60 C	< 0.5	--	--	--	--	--	--	--	--
TR-30 (GW)	1/20/05	640 H Y	960	< 50	< 0.5	0.85 C	< 0.5	0.85 C	< 0.5	--	--	--	--	--	--	--	--
TR-31 (GW)	1/20/05	270 H Y	1,500	< 50	< 0.5	0.56 C	< 0.5	0.57 C	< 0.5	--	--	--	--	--	--	--	ND
Maximum		8400	1500	150000	4300	31	3600	1100	620	210	240	290	160	70	710	35	ND
ESL (Table E-1a) Residential - high permeability*		500	640	500	540	380,000	170,000	160,000	160,000	NA	NA	NA	NA	NA	3,200	53,000,000	NA
ESL (Table E-1a) Commercial - high permeability*		640	640	500	1,800	380,000	170,000	160,000	160,000	NA	NA	NA	NA	NA	11,000	150,000,000	NA
Maximum vs. Residential ESL		**Exceeds ESL**	**Exceeds ESL**	**Exceeds ESL**	**Exceeds ESL**	Less than ESL	Less than ESL	Less than ESL	Less than ESL	NA	NA	NA	NA	NA	Less than ESL	Less than ESL	ND
Maximum vs. Commercial ESL		**Exceeds ESL**	**Exceeds ESL**	**Exceeds ESL**	**Exceeds ESL**	Less than ESL	Less than ESL	Less than ESL	Less than ESL	NA	NA	NA	NA	NA	Less than ESL	Less than ESL	ND

Notes:
Results presented in units indicated at top of table.
ug/l = micrograms per liter (parts per billion)
TPHg = Total Petroleum Hydrocarbons quantified as gasoline
TPHd = Total Petroleum Hydrcarbons quantified as diesel fuel
TPHmo = Total Petroleum Hydrocarbons quantified as motor oil
VOCs = Volatile Organic Compounds (see laboratory data sheets for complete list of VOCs analyzed)
< 1 = indicates not detected at the indicated laboratory detection limit
ND = Not detected at or greater than the laboratory detection limit which varies, see laboratory report
C = Presence confirmed, but RPD (Relative Percent Difference) between columns exceeds 40%
Y = Laboratory flag indicating sample exhibits chromatographic pattern which does not resemble standard
H = Laboratory flag indicating heavier hydrocarbons contributed to quantitation
L = Laboratory flag indicating lighter hydrocarbons contributed to quantitation
NA = not analyzed

Treadwell&Rollo

FIGURES



Base map: The Thomas Guide
Alameda County
1999

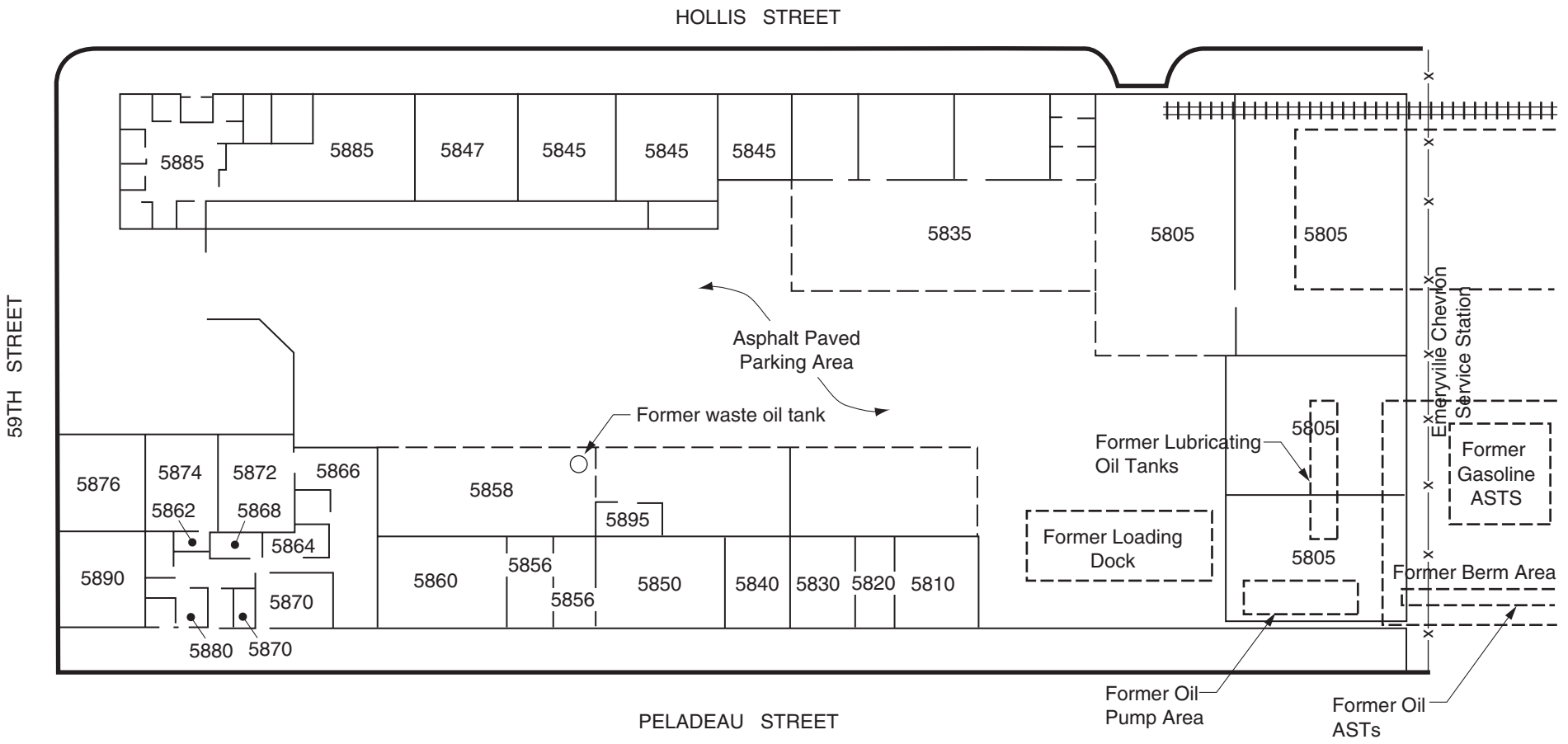
No scale

5885 HOLLIS STREET
Emeryville, California

SITE LOCATION MAP

Treadwell&Rollo

Date 05/13/05	Project No. 4069.01	Figure 1



EXPLANATION:

Approximate location of Union Oil of California Operations

0 60 Feet

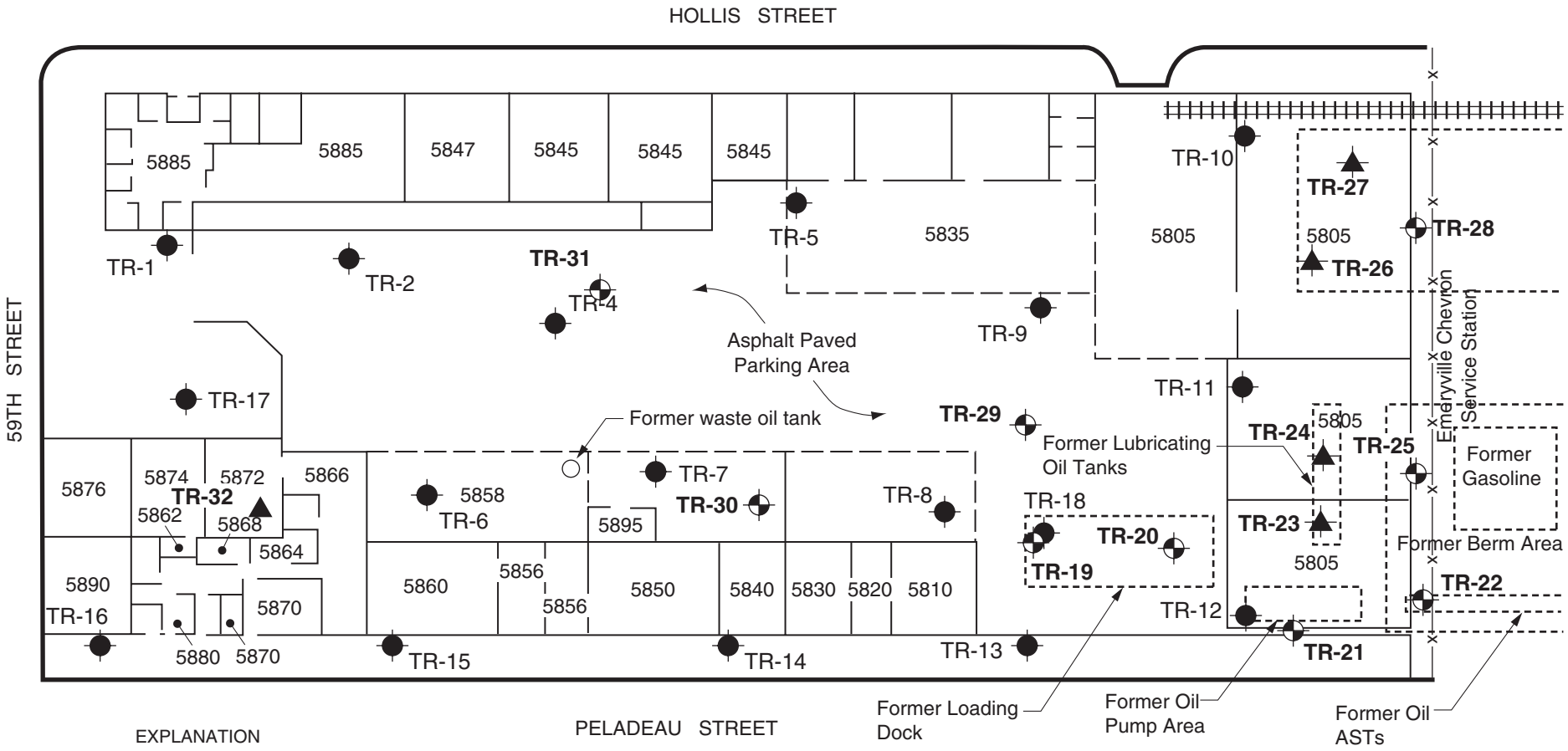
Approximate scale

5885 HOLLIS STREET
Emeryville, California

SITE PLAN

Date 05/18/05	Project No. 4069.01	Figure 2

Treadwell&Rollo



EXPLANATION

TR-31 Approximate location of current exploratory boring by Treadwell & Rollo, Inc., (January 2005)

TR-1 Approximate location of previous exploratory boring by Treadwell & Rollo, Inc. (April 2000)

TR-27 Approximate location of exploratory boring by Treadwell & Rollo, Inc., (June 2005)

TR-32 Proposed sampling locations that could not be accessed because of current buildings

Approximate location of Union Oil of California Operations

0 60 Feet

Approximate scale

5885 HOLLIS STREET
Emeryville, California

SAMPLE LOCATIONS

Date 07/11/05 | Project No. 4069.01 | Figure 3

Treadwell&Rollo

EXPLANATION

TR-31 Approximate location of current exploratory boring by Treadwell & Rollo, Inc., (January 2005)

TR-1 Approximate location of previous exploratory boring by Treadwell & Rollo, Inc. (April 2000)

TR-27 Approximate location of exploratory boring by Treadwell & Rollo, Inc., (June 2005)

TR-32 Proposed sampling locations that could not be accessed because of current buildings

Approximate location of Union Oil of California Operations

NOTES:
Depths - Feet, below ground surface
TPHg - Total Petroleum Hydrocarbons as gasoline
TPHmo - Total Petroleum Hydrocarbons as motor oil
mg/kg - Milligrams per kilogram
ND - Not Detected
NA - Not Analyzed

TR-2	TPHg mg/kg	TPHmo mg/kg
5'	ND	ND
10'	ND	46
15'	ND	ND

TR-4	TPHg mg/kg	TPHmo mg/kg
3'	ND	ND
5'	ND	ND
11'	99	ND

TR-5	TPHg mg/kg	TPHmo mg/kg
3'	ND	93
5'	ND	15
11'	ND	ND

TR-9	TPHg mg/kg	TPHmo mg/kg
5'	ND	ND
10'	ND	ND
15'	ND	ND

TR-11	TPHg mg/kg	TPHmo mg/kg
5'	1.7	17
3'	ND	ND
10'	ND	ND

TR-10	TPHg mg/kg	TPHmo mg/kg
3'	ND	ND
10'	ND	ND
15'	ND	ND

TR-31	TPHg mg/kg	TPHmo mg/kg
2'	ND	2,700
6'	ND	ND

TR-29	TPHg mg/kg	TPHmo mg/kg
2'	ND	1,600
6'	ND	6.6

TR-1	TPHg mg/kg	TPHmo mg/kg
5'	110	6,600
9'	ND	ND
12'	ND	ND

TR-17	TPHg mg/kg	TPHmo mg/kg
3'	ND	ND
10'	ND	ND
15'	ND	ND

TR-16	TPHg mg/kg	TPHmo mg/kg
5'	ND	ND
10'	ND	ND

TR-6	TPHg mg/kg	TPHmo mg/kg
5'	ND	250
8'	ND	ND
10'	ND	ND

TR-15	TPHg mg/kg	TPHmo mg/kg
5'	ND	ND
10'	1.0	ND
15'	ND	ND

TR-7	TPHg mg/kg	TPHmo mg/kg
3'	ND	93
8'	1.0	15
15'	ND	ND

TR-30	TPHg mg/kg	TPHmo mg/kg
2'	ND	510
6'	2.8	ND

TR-14	TPHg mg/kg	TPHmo mg/kg
3'	ND	ND
5'	ND	ND
8'	ND	ND
10'	1.2	ND
15'	1.4	ND

TR-8	TPHg mg/kg	TPHmo mg/kg
5'	ND	93
10'	ND	15
15'	ND	ND

TR-19	TPHg mg/kg	TPHmo mg/kg
2'	ND	910
6'	ND	ND

TR-13	TPHg mg/kg	TPHmo mg/kg
5'	ND	ND
8'	ND	13
10'	ND	ND
15'	ND	ND

TR-18	TPHg mg/kg	TPHmo mg/kg
3'	ND	93
5'	ND	15
10'	ND	ND

TR-20	TPHg mg/kg	TPHmo mg/kg
2'	15	26
6'	500	22

TR-12	TPHg mg/kg	TPHmo mg/kg
3'	ND	ND
5'	27	ND
8'	ND	ND
10'	160	ND
15'	19	ND

TR-21	TPHg mg/kg	TPHmo mg/kg
2'	ND	ND
6'	14	42

TR-27	TPHg mg/kg	TPHmo mg/kg
2'	<1.1	NA

TR-28	TPHg mg/kg	TPHmo mg/kg
2'	ND	54
6'	160	280

TR-26	TPHg mg/kg	TPHmo mg/kg
4'	140	NA

TR-25	TPHg mg/kg	TPHmo mg/kg
2'	ND	62
6'	2,100	16

TR-24	TPHg mg/kg	TPHmo mg/kg
4'	1.1	NA

TR-23	TPHg mg/kg	TPHmo mg/kg
4'	2.3	NA
9'	390	NA

TR-22	TPHg mg/kg	TPHmo mg/kg
2'	ND	32
6'	1.7	10

HOLLIS STREET

59TH STREET

PELADEAU STREET

5885 5885 5847 5845 5845 5845 5835 5805 5805 5805 5876 5874 5872 5866 5862 5868 5864 5858 5856 5856 5850 5840 5830 5820 5810 5895 5890 5880 5870 5870 5860

TR-1 TR-2 TR-4 TR-31 TR-5 TR-9 TR-10 TR-27 TR-28 TR-26 TR-11 TR-24 TR-25 TR-23 TR-22 TR-21 TR-12 TR-17 TR-16 TR-32 TR-6 TR-30 TR-7 TR-8 TR-18 TR-20 TR-19 TR-13 TR-15 TR-14

Asphalt Paved Parking Area

Former waste oil tank

Former Lubricating Oil Tanks

Former Gasoline

Former Berm Area

Former Loading Dock

Former Oil Pump Area

Former Oil ASTs

Emeryville Chevron Service Station

0 60 Feet

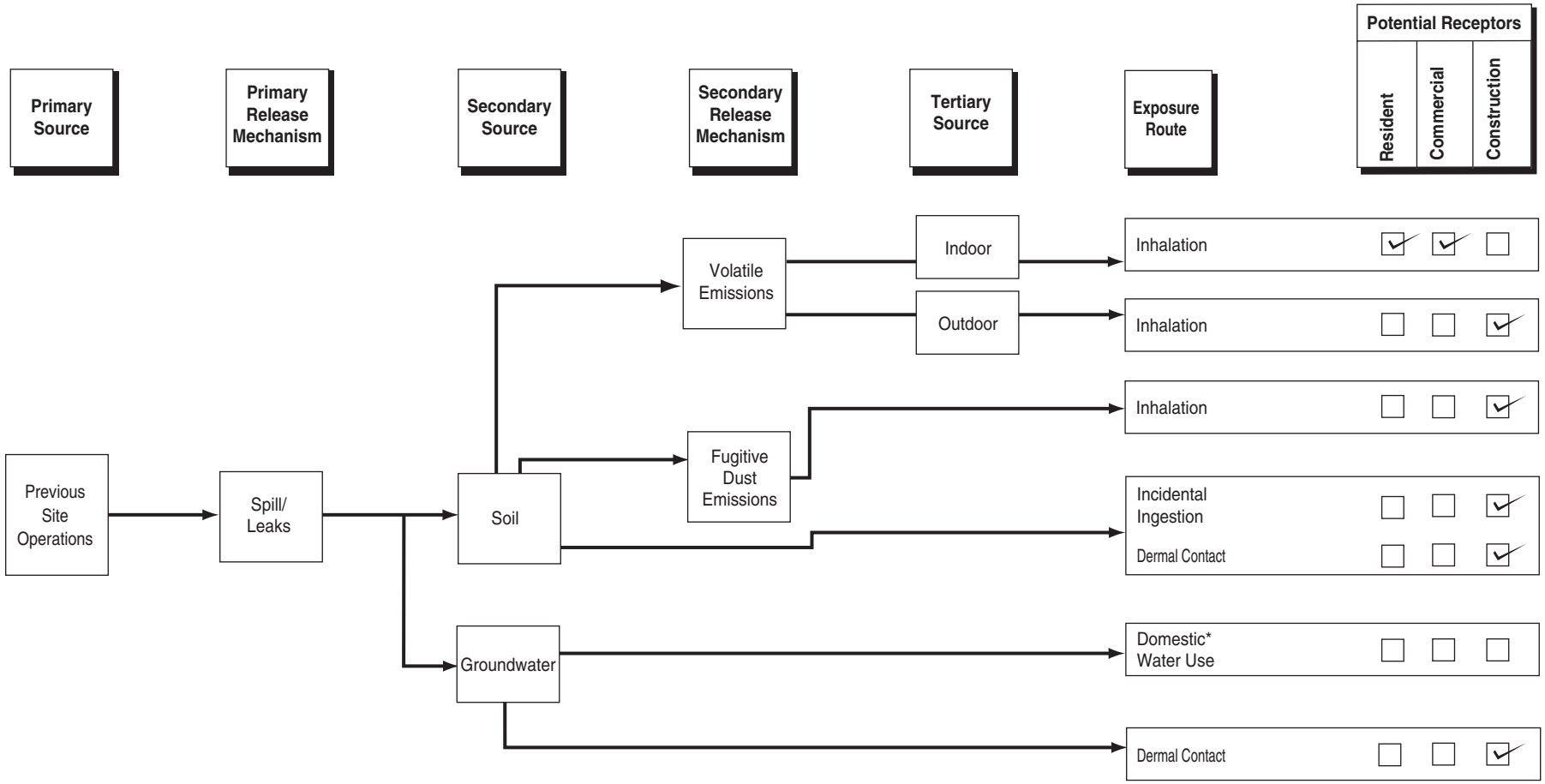
Approximate scale

5885 HOLLIS STREET
Emeryville, California

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE AND MOTOR OIL IN SOIL

Date 07/11/05 | Project No. 4069.01 | Figure 4

Treadwell&Rollo



☑ = Pathway Complete, Based on Proposed Development

Domestic water is supplied from off-site sources by East Bay Municipal Utility District.

5885 HOLLIS STREET
Emeryville, California

CONCEPTUAL SITE MODEL

Date 06/02/05	Project No. 4069.01	Figure 5

Treadwell&Rollo

APPENDIX A

ACHCSA AND TREADWELL & ROLLO CORRESPONDENCE

Treadwell&Rollo

23 January 2001
Project 2808.01

Susan Hugo
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Emeryville Industrial Court
5885 Hollis Street
Emeryville, California

Dear Ms. Hugo:

At our meeting with you and others at the City of Emeryville offices on 12 January 2001, you requested additional information prior to the construction of the proposed Emeryville Industrial Court project (Figures 1). This report incorporates the requested information and describes the relevant aspects of the revised project plans. Previous work by Treadwell & Rollo at the site is documented in two reports: *Environmental Site Characterization* (report dated 12 May 2000) and *Geotechnical Investigation* (report dated 27 July 2000).

EXISTING CONDITIONS

The project site is approximately 220 feet by 550 feet in plan dimension and is bounded by Hollis Street to the east, 59th Street to the north, Peladeau Street to the west, and a Chevron Service Station and Powell Street to the south (Figure 1). The site is currently occupied with four buildings: a one-story masonry and wood building that occupies 5835 through 5885 Hollis Street, a one-story masonry building that occupies 5810 through 5890 Peladeau Street, and two one-story metal framed buildings that occupy 5805 Hollis Street and 5801 through 5808 Peladeau Street. The remaining area of the site is used for at-grade parking and is paved with asphalt and concrete.

PROJECT DESCRIPTION

We understand the proposed development for the Emeryville Industrial Court project site will consist of demolishing the existing buildings and the construction of a two-story office building with one level of below ground parking. The parking structure will encompass the entire property, with the office building built over the garage.

Current excavation plans are to remove approximately the top 10 to 11 feet of soil for the building and garage foundation construction. The entirety of this soil will be excavated,

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stockpiled, chemically tested, and properly disposed of off-site. No excavated soil will be re-used on-site.

BACKGROUND INFORMATION

Previously, we reviewed the Environmental Site Assessment (ESA) of Emeryville Industrial Court, Emeryville, California dated 14 March 1995, prepared by Weiss Associates. We also reviewed historical Sanborn Fire Insurance Maps for the subject property.

Prior to 1917, the site and vicinity appeared to be vacant land. Union Oil Company of California occupied the site from 1917 to 1964. Intermountain Terminal Company, an affiliate of Pacific Intermountain Express Company owned the property from 1964 to 1974. In 1974, the current owners of the property purchased the property and the current buildings, with the exception of the 5806-5808 Peladeau Street building, which was constructed in 1985.

Union Oil Company of California reportedly used the property as a distribution facility, which contained many above- and underground petroleum storage tanks, a garage along Hollis Street, and an auto repair shop along Peladeau Street. Along the southeastern portion of the subject property, a total of 40,000 gallons of lubricating oil were reportedly stored in aboveground tanks.

On the basis of our review of historical maps, Intermountain Terminal Company used the property as a truck storage area and parts warehouses. From 1974, the property has been used as office/warehouse space.

During the remodeling of one of the buildings in 1985 and more recently during the widening of 59th Street and the replacement of an underground utility in 1999, petroleum hydrocarbons were discovered in the soil. Diesel was detected at a maximum concentration of 13,000 parts per million and motor oil at 15,000 ppm. The excavated soil was transported and disposed of at a regulated landfill.

In 1990, an unknown 10,000-gallon underground gasoline storage tank was reportedly located and removed from the 5805 Hollis Street property (S. B. Thomas). No records were found in regards to the removal of the underground storage tank. However, according to the property owners, soil contamination was noted during the tank removal and the affected soil was disposed at a regulated landfill. The records for the underground storage tank removal have been requested from the corporate headquarters of S. B. Thomas. When these records are received, a copy will be forwarded to Alameda County Health Care Services.

In April 2000, we performed a subsurface investigation that included collection of soil samples from 17 exploratory borings and collection of four groundwater grab samples from 4 exploratory

borings. The locations of the exploratory boring are presented on Figure 4. Analytical results are summarized on Tables 1 through 3.

Soil Analytical Results

A total of 59 soil samples were analyzed for gasoline, diesel, motor oil, TRPH, VOCs, SVOCs, and LUFT 5 metals. Low levels of gasoline were detected above method reporting limits in 11 of the 59 samples at concentrations ranging from 1.0 to 160 milligrams per kilograms (mg/kg) or parts per million (ppm). Diesel was detected above method reporting limits in 10 of the 59 soil samples analyzed in concentrations ranging from 1.3 to 360 ppm.

Motor oil was detected above method reporting limits in 11 of the 59 samples at concentrations ranging from 15 to 6,600 ppm. TRPH were detected above method reporting limits in 11 of the 59 samples at concentrations ranging from 30 to 9,900 ppm. The maximum concentrations of TRPH, TPH as gasoline, and TRP as motor oil were detected in sample TR-1-4.0. When encountered elsewhere, these contaminants were generally one order of magnitude lower.

The only volatile organic compounds (VOCs) detected at or above the method reporting limits in the soil samples analyzed was carbon disulfide in sample TR-18-15 at a concentration of 17 micrograms per kilograms (ug/kg) or parts per billion (ppb). Benzo(a)pyrene was the only semi-volatile organic compound (SVOC) detected; it was detected in 5 of the 9 soil samples analyzed in concentrations ranging from 540 to 600 ppb.

With two exceptions, the metal concentrations were within normal[1] background ranges found in the western United States. Elevated concentrations (150 ppm) of total lead were found in samplesTR-1-4.0 and TR-6-3.0.

Groundwater Analytical Results

Groundwater grab samples were collected from borings TR-1, TR-6, TR-9, and TR-12 contained detectable concentrations of total recoverable petroleum hydrocarbons (TRPH), total petroleum hydrocarbons as gasoline, diesel, and motor oil, the metal concentrations detected were within generally accepted background levels. No volatile organic compounds (VOCs) were detected in the groundwater samples.

Gasoline was detected in the groundwater collected from boring TR-1 and TR-12 at concentrations of 98 and 3,300 micrograms per liter (ug/L) or parts per billion (ppb),

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[1] "U.S.G.S. Professional Paper 1270, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States," 1984

respectively. Diesel was also detected in groundwater samples from these borings at concentrations of 130 and 700 ppb, respectively.

TRPH and motor oil were TRPH was detected in the groundwater samples collected from borings TR-6 and TR-12 at concentrations of 6,600 and 9,900 ppb, respectively. Motor oil was detected in the groundwater samples collected from borings TR-6 and TR-9 at concentrations of 1,400 and 420 ppb, respectively.

SHORT TERM AND LONG TERM RISK MANAGEMENT PLAN

This risk management plan (RMP) presents the measures recommended by Treadwell & Rollo to mitigate worker and site user and neighbor risks associated with the presence of certain constituents in the soil and groundwater at the 5885 Hollis Street project site both during and after construction. Current plans are to excavate about 10 to 11 feet of soil across the entire site, stockpile the excavated soil, chemically test the soil, and properly dispose of all the soil at the proper off-site locations.

The presence of organic and inorganic compounds in the native soil was identified by soil sample analyses, as described in our *Environmental Site Characterization* report dated 12 May 2000. Regulations stipulate that the "disturbance" or excavation of soil with these constituents must include special soil handling procedures and specific worker heath and safety measures. In addition, provisions for long-term maintenance and management practices will be necessary to minimize exposure to future site users. A description of the findings of previous environmental studies and our recommendations for further action are presented in the remainder of this plan.

Subsurface Conditions

Subsurface information from test borings indicates the site is blanketed by approximately 2 to 4 feet of fill. The fill consists of clayey sand and clayey gravel and is underlain by medium stiff to very stiff clay to maximum depths explored. Previous investigations reported encountering groundwater at various depths (from 6 to 14 feet) below existing grade. Groundwater levels are expected to fluctuate depending on rainfall and seasonal conditions, as well as manmade obstructions and possible tidal influences from the Bay.

The results of the laboratory analyses for soil and groundwater samples have detected concentrations of total recoverable petroleum hydrocarbons (TRPH), gasoline, diesel, volatile and semi-volatile organic compounds (VOCs and SVOCs), and heavy metals. Our recommended risk management procedures, including contingencies for undiscovered contamination, possible underground storage tanks and associated piping are described in the remainder of this report.

RECOMMENDATIONS FOR MITIGATIVE ACTIONS

The results of the environmental investigation indicate the soil and groundwater at the site contains elevated concentrations of primarily petroleum hydrocarbons. The presence of these and other compounds poses soil management and potential health and safety issues to be addressed as part of the site development activities.

Soil Management

The soil management objectives for the site are to minimize exposure to construction workers at the site, nearby residents, workers and/or pedestrians, and future users of the site to constituents in the soil. The soil that is disturbed during construction activities will be stockpiled at locations to be determined prior to any site activities. It is anticipated that the stockpiles will contain at a maximum about 500 cubic yards of soil and will be placed to a height of about 7 feet. The stockpiled soil will be placed on plastic sheeting, covered with anchored plastic sheeting and kept moist at all times. The site will be secured by fencing at all times and temporary fencing will also be placed around the stockpiles.

The excavation contractor should establish appropriate soil stockpile locations on the site to properly segregate, cover, moisture control, and profile the excavated soil. Soil profiling criteria depends on the proposed landfill location. These procedures should be established by the excavation contractor and coordinated with the proposed landfills prior to initiating soil excavation.

Groundwater Management

The proposed construction activities will most likely encounter groundwater in quantities that will require its removal from the subsurface. With the low permeability of the native soil, which is primarily a clayey material, migration of groundwater on-site and off-site would most likely be minimal. The groundwater will be pumped into appropriate aboveground containers and groundwater samples will be obtained for chemical analyses. The groundwater will be tested for parameters established by the East Bay Municipal Utility District (EBMUD) for discharge of groundwater into the sanitary sewer system. If contamination is detected in the groundwater, the groundwater will be properly treated, i.e. carbon units prior to disposal.

Groundwater Intrusion and Waterproofing

It is expected that the below grade garage will include a two foot thick concrete floor slab and that the exterior walls will be about one foot of concrete. The slab and wall will both be

waterproofed, so no water intrusion is expected. Once the building and waterproofing design has been completed, copies will be provided to ACHCS and the City of Emeryville.

CONTINGENCY PLAN

If underground storage tanks, sumps, and/or associated piping are uncovered during the excavation activities; the following contingency plan will be followed. ACHCS and the City of Emeryville will be notified and the underground storage tank, sump, and/or associated piping will be remove and properly disposed. The removals will be performed by a licensed contractor in accordance with current Federal and State regulations. In addition, soil and groundwater samples will be collected accordingly. A tank closure report with be prepared and submitted to ACHCS and the City of Emeryville.

If unknown areas of suspected petroleum hydrocarbons or other hazardous materials are discovered during the excavation activities, the following contingency plan will be followed. The impacted areas will be excavated, stockpiled on and covered with plastic sheeting, soil samples will be collected and tested for appropriate chemical constituents (petroleum hydrocarbons, HVOCs, SVOCs, metals), and reported to ACHCS and City of Emeryville. Based on the results of the testing, the soil will be properly disposed of off-site.

HEALTH AND SAFETY ISSUES

Based on our experience on similar sites, there are potential health and safety issues associated with the compounds detected at the site. We judge there may be the potential for these compounds to affect construction workers at the site, nearby residents, workers and/or pedestrians, and future users of the site. The routes of potential exposure to these compounds will be through three pathways: (1) dermal (skin) contact with the soil, (2) inhalation of dusts and/or vapors, and (3) ingestion of the soil.

The most likely potential for human exposure to the compounds in the soil will be during soil excavation operations. Because on-site materials may contain petroleum hydrocarbons and other concentrations in excess of the Proposition 65 guidelines, we recommend that proper health and safety procedures, as well as warning requirements be implemented during construction. The potential health risk to on-site construction workers and the public will be minimized by developing and implementing a comprehensive health and safety plan (HSP). This plan will be prepared for the contractor by a certified industrial hygienist and will be submitted to ACHCS and City of Emeryville for review and approval prior to the start of any construction activities.

The site contractor shall be responsible for establishing and maintaining proper health and safety procedures to minimize worker and public exposure to site contaminants during construction.

The HSP describes the health and safety training requirements, i.e. trained in accordance with Section 1910.120 of 29 Code of Federal Regulations (HazWoper training), specific personal hygiene, and monitoring equipment that will be used during construction to protect and verify the health and safety of the construction workers and the general public from exposure to constituents in the soil. It may also be necessary to conduct air monitoring to evaluate the amount of airborne particles during excavation and grading. A site health and safety officer (HSO) will be on site at all times during excavation activities to ensure that all health and safety measures are maintained. The HSO will have authority to direct and stop (if necessary) all construction activities in order to ensure compliance with the HSP.

Confirmation Soil and Groundwater Sampling

Once the excavation has been completed, confirmatory soil and groundwater samples will be collected and analyzed. The soil and groundwater samples will be analyzed for the following: total petroleum hydrocarbons as gasoline, diesel, motor oil, and mineral spirits by EPA Method 8015M, volatile organic compounds (VOCs) by EPA Method 8260, semi-volatile organic compounds by EPA Method 8270, and California Title 22 metals. The analytical results of the confirmation sampling will be presented in our certification report.

Site Encapsulation

The risk of direct contact with the soil by future site users will be mitigated by encapsulating the soil with the concrete floor slab and exterior walls of the garage and the waterproofing. The concrete floor slab and exterior walls will be considered the cap above the soil. The encapsulation will sufficiently reduce the health risk through dermal contact and ingestion by providing a physical barrier, thereby eliminating the exposure pathway between the contaminants and site users.

MAINTENANCE REQUIREMENTS

The objective of these maintenance requirements is to ensure that the long-term risk management plan measures, specifically encapsulating soil beneath the floor slab will remain effective during the building's and garage's use and occupancy period. The owner and operator will maintain this risk management plan, maintenance work plans, and maintenance records in a readily accessible on-site location and shall be responsible for informing any employee or contractor, who will perform below grade construction, of the environmental conditions, soil management concerns, and health and safety requirements stipulated in this risk management plan.

These measures will also be enforced during any post-development construction activities such as utility line repair, building expansion, and other activities that may disturb the underlying contaminated soil. To maintain the integrity of the encapsulation layer and to protect future site workers, who may disturb the encapsulation layer, the following procedures must be adhered to by the owner and/or operator of the site:

- Notify the ACHCS and City of Emeryville of any proposed activity expected to disturb the integrity of the encapsulating layer or soil, thirty (30) calendar days before work commences. In cases of emergency, the ACHCS and City of Emeryville shall be notified within 24 hours and the work should commence in accordance with the mitigation measures described in this risk management plan.

- Prepare a specific work plan that includes a description of the proposed construction activities, soil management plan, and health and safety plan.

- Direct any contractor or employee who disturbs the encapsulating layer and is engaged in any excavation or earth movement at the property to comply with the appropriate local, State, and Federal regulations.

- Direct any contractor or employee engaged in any activities that involve penetrating the encapsulating layer to repair the disturbed area as soon as is practical.

- Control dust by wetting and protect exposed or excavated soil from storm run-on and run-off during the period of excavation, soil movement, or exposure.

- Determine by appropriate testing whether any excess material removed from the site is hazardous pursuant to State or Federal hazardous criteria. This material must be managed in accordance with all appropriate regulations.

- Provide the ACHCS and the City of Emeryville with a report that describes the maintenance activities related to the encapsulating layer or excavation of soil.

CERTIFICATION REPORT

Upon completion of the soil management activities, a Certification Report will be prepared by a third party (other than the contractor). This report will present a chronology of the construction events, a summary of analytical data, and a description of all mitigation activities at the site. It will also include a certification statement that indicates the mitigation activities have been performed in accordance with this risk management plan. The Certification Report will be submitted to the Alameda County Health Care Services (ACHCS) for review and approval

within 60 days of the completion of all earthwork performed as part of the Emeryville Industrial Court project.

We trust this report provides the required information. If you have any questions, please call either of us at 415-955-9040.

Sincerely yours,
TREADWELL & ROLLO, INC.

Peter J. Cusack
Senior Project Scientist

Donald D. Treadwell, PhD, PE
Principal Engineer

Enclosures

510 337 9335

Post-it® Fax Note 7671 | Date | # of pages ▶ 2
To PETER CUSACK | From SUSAN HUGO
Co./Dept. TREADWELL & ROLLO | Co. ACEHS
Phone # | Phone #
Fax # 415-955-9041 | Fax # 510 337-9335

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
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January 16, 2001

Mr. Fillmore Marks
Marks Management Company
44 Montgomery, Suite 850
San Francisco, California 94104

RE: Proposed Emeryville Industrial Court (STID# 6687)
5885 Hollis Street, Emeryville, California 94608

Dear Mr. Fillmore:

This letter serves to follow up the meeting we had last Friday, January 12, 2001, attended by Marks Management (Elaine Kirk and yourself), City of Emeryville Building and Planning (Barrie Cromarti), Treadwell and Rollo (Donald Treadwell, Christian Divis and Peter Cusack) and your architect for the project. On July 5, 2000, this agency issued a letter approving the proposed development of the subject site for commercial use provided the issues listed in our June 23, 2000 letter are addressed. The submitted development plan included construction of a two-story building and above ground four level parking garage structure. Treadwell and Rollo submitted a letter report dated August 8, 2000 to address those issues.

As you know, the development plan has changed since that time. Treadwell and Rollo submitted a letter dated December 8, 2000 describing the proposed changes to the development plan which included one level of underground parking covering the entire site. It is my understanding that the entire site will be excavated between ten to eleven feet below ground surface. Because of these proposed changes to the previously submitted plan, the following issues (discussed in our meeting) must be addressed prior to development of the site:

1. Potential future groundwater intrusion into the basement of the building must be addressed.
2. Evaluate and demonstrate that the proposed construction activities will not create migration of on-site and off-site contamination during construction and after completion of the development of the site. Potential off-site sources should be identified.
3. Evaluate vapor seepage into the basement / building and identify human health risk to occupants of the building.
4. Site development plan should be revised to incorporate the proposed changes and should include at a minimum the following: description of the project, site map with the location of the proposed building, landscapes, underground parking, known sources or potential sources of contamination, extent of excavation, location of pile drives or elevator shafts if applicable.
5. Site conceptual model (SCM) should be prepared to include the proposed changes, identify sources of releases, chemicals of concern (COCs), routes of exposures and sensitive receptors. This should include evaluation of human health and environmental risk assessment for the proposed use of the site. Issue # 3 should be incorporated in the SCM.

Mr. Fillmore Marks
RE: 5885 Hollis Street, Emeryville, CA 94608
January 16, 2001

6. The short term and long-term risk management plan should be revised to incorporate the proposed changes. The short term (construction) risk management plan should include at a minimum the following elements: acceptable health & safety plan for construction workers, soil management plan, groundwater management plan, dust control, stormwater prevention plan, and preventive measures to not create any vertical conduits for contaminants to migrate from shallow to deeper groundwater. The long-term (future) risk management plan should include at a minimum the following items: health and safety plan for future construction workers such as utility workers who maybe exposed to residual contaminants that will be left at the site, institutional controls such as deed restriction and capping with clean soil cover at least three feet thick to minimize or eliminate exposure of gardeners and routine maintenance personnel (e.g. those who repair landscaping irrigation systems) to affected soil. Sidewalks should have at least three to four feet of clean soil cover.
7. Confirmation soil and groundwater samples should be collected at the site and should include the following chemicals of concern: TPH gasoline, TPH diesel, TPH motor oil, TPH mineral spirits, chlorinated solvents, volatile organic compounds (VOCs0, semi-volatile organic compounds (SVOCs) and metals.
8. The contingency plan should be revised to include the proposed changes.
9. Future groundwater monitoring plan for the site should include contamination found on 59th Street and Peleadeau.
10. A report should be submitted after completion of the development and should include at a minimum copies of any soil and /or groundwater disposed off site, results of soil and groundwater sampling, site map with location of residual contamination left at the site, etc.

A work plan addressing the above listed issues should be submitted and approved by this agency prior to development of the subject site.

If you have any questions about this letter or the subject site, please contact me at (510) 567-6780.

Sincerely,

Susan L. Hugo
Hazardous Materials Specialist

c: Ariu Levi /Thomas Peacock, Environmental Health Services
Ravi Arulanantham, San Francisco Bay RWQCB
Barrie Cromartie / Ignacio Dayrit, City of Emeryville, 1333 Park Street, Emeryville, CA 94608
Peter Cusack, Treadwell & Rollo, 555 Montgomery St., Suite 1300, San Francisco, CA 94111
SH / files

Treadwell&Rollo

8 August 2000
Project 2808.01

Ms. Susan Hugo
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Emeryville Industrial Court
5885 Hollis Street
Emeryville, California

Dear Ms. Hugo:

The following is in response to your letter dated 23 June 2000, in which you requested additional information prior to development of the proposed Emeryville Industrial Court project in Emeryville, California (Figure 1). Treadwell & Rollo, Inc. has previously performed an *Environmental Site Characterization* report dated 12 May 2000 and a *Geotechnical Investigation* report dated 27 July 2000.

EXISTING CONDITIONS

The project site is approximately 220 feet by 550 feet in plan dimension and is bounded by Hollis Street to the east, 59th Street to the north, Peladeau Street to the west, and a Chevron Service Station and Powell Street to the south (Figure 1). The site is currently occupied with four buildings: a one-story concrete building that occupies 5805 through 5885 Hollis Street, a one-story concrete building that occupies 5810 through 5890 Peladeau Street, and two one-story metal-framed buildings that occupy 5805 Hollis Street. The remaining area is asphalt-paved parking.

PROJECT DESCRIPTION

We understand the proposed development for the Emeryville Industrial Court project site will consist of demolishing the existing buildings and construct a two-story office building and a four-level parking garage. As shown on Figure 2, the proposed office building will have plan dimensions of about 292 by 196 feet and the proposed garage will have plan dimensions of about 194 by 119 feet. The remaining areas will be landscaped and walkways.

Current excavation plans are to remove approximately the top 5 feet of soil for the building and garage foundation construction. This soil will be excavated, stockpiled, and recompacted throughout the entire site. A schematic of select fill beneath the building and garage footings is shown on Figure 3.

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Telephone (415) 955-9040 Facsimile (415) 955-9041

BACKGROUND

Prior to 1917, the site and vicinity appeared to be vacant land. Union Oil Company of California occupied the site from 1917 to 1964. Intermountain Terminal Company, an affiliate of Pacific Intermountain Express Company owned the property from 1964 to 1974. In 1974, the current owners of the property purchased the property and the current buildings, with the exception of the 5806-5808 Peladeau Street building, which was constructed in 1985.

Union Oil Company of California reportedly used the property as a distribution facility, which contained many above- and underground petroleum storage tanks, a garage along Hollis Street, and an auto repair shop along Peladeau Street. Along the southeastern portion of the subject property, a total of 40,000-gallons of lubricating oil were reportedly stored in aboveground tanks.

During the remodeling of one of the buildings in 1985 and more recently during the widening of 59th Street and the replacement of an underground utility in 1999, petroleum hydrocarbons were discovered in the soil with diesel detected at a maximum concentration of 13,000 parts per million (ppm) and motor oil at 15,000 ppm. The excavated soil was transported and disposed of at a regulated landfill.

In 1990, an unknown 10,000-gallon underground gasoline storage tank was reportedly located and removed from the 5805 Hollis Street property (S. B. Thomas). No records were found in regards to the removal of the underground storage tank. However, according to the property owners, soil contamination was noted during the tank removal and the affected soil was disposed at a regulated landfill.

Per your request, the records for the underground storage tank removal have been requested from the Corporate headquarters of S. B. Thomas. When they are received, we will forward a copy to Alameda County Health Care Services.

In April 2000, we performed a subsurface investigation that included collection of soil samples from 18 exploratory borings and collection of four groundwater grab samples from 4 exploratory borings. The locations of the exploratory boring are presented on Figure 4. Analytical results are summarized on Tables 1 through 3.

Soil Analytical Results

A total of 59 soil samples were analyzed for gasoline, diesel, motor oil, TRPH, VOCs, SVOCs, and LUFT 5 metals. Low levels of gasoline were detected above method reporting limits in 11 of the 59 samples at concentrations ranging from 1.0 to 160 milligrams per kilograms (mg/kg) or parts per million (ppm). Diesel was detected above method reporting limits in 10 of the 59 soil samples analyzed in concentrations ranging from 1.3 to 360 ppm.

Motor oil was detected above method reporting limits in 11 of the 59 samples at concentrations ranging from 15 to 6,600 ppm. TRPH were detected above method reporting limits in 11 of the 59 samples at concentrations ranging from 30 to 9,900 ppm. The maximum concentration of TRPH, TPH as gasoline, and TPH as motor oil were each detected in sample TR-1-4.0. When encountered elsewhere, these contaminants were generally one order of magnitude lower.

The only volatile organic compounds (VOCs) detected at or above the method reporting limits in the soil samples analyzed was carbon disulfide in sample TR-18-15 at a concentration of 17 micrograms per kilograms (ug/kg) or parts per billion (ppb). Benzo(a)pyrene was the only semi-volatile organic compounds (SVOCs) detected, it was detected in 5 of the 9 soil samples analyzed in concentrations ranging from 540 to 600 ppb.

The metal concentrations were within expected[1] background ranges found in the western United States, with the exception of elevated total lead in two samples, TR-1-4.0 and TR-6-3.0, whose concentrations were 150 ppm.

Groundwater Results

Groundwater samples collected from borings TR-1, TR-6, TR-9, and TR-12 contained detectable concentrations of total recoverable petroleum hydrocarbons (TRPH), and total petroleum hydrocarbons as gasoline, diesel, and motor oil. The metal concentrations detected were within expected background levels. No volatile organic compounds (VOCs) were detected in the groundwater samples tested.

Gasoline was detected in the groundwater collected from boring TR-1 and TR-12 at concentrations of 98 and 3,300 micrograms per liter (ug/L) or parts per billion (ppb), respectively. Diesel was also detected in groundwater samples from these borings at concentrations of 130 and 700 ppb, respectively.

TRPH and motor oil were detected in the groundwater samples collected from borings TR-6 and TR-12 at concentrations of 6,600 and 9,900 ppb, respectively. Motor oil was detected in the groundwater samples collected from borings TR-6 and TR-9 at concentrations of 1,400 and 420 ppb.

SHORT TERM AND LONG TERM RISK MANAGEMENT PLAN

This section describes the risk management plan (RMP) measures recommended by Treadwell & Rollo, Inc. to mitigate worker and site user and neighbor risks associated with the presence of

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[1] "U.S.G.S. Professional Paper 1270, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States," 1984

certain constituents in the soil and groundwater at the 5885 Hollis Street project site both during and after construction.

Current plans are to excavate approximately five feet of soil across the entire site, stockpile the excavated soil, and recompact and re-use the soil beneath the building and parking garage foundation slabs. At this time, minimal off-site disposal is planned for the site. Clean imported fill will be brought in to provide approximately two feet of cover placed on landscaping areas and within utility trenches.

The presence of organic and inorganic compounds in the native soil was identified by soil sample analyses, as described in our Environmental Site Characterization report dated 12 May 2000. Current California Health and Safety Code stipulate that the "disturbance" or excavation of soil with these constituents must include special soil handling procedures and specific worker heath and safety measures. In addition, provisions for long-term maintenance and management practices will be necessary to minimize exposure to future site users. A description of the findings of previous environmental studies and our recommendations for further action are presented in the remainder of this plan.

Subsurface Conditions

Subsurface information from test borings indicates the site is blanketed by approximately 2 to 4 feet of fill, consisting of clayey sand and clayey gravel. The fill is underlain by medium stiff to very stiff clay to maximum depths explored. Previous investigations reported encountering groundwater at various depths varying from 6 to 14 feet below existing grade. Groundwater levels are expected to fluctuate depending on rainfall and seasonal conditions, as well as manmade drainage and possible tidal influences of the Bay.

The results of the laboratory analyses for soil and groundwater samples have detected concentrations of total recoverable petroleum hydrocarbons (TRPH), gasoline, diesel, volatile and semi-volatile organic compounds (VOCs and SVOCs), and heavy metals. Our recommended risk management procedures, including contingencies for undiscovered contamination, possible underground storage tanks and associated piping are described in the remainder of this plan.

Recommendations for Mitigative Actions

The results of the environmental investigation indicate the soil and groundwater at the site contains elevated concentrations of primarily petroleum hydrocarbons. The presence of these and other compounds poses soil management and potential health and safety issues to be addressed as part of the site development activities. The soil management objectives for the site are to minimize exposure to constituents in the soil to construction workers at the site, nearby residents, workers and/or pedestrians, and future users of the site.

Soil Management

The proposed construction activities will disturb limited amounts of native soil during the construction of the new foundations, grade beams, elevator pits, utility lines, and sanitary sewer lines. During construction activities, dust control measures will be implemented to reduce exposure. These measures may include moisture-conditioning the soil, using dust suppressants, covering the exposed soil and stockpiles with weighed-down plastic sheeting to prevent exposure of the soil. The site's Health and Safety Plan (prepared by others) will contain additional dust monitoring, action levels, dust control measures, and work stoppage provisions to be followed during construction activities.

All existing soil that is disturbed during construction will be reused on-site as backfill beneath the concrete floor slabs of the proposed building and garage and limited off-site disposal will be performed. This encapsulation will mitigate any direct contact with the soil by future site users. No native soil will be used as backfill material within the top two feet in the landscape areas or within the utility trenches.

Groundwater Management

The proposed construction activities most likely will not encounter groundwater in quantities that will require removal measures. If significant groundwater quantities are encountered during construction, the groundwater will be pumped into appropriate containers and samples will be obtained for chemical analyses. The groundwater will be tested for parameters established by the East Bay Municipal Utility District (EBMUD) for discharge of groundwater into the sanitary sewer system. If contamination is detected in the groundwater, the groundwater will be properly treated prior to disposal.

CONTINGENCY PLAN

If underground storage tanks, sumps, and/or associated piping are uncovered during the excavation activities; the following contingency plan will be followed. ACHCS and the City of Emeryville will be notified and the underground storage tank, sump, and/or associated piping will be removed and properly disposed. The removal will be performed by a licensed contractor in accordance with current Federal and State regulations, and soil and groundwater samples will be collected accordingly. A tank closure report with be prepared and submitted to ACHCS and the City of Emeryville.

If unknown areas of suspected petroleum hydrocarbons or other hazardous materials are discovered during the excavation activities, the following contingency plan will be followed. The impacted area will be excavated, stockpiled on and covered with plastic sheeting, soil samples will be collected and tested for appropriate chemical constituent (petroleum

hydrocarbons, HVOCs, SVOCs, metals), and reported to ACHCS and City of Emeryville. Based on the results of the testing, the soil will be properly disposed of.

Prior to being re-used on-site as backfill, the existing soil that is disturbed will be stockpiled and tested for total petroleum hydrocarbons as gasoline, diesel, and mineral spirits by EPA Method 8015M, total petroleum hydrocarbons as motor oil by EPA Method 418.1, volatile organic compounds (VOCs) by EPA Method 8010, semi-volatile organic compounds (SVOCs) by EPA Method 8270, and Title 22 Metals by EPA Method 6010/7000. Approximately every 500 cubic yards of stockpiled soil will be sampled by collecting a four-point composite sample. The samples will be collected by using a hand-driven sampler with an inside diameter of two inches, lined with a clean stainless steel tube and driven into the soil. The ends of the sample tube will be covered with Teflon and sealed with plastic end caps, and placing the samples into and ice-cooled chest until delivery to an analytical laboratory. The soil samples collected from the stockpile will be identified by using a progressive numbering sequence with the date of the sample collection and the location. All appropriate regulatory sampling methods, holding times, and detection limits will be followed.

HEALTH AND SAFETY ISSUES

Based on our experience on similar sites, there are potential health and safety issues associated with the compounds detected at the site. The routes of potential exposure to construction workers at the site, nearby residents, workers and/or pedestrians, and future users of the site are via three pathways: (1) dermal (skin) contact with the soil, (2) inhalation of dusts and/or vapors, and (3) ingestion of the soil.

The most likely potential occurrence for human exposure to the compounds in the soil will be during soil excavation operations. Because on-site materials may contain lead and other concentrations in excess of the Proposition 65 guidelines, we recommend that proper health and safety procedures, as well as warning requirements be implemented during construction. The potential health risk to on-site construction workers and the public will be minimized by developing and implementing a comprehensive health and safety plan (HSP) and by minimizing the generation of dust during excavation and development activities. This HSP will be prepared for the contractor by a certified industrial hygienist and will be submitted to ACHCS and City of Emeryville prior to the start of any construction activities. The site contractor shall be responsible for establishing and maintaining proper health and safety procedures to minimize worker and public exposure to site contaminants during construction.

The HSP describes the health and safety training requirements, specific personal hygiene, and monitoring equipment that will be used during construction to protect and verify the health and safety of the construction workers and the general public from exposure to constituents in the soil. It may also be necessary to conduct air monitoring to evaluate the amount of airborne particles during grading. A site health and safety officer (HSO) will be on site at all times during

excavation activities to ensure that all health and safety measures are maintained. The HSO will have authority to direct and stop (if necessary) all construction activities in order to ensure compliance with the HSP.

Site Encapsulation

The risk of direct contact with the soil by future site users will be mitigated by encapsulating the soil with either the concrete floor slab for the proposed office and garage buildings, landscaped areas, asphaltic concrete pavement, and the concrete walkways. The concrete floor slab, landscape areas, asphaltic concrete pavement, and concrete walkways will be considered the cap above the fill. The encapsulation will sufficiently reduce the potential health risk through dermal contact and ingestion by providing a physical barrier, thereby eliminating the exposure pathway between the contaminants and site users.

MAINTENANCE REQUIREMENTS

The objective of these maintenance requirements is to ensure that the long-term risk management plan measures, specifically encapsulating soil beneath the floor slab, will remain effective during the building and garage's use and occupancy period. The owner and operator will maintain this risk management plan, maintenance work plans, and maintenance records in a readily accessible on-site location and shall be responsible for informing any employee or contractor, who will perform below grade construction, of the environmental conditions, soil management concerns, and health and safety requirements stipulated in this risk management plan.

These measures will also be enforced during any post-development construction activities such as utility line repair, building expansion, and other activities that may disturb the underlying contaminated soil. To maintain the integrity of the encapsulation layer and to protect future site workers who may disturb the encapsulation layer, the following procedures should be adhered to by the owner and/or operator of the site:

1. Notify the ACHCS and City of Emeryville of any proposed activity expected to disturb the integrity of the encapsulating layer or soil, thirty (30) calendar days before work commences. In case of emergency, the ACHCS and City of Emeryville shall be notified within 24 hours and the work should commence in accordance with the mitigation measures described in this risk management plan.

2. Prepare a specific work plan that includes a description of the proposed construction activities, soil management plan, and health and safety plan.

3. Direct any contractor or employee who disturbs the encapsulating layer and is engaged in any excavation or earth movement at the property to comply with the appropriate local, State, and Federal regulations.

4. Direct any contractor or employee engaged in any activities that involve penetrating the encapsulating layer to repair the disturbed area as soon as is practical.

5. Control dust by wetting exposed soil and protect exposed or excavated soil from storm run-on and run-off during the period of excavation, soil movement, or exposure.

6. Determine by appropriate testing whether any excess material removed from the site is hazardous pursuant to State or Federal hazardous criteria. This material must be managed in accordance with all appropriate regulations.

7. Provide the ACHCS and City of Emeryville with a report that describes the maintenance activities related to the encapsulating layer or excavation of soil.

CERTIFICATION REPORT

A Certification Report will be prepared by a third party (separate from the contractor) upon completion of soil mitigation activities. This report will present a chronology of the construction events, a summary of analytical data, and a description of all mitigation activities at the site. It will also include a certification statement that indicates the mitigation activities have been performed in accordance with this risk management plan. The Certification Report will be submitted to the Alameda County Health Care Services (ACHCS) for review and approval within 60 days of the completion of all earthwork on the Emeryville Industrial Court project.

We trust this plan provides the information that you require. If you have any questions, please call.

Sincerely yours,
TREADWELL & ROLLO, INC.

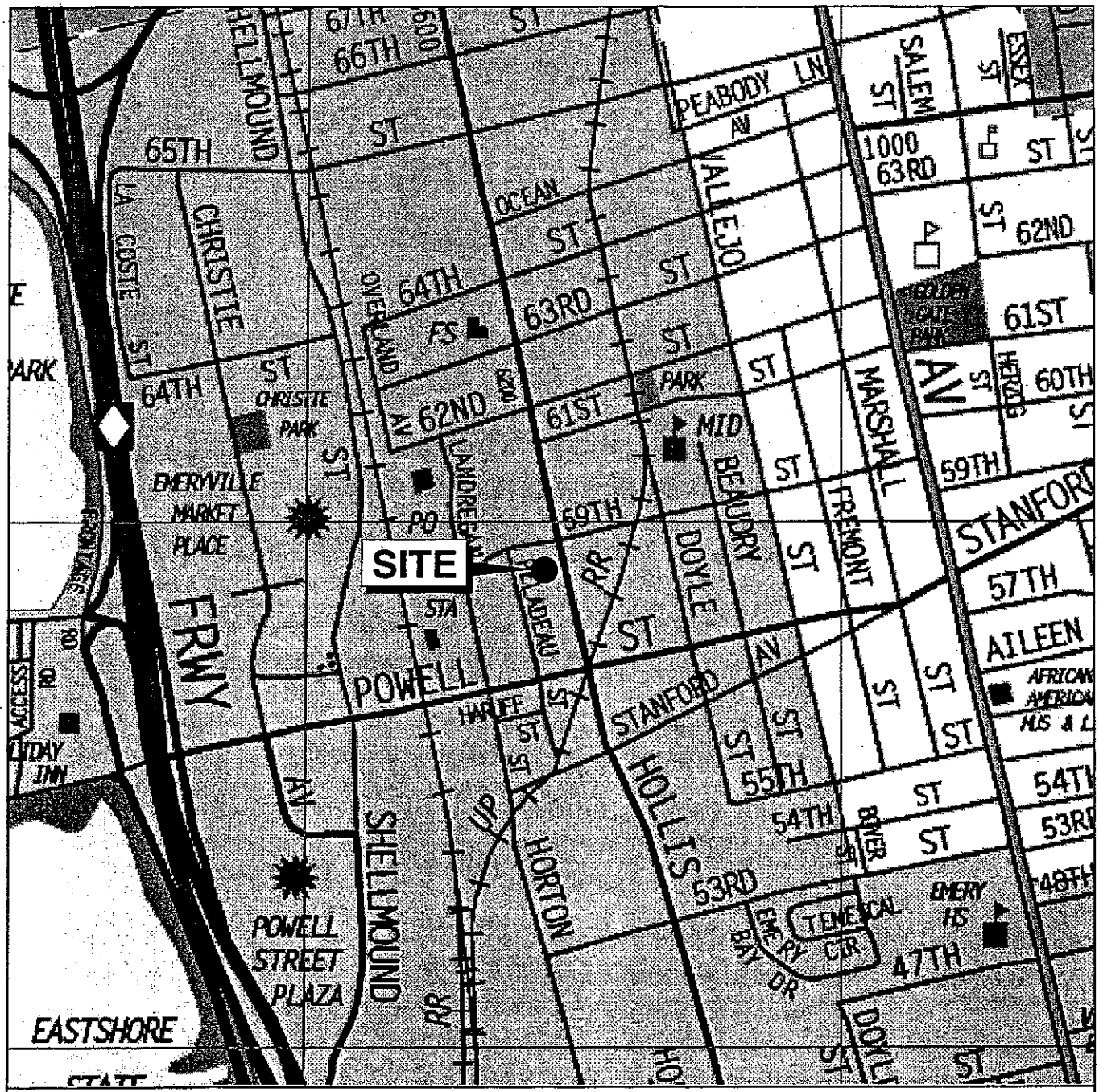
Peter J. Cusack
Senior Project Scientist

Philip G. Smith, R.E.A.
Principal

28080103.PJC

cc: Mr. Filmore Marks – Marks Management Company

FIGURES



Base map: The Thomas Guide
Alameda County
1999

No scale

5885 HOLLIS STREET
Emeryville, California

SITE LOCATION MAP

Treadwell&Rollo

Date 07/08/00	Project No. 2808.01	Figure 1

HOLLIS STREET

Property Line

59TH STREET

Proposed
Office
Building

Proposed
Parking
Structure

Existing
Gas Station

PELADEAU STREET

Emery Station No.1
Office Building

0 50 feet

Approximate scale

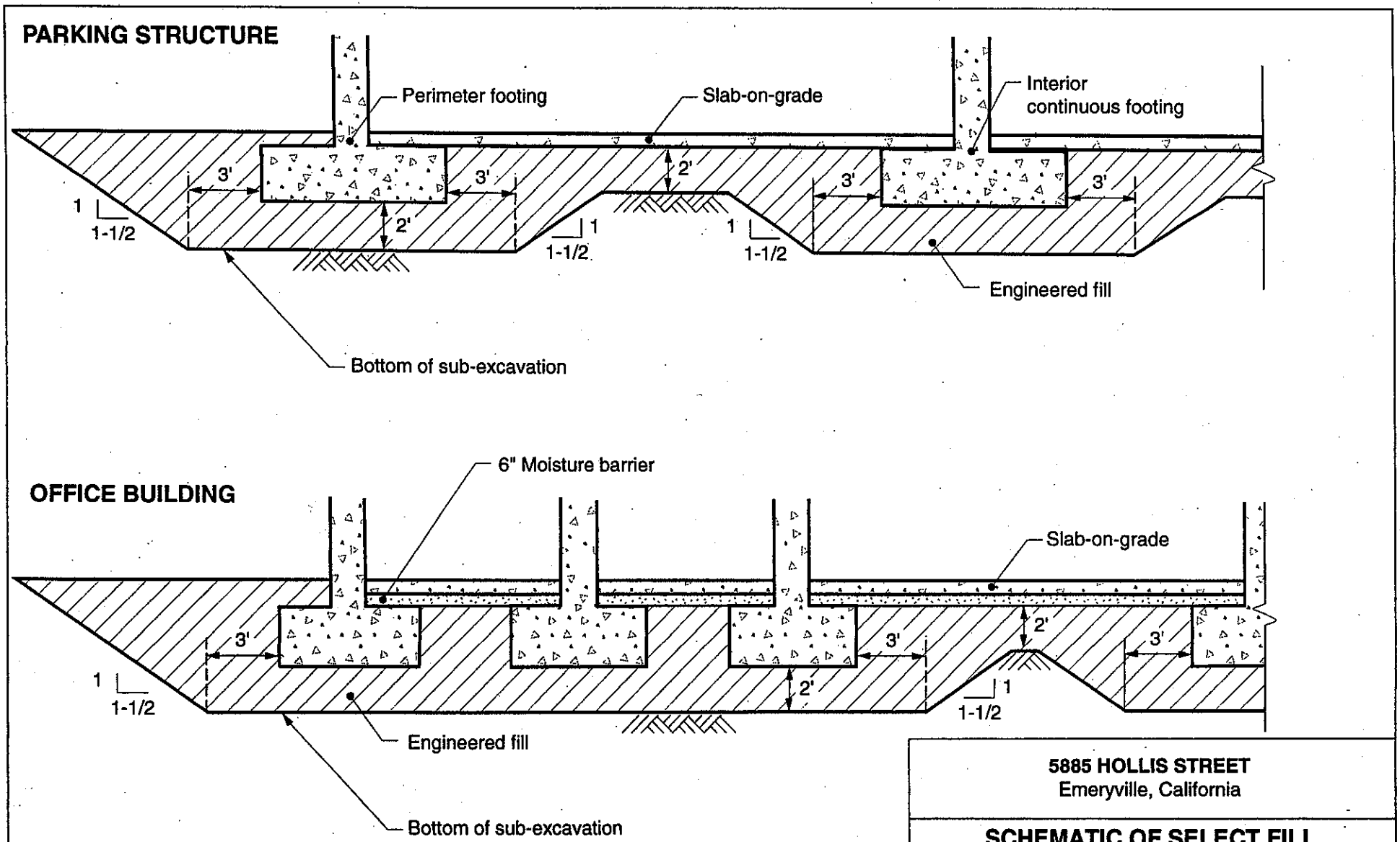
5885 HOLLIS STREET
Emeryville, California

SITE PLAN

Date 08/07/00	Project No. 2808.01	Figure 2

Treadwell&Rollo

SITEPLAN.DWG



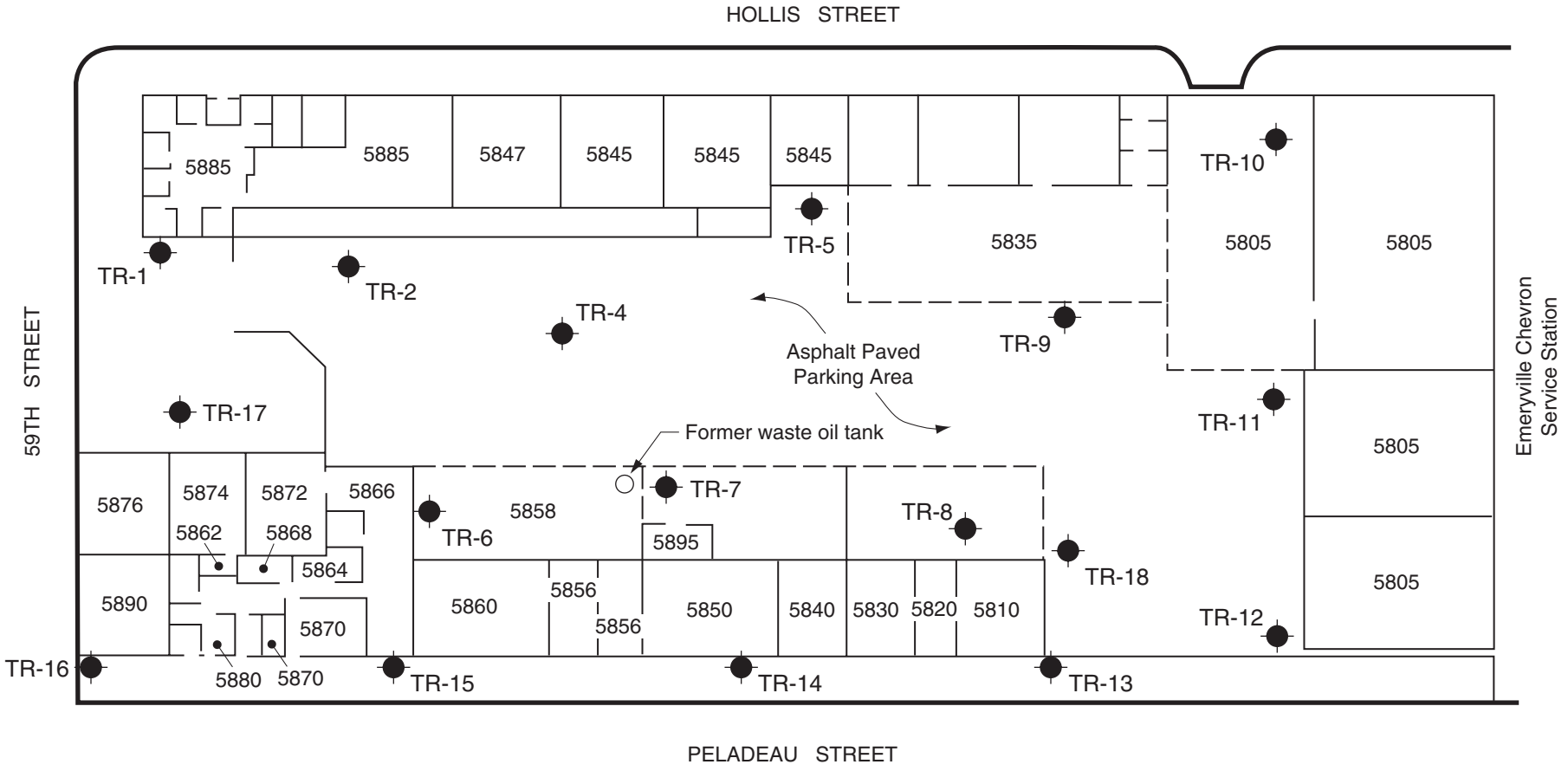
Not to scale

5885 HOLLIS STREET
Emeryville, California

SCHEMATIC OF SELECT FILL BENEATH FOOTINGS

Date 08/07/00	Project No. 2808.01	Figure 3

Treadwell&Rollo



EXPLANATION:

TR-1 ● Approximate location of exploratory boring by Treadwell&Rollo, Inc.

0 60 Feet

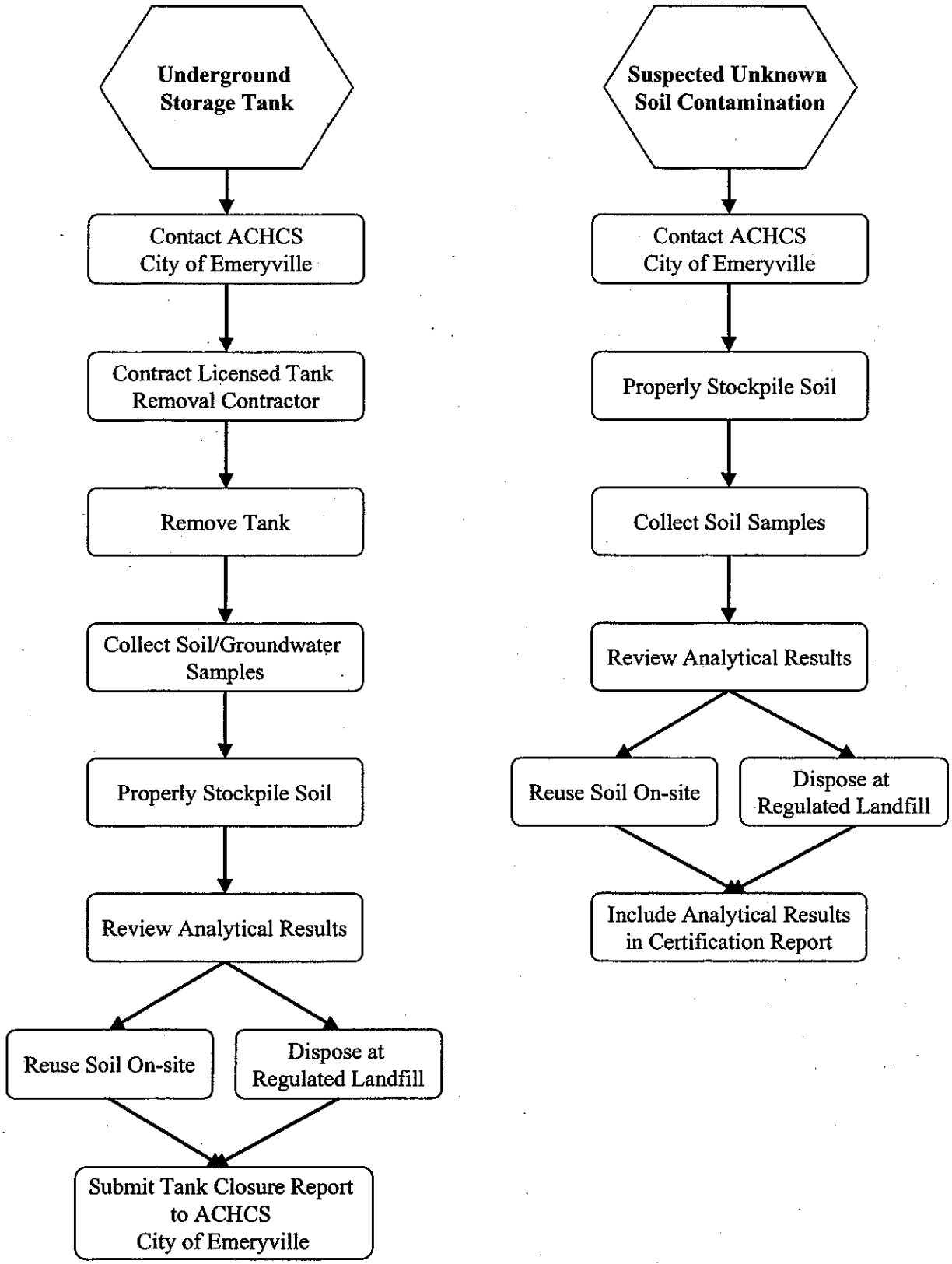
Approximate scale

EMERYVILLE INDUSTRIAL COURT
Emeryville, California

SITE PLAN

Date 08/07/00	Project No. 2808.01	Figure 4

Treadwell&Rollo



EMERYVILLE INDUSTRIAL COURT
Emeryville, California

Treadwell&Rollo

Date 08/07/00	Project No. 2808.01	Figure 5

TABLES

Table 1
SOIL SAMPLE ANALYTICAL RESULTS
Emeryville Industrial Court
Emeryville, California

Sample Number	Sample Date	Sample Depth	TRPH (mg/kg)	TPH-g (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	8010 (ug/kg)	8260 (ug/kg)	8270 (ug/kg)
TR-1-4.0	4/6/00	4	9,900	110	ND	6,600	--	--	ND
TR-1-7.0	4/6/00	7	--	--	--	--	--	--	--
TR-1-9.0	4/6/00	9	ND	ND	ND	ND	ND	ND	--
TR-1-12.0	4/6/00	12	ND	ND	ND	ND	--	--	--
TR-1-15.0	4/6/00	15	--	--	--	--	--	--	--
TR-2-3.0	4/6/00	3	--	--	--	--	--	--	--
TR-2-5.0	4/6/00	5	ND	ND	ND	ND	--	--	--
TR-2-7.0	4/6/00	7	--	--	--	--	--	--	--
TR-2-10.0	4/6/00	10	36	ND	ND	46	--	--	--
TR-2-15.0	4/6/00	15	ND	ND	ND	ND	--	--	--
TR-4-3.0	4/5/00	3	ND	ND	ND	ND	--	--	ND
TR-4-5.0	4/5/00	5	420	99	360	ND	--	ND	--
TR-4-8.0	4/5/00	7	--	--	--	--	--	--	--
TR-4-11.0	4/5/00	10	86	9.4	30	35	--	--	--
TR-5-3.0	4/5/00	3	140	ND	ND	93	--	--	--
TR-5-4.0	4/5/00	4	--	--	--	--	--	--	--
TR-5-6.0	4/5/00	6	--	--	--	--	--	--	--
TR-5-8.0	4/5/00	8	--	--	--	--	--	--	--
TR-5-10.0	4/5/00	10	ND	ND	ND	15	--	--	--
TR-5-15.0	4/5/00	15	ND	ND	ND	ND	--	--	--
TR-6-3.0	4/5/00	3	--	--	--	--	--	--	--
TR-6-5.0	4/5/00	5	300	ND	ND	250	ND	--	ND
TR-6-8.0	4/5/00	8	ND	ND	ND	ND	--	ND	--
TR-6-10.0	4/5/00	10	ND	ND	ND	ND	--	--	--
TR-6-15.0	4/5/00	15	--	--	--		--	--	--
TR-7-3.0	4/5/00	3	ND	ND	ND	ND	ND	--	ND
TR-7-5.0	4/5/00	5	--	--	--	--	--	--	--
TR-7-8.0	4/5/00	8	ND	1.0	ND	ND	--	ND	--
TR-7-10.0	4/5/00	10	--	--	--	--	--	--	--
TR-7-15.0	4/5/00	15	ND	ND	ND	ND	--	--	--
TR-8-3.0	4/5/00	3	--	--	--	--	--	--	--
TR-8-5.0	4/5/00	5	ND	ND	6.8	ND	--	ND	--
TR-8-8.0	4/5/00	8	--	--	--	--	--	--	--
TR-8-10.0	4/5/00	10	ND	ND	7.8	ND	--	--	--
TR-8-15.0	4/5/00	15	ND	ND	ND	ND	--	--	--

Table 1
SOIL SAMPLE ANALYTICAL RESULTS
Emeryville Industrial Court
Emeryville, California

Sample Number	Sample Date	Sample Depth	TRPH (mg/kg)	TPH-g (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	8010 (ug/kg)	8260 (ug/kg)	8270 (ug/kg)
TR-9-3.0	4/5/00	3	--	--	--	--	--	--	--
TR-9-5.0	4/5/00	5	ND	ND	ND	ND	--	--	--
TR-9-8.0	4/5/00	8	--	--	--	--	--	--	--
TR-9-10.0	4/5/00	10	ND	ND	ND	ND	--	ND	--
TR-9-15.0	4/5/00	15	ND	ND	ND	ND	--	--	--
TR-10-3.0	4/6/00	3	ND	ND	ND	ND	--	--	--
TR-10-5.0	4/6/00	5	--	--	--	--	--	--	--
TR-10-8.0	4/6/00	8	ND	ND	ND	ND	ND	--	ND
TR-10-10.0	4/6/00	10	--	--	--	--	--	--	--
TR-10-15.0	4/6/00	15	330	ND	ND	180	--	--	--
TR-11-3.0	4/5/00	3	--	--	--	--	--	--	--
TR-11-5.0	4/5/00	5	ND	1.7	21	17	ND	--	ND
TR-11-8.0	4/5/00	8	ND	ND	ND	ND	--	--	--
TR-11-10.0	4/5/00	10	ND	ND	ND	ND	--	--	--
TR-11-15.0	4/5/00	15	--	--	--	--	--	--	--
TR-12-3.0	4/5/00	3	ND	ND	ND	ND	--	--	--
TR-12-5.0	4/5/00	5	ND	27	2.9	ND	--	--	ND
TR-12-8.0	4/5/00	8	ND	ND	ND	ND	--	ND	--
TR-12-10.0	4/5/00	10	100	160	30	ND	--	--	--
TR-12-15.0	4/5/00	15	ND	19	ND	ND	--	--	--
TR-13-3.0	4/6/00	3	--	--	--	--	--	--	--
TR-13-5.0	4/6/00	5	30	ND	ND	ND	ND	--	550**
TR-13-8.0	4/6/00	8	52	ND	ND	39	--	--	--
TR-13-10.0	4/6/00	10	ND	ND	ND	ND	--	ND	--
TR-13-15.0	4/6/00	15	ND	ND	ND	ND	--	--	--
TR-14-3.0	4/6/00	3	ND	ND	ND	ND	--	--	--
TR-14-5.0	4/6/00	5	ND	ND	ND	ND	--	ND	570**
TR-14-8.0	4/6/00	8	ND	ND	ND	ND	--	--	--
TR-14-10.0	4/6/00	10	ND	1.2	2.3	ND	--	ND	--
TR-14-15.0	4/6/00	15	ND	1.4	4.0	ND	--	--	540**
TR-15-3.0	4/6/00	3	--	--	--	--	--	--	--
TR-15-5.0	4/6/00	5	ND	ND	ND	ND	--	--	--
TR-15-8.0	4/6/00	8	--	--	--	--	--	--	--
TR-15-10.0	4/6/00	10	ND	1.0	1.3	ND	--	--	590**
TR-15-15.0	4/6/00	15	ND	ND	ND	ND	--	--	--

Table 1
SOIL SAMPLE ANALYTICAL RESULTS
Emeryville Industrial Court
Emeryville, California

Sample Number	Sample Date	Sample Depth	TRPH (mg/kg)	TPH-g (mg/kg)	TPH-d (mg/kg)	TPH-mo (mg/kg)	8010 (ug/kg)	8260 (ug/kg)	8270 (ug/kg)
TR-16-3.0	4/6/00	3	--	--	--	--	--	--	--
TR-16-5.0	4/6/00	5	ND	ND	ND	ND	ND	--	--
TR-16-8.0	4/6/00	8	--	--	--	--	--	--	--
TR-16-10.0	4/6/00	10	ND	ND	ND	ND	--	--	600**
TR-16-15.0	4/6/00	15	--	--	--	--	--	--	--
TR-17-3.0	4/6/00	3	**37**	ND	ND	ND	--	--	--
TR-17-5.0	4/6/00	5	--	--	--	--	--	--	--
TR-17-8.0	4/6/00	8	--	--	--	--	--	--	--
TR-17-10.0	4/6/00	10	ND	ND	ND	ND	--	--	--
TR-17-15.0	4/6/00	15	ND	ND	ND	ND	--	--	--
TR-18-3.0	4/5/00	3	ND	ND	ND	ND	--	--	--
TR-18-5.0	4/5/00	5	ND	ND	ND	ND	--	--	ND
TR-18-8.0	4/5/00	8	--	--	--	--	--	--	--
TR-18-10.0	4/5/00	10	ND	ND	ND	ND	ND	**17***	--
TR-18-15.0	4/5/00	15	--	--	--	--	--	--	--

Notes:
TPHH = EPA Method SM5520 - Total Recoverable Petroleum Hydrocarbons
TPH-g = EPA Method 8015M - Total Petroleum Hydrocarbons as gasoline
TPH-d = EPA Method 8015M - Total Petroleum Hydrocarbons as diesel
TPH-mo = EPA Method 8015 - Total Petroleum Hydrocarbons as motor oil.
8010 = EPA Method 8010 - Purgeable Halocarbons
8260 = EPA Method 8260 - Volatile Organic Compounds
8270 = EPA Method 8270 - Semi-volatile Organic Compounds
mg/kg = milligrams per kilogram (parts per million)
ug/kg = micrograms per kilogram (parts per billion)
BOLD indicates detected at or above the laboratory reporting limit
ND = Not Detected Above Laboratory Reporting Limits
-- = Not Analyzed or Not Applicable
* = 17 represents Carbon Disulfide
** = Benzo[a]pyrene

Table 2
SOIL SAMPLE ANALYTICAL RESULTS
Emeryville Industrial Court
Emeryville, California

Sample Number	Sample Date	Sample Depth	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
TR-1-4.0	4/6/00	4	ND	24	150	21	110
TR-1-7.0	4/6/00	7	--	--	--	--	--
TR-1-9.0	4/6/00	9	--	--	--	--	--
TR-1-12.0	4/6/00	12	--	--	--	--	--
TR-1-15.0	4/6/00	15	--	--	--	--	--
TR-2-3.0	4/6/00	3	--	--	--	--	--
TR-2-5.0	4/6/00	5	ND	45	8.9	32	40
TR-2-7.0	4/6/00	7	--	--	--	--	--
TR-2-10.0	4/6/00	10	ND	50	ND	41	41
TR-2-15.0	4/6/00	15	ND	26	ND	37	48
TR-4-3.0	4/5/00	3	--	--	--	--	--
TR-4-5.0	4/5/00	5	ND	30	5.8	31	40
TR-4-8.0	4/5/00	7	--	--	--	--	--
TR-4-11.0	4/5/00	10	ND	45	ND	56	54
TR-5-3.0	4/5/00	3	--	--	--	--	--
TR-5-4.0	4/5/00	4	--	--	--	--	--
TR-5-6.0	4/5/00	6	--	--	--	--	--
TR-5-8.0	4/5/00	8	--	--	--	--	--
TR-5-10.0	4/5/00	10	ND	49	9.7	70	57
TR-5-15.0	4/5/00	15	--	--	--	--	--
TR-6-3.0	4/5/00	3	--	--	--	--	--
TR-6-5.0	4/5/00	5	ND	55	150	38	86
TR-6-8.0	4/5/00	8	--	--	--	--	--
TR-6-10.0	4/5/00	10	--	--	--	--	--
TR-6-15.0	4/5/00	15	--	--	--	--	--
TR-7-3.0	4/5/00	3	ND	28	ND	23	26
TR-7-5.0	4/5/00	5	--	--	--	--	--
TR-7-8.0	4/5/00	8	--	--	--	--	--
TR-7-10.0	4/5/00	10	--	--	--	--	--
TR-7-15.0	4/5/00	15	--	--	--	--	--
TR-8-3.0	4/5/00	3	--	--	--	--	--
TR-8-5.0	4/5/00	5	--	--	--	--	--
TR-8-8.0	4/5/00	8	--	--	--	--	--
TR-8-10.0	4/5/00	10	ND	43	8.3	56	49
TR-8-15.0	4/5/00	15	--	--	--	--	--
TR-9-3.0	4/5/00	3	--	--	--	--	--
TR-9-5.0	4/5/00	5	--	--	--	--	--
TR-9-8.0	4/5/00	8	--	--	--	--	--
TR-9-10.0	4/5/00	10	ND	8.8	7.6	25	39
TR-9-15.0	4/5/00	15	--	--	--	--	--
TR-10-3.0	4/6/00	3	ND	47	ND	35	31
TR-10-5.0	4/6/00	5	--	--	--	--	--
TR-10-8.0	4/6/00	8	--	--	--	--	--
TR-10-10.0	4/6/00	10	--	--	--	--	--
TR-10-15.0	4/6/00	15	ND	37	ND	110	61
TR-11-3.0	4/5/00	3	--	--	--	--	--
TR-11-5.0	4/5/00	5	ND	30	10	64	40
TR-11-8.0	4/5/00	8	--	--	--	--	--
TR-11-10.0	4/5/00	10	--	--	--	--	--
TR-11-15.0	4/5/00	15	--	--	--	--	--

Table 2
SOIL SAMPLE ANALYTICAL RESULTS
Emeryville Industrial Court
Emeryville, California

Sample Number	Sample Date	Sample Depth	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Zinc (mg/kg)
TR-12-3.0	4/5/00	3	ND	**17**	**6.8**	**14**	**28**
TR-12-5.0	4/5/00	5	ND	**35**	**8.2**	**64**	**52**
TR-12-8.0	4/5/00	8	--	--	--	--	--
TR-12-10.0	4/5/00	10	--	--	--	--	--
TR-12-15.0	4/5/00	15	--	--	--	--	--
TR-13-3.0	4/6/00	3	--	--	--	--	--
TR-13-5.0	4/6/00	5	--	--	--	--	--
TR-13-8.0	4/6/00	8	ND	**97**	**28**	**99**	**73**
TR-13-10.0	4/6/00	10	--	--	--	--	--
TR-13-15.0	4/6/00	15	--	--	--	--	--
TR-14-3.0	4/6/00	3	--	--	--	--	--
TR-14-5.0	4/6/00	5	ND	**18**	ND	**15**	**20**
TR-14-8.0	4/6/00	8	--	--	--	--	--
TR-14-10.0	4/6/00	10	ND	**32**	ND	**33**	**36**
TR-14-15.0	4/6/00	15	--	--	--	--	--
TR-15-3.0	4/6/00	3	--	--	--	--	--
TR-15-5.0	4/6/00	5	ND	**39**	ND	**64**	**42**
TR-15-8.0	4/6/00	8	--	--	--	--	--
TR-15-10.0	4/6/00	10	--	--	--	--	--
TR-15-15.0	4/6/00	15	--	--	--	--	--
TR-16-3.0	4/6/00	3	--	--	--	--	--
TR-16-5.0	4/6/00	5	--	--	--	--	--
TR-16-8.0	4/6/00	8	--	--	--	--	--
TR-16-10.0	4/6/00	10	--	--	--	--	--
TR-16-15.0	4/6/00	15	--	--	--	--	--
TR-17-3.0	4/6/00	3	ND	**28**	ND	**12**	**19**
TR-17-5.0	4/6/00	5	--	--	--	--	--
TR-17-8.0	4/6/00	8	--	--	--	--	--
TR-17-10.0	4/6/00	10	ND	**39**	ND	**53**	**39**
TR-17-15.0	4/6/00	15	--	--	--	--	--
TR-18-3.0	4/5/00	3	ND	**26**	**9.4**	**21**	**26**
TR-18-5.0	4/5/00	5	--	--	--	--	--
TR-18-8.0	4/5/00	8	--	--	--	--	--
TR-18-10.0	4/5/00	10	ND	**37**	**6.4**	**83**	**48**
TR-18-15.0	4/5/00	15	--	--	--	--	--

Notes:
TPHH = EPA Method SM5520 - Total Recoverable Petroleum Hydrocarbons
TPH-g = EPA Method 8015M - Total Petroleum Hydrocarbons as gasoline
TPH-d = EPA Method 8015M - Total Petroleum Hydrocarbons as diesel
TPH-mo = EPA Method 8015 - Total Petroleum Hydrocarbons as motor oil.
mg/kg = milligrams per kilogram (parts per million)
ND = Not Detected Above Laboratory Reporting Limits
BOLD indicates detected at or above the laboratory reporting limit
-- = Not Analyzed or Not Applicable

Table 3
WATER SAMPLE ANALYTICAL RESULTS
Emeryville Industrial Court
Emeryville, California

Sample Number	Sample Date	TRPH (ug/L)	TPH-g (ug/L)	TPH-d (ug/L)	TPH-mo (ug/L)	8010 (ug/L)	8260 (ug/L)	Cadmium (mg/L)	Chromium (mg/L)	Lead (mg/L)	Nickel (mg/L)	Zinc (mg/L)
TR-1	4/6/00	--	**98**	**130**	ND	ND	--	ND	**0.042**	**0.032**	**0.4**	**0.65**
TR-6	4/5/00	**6,600**	ND	ND	**1,400**	ND	ND	--	--	--	--	--
TR-9	4/6/00	ND	ND	ND	**420**	--	--	--	--	--	--	--
TR-12	4/6/00	**9,900**	**3,300**	**700**	ND	ND	--	ND	**0.018**	**ND**	**0.34**	**0.16**

Notes:
TPHH = EPA Method SM5520 - Total Recoverable Petroleum Hydrocarbons
TPH-g = EPA Method 8015M - Total Petroleum Hydrocarbons as gasoline
TPH-d = EPA Method 8015M - Total Petroleum Hydrocarbons as diesel
TPH-mo = EPA Method 8015 - Total Petroleum Hydrocarbons as motor oil.
8010 = EPA Method 8010 - Purgeable Halocarbons
8260 = EPA Method 8260 - Gasoline Oxygenates
ug/L = micrograms per liter or parts per billion
mg/L = miligrams per liter or parts per million
-- = Not Analyzed or Not Applicable
BOLD indicates detected at or above the laboratory reporting limit
ND = Not Detected Above Laboratory Reporting Limits

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

June 23, 2000

Mr. Fillmore Marks
Marks Management Company
44 Montgomery, Suite 850
San Francisco, California 94104

RE: Proposed Emeryville Industrial Court (STID# 6687)
5885 Hollis Street, Emeryville, California 94608

Dear Mr. Fillmore:

The Alameda County Environmental Health Services (ACEHS) has reviewed the following reports submitted for the above referenced site:

- Environmental Site Assessment (March 15, 1995) prepared by Weiss Associates
- Environmental Site Characterization (May 12, 2000) prepared by Treadwell & Rollo

The subject site has four buildings and currently occupied by tenants. The proposed development for the site consists of demolishing the existing buildings and construction of a two-story office building and a four-level parking garage.

Results of the soil samples collected from seventeen exploratory borings (TR-1 to TR-18) drilled at the site in April 2000 indicated the presence of the following contaminants: 9,900 parts per million (ppm) Total Recoverable Petroleum Hydrocarbons (TRPH), 160 ppm Total Petroleum Hydrocarbon (TPH) as gasoline, 360 ppm TPH diesel, 6600 ppm TPH motor oil, 600 ppm benzo[a] pyrene, 17 parts per billion (ppb) carbon disulfide and metals (97 ppm chromium, 150 ppm lead, 110 ppm nickel, 110 ppm zinc). Groundwater samples were collected from four borings (TR-1, TR-6, TR-9 and TR-12) and found up to 9900 ppb TRPH, 3300 ppb TPH gasoline, 700 ppb TPH diesel, 1400 ppb TPH motor oil, 20 ppb 1,4-dichlorobenzene, 18 ppb chloroform, 42 ppb chromium, 32 ppb lead, 400 ppb nickel and 650 ppb zinc.

Based on the review of the referenced reports, the following issues must be addressed prior to development of the subject site:

1. A 10,000-gallon underground storage tank was reportedly removed in 1990 at 5805 Hollis Street which is occupied by S.B.Thomas, one of the tenants at the site. The presence or absence of the tank must be verified. The tank's location must be identified. Records of the disposal of the tank and any stockpiled soil generated during the removal action should be submitted. Results of any soil and /or groundwater samples collected during the removal of the tank should also be submitted.

2. As you are aware, City of Emeryville acquired a portion of the subject site located on the corner of 59th Street and Peladeau (the former coffee roasters building). During the widening of 59th Street, petroleum hydrocarbon contamination (up to 13,000 ppm TPH diesel and 15,000 ppm TPH motor oil) was detected at the site. These data should be included in evaluating future groundwater monitoring requirements at the site.

3. A site conceptual model should be prepared which will identify sources of releases, chemicals of concern (COCs), routes of exposures, and sensitive receptors. This should include evaluation of the human and environmental risk assessment for the proposed use of the site.

4. A short term and long term risk management plan should be submitted for the site. The short term (construction) risk management plan should include at a minimum, the following elements: acceptable health & safety plans for construction workers, soil management plan, groundwater management plan, dust control, stormwater prevention plan and preventive measures to not create any vertical conduits for contaminants to migrate from shallow to deeper groundwater. The long term (future) risk management plan should include health and safety plan for future construction workers such as utility workers who maybe exposed to residual contaminants that will be left at the site and institutional controls such as capping and deed restrictions that may be required at the site.

5. Any reuse of soil at the site should have prior approval from this agency.

6. Confirmation soil and groundwater samples will be required at the site and should include the following chemicals of concern: TPH gasoline, TPH diesel, TPH motor oil, TPH as mineral spirits, chlorinated solvents, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and metals.

7. A site development plan should be submitted and should include at a minimum the following: description of the project; site map with the location of the proposed buildings, landscapes, basements, underground parking garages, known sources or potential sources of contamination and extent of any excavation associated with construction activities at the site.

8. A sump was identified at the site. Please provide more information about the location and usage of the reported sump and evaluate if the sump is a potential source of contamination.

9. Please provide us with the information of the type of business Cook Midwest, one of the tenants, used to operate at the site.

10. A contingency plan should be prepared for the site. The plan should include steps to be taken in the event that any unexpected or unusual condition is encountered during construction activities at the site. This may include uncovering abandoned tanks and associated pipings, hot spots and/ or contamination. Please include a flowchart of steps to be taken as part of the contingency plan.

11. A report should be submitted after completion of the development and should include at a minimum copies of any soil and /or groundwater disposed off site, results of soil and groundwater sampling, etc.

If you have any questions about this letter or the subject site, please contact me at (510) 567-6780.

Sincerely,

Susan L. Hugo

Susan L. Hugo
Hazardous Materials Specialist

c: Ariu Levi /Thomas Peacock, Environmental Health Services
Betty Graham, San Francisco Bay RWQCB
Barrie Cromartie / Ignacio Dayrit, City of Emeryville, 2200 Powell St., 12th Floor, Emeryville, CA 4608
Peter Cusack, Treadwell & Rollo, 555 Montgomery St., Suite 1300, San Francisco, CA 94111
SH / files

Treadwell&Rollo

FILE COPY

8 December 2000
Project 2808.01

Susan L. Hugo
Alameda County Health Care Services
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Emeryville Industrial Court
5885 Hollis Street
Emeryville, California

Dear Ms. Hugo:

We have prepared this letter in response to your recent request regarding the proposed Emeryville Industrial Court project in Emeryville, California (Figure 1). For the project, we previously performed an Environmental Site Characterization (report dated 12 May 2000) and a Geotechnical Investigation (report dated 27 July 2000). We also prepared a letter report dated 8 August 2000, in response to your letters dated 23 June 2000 and 5 July 2000.

Since our letter dated 8 August 2000, development plans have changed to include one level of below ground parking. In our previous letter report, excavation plans were to remove approximately the top 5 feet of soil for the building and garage foundation construction. This soil was to be excavated, stockpiled, and recompacted throughout the site.

Based on current development plans, including the below ground parking, new soil handling procedures will be followed. The proposed below ground parking area will include the entire site. All of the excavated soil will be properly stockpiled and soil samples will be collected and tested. Based on our review of the analytical results, the soil will be properly disposed at a licensed landfill.

Once the excavation has been completed, confirmatory soil samples will be collected and analyzed. Based on these analytical results, a deed restriction and/or additional soil management procedures may be required for the property.

We will be providing construction observation services to Mark Management Company. The Short and Long Term Risk Management Plan, Contingency Plan, Health and Safety Issues, Maintenance Requirements, and Certification Report presented in our 8 August 2000 letter report will be followed as part of the site development activities.

Treadwell & Rollo, Inc. *Environmental & Geotechnical Consultants*
555 Montgomery Street, Suite 1300, San Francisco, CA 94111
Telephone (415) 955-9040 Facsimile (415) 955-9041

Treadwell&Rollo

We trust this letter provides the information that you require. If you have any questions, please call either of us.

Sincerely yours,
TREADWELL & ROLLO, INC.

Peter J. Cusack
Senior Project Scientist

Donald D. Treadwell, PhD, PE
Principal Engineer

cc: Elaine Kirk – Mark Management Company

28080104.PJC

Treadwell&Rollo

APPENDIX B

JUNE 2005 LABORATORY DATA

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Total Volatile Hydrocarbons

Lab #:	180038	Location:	Emeryville Industrial Ct
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8015B
Field ID:	TR-24-GW	Sampled:	06/15/05
Matrix:	Water	Received:	06/15/05
Units:	ug/L	Analyzed:	06/15/05
Batch#:	102966		

Type: SAMPLE Diln Fac: 40.00
Lab ID: 180038-006

Analyte	Result	RL
Gasoline C7-C12	91,000 Y	2,000

Surrogate	%REC	Limits
Trifluorotoluene (FID)	148 *	63-141
Bromofluorobenzene (FID)	159 *	79-139

Type: BLANK Diln Fac: 1.000
Lab ID: QC297557

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	63-141
Bromofluorobenzene (FID)	103	79-139

*= Value outside of QC limits; see narrative
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Total Volatile Hydrocarbons

Lab #:	180038	Location:	Emeryville Industrial Ct
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	06/15/05
Units:	mg/Kg	Received:	06/15/05
Basis:	as received	Analyzed:	06/15/05
Batch#:	102985		

Field ID: TR-24-4.0 Lab ID: 180038-002
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	97	60-138
Bromofluorobenzene (FID)	104	66-148

Field ID: TR-26-4.0 Lab ID: 180038-004
Type: SAMPLE Diln Fac: 20.00

Analyte	Result	RL
Gasoline C7-C12	140 H Y	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	94	60-138
Bromofluorobenzene (FID)	134	66-148

Field ID: TR-27-2.0 Lab ID: 180038-005
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	95	60-138
Bromofluorobenzene (FID)	100	66-148

Type: BLANK Diln Fac: 1.000
Lab ID: QC297635

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	95	60-138
Bromofluorobenzene (FID)	101	66-148

H= Heavier hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Total Extractable Hydrocarbons

Lab #:	180038	Location:	5885 Hollis St
Client:	Treadwell & Rollo	Prep:	EPA 3520C
Project#:	4069.01	Analysis:	EPA 8015B
Field ID:	TR-24-GW	Sampled:	06/15/05
Matrix:	Water	Received:	06/15/05
Units:	ug/L	Prepared:	06/15/05
Batch#:	102992	Analyzed:	06/16/05

Type: SAMPLE
Lab ID: 180038-006
Diln Fac: 20.00

Analyte	Result	RL
Diesel C10-C24	68,000 L	1,000

Surrogate	%REC	Limits
Hexacosane	DO	55-143

Type: BLANK
Lab ID: QC297661
Diln Fac: 1.000
Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND q	50

Surrogate	%REC	Limits
Hexacosane	112 q	55-143

L= Lighter hydrocarbons contributed to the quantitation
q= Draft result - ending instrument QC not yet analyzed
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Total Extractable Hydrocarbons

Lab #:	180038	Location:	5885 Hollis St
Client:	Treadwell & Rollo	Prep:	SHAKER TABLE
Project#:	4069.01	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	06/15/05
Units:	mg/Kg	Received:	06/15/05
Basis:	as received	Prepared:	06/15/05
Batch#:	103004		

Field ID:	TR-24-4.0	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	06/16/05
Lab ID:	180038-002		

Analyte	Result	RL
Diesel C10-C24	46 Y	1.0

Surrogate	%REC	Limits
Hexacosane	103	51-136

Field ID:	TR-26-4.0	Diln Fac:	20.00
Type:	SAMPLE	Analyzed:	06/16/05
Lab ID:	180038-004		

Analyte	Result	RL
Diesel C10-C24	2,100 H L Y	20

Surrogate	%REC	Limits
Hexacosane	DO	51-136

Field ID:	TR-27-2.0	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	06/16/05
Lab ID:	180038-005		

Analyte	Result	RL
Diesel C10-C24	61 H Y	1.0

Surrogate	%REC	Limits
Hexacosane	83	51-136

Type:	BLANK	Analyzed:	06/15/05
Lab ID:	QC297704	Cleanup Method:	EPA 3630C
Diln Fac:	1.000		

Analyte	Result	RL
Diesel C10-C24	ND	1.0

Surrogate	%REC	Limits
Hexacosane	98	51-136

H= Heavier hydrocarbons contributed to the quantitation
L= Lighter hydrocarbons contributed to the quantitation
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Purgeable Organics by GC/MS

Lab #:	180038	Location:	5885 Hollis St
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8260B
Field ID:	TR-24-GW	Batch#:	103009
Lab ID:	180038-006	Sampled:	06/15/05
Matrix:	Water	Received:	06/15/05
Units:	ug/L	Analyzed:	06/16/05
Diln Fac:	33.33		

Analyte	Result	RL
Freon 12	ND	33
Chloromethane	ND	33
Vinyl Chloride	ND	17
Bromomethane	ND	33
Chloroethane	ND	33
Trichlorofluoromethane	ND	33
Acetone	ND	330
Freon 113	ND	170
1,1-Dichloroethene	ND	17
Methylene Chloride	ND	330
Carbon Disulfide	ND	17
MTBE	ND	17
trans-1,2-Dichloroethene	ND	17
Vinyl Acetate	ND	330
1,1-Dichloroethane	ND	17
2-Butanone	ND	330
cis-1,2-Dichloroethene	ND	17
2,2-Dichloropropane	ND	17
Chloroform	ND	17
Bromochloromethane	ND	17
1,1,1-Trichloroethane	ND	17
1,1-Dichloropropene	ND	17
Carbon Tetrachloride	ND	17
1,2-Dichloroethane	ND	17
Benzene	2,500	17
Trichloroethene	ND	17
1,2-Dichloropropane	ND	17
Bromodichloromethane	ND	17
Dibromomethane	ND	17
4-Methyl-2-Pentanone	ND	330
cis-1,3-Dichloropropene	ND	17
Toluene	31	17
trans-1,3-Dichloropropene	ND	17
1,1,2-Trichloroethane	ND	17
2-Hexanone	ND	330
1,3-Dichloropropane	ND	17
Tetrachloroethene	ND	17

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Purgeable Organics by GC/MS

Lab #:	180038	Location:	5885 Hollis St
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8260B
Field ID:	TR-24-GW	Batch#:	103009
Lab ID:	180038-006	Sampled:	06/15/05
Matrix:	Water	Received:	06/15/05
Units:	ug/L	Analyzed:	06/16/05
Diln Fac:	33.33		

Analyte	Result	RL
Dibromochloromethane	ND	17
1,2-Dibromoethane	ND	17
Chlorobenzene	ND	17
1,1,1,2-Tetrachloroethane	ND	17
Ethylbenzene	950	17
m,p-Xylenes	380	17
o-Xylene	ND	17
Styrene	ND	17
Bromoform	ND	33
Isopropylbenzene	210	17
1,1,2,2-Tetrachloroethane	ND	17
1,2,3-Trichloropropane	ND	17
Propylbenzene	360	17
Bromobenzene	ND	17
1,3,5-Trimethylbenzene	110	17
2-Chlorotoluene	ND	17
4-Chlorotoluene	ND	17
tert-Butylbenzene	ND	17
1,2,4-Trimethylbenzene	290	17
sec-Butylbenzene	43	17
para-Isopropyl Toluene	70	17
1,3-Dichlorobenzene	ND	17
1,4-Dichlorobenzene	ND	17
n-Butylbenzene	ND	17
1,2-Dichlorobenzene	ND	17
1,2-Dibromo-3-Chloropropane	ND	17
1,2,4-Trichlorobenzene	ND	17
Hexachlorobutadiene	ND	17
Naphthalene	710	67
1,2,3-Trichlorobenzene	ND	17

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	99	80-122
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-124

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Purgeable Organics by GC/MS

Lab #:	180038	Location:	5885 Hollis St
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8260B
Field ID:	TR-24-4.0	Basis:	as received
Lab ID:	180038-002	Sampled:	06/15/05
Matrix:	Soil	Received:	06/15/05
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	10	1.000	102980	06/15/05
Chloromethane	ND	10	1.000	102980	06/15/05
Vinyl Chloride	ND	10	1.000	102980	06/15/05
Bromomethane	ND	10	1.000	102980	06/15/05
Chloroethane	ND	10	1.000	102980	06/15/05
Trichlorofluoromethane	ND	5.0	1.000	102980	06/15/05
Acetone	35	20	1.000	102980	06/15/05
Freon 113	ND	5.0	1.000	102980	06/15/05
1,1-Dichloroethene	ND	5.0	1.000	102980	06/15/05
Methylene Chloride	ND	20	1.000	102980	06/15/05
Carbon Disulfide	ND	4.6	0.9259	103011	06/16/05
MTBE	ND	5.0	1.000	102980	06/15/05
trans-1,2-Dichloroethene	ND	5.0	1.000	102980	06/15/05
Vinyl Acetate	ND	50	1.000	102980	06/15/05
1,1-Dichloroethane	ND	5.0	1.000	102980	06/15/05
2-Butanone	ND	10	1.000	102980	06/15/05
cis-1,2-Dichloroethene	ND	5.0	1.000	102980	06/15/05
2,2-Dichloropropane	ND	5.0	1.000	102980	06/15/05
Chloroform	ND	5.0	1.000	102980	06/15/05
Bromochloromethane	ND	5.0	1.000	102980	06/15/05
1,1,1-Trichloroethane	ND	5.0	1.000	102980	06/15/05
1,1-Dichloropropene	ND	5.0	1.000	102980	06/15/05
Carbon Tetrachloride	ND	5.0	1.000	102980	06/15/05
1,2-Dichloroethane	ND	5.0	1.000	102980	06/15/05
Benzene	ND	5.0	1.000	102980	06/15/05
Trichloroethene	ND	5.0	1.000	102980	06/15/05
1,2-Dichloropropane	ND	5.0	1.000	102980	06/15/05
Bromodichloromethane	ND	5.0	1.000	102980	06/15/05
Dibromomethane	ND	5.0	1.000	102980	06/15/05
4-Methyl-2-Pentanone	ND	10	1.000	102980	06/15/05
cis-1,3-Dichloropropene	ND	5.0	1.000	102980	06/15/05
Toluene	ND	5.0	1.000	102980	06/15/05
trans-1,3-Dichloropropene	ND	5.0	1.000	102980	06/15/05
1,1,2-Trichloroethane	ND	5.0	1.000	102980	06/15/05
2-Hexanone	ND	10	1.000	102980	06/15/05
1,3-Dichloropropane	ND	5.0	1.000	102980	06/15/05
Tetrachloroethene	ND	5.0	1.000	102980	06/15/05
Dibromochloromethane	ND	5.0	1.000	102980	06/15/05

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Purgeable Organics by GC/MS

Lab #:	180038	Location:	5885 Hollis St
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8260B
Field ID:	TR-24-4.0	Basis:	as received
Lab ID:	180038-002	Sampled:	06/15/05
Matrix:	Soil	Received:	06/15/05
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
1,2-Dibromoethane	ND	5.0	1.000	102980	06/15/05
Chlorobenzene	ND	5.0	1.000	102980	06/15/05
1,1,1,2-Tetrachloroethane	ND	5.0	1.000	102980	06/15/05
Ethylbenzene	ND	5.0	1.000	102980	06/15/05
m,p-Xylenes	ND	5.0	1.000	102980	06/15/05
o-Xylene	ND	5.0	1.000	102980	06/15/05
Styrene	ND	5.0	1.000	102980	06/15/05
Bromoform	ND	5.0	1.000	102980	06/15/05
Isopropylbenzene	ND	5.0	1.000	102980	06/15/05
1,1,2,2-Tetrachloroethane	ND	5.0	1.000	102980	06/15/05
1,2,3-Trichloropropane	ND	5.0	1.000	102980	06/15/05
Propylbenzene	ND	5.0	1.000	102980	06/15/05
Bromobenzene	ND	5.0	1.000	102980	06/15/05
1,3,5-Trimethylbenzene	ND	5.0	1.000	102980	06/15/05
2-Chlorotoluene	ND	5.0	1.000	102980	06/15/05
4-Chlorotoluene	ND	5.0	1.000	102980	06/15/05
tert-Butylbenzene	ND	5.0	1.000	102980	06/15/05
1,2,4-Trimethylbenzene	ND	5.0	1.000	102980	06/15/05
sec-Butylbenzene	ND	5.0	1.000	102980	06/15/05
para-Isopropyl Toluene	ND	5.0	1.000	102980	06/15/05
1,3-Dichlorobenzene	ND	5.0	1.000	102980	06/15/05
1,4-Dichlorobenzene	ND	5.0	1.000	102980	06/15/05
n-Butylbenzene	ND	5.0	1.000	102980	06/15/05
1,2-Dichlorobenzene	ND	5.0	1.000	102980	06/15/05
1,2-Dibromo-3-Chloropropane	ND	5.0	1.000	102980	06/15/05
1,2,4-Trichlorobenzene	ND	5.0	1.000	102980	06/15/05
Hexachlorobutadiene	ND	5.0	1.000	102980	06/15/05
Naphthalene	ND	5.0	1.000	102980	06/15/05
1,2,3-Trichlorobenzene	ND	5.0	1.000	102980	06/15/05

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	97	78-120	1.000	102980	06/15/05
1,2-Dichloroethane-d4	102	80-120	1.000	102980	06/15/05
Toluene-d8	101	80-120	1.000	102980	06/15/05
Bromofluorobenzene	106	80-120	1.000	102980	06/15/05

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Purgeable Organics by GC/MS

Lab #:	180038	Location:	5885 Hollis St
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8260B
Field ID:	TR-26-4.0	Basis:	as received
Lab ID:	180038-004	Diln Fac:	4.545
Matrix:	Soil	Sampled:	06/15/05
Units:	ug/Kg	Received:	06/15/05

Analyte	Result	RL	Batch#	Analyzed
Freon 12	ND	45	102980	06/15/05
Chloromethane	ND	45	102980	06/15/05
Vinyl Chloride	ND	45	102980	06/15/05
Bromomethane	ND	45	102980	06/15/05
Chloroethane	ND	45	102980	06/15/05
Trichlorofluoromethane	ND	23	102980	06/15/05
Acetone	ND	91	102980	06/15/05
Freon 113	ND	23	102980	06/15/05
1,1-Dichloroethene	ND	23	102980	06/15/05
Methylene Chloride	ND	91	102980	06/15/05
Carbon Disulfide	ND	23	103011	06/16/05
MTBE	ND	23	102980	06/15/05
trans-1,2-Dichloroethene	ND	23	102980	06/15/05
Vinyl Acetate	ND	230	102980	06/15/05
1,1-Dichloroethane	ND	23	102980	06/15/05
2-Butanone	ND	45	102980	06/15/05
cis-1,2-Dichloroethene	ND	23	102980	06/15/05
2,2-Dichloropropane	ND	23	102980	06/15/05
Chloroform	ND	23	102980	06/15/05
Bromochloromethane	ND	23	102980	06/15/05
1,1,1-Trichloroethane	ND	23	102980	06/15/05
1,1-Dichloropropene	ND	23	102980	06/15/05
Carbon Tetrachloride	ND	23	102980	06/15/05
1,2-Dichloroethane	ND	23	102980	06/15/05
Benzene	ND	23	102980	06/15/05
Trichloroethene	ND	23	102980	06/15/05
1,2-Dichloropropane	ND	23	102980	06/15/05
Bromodichloromethane	ND	23	102980	06/15/05
Dibromomethane	ND	23	102980	06/15/05
4-Methyl-2-Pentanone	ND	45	102980	06/15/05
cis-1,3-Dichloropropene	ND	23	102980	06/15/05
Toluene	ND	23	102980	06/15/05
trans-1,3-Dichloropropene	ND	23	102980	06/15/05
1,1,2-Trichloroethane	ND	23	102980	06/15/05
2-Hexanone	ND	45	102980	06/15/05
1,3-Dichloropropane	ND	23	102980	06/15/05
Tetrachloroethene	ND	23	102980	06/15/05
Dibromochloromethane	ND	23	102980	06/15/05

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Purgeable Organics by GC/MS

Lab #:	180038	Location:	5885 Hollis St
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8260B
Field ID:	TR-26-4.0	Basis:	as received
Lab ID:	180038-004	Diln Fac:	4.545
Matrix:	Soil	Sampled:	06/15/05
Units:	ug/Kg	Received:	06/15/05

Analyte	Result	RL	Batch#	Analyzed
1,2-Dibromoethane	ND	23	102980	06/15/05
Chlorobenzene	ND	23	102980	06/15/05
1,1,1,2-Tetrachloroethane	ND	23	102980	06/15/05
Ethylbenzene	ND	23	102980	06/15/05
m,p-Xylenes	ND	23	102980	06/15/05
o-Xylene	ND	23	102980	06/15/05
Styrene	ND	23	102980	06/15/05
Bromoform	ND	23	102980	06/15/05
Isopropylbenzene	ND	23	102980	06/15/05
1,1,2,2-Tetrachloroethane	ND	23	102980	06/15/05
1,2,3-Trichloropropane	ND	23	102980	06/15/05
Propylbenzene	ND	23	102980	06/15/05
Bromobenzene	ND	23	102980	06/15/05
1,3,5-Trimethylbenzene	ND	23	102980	06/15/05
2-Chlorotoluene	ND	23	102980	06/15/05
4-Chlorotoluene	ND	23	102980	06/15/05
tert-Butylbenzene	ND	23	102980	06/15/05
1,2,4-Trimethylbenzene	ND	23	102980	06/15/05
sec-Butylbenzene	ND	23	102980	06/15/05
para-Isopropyl Toluene	ND	23	102980	06/15/05
1,3-Dichlorobenzene	ND	23	102980	06/15/05
1,4-Dichlorobenzene	ND	23	102980	06/15/05
n-Butylbenzene	ND	23	102980	06/15/05
1,2-Dichlorobenzene	ND	23	102980	06/15/05
1,2-Dibromo-3-Chloropropane	ND	23	102980	06/15/05
1,2,4-Trichlorobenzene	ND	23	102980	06/15/05
Hexachlorobutadiene	ND	23	102980	06/15/05
Naphthalene	ND	23	102980	06/15/05
1,2,3-Trichlorobenzene	ND	23	102980	06/15/05

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	97	78-120	102980	06/15/05
1,2-Dichloroethane-d4	100	80-120	102980	06/15/05
Toluene-d8	99	80-120	102980	06/15/05
Bromofluorobenzene	112	80-120	102980	06/15/05

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Purgeable Organics by GC/MS

Lab #:	180038	Location:	5885 Hollis St
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8260B
Field ID:	TR-27-2.0	Basis:	as received
Lab ID:	180038-005	Sampled:	06/15/05
Matrix:	Soil	Received:	06/15/05
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	10	1.000	102980	06/15/05
Chloromethane	ND	10	1.000	102980	06/15/05
Vinyl Chloride	ND	10	1.000	102980	06/15/05
Bromomethane	ND	10	1.000	102980	06/15/05
Chloroethane	ND	10	1.000	102980	06/15/05
Trichlorofluoromethane	ND	5.0	1.000	102980	06/15/05
Acetone	21	20	1.000	102980	06/15/05
Freon 113	ND	5.0	1.000	102980	06/15/05
1,1-Dichloroethene	ND	5.0	1.000	102980	06/15/05
Methylene Chloride	ND	20	1.000	102980	06/15/05
Carbon Disulfide	ND	4.5	0.9091	103011	06/16/05
MTBE	ND	5.0	1.000	102980	06/15/05
trans-1,2-Dichloroethene	ND	5.0	1.000	102980	06/15/05
Vinyl Acetate	ND	50	1.000	102980	06/15/05
1,1-Dichloroethane	ND	5.0	1.000	102980	06/15/05
2-Butanone	ND	10	1.000	102980	06/15/05
cis-1,2-Dichloroethene	ND	5.0	1.000	102980	06/15/05
2,2-Dichloropropane	ND	5.0	1.000	102980	06/15/05
Chloroform	ND	5.0	1.000	102980	06/15/05
Bromochloromethane	ND	5.0	1.000	102980	06/15/05
1,1,1-Trichloroethane	ND	5.0	1.000	102980	06/15/05
1,1-Dichloropropene	ND	5.0	1.000	102980	06/15/05
Carbon Tetrachloride	ND	5.0	1.000	102980	06/15/05
1,2-Dichloroethane	ND	5.0	1.000	102980	06/15/05
Benzene	ND	5.0	1.000	102980	06/15/05
Trichloroethene	ND	5.0	1.000	102980	06/15/05
1,2-Dichloropropane	ND	5.0	1.000	102980	06/15/05
Bromodichloromethane	ND	5.0	1.000	102980	06/15/05
Dibromomethane	ND	5.0	1.000	102980	06/15/05
4-Methyl-2-Pentanone	ND	10	1.000	102980	06/15/05
cis-1,3-Dichloropropene	ND	5.0	1.000	102980	06/15/05
Toluene	ND	5.0	1.000	102980	06/15/05
trans-1,3-Dichloropropene	ND	5.0	1.000	102980	06/15/05
1,1,2-Trichloroethane	ND	5.0	1.000	102980	06/15/05
2-Hexanone	ND	10	1.000	102980	06/15/05
1,3-Dichloropropane	ND	5.0	1.000	102980	06/15/05
Tetrachloroethene	ND	5.0	1.000	102980	06/15/05
Dibromochloromethane	ND	5.0	1.000	102980	06/15/05

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Purgeable Organics by GC/MS

Lab #:	180038	Location:	5885 Hollis St
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8260B
Field ID:	TR-27-2.0	Basis:	as received
Lab ID:	180038-005	Sampled:	06/15/05
Matrix:	Soil	Received:	06/15/05
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
1,2-Dibromoethane	ND	5.0	1.000	102980	06/15/05
Chlorobenzene	ND	5.0	1.000	102980	06/15/05
1,1,1,2-Tetrachloroethane	ND	5.0	1.000	102980	06/15/05
Ethylbenzene	ND	5.0	1.000	102980	06/15/05
m,p-Xylenes	ND	5.0	1.000	102980	06/15/05
o-Xylene	ND	5.0	1.000	102980	06/15/05
Styrene	ND	5.0	1.000	102980	06/15/05
Bromoform	ND	5.0	1.000	102980	06/15/05
Isopropylbenzene	ND	5.0	1.000	102980	06/15/05
1,1,2,2-Tetrachloroethane	ND	5.0	1.000	102980	06/15/05
1,2,3-Trichloropropane	ND	5.0	1.000	102980	06/15/05
Propylbenzene	ND	5.0	1.000	102980	06/15/05
Bromobenzene	ND	5.0	1.000	102980	06/15/05
1,3,5-Trimethylbenzene	ND	5.0	1.000	102980	06/15/05
2-Chlorotoluene	ND	5.0	1.000	102980	06/15/05
4-Chlorotoluene	ND	5.0	1.000	102980	06/15/05
tert-Butylbenzene	ND	5.0	1.000	102980	06/15/05
1,2,4-Trimethylbenzene	ND	5.0	1.000	102980	06/15/05
sec-Butylbenzene	ND	5.0	1.000	102980	06/15/05
para-Isopropyl Toluene	ND	5.0	1.000	102980	06/15/05
1,3-Dichlorobenzene	ND	5.0	1.000	102980	06/15/05
1,4-Dichlorobenzene	ND	5.0	1.000	102980	06/15/05
n-Butylbenzene	ND	5.0	1.000	102980	06/15/05
1,2-Dichlorobenzene	ND	5.0	1.000	102980	06/15/05
1,2-Dibromo-3-Chloropropane	ND	5.0	1.000	102980	06/15/05
1,2,4-Trichlorobenzene	ND	5.0	1.000	102980	06/15/05
Hexachlorobutadiene	ND	5.0	1.000	102980	06/15/05
Naphthalene	ND	5.0	1.000	102980	06/15/05
1,2,3-Trichlorobenzene	ND	5.0	1.000	102980	06/15/05

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	96	78-120	1.000	102980	06/15/05
1,2-Dichloroethane-d4	96	80-120	1.000	102980	06/15/05
Toluene-d8	98	80-120	1.000	102980	06/15/05
Bromofluorobenzene	102	80-120	1.000	102980	06/15/05

ND= Not Detected
RL= Reporting Limit

15235

Treadwell&Rollo

Environmental and Geotechnical Consultant

CHAIN OF CUSTODY RECORD

☐ 555 Montgomery Street, Suite 1300, San Francisco, CA 94111 Ph: 415-955-9040 / Fax: 415-955-9041
☐ 2 Theatre Square, Suite 216, Orinda CA 94563 Ph: 925-253-4980 / Fax: 925-253-4985
☒ 501 14th Street, 3rd Floor, Oakland, CA 94612 Ph: 510-874-4500 / Fax: 510-874-4507

Site Name: 5885 Hollis Street
Job Number: 4069.01
Project Manager\Contact: David Kreshtool
Samplers: Eric Mehta
Recorder (Signature Required):

Turnaround Time: 24 hour rush

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix: Soil	Matrix: Water	Matrix: Other	No. Containers & Preservative: HCL	H_2SO_4	HNO_3	Ice	Other		Analysis Requested: TPH-gas	TPH-diesel	VOCs 8260B	Silica gel clean-up	Hold	Remarks
-1 TR-24-3.0	6/15/05	10:41		X						1							X	
-2 TR-24-4.0		10:50		X						1			X	X	X			
-3 TR-24-6.0		11:00		X						1								
-4 TR-26-4.0		14:00		X						1			X	X	X			
-5 TR-27-2.0		15:00		X						1			X	X	X			
-6 TR-24-GW	↓	12:00			X		4			1			X	X	X			

Relinquished by: (Signature)	Date 6/15/05	Time 4:20	Received by: (Signature)	Date 6/15/05	Time 4:20
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)	Date	Time

Sent to Laboratory (Name): Curtis and Tompkins Ltd
Laboratory Comments/Notes:

Method of Shipment: ☐ Lab courier ☐ Fed Ex ☐ Airborne ☐ UPS ☒ Hand Carried ☐ Private Courier (Co. Name)

White Copy - Original Yellow Copy - Laboratory Pink Copy - Field

COC Number: 003609

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1
Effective Date: 10-May-99
Revision: 1 Number 1 of 3
Filename: F:\QC\Forms\QC\Cooler.wpd

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 180038 Date Received: 6-15-05 Number of Coolers: 1
Client: Treadwell & Rollo Project: 4969.01

A. Preliminary Examination Phase
Date Opened: 6-15-05 By (print): Troy Windsor (sign) Troy G Windsor

1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES (NO)
If YES, enter carrier name and airbill number: _____
2. Were custody seals on outside of cooler? ..... YES (NO)
How many and where? _____ Seal date: _____ Seal name: _____ N/A
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO
4. Were custody papers dry and intact when received? ..... (YES) NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (YES) NO
6. Did you sign the custody papers in the appropriate place? ..... (YES) NO
7. Was project identifiable from custody papers? ..... (YES) NO
If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be 2-6 degrees C. ..... YES NO
Type of ice: wet Temperature: cold - no temp blank

B. Login Phase
Date Logged In: 6-15-05 By (print): Troy Windsor (sign) Troy G Windsor

1. Describe type of packing in cooler: In ziplok type bags, voas wrapped in paper towels
2. Did all bottles arrive unbroken? ..... (YES) NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ..... (YES) NO
4. Did bottle labels agree with custody papers? ..... (YES) NO
5. Were appropriate containers used for the tests indicated? ..... (YES) NO
6. Were correct preservatives added to samples? ..... (YES) NO
7. Was sufficient amount of sample sent for tests indicated? ..... (YES) NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... (YES) NO
9. Was the client contacted concerning this sample delivery? ..... YES NO
If YES, give details below.
Who was called? _____ By whom? _____ Date: _____

Additional Comments:

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Purgeable Organics by GC/MS

Lab #:	180104	Location:	5885 Hollis Street
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8260B
Field ID:	TR-23-9.0'	Basis:	as received
Lab ID:	180104-002	Sampled:	06/20/05
Matrix:	Soil	Received:	06/20/05
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Freon 12	ND	9.4	0.9434	103099	06/20/05
Chloromethane	ND	9.4	0.9434	103099	06/20/05
Vinyl Chloride	ND	9.4	0.9434	103099	06/20/05
Bromomethane	ND	9.4	0.9434	103099	06/20/05
Chloroethane	ND	9.4	0.9434	103099	06/20/05
Trichlorofluoromethane	ND	4.7	0.9434	103099	06/20/05
Acetone	36	19	0.9434	103099	06/20/05
Freon 113	ND	4.7	0.9434	103099	06/20/05
1,1-Dichloroethene	ND	4.7	0.9434	103099	06/20/05
Methylene Chloride	ND	19	0.9434	103099	06/20/05
Carbon Disulfide	ND	4.7	0.9434	103099	06/20/05
MTBE	ND	4.7	0.9434	103099	06/20/05
trans-1,2-Dichloroethene	ND	4.7	0.9434	103099	06/20/05
Vinyl Acetate	ND	47	0.9434	103099	06/20/05
1,1-Dichloroethane	ND	4.7	0.9434	103099	06/20/05
2-Butanone	23	9.4	0.9434	103099	06/20/05
cis-1,2-Dichloroethene	ND	4.7	0.9434	103099	06/20/05
2,2-Dichloropropane	ND	4.7	0.9434	103099	06/20/05
Chloroform	ND	4.7	0.9434	103099	06/20/05
Bromochloromethane	ND	4.7	0.9434	103099	06/20/05
1,1,1-Trichloroethane	ND	4.7	0.9434	103099	06/20/05
1,1-Dichloropropene	ND	4.7	0.9434	103099	06/20/05
Carbon Tetrachloride	ND	4.7	0.9434	103099	06/20/05
1,2-Dichloroethane	ND	4.7	0.9434	103099	06/20/05
Benzene	200	130	25.00	103173	06/22/05
Trichloroethene	ND	4.7	0.9434	103099	06/20/05
1,2-Dichloropropane	ND	4.7	0.9434	103099	06/20/05
Bromodichloromethane	ND	4.7	0.9434	103099	06/20/05
Dibromomethane	ND	4.7	0.9434	103099	06/20/05
4-Methyl-2-Pentanone	ND	9.4	0.9434	103099	06/20/05
cis-1,3-Dichloropropene	ND	4.7	0.9434	103099	06/20/05
Toluene	ND	4.7	0.9434	103099	06/20/05
trans-1,3-Dichloropropene	ND	4.7	0.9434	103099	06/20/05
1,1,2-Trichloroethane	ND	4.7	0.9434	103099	06/20/05
2-Hexanone	ND	9.4	0.9434	103099	06/20/05
1,3-Dichloropropane	ND	4.7	0.9434	103099	06/20/05
Tetrachloroethene	ND	4.7	0.9434	103099	06/20/05

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Purgeable Organics by GC/MS

Lab #:	180104	Location:	5885 Hollis Street
Client:	Treadwell & Rollo	Prep:	EPA 5030B
Project#:	4069.01	Analysis:	EPA 8260B
Field ID:	TR-23-9.0'	Basis:	as received
Lab ID:	180104-002	Sampled:	06/20/05
Matrix:	Soil	Received:	06/20/05
Units:	ug/Kg		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Dibromochloromethane	ND	4.7	0.9434	103099	06/20/05
1,2-Dibromoethane	ND	4.7	0.9434	103099	06/20/05
Chlorobenzene	ND	4.7	0.9434	103099	06/20/05
1,1,1,2-Tetrachloroethane	ND	4.7	0.9434	103099	06/20/05
Ethylbenzene	600	130	25.00	103173	06/22/05
m,p-Xylenes	190	130	25.00	103173	06/22/05
o-Xylene	22	4.7	0.9434	103099	06/20/05
Styrene	ND	4.7	0.9434	103099	06/20/05
Bromoform	ND	4.7	0.9434	103099	06/20/05
Isopropylbenzene	180	130	25.00	103173	06/22/05
1,1,2,2-Tetrachloroethane	ND	4.7	0.9434	103099	06/20/05
1,2,3-Trichloropropane	ND	4.7	0.9434	103099	06/20/05
Propylbenzene	480	130	25.00	103173	06/22/05
Bromobenzene	ND	4.7	0.9434	103099	06/20/05
1,3,5-Trimethylbenzene	69	4.7	0.9434	103099	06/20/05
2-Chlorotoluene	ND	4.7	0.9434	103099	06/20/05
4-Chlorotoluene	ND	4.7	0.9434	103099	06/20/05
tert-Butylbenzene	ND	4.7	0.9434	103099	06/20/05
1,2,4-Trimethylbenzene	250	130	25.00	103173	06/22/05
sec-Butylbenzene	42	4.7	0.9434	103099	06/20/05
para-Isopropyl Toluene	57	4.7	0.9434	103099	06/20/05
1,3-Dichlorobenzene	ND	4.7	0.9434	103099	06/20/05
1,4-Dichlorobenzene	ND	4.7	0.9434	103099	06/20/05
n-Butylbenzene	290	130	25.00	103173	06/22/05
1,2-Dichlorobenzene	ND	4.7	0.9434	103099	06/20/05
1,2-Dibromo-3-Chloropropane	ND	4.7	0.9434	103099	06/20/05
1,2,4-Trichlorobenzene	ND	4.7	0.9434	103099	06/20/05
Hexachlorobutadiene	ND	4.7	0.9434	103099	06/20/05
Naphthalene	310	130	25.00	103173	06/22/05
1,2,3-Trichlorobenzene	ND	4.7	0.9434	103099	06/20/05

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	89	78-120	0.9434	103099	06/20/05
1,2-Dichloroethane-d4	132 *	80-120	0.9434	103099	06/20/05
Toluene-d8	102	80-120	0.9434	103099	06/20/05
Bromofluorobenzene	159 *	80-120	0.9434	103099	06/20/05
Trifluorotoluene (MeOH)	89	52-135	25.00	103173	06/22/05

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

160104

Treadwell&Rollo
Environmental and Geotechnical Consultant

CHAIN OF CUSTODY RECORD

☐ 555 Montgomery Street, Suite 1300, San Francisco, CA 94111 Ph: 415-955-9040 / Fax: 415-955-9041
☐ 2 Theatre Square, Suite 216, Orinda CA 94563 Ph: 925-253-4980 / Fax: 925-253-4985
☒ 1501 14th Street, 3rd Floor, Oakland, CA 94612 Ph: 510-874-4500 / Fax: 510-874-4507

Site Name: 5885 Hollis Street
Job Number: 4069.01
Project Manager\Contact: David Kleespies
Samplers: SID
Recorder (Signature Required):

Turnaround Time: 24 hour!!!

Field Sample Identification No.	Date	Time	Lab Sample No.	Matrix: Soil	Matrix: Water	Matrix: Other	No. Containers & Preservative: HCL	H_2SO_4	HNO_3	Ice	Other	None	Analysis Requested: TPH - Diesel	TPH - Gas	VOCs	Silica gel clean-up	Hold	Remarks
-1 TR-23-4.0'	6/20/05	1025		X									X	X	X			
-2 TR-23-9.0'	↓	1050		X									X	XX				
-3 TR-23(GW)	↓	1105			X		4					1	X	X	X			

Relinquished by: (Signature)	Date 6/20/05	Time 1203	Received by: (Signature) Lavanna Lutri
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)

Date 6/20/05 Time 12:05 pm

Sent to Laboratory (Name):
Laboratory Comments/Notes:

Method of Shipment ☐ Lab courier ☐ Fed Ex ☐ Airborne ☐ UPS ☐ Hand Carried ☐ Private Courier (Co. Name)

White Copy - Original Yellow Copy - Laboratory Pink Copy - Field

COC Number: 003611

Received ☒ On ice ☐ Cold ☐ Ambient ☐ Intact

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 180104 Date Received: 6-20-05 Number of Coolers: 1
Client: Treadwell & Rollo Project: 4069.01

A. Preliminary Examination Phase
Date Opened: 6-20-05 By (print): Troy Windsor (sign) Troy Windsor

1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES (NO)
   If YES, enter carrier name and airbill number: _____
2. Were custody seals on outside of cooler? ..... YES (NO)
   How many and where? _____ Seal date: _____ Seal name: _____ N/A
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO
4. Were custody papers dry and intact when received? ..... (YES) NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (YES) NO
6. Did you sign the custody papers in the appropriate place? ..... (YES) NO
7. Was project identifiable from custody papers? ..... (YES) NO
   If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be 2-6 degrees C. ..... YES NO
   Type of ice: Wet Temperature: Cold - no temp blank

B. Login Phase
Date Logged In: 6-20-05 By (print): Troy Windsor (sign) Troy Windsor

1. Describe type of packing in cooler: In ziploc type bags/vials in paper towels / IC in bubble wrap
2. Did all bottles arrive unbroken? ..... (YES) NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ..... (YES) NO
4. Did bottle labels agree with custody papers? ..... (YES) NO
5. Were appropriate containers used for the tests indicated? ..... (YES) NO
6. Were correct preservatives added to samples? ..... (YES) NO
7. Was sufficient amount of sample sent for tests indicated? ..... (YES) NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... (YES) NO
9. Was the client contacted concerning this sample delivery? ..... YES NO
   If YES, give details below.
   Who was called? _____ By whom? _____ Date: _____

Additional Comments: