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SITE MANAGEMENT COMPLETION REPORT
5885 HOLLIS STREET
Emeryville, California

E S East Associates, LLC
Emeryville, California

5 January 2007
Project No. 4069.01

Treadwell&Rollo
Environmental and Geotechnical Consultants

5 January 2007
Project 4069.01

Mr. Geoffrey Sears
E S East Associates, LLC, an affiliate of Wareham Development
1120 Nye Street, Suite 400
San Rafael, CA 94901

Subject: Site Management Completion Report
5885 Hollis Street
Emeryville, California

Dear Mr. Sears:

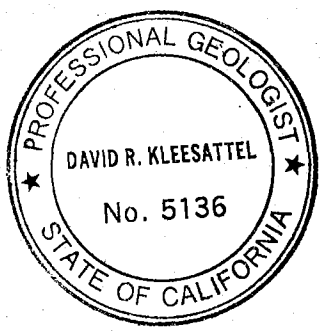
We have completed the Site Management Completion Report for the Site located at 5885 Hollis Street in Emeryville, California. We declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report are true and correct to the best of our knowledge.

Please call us at (510) 874-4500 if you have any questions.

Sincerely yours,
TREADWELL & ROLLO, INC.

Glenn M. Leong, R.E.A.
Senior Associate Scientist

David R. Kleesattel, P.G.
Senior Geologist



Eric T. Morita
Senior Staff Geologist

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SITE MANAGEMENT COMPLETION REPORT
5885 HOLLIS STREET
Emeryville, California

1.0 INTRODUCTION

This Site Management Completion Report has been prepared by Treadwell & Rollo, Inc. (Treadwell & Rollo) for the property located at 5885 Hollis Street in Emeryville, California (Site) (Figures 1 and 2). This Site Management Completion Report was prepared on behalf of E S East Associates, LLC (Client) to fulfill soil and groundwater removal requirements documented in the *Site Management Plan, 5885 Hollis Street, Emeryville, California* prepared by Treadwell & Rollo on 14 July 2005 (SMP) and the approval letter from the Alameda County Health Care Services Agency (ACHCSA) dated 8 December 2005.

2.0 PURPOSE

The purposes of this Site Management Completion Report are to:

- summarize soil and groundwater removal activities performed at the Site and to document that they were performed in accordance with the SMP and ACHCSA requirements
- summarize concentrations of residual contaminants that remain in soil and groundwater at the Site after redevelopment activities have been completed.

3.0 BACKGROUND

3.1 Site Description and History

The Site has a footprint of approximately 220 feet by 550 feet 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 2).

The Site redevelopment consists of a multi-level commercial laboratory building with an underground parking garage that extends across the Site footprint. The building foundation has been completed with active vertical construction activities currently being performed. With the exception of raised beds for landscaping, no exposed soil is anticipated once construction is completed.

Union Oil Company of California occupied the Site and the property to the south of the Site and used it as a distribution facility from 1917 to 1964. During this period, the Site contained numerous 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 that extended onto the property to the south (currently the Chevron Service Station).

During the remodeling of one of the buildings in 1985 and during the widening of 59th Street and replacement of an underground utility in 1999, petroleum hydrocarbons were discovered in the soil with total petroleum hydrocarbons (TPH) as diesel (TPH-d) detected at a maximum concentration of 13,000 milligrams per kilogram (mg/kg) and total petroleum hydrocarbons as motor oil (TPH-mo) 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 Marks Management, the previous property owners, soil contamination was noted during the tank removal and the affected soil was disposed at a regulated landfill.

3.1.1 Investigation performed in 2000

In April 2000, Treadwell & Rollo performed a subsurface investigation for Marks Management Company that included the collection of soil and grab groundwater samples. The investigation was conducted to provide additional soil and groundwater data to assist the redevelopment of the Site. Results of the soil sample analyses indicated the presence of:

- Total recoverable petroleum hydrocarbons (TRPH) at a maximum concentration of 9,900 mg/kg
- Total petroleum hydrocarbons as gasoline (TPH-g) at a maximum concentration of 160 mg/kg
- TPH-d at a maximum concentration of 360 mg/kg
- TPH-mo at a maximum concentration of 6,600 mg/kg
- Benzo(a)pyrene at a maximum concentration of 660 micrograms per kilogram (µg/kg)
- Carbon disulfide at a maximum concentration of 17 µg/kg
- Total chromium at a maximum concentration of 97 mg/kg
- Lead at a maximum concentration of 150 mg/kg
- Nickel at a maximum concentration of 110 mg/kg
- Zinc at a maximum concentration of 110 mg/kg.

The maximum concentration of TRPH and TPH-mo were each detected in sample TR-1 at 4 feet below ground surface (bgs) (TR-1-4.0), located near the northeast corner of the Site near 59th Street (Figure 3). The maximum detected concentration of TPH-g was detected in sample TR-12 at 10 feet bgs (TR-12-10), which is located near the former oil pump area near the southwest corner of the Site. When encountered elsewhere, TRPH, TPH-g, and TPH-mo 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 at 15 feet bgs (TR-18-15) at a concentration of 17 µg/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 µg/kg. Figure 4 presents the TPH-g and TPH-mo concentrations in soil.

In April 2000, grab groundwater samples were collected from four of the soil borings (TR-1, TR-6, TR-9, TR-12). These grab groundwater samples indicated the presence of:

- TRPH at a maximum concentration of 9,900 µg/L
- TPH-g at a maximum concentration of 3,300 µg/L
- TPH-d at a maximum concentration of 700 µg/L
- TPH-mo at a maximum concentration of 1,400 µg/L.

Grab groundwater samples were not analyzed for benzene, toluene, ethylbenzene or xylenes (BTEX) in the 2000 investigation.

3.1.2 Additional Information Requested from the ACHCSA

The results of the 2000 investigation (along with the 1995 Weiss Associates Environmental Site Assessment), were submitted by Marks Management Company to the 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.

3.1.3 Investigations Performed in 2005

In January and June 2005, Treadwell & Rollo performed additional subsurface investigations for E S East Associates, LLC that included the collection of soil and grab groundwater samples. E S East Associates, LLC is the current owner who purchased the Site from Marks Management in 2004. Results of the 2005 investigations are provided in the Site Management Plan (Appendix A).

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 were present beneath the Site. The information developed in the ESA prepared by Weiss Associates (1995) and the 2000 investigation suggested 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.

Soil samples were collected from nine environmental soil borings (TR-19 through TR-22, TR-25, and TR-28 through TR-31 (Figure 3) and four grab groundwater samples were collected from temporary wells placed in select borings (TR-25, TR-29 through TR-31). Soil and groundwater samples were selectively analyzed for TPH-d, TPH-mo, TPH-g, 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. These soil samples were collected later in June 2005 and are discussed in the following section.

Analytical results for soil samples collected in January 2005 indicated that TPH-d was detected in 17 of the 18 soil samples analyzed with concentrations that ranged from less than 1.0 mg/kg in TR-19 at 6.0 feet bgs to a maximum concentration of 1,100 mg/kg in TR-31 at 2.5 feet bgs. All detected concentrations of TPH-d 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." TPH-mo was detected in 14 of the 18 soil samples analyzed with concentrations ranging 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 (Figure 4). Several detections of TPH-mo were reported with one or more laboratory qualifiers that indicate that "lighter or heavier hydrocarbons may have contributed to the analytical concentration."

TPH-g was detected in seven of the 18 soil samples analyzed with concentrations ranging from less than 1.0 mg/kg in several samples to a maximum concentration of 2,100 mg/kg in TR-25 at 6.0 feet bgs. Several detections of TPH-g were reported with a laboratory qualifier indicating the sample exhibited a chromatographic pattern that did not resemble the laboratory standard. Figure 4 present the TPH-g and TPH-mo concentrations in soil.

Total lead was detected in all four of the 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 concentration 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 µg/kg. This concentration was below the residential surface soil ESL for PCBs of 220 µg/kg (RWQCB, 2005).

Groundwater was measured in one boring (TR-31) at 9.88 feet bgs, although this was not a stabilized water level measurement. TPH-d was detected in three of four groundwater samples analyzed and ranged from 270 µg/L in TR-31 to 640 µg/L in TR-30. All TPH-d detections had laboratory qualifiers indicating that both lighter and heavier hydrocarbons contributed to the total analytical concentration. TPH-mo was also detected in three of four groundwater samples analyzed and ranged from 340 µg/L in TR-29 to a maximum of 1,500 µg/L in TR-31. The TPH-mo detection in the groundwater sample from TR-29 had a laboratory qualifier indicating that lighter hydrocarbons contributed to the total analytical concentration.

TPH-g was only detected in groundwater from TR-25 with a concentration of 150,000 µg/L. This groundwater concentration is in excess of the residential groundwater ESL of 500 µg/L (RWQCB, 2005), and suggested the possible presence of free-phase hydrocarbons in the subsurface. Benzene was detected in groundwater from TR-25 at a concentration of 2,500 µg/L. Toluene was detected in groundwater from three of four samples analyzed with concentrations that ranged from 0.56 µg/L in TR-29 to a maximum of 0.85 µg/L in TR-30. Ethylbenzene was detected in groundwater from TR-25 at a concentration of 3,600 µg/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 µg/L. In the remaining three groundwater samples, m,p-xylenes were detected at concentrations ranging from 0.57 µg/L in TR-31 (GW) to 0.85 µg/L in TR-30 (GW).

June 2005 Investigation

Site access was granted in June 2005 at sampling at locations along the south end of the Site. Each location was within buildings that previously existed at the Site. Due to the elevated concentrations of TPH-g 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 TPH-g in groundwater. The June 2005 investigation included soil and groundwater sampling at the TR-23, TR-24, TR-26, and TR-27 (Figure 3).

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 auger equipment. At boring locations TR-26 and TR-27, an obstruction was encountered approximately 4 feet below ground surface. The obstruction was concrete from a second building slab or foundation. Therefore, no groundwater samples and only shallow soil samples were collected at TR-26 and TR-27.

TPH-d was detected in the 5 soil samples analyzed and concentrations ranged from 46 mg/kg in TR-24 at 4.0 feet bgs to a maximum concentration of 2,100 mg/kg in TR-26 at 4.0 feet bgs. All detections of TPH-d 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."

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

Benzene was detected in soil only in TR-23 at 4 feet bgs with a concentration of 97 µg/kg and at 9 feet bgs with a concentration of 200 µg/kg. Other petroleum-related chemicals detected in the soil samples from TR-23 and TR-26 included the following compounds:

- Ethylbenzene at a maximum concentration of 600 µg/kg
- m,p-Xylenes at a maximum concentration of 190 µg/kg
- o-Xylenes at a maximum concentration of 22 µg/kg
- Isopropylbenzene at a maximum concentration of 180 µg/kg
- Propylbenzene at a maximum concentration of 480 µg/kg
- 1,3,5-Trimethylbenzene at a maximum concentration of 69 µg/kg
- 1,2,4-Trimethylbenzene at a maximum concentration of 250 µg/kg
- Sec-Butylbenzene at a maximum concentration of 42 µg/kg
- N-Butylbenzene at a maximum concentration of 290 µg/kg
- Naphthalene at a maximum concentration of 310 µg/kg.

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

The groundwater samples collected from borings TR-23 and TR-24 indicated the presence of TPH-d at 8,400 µg/L and 6,800 µg/L, respectively. The TPH-d results had laboratory qualifiers indicating that both lighter and heavier hydrocarbons contributed to the total analytical concentration. TPH-g was detected in groundwater at 28,000 µg/L from TR-23 and 91,000 µg/L from TR-24. These concentrations are in excess of the residential groundwater ESL of 500 µg/L (RWQCB, 2005), and suggested the presence of free-phase hydrocarbons in the subsurface. Benzene was also detected in groundwater at 4,300 µg/L from TR-23 and 2,500 µg/L from TR-

24. Other petroleum-related chemicals detected in groundwater from TR-23 and TR-24 included the following:

- Toluene up to 21 µg/L
- Ethylbenzene up to 990 µg/L
- m,p-Xylenes up to 380 µg/L
- o-Xylenes up to 380 µg/L
- Isopropylbenzene up to 210 µg/L
- Propylbenzene up to 240 µg/L
- 1,3,5-Trimethylbenzene up to 290 µg/L
- 1,2,4-Trimethylbenzene up to 160 µg/L
- Sec-Butylbenzene up to 70 µg/L
- Naphthalene up to 710 µg/L
- Acetone up to 35 µg/L.

3.2 Site Management Requirements

Since 2000, ACHCSA has provided regulatory oversight for the Site. Based on E S East Associates, LLC's intention to redevelop the Site, ACHCSA required that redevelopment activities include measures to mitigate worker and Site user and neighbor risks associated with the presence of petroleum hydrocarbons and benzene in subsurface soil and groundwater at the Site. Treadwell & Rollo prepared a Site Management Plan dated 14 July 2005 that included:

- Historical Site Use and Environmental Investigations
- Tier 1 Environmental Risk Assessment
- Short-Term and Long-Term Risk Management Measures including:
  - Construction Worker Health and Safety Recommendations
  - Soil Management Measures
  - Post-Excavation Confirmation Soil and Groundwater Sampling
  - Storm Water Pollution Controls
  - Groundwater Management for Construction-Phase Dewatering and Groundwater Intrusion Management
  - Site Encapsulation
  - Mechanical Ventilation of the Parking Garage
  - Maintenance Requirements
  - Contingency Plan
  - Restrictions on Future Groundwater Use.

The 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. An exposure assessment was previously conducted to evaluate potential exposure to chemicals in soil by the following 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.

These five exposure pathways were evaluated for the risk evaluation, but the Site development design resulted in preclusion of direct contact with soil for future residents. For future residents, the only potentially complete exposure pathway evaluated for groundwater was inhalation of VOCs in indoor air from subsurface emissions.

The chemicals of potential concern identified during the risk assessment were TPH-g, TPH-d, TPH-mo, benzene, and lead present at the Site.

The risk evaluation included a comparison between the maximum soil and groundwater concentrations and residential land use ESLs (RWQCB, 2005). Based upon the results of the exposure assessment, detected concentrations were compared to the following ESLs to determine if Site encapsulation required for the redevelopment:

- Direct Exposure Screening Levels, Residential and Commercial Exposure Scenario (Table K-1 and K-2 of the RWQCB 2005 ESLs)
- Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (Table E-1a of the RWQCB 2005 ESLs)
- Soil Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (E-1b of the RWQCB 2005 ESLs)
- Environmental Screening Levels for Shallow Soils, Groundwater is Not a Current or Potential Source of Drinking Water (Table B of the RWQCB 2005 ESLs).

Comparison of the chemical concentrations in soil to the ESLs indicated that TPH-g, TPH-d, TPH-mo and TRPH in soil exceeded the residential and commercial direct contact ESLs. Benzo(a)pyrene in soil also exceeded the residential and commercial direct contact ESLs. No metals exceeded the residential or commercial ESLs. Consequently, potential residential and commercial risks would only exist if the TPH-g, TPH-d, TPH-mo, TRPH, and benzo(a)pyrene-affected soil remained uncovered and available for exposure.

Comparison of the chemical concentrations of volatile organic compounds in soil to the ESLs indicated that benzene exceeded the residential ESLs for potential vapor intrusion concerns. Consequently, potential residential risks exist if the benzene in soil remained and the potential inhalation exposures are not mitigated.

Comparison of the groundwater data to the ESLs indicates that TPH-g, TPH-d, TPH-mo and TRPH in groundwater exceeded the general water quality ESLs. Benzene in groundwater exceeded the groundwater ESL for protection of indoor air quality at TR-23, TR-24 and TR-25, which are were all located near the southwest corner of the Site. Consequently, potential residential and commercial indoor risks exist if the benzene in groundwater remained and if the potential inhalation exposures are not mitigated.

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

The previously mentioned measures included 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 were designed to be in compliance with applicable federal, state, and local laws and regulations regarding hazardous and industrial waste management and are described in the SMP (T&R, 2005).

ACHCSA provided technical comments to the SMP on 28 October 2005 (ACHCSA, 2005a). A response letter with the requested information was sent to the ACHCSA on 30 November 2005 (Wareham, 2005). The SMP and redevelopment activities received final approval from the ACHCSA on 8 December 2005 (ACHCSA, 2005b) provided that additional soil and groundwater testing is performed as follows:

- Methyl tert-butyl ether (MTBE) to be analyzed by EPA Method 8260B to avoid false positives
- where total petroleum hydrocarbons (TPH) quantified as gas (TPH-g) is a contaminant of concern in soil and groundwater samples, also analyze for:
  - Isopropyl ether (DIPE), Ethyl tert-butyl ether (ETBE), methyl tert-amyl ether (TAME), and tert-butyl alcohol (TBA) (Fuel Oxygenates)
  - Ethanol
  - 1,2 dibromoethane (EDB) and 1,2 dichloroethane (EDC) (Lead Scavengers).
- collect additional post-excavation sampling at the loading rack, the southern border of the Site, and the current Chevron gasoline station in areas of potential and known contaminant releases and where commingle plumes may exist
- collect water samples from discrete locations from the dewatering system in the southeast, southwest, and northern portion of the Site.

The SMP and subsequent communications including the approval letter from the ACHCSA dated 8 December 2005 are provided in Appendix A.

4.0 PERFORMANCE OF SITE MANAGEMENT FIELD ACTIVITES

Site management activities were performed during the redevelopment. These activities included:

- Construction Worker Health and Safety Management
- Soil Excavation and Off-Site Disposal
- Post-Excavation Confirmation Soil Sampling
- Groundwater Intrusion Management
- Evaluation of Import Soil
- Site Encapsulation
- Monitoring Plan.

4.1 Construction Worker Health and Safety Management

During redevelopment, construction worker health and safety management included adherence to a Site-specific health and safety plan, notifications regarding the presence of hazardous materials on-Site, and controlling dust during excavation and grading. These activities were performed as follows:

- Under contract to DPR Construction Inc. (the general contractor) (DPR), Brighton Environmental Consulting prepared a Site-specific Health and Safety Plan, Demolition, Shoring Installation, Dewatering, and Soil Excavation, Emery Station, 5885 Hollis Street, Emeryville, California, dated February 2006 (HSP). During Treadwell and Rollo's periodic observations, DPR enforced the requirements stated in the HSP for Site activities performed by workers and visitors to the Site.

- Notifications regarding the presence of hazardous materials on site were posted, per California Proposition 65 requirements.

- During Treadwell and Rollo's periodic observations, dust from active excavations and during grading operations was controlled by wetting the soil.

4.2 Soil Excavation and Off-Site Disposal

Soil excavation activities began at the Site on 23 March 2006 and occurred over a period of 10 weeks through 15 June 2006. Due to inclement weather, there were delays in soil excavation from April 3-5, 2006 and April 12-17, 2006. During soil excavation, support lagging for sub-grade construction was being installed. Lagging and vehicle off-hauling routes were progressively installed with increasing depth by alternating soil removal between the northern and southern halves of the Site (Photograph 1).

Per the requirements of the SMP, soil was only excavated to the final construction depth (approximately 12 to 15 vertical feet below original grade). Soil excavation and removal activities were subcontracted to Pacific States Environmental Contractors (PSEC). PSEC relied on chemical information provided in the SMP to determine that the excavated soil was non-hazardous. Excavated soil was directly loaded and transported to Keller Canyon Landfill located in Pittsburg, California (as non-hazardous waste). Because soil was directly hauled off-Site, stockpiling was not necessary. Soil was transported by Double D Transportation based out of Hayward, California. According to bills of lading signed by PSEC for the Client, a total of 91,640 tons of soil were excavated and hauled from the Site. All bills of lading are provided on CD-ROM in Appendix B.

4.3 Post-Excavation Confirmation Soil Sampling

Post-excavation confirmation soil samples were collected at the completed excavation depth to develop residual concentrations of chemicals that may remain in soil beneath the building foundation after completion of the redevelopment project.

In accordance with ACHCSA requirements, eighteen soil samples (TR-39 through TR-56) were collected on May 4-12, 2006 as the final building construction depths were progressively attained (Figure 5). The completed depth ranged between 12 to 15 feet below original grade.

Rationale For Soil Sample Locations

- Rationale for the soil sample locations were based on previous knowledge of the Site, guidance from the SMP (T&R, 2005), and the approval letter from ACHCSA (ACHCSA, 2005b). Based upon the Site characterization information, chemicals of potential concern in soil vary based upon location and past use of the Site. The locations are shown on Figure 5 and described below.

- BMP Seismic Retrofitting – Soil sample TR-39 was collected from this the area to evaluate the potential presence of paint thinners in soil.

- Graphic Traffic – Soil sample TR-40 was collected from this area to evaluate the potential presence of solvents.

- Canova Marble – Soil sample TR-41 was collected from this area to evaluate the potential presence of solvents associated with paints and adhesives.

- S.B. Thomas – Soil samples TR-42 and TR-43 were collected from this area near the former 10,000 gallon gasoline UST.

- Correris Cabinets – Soil sample TR-44 was collected from the yard area near the former paint storage cabinets.

- Fleetcare Repair – Soil sample TR-45 was collected from the yard area near the former waste oil AST and soil sample TR-46A was collected near the two former 3,000 gallon waste oil ASTs.

- Ellerson Weaver – Soil sample TR-46 was collected from the yard area near the former drum locations.

- Subsurface contamination detected as part of the 59th Street Widening – Soil samples TR-47 and TR-48 were collected near the former area where diesel and motor oil were detected in subsurface soil.

- Southwest corner of the Site near TR-23, TR-24 and TR-25 – Soil samples TR-49 through TR-54 were collected from areas near TR-23, TR-24 and TR-25, which are near the former 5,000-barrel (210,000 gallon) gasoline AST and the former lubrication oil tanks. The locations may have also been impacted by the gasoline service station.

- Former Loading Rack – Soil samples TR-55 and TR-56 were collected from the area where a loading rack associated with the former Union Oil of California operations was located.

Soil samples were collected at the base of the excavation with a drive sampler in 2" x 6" stainless steel tubes, capped with Teflon™ sheeting and plastic caps, labeled, and placed in an ice-chilled cooler. Samples were submitted to a California-certified analytical laboratory (Curtis & Tompkins, Ltd., Berkeley, CA) under Chain-of-Custody protocol and documentation.

Depending on the previous use of the Site at the particular sample locations, soil samples were analyzed for specific analytes. The analytes included the following:

- TPH-g by EPA Method 8015M

- TPH-d and TPH-mo by EPA Method 8015M with silica gel cleanup by EPA Method 3630C

- Volatile organic compounds (VOCs) by EPA Method 8260B. Some soil samples were only analyzed for specific VOCs which included some or all of the following:

  - Isopropyl ether (DIPE), Ethyl tert-butyl ether (ETBE), methyl tert-amyl ether (TAME), and tert-butyl alcohol (TBA) (Fuel Oxygenates)

  - Ethanol

- 1,2 dibromoethane (EDB) and 1,2 dichloroethane (EDC) (Lead Scavengers)
- Benzene, toluene, ethylbenzene, and xylenes (BTEX)
- Methyl tert-butyl ether (MTBE).

Table 1 summarizes the analytical procedures performed for each post-excavation soil sample.

Laboratory analytical results from all post excavation soil samples are summarized on Tables 2 and 3. Total petroleum hydrocarbons detected in the post excavation soil samples are summarized on Figure 6. Laboratory analytical reports are provided in Appendix C.

All detected laboratory analytical results in soil were compared to Table D of the RWQCB 2005 ESLs for deep soil (greater than 3 meters) where groundwater is not a current source of drinking water for commercial use. All detected concentrations (TPH-g, TPH-d, TPH-mo, and VOCs) in the post excavation soil samples from the Site were below ESLs.

TPH-g was only detected in soil at TR-52 in the southwestern corner of the Site at a concentration of 10 mg/kg. TPH-d was detected in numerous soil samples at concentrations ranging from less than 0.93 mg/kg to 7.9 mg/kg. TPH-mo was detected in numerous soil samples ranging from ranging from less than 5.0 mg/kg to 33 mg/kg.

The only VOCs detected in soil were TBA, benzene, ethylbenzene, total xylenes, and methylene chloride. Methylene chloride is a laboratory contaminant commonly introduced during decontamination of laboratory equipment. Because methylene chloride has not been a historic contaminant of concern at the Site, it was likely a laboratory induced contaminant and therefore not representative of Site soil conditions. Therefore, excluding methylene chloride, the only VOCs detected in soil were identified in the southwestern corner of the Site in soil samples TR-51 and TR-52. TBA was detected only in soil sample TR-51 at 400 micrograms per kilogram (µg/kg), benzene was detected only in soil sample TR-51 at 8.2 µg/kg, ethylbenzene detected only in soil sample TR-52 at 7.6 µg/kg, and total xylenes detected only in soil sample TR-52 at 7.1 µg/kg. All other compounds in soil were not detected above laboratory detection limits.

4.4 Groundwater Intrusion Management

The base of the planned building foundation depth was expected to be near the historical water table elevation. To mitigate groundwater from flowing into the excavation area, a total of 27 temporary wells were installed along the perimeter of the Site (mid-March 2006). The 27 temporary wells included 25 dewatering and two monitoring wells (geotechnical purposes). All wells were installed to approximately 30 feet bgs with a 7 inch diameter PVC pipe (Photograph 2). Dewatering wells began pumping on 28 March 2006 and ended during the week of 31 July 2006. The rate of groundwater extraction could not be determined because each pump operated on a self-activating system.

Self-activating pumps were placed near the bottom of each dewatering well. When water levels rose above the sensor, the pump was automatically activated and water was pumped through a manifold, treated through carbon vessels, and stored in two-10,000 gallon Baker Tanks located along the southern edge of the Site. PSEC managed the treatment of all water that was discharged off-Site under an approved permit.

To meet the requirements of the SMP and ACHCSA approval letters, weekly water samples were collected from dewatering wells (DW) at locations determined by the ACHCSA. The ACHCSA requested that water from these locations be analyzed to further investigate whether off-Site releases have impacted the Site and if future groundwater monitoring would be necessary. These locations included the southeastern corner (DW-11), southwestern corner (DW-14), and the northern part of the Site (DW-24) (Figure 5). Water samples were collected on a weekly basis from these locations from 13 April 2006 through 27 July 2006. The following chemicals were analyzed in groundwater:

- TPH-g by EPA Method 8015M (analyzed in DW-11 and DW-14)
- TPH-d and TPH-mo by EPA Method 8015M with silica gel cleanup by EPA Method 3630C (analyzed in DW-11, DW-14, and DW-24)

- Specific volatile organic compounds (VOCs) by EPA Method 8260B (analyzed in DW-11 and DW-14):
    - Isopropyl ether (DIPE), Ethyl tert-butyl ether (ETBE), methyl tert-amyl ether (TAME), and tert-butyl alcohol (TBA) (a.k.a. Fuel Oxygenates)
    - Ethanol
    - Benzene, toluene, ethylbenzene, and xylenes (BTEX)
    - Methyl tert-butyl ether (MTBE)
    - 1,2 dibromoethane (EDB) and 1,2 dichloroethane (EDC) (Lead Scavengers).

Laboratory analytical results from all dewatering well samples are summarized on Table 3. All detected laboratory analytical results for groundwater were compared to Table B of the RWQCB 2005 ESLs where groundwater is not a current source of drinking water. The ESL for TPH-g (500 µg/L) was exceeded in numerous groundwater samples from dewatering well DW-14. The ESL for benzene (46 µg/L) was exceeded in one groundwater sample from dewatering well DW-14 at a concentration of 55 µg/L on 1 June 2006. All other detected concentrations in groundwater were below ESLs.

In the southeast corner of the Site (DW-11), the only detected compounds in groundwater were TPH-d ranging from less than 50 µg/L to 130 µg/L, and toluene ranging from less than 0.5 µg/L to 9.8 µg/L. In the northern part of the Site (DW-24), the only detected compound in groundwater was TPH-d at 63 µg/L on 3 May 2006.

In the southwestern corner of the Site (DW-14), numerous compounds were detected in groundwater including those with the following concentration ranges:

- TPH-g from 77 to 1,800 µg/L, TPH-d from less than 50 µg/L to 440 µg/L
- TBA from 24 to 83 µg/L

- Benzene from 10 to 55 µg/L, Toluene from less than 0.5 µg/L to 4.9 µg/L, Ethylbenzene from less than 0.5 µg/L to 41 µg/L, Xylenes from 0.6 to 28 µg/L
- EDC from 14 to 19 µg/L.

All other compounds in water were not detected above laboratory detection limits.

4.5 Evaluation of Import Soil

Although not a requirement of the SMP or the ACHCSA, Treadwell & Rollo assisted DPR in the evaluation of import soil to be used at the Site. According to PSEC, the import soil originated from a property located at 20th and Telegraph in Oakland, California (a.k.a., The Uptown Development) and was then transported to the Port of Oakland. Extra soil brought from the Uptown Development to the Port of Oakland was then transported to the Site as import fill. To determine if the extra soil brought from the Port of Oakland was environmentally appropriate for use at the Site, PSEC collected a combination of discrete samples and four point composite samples from the stockpiled material and analyzed the soil samples for the following:

- Volatile Organic Compounds (VOCs) by EPA 8260B
- TPH-g by EPA Method 8015M
- TPH-d and TPH-mo by EPA Method 8015M with Silica Gel Cleanup
- Semivolatile VOCs by EPA Method 8270B
- Organochlorine Pesticides by EPA Method 8081A
- Polychlorinated Biphenyls (PCBs) by EPA Method 8082
- California Title 26 Metals by EPA Method 6020.

PSEC certified that the sampling methods and locations were appropriately collected and representative of the import material. The laboratory analytical results for the import fill is provided in Appendix D.

Based on the chemical analytical results, PSEC determined that the import material was environmentally appropriate for use at the Site. Per the request of DPR, Treadwell and Rollo compared the chemical analytical results against Table B of the RWQCB 2005 ESLs for shallow soil (less than 3 meters) where groundwater is not a current source of drinking water for commercial land-use. Because PSEC certified that the analytical data was representative of the import soil and because all detected concentrations were below ESLs, Treadwell and Rollo found no conflicts with PSEC's determination that the import material was environmentally appropriate for use at the Site.

4.6 Site Encapsulation

Based on the analytical results of the post-excavation soil samples (Table 3) and dewatering well samples (Table 4), residual concentrations of chemicals will remain beneath the Site after construction is complete. As a result of the redevelopment activities, the residual chemicals remaining beneath the Site have been encapsulated by a water-proofing membrane, concrete foundation, and engineered planter areas with clean imported fill (cap). The cap eliminates exposures to soil vapor, inhalation of dusts, incidental ingestion of soil, and dermal contact with soil by providing a physical barrier between the contaminants in the subsurface and future Site users.

4.7 Cap Monitoring Plan

All contaminated soil at the Site is currently capped with asphalt/concrete pavement. This cap is to be inspected on an annual basis, repaired and sealed (if necessary) to prohibit incidental contact with the underlying soil or groundwater.

The annual Site inspection will consist of visual observation of all areas covered with pavement. The pavement will be inspected for cracks, breaks, erosion, groundwater infiltration into the

basement areas, or other conditions that may warrant repair or replacement to prohibit the soil or groundwater from being exposed. All cap disturbances during the cap inspection will be documented in the field, their locations identified on a figure of the Site, and photographs will be taken. An annual inspection report will include these observations and will also include a review of the previous annual inspection report to evaluate whether Site conditions have changed between inspections. Recommendations for additional maintenance or repair will be noted within the report which will be prepared as a summary letter. If future activities require that the cap be disturbed (i.e., drilling, demolishing), prior approval must be submitted to and approved by the ACHCSA before commencing.

5.0 CONCLUSION

Based on Treadwell and Rollo's observations and information provided to us by DPR and the Client, all substantive requirements of the SMP and ACHCSA approval letters have been fulfilled.

Residual petroleum compounds and volatile organic compounds remain in soil and groundwater at the Site. No chemical concentrations detected in soil exceeded Table D in the RWQCB 2005 ESLs for deep soil (greater than 3 meters) where groundwater is not a current source of drinking water for commercial land-use. All detected laboratory analytical results for groundwater were compared to Table B of the RWQCB 2005 ESLs where groundwater is not a current source of drinking water. The ESL for TPH-g (500 µg/L) was exceeded in numerous groundwater samples from dewatering well DW-14 located in the southwestern corner of the Site. The ESL for benzene (46 µg/L) was exceeded in one groundwater sample from dewatering well DW-14 at a concentration of 55 µg/L on 1 June 2006. Exposure to these groundwater concentrations have been mitigated by the installation of a cap at the Site (activities approved by the ACHCSA). All other detected concentrations in groundwater from the sampled dewatering wells were below ESLs.

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TABLES

Table 1
TABLE OF ANALYTICAL METHODS
5885 Hollis Street
Emeryville, California

	SAMPLE ID	TPH-g	TPH-d	TPH-mo	BTEX/ MTBE	VOCs	TAME	ETBE	DIPE	TBA	Ethanol	EDB	EDC
POST EXCAVATION SOIL SAMPLES	TR-39	X	--	--	--	X	X	X	X	X	X	X	X
	TR-40	X	--	--	--	X	X	X	X	X	X	X	X
	TR-41	X	--	--	--	X	X	X	X	X	X	X	X
	TR-42	X	--	--	X	--	X	X	X	X	X	X	X
	TR-43	X	--	--	X	--	X	X	X	X	X	X	X
	TR-44	X	--	--	--	X	X	X	X	X	X	X	X
	TR-45	--	X	X	--	--	--	--	--	--	--	--	--
	TR-46	--	X	X	--	--	--	--	--	--	--	--	--
	TR-47	--	X	X	--	--	--	--	--	--	--	--	--
	TR-48	--	X	X	--	--	--	--	--	--	--	--	--
	TR-49	X	X	X	X	--	X	X	X	X	X	X	X
	TR-50	X	X	X	X	--	X	X	X	X	X	X	X
	TR-51	X	X	X	X	--	X	X	X	X	X	X	X
	TR-52	X	X	X	X	--	X	X	X	X	X	X	X
	TR-53	X	X	X	X	--	X	X	X	X	X	X	X
	TR-54	X	X	X	X	--	X	X	X	X	X	X	X
	TR-55	X	X	X	X	--	X	X	X	X	X	X	X
	TR-56	X	X	X	X	--	X	X	X	X	X	X	X
DEWATERING WELLS	DW-11	X	X	X	X	--	X	X	X	X	X	X	X
	DW-14	X	X	X	X	--	X	X	X	X	X	X	X
	DW-24	--	X	X	--	--	--	--	--	--	--	--	--

Notes

Total Petroleum Hydrocarbons (TPH) quantified as gasoline (TPH-g), diesel fuel (TPH-d), and motor oil (TPH-mo) analyzed by EPA Method 8015M. TPH-d and TPH-mo anayzed with silica gel cleanup.

Volatile organic compounds (VOCs) analyzed by EPA Method 8260B.

BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes.

Fuel oxygenates include tert-Butyl Alcohol (TBA), Methyl tert-Butyl ether (MTBE), Isopropyl Ether (DIPE), Ethyl tert-Butyl Ether (ETBE), and Methyl tert-Amyl Ether (TAME). Fuel Oxygenates analyzed by EPA Method 8260B.

Lead scavengers include 1,2 dibromoethane (EDB) and 1,2 dichloroethane (EDC). Lead Scavengers analyzed by EPA Method 8260B.

X = Anaysis Performed

-- = Not Analyzed

Table 2
SOIL ANALYTICAL RESULTS
Total Petroleum Hydrocarbons in Soil
5885 Hollis Street
Emeryville, California

Sample ID	Date	TPH-g	TPH-d	TPH-mo
TR-39	5/4/2006	<1.0	--	--
TR-40	5/4/2006	<0.96	--	--
TR-41	5/4/2006	<1.0	--	--
TR-42	5/4/2006	<1.1	--	--
TR-43	5/4/2006	<0.98	--	--
TR-44	5/10/2006	<0.99	--	--
TR-45	5/10/2006	--	<1.0	<5.0
TR-46	5/12/2006	--	<1.0	<5.0
TR-46A	5/10/2006	--	<1.0	<5.0
TR-47	5/12/2006	--	<0.99	<5.0
TR-48	5/12/2006	--	**7.9 H Y**	**33 L**
TR-49	5/4/2006	<0.97	<1.0	<5.0
TR-50	5/4/2006	<0.93	**2.0 H Y**	**6.0**
TR-51	5/4/2006	<1.1	<0.99	<5.0
TR-52	5/4/2006	**10 H Y**	**1.9 H Y**	<5.0
TR-53	5/4/2006	<0.99	<1.0	<5.0
TR-54	5/4/2006	<1.1	**2.0 H Y**	**5.8**
TR-55	5/4/2006	<1.1	<1.0	<5.0
TR-56	5/4/2006	<0.94	**1.4 H Y**	<5.0
ESLs		400	500	1,000

Notes
All soil samples were collected from the completed grade, approximately 15 feet below sidewalk grade.
All results reported in milligrams per kilogram (mg/kg). Results shown in bold are detected concentrations.
Total Petroleum Hydrocarbons (TPH) quantified as gasoline (TPH-g), diesel fuel (TPH-d), and motor oil (TPH-mo) analyzed by EPA Method 8015. TPH-d and TPH-mo anayzed with silica gel cleanup.
<1.0 = Compound not detected above laboratory reporting limit.
H = Heavier hydrocarbons contributed to the quantitation
Y = Sample exhibits chromatographic pattern which does not resemble standard.
-- = Not Analyzed
ESLs = Environmental Screening Levels, California Regional Water Quality Control Board, San Francisco Bay Region, February 2005. ESL criteria based on deep soil (> 3 meters below ground surface) where water is not a current or potential source of drinking water for commercial land-use (Table D)

Table 3
SOIL ANALYTICAL RESULTS
Volatile Organic Compounds in Soil
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	Fuel Oxygenates						BTEX				Lead Scavengers		Methylene Chloride	Other VOCs
		TBA	MTBE	DIPE	ETBE	TAME	Ethanol	Benzene	Toluene	Ethyl-benzene	Total Xylenes	EDB	EDC		
TR-39	5/4/2006	<98	<4.9	<4.9	<4.9	<4.9	<980	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	**180**	All ND
TR-40	5/4/2006	<96	<4.8	<4.8	<4.8	<4.8	<960	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	**220**	All ND
TR-41	5/4/2006	<94	<4.7	<4.7	<4.7	<4.7	<940	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	**170**	All ND
TR-42	5/4/2006	<100	<5.0	<5.0	<5.0	<5.0	<1,000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--	--
TR-43	5/4/2006	<91	<4.5	<4.5	<4.5	<4.5	<910	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	--	--
TR-44	5/10/2006	<94	<4.7	<4.7	<4.7	<4.7	<940	<4.7	<4.7	<4.7	<4.7	<4.7	<4.7	**94**	All ND
TR-45	5/10/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-46	5/12/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-46A	5/10/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-47	5/12/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-48	5/12/2006	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TR-49	5/4/2006	<96	<4.8	<4.8	<4.8	<4.8	960	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	--	--
TR-50	5/4/2006	<96	<4.8	<4.8	<4.8	<4.8	<960	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	--	--
TR-51	5/4/2006	**400**	<5.0	<5.0	<5.0	<5.0	<1,000	**8.2**	<5.0	<5.0	<5.0	<5.0	<5.0	--	--
TR-52	5/4/2006	<100	<5.0	<5.0	<5.0	<5.0	<1,000	<5.0	<5.0	**7.6**	**7.1**	<5.0	<5.0	--	--
TR-53	5/4/2006	<89	<4.5	<4.5	<4.5	<4.5	<890	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	--	--
TR-54	5/4/2006	<93	<4.6	<4.6	<4.6	<4.6	<930	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6	--	--
TR-55	5/4/2006	<98	<4.9	<4.9	<4.9	<4.9	<980	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	--	--
TR-56	5/4/2006	<93	<4.6	<4.6	<4.6	<4.6	<930	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6	--	--
ESLs		110,000	5,600	NE	NE	NE	45,000	510	9,300	32,000	11,000	20	70	1,500	NE

Notes
All soil samples were collected from the completed grade, approximately 15 feet below sidewalk grade.
All results reported in micrograms per kilogram (µg/kg). Results shown in **bold** are detected concentrations
Volatile organic compounds (VOCs) analyzed by EPA Method 8260B.
Fuel oxygenates include tert-Butyl Alcohol (TBA), Methyl tert-Butyl ether (MTBE), Isopropyl Ether (DIPE), Ethyl tert-Butyl Ether (ETBE), and Methyl tert-Amyl Ether (TAME)
Lead scavengers include 1,2 dibromoethane (EDB) and 1,2 dichloroethane (EDC)
Other VOCs = Other volatile organic compounds described in the laboratory analytical report
-- = Not Analyzed
NE = Not Established
<5.0 = Compound not detected above laboratory reporting limit.
ND = Not detected above laboratory detection limits. Detection limits vary for each constituent.
ESLs = Environmental Screening Levels, California Regional Water Quality Control Board, San Francisco Bay Region, February 2005. ESL criteria based on deep soil (> 3 meters below ground surface) where water is not a current or potential source of drinking water for commercial land-use (Table D)

Table 4
GROUNDWATER ANALYTICAL RESULTS
Dewatering Wells
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	TPH			VOCs												
		Gasoline	Diesel Fuel	Motor Oil	TBA	MTBE	DIPE	ETBE	TAME	Ethanol	B	T	E	X	EDB	EDC	Other VOCs
DW-11	4/13/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	--	--	--
	4/18/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**0.6**	<0.5	<0.5	<0.5	<0.5	All ND
	4/26/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**9.8**	<0.5	<0.5	<5.0	<5.0	--
	5/3/2006	<50	**130 Y**	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**2.3**	<0.5	<0.5	<5.0	<5.0	--
	5/10/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**0.9**	<0.5	<0.5	<5.0	<5.0	--
	5/17/2006	<50	**100 Y**	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**0.6**	<0.5	<0.5	<5.0	<5.0	--
	5/23/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	**0.5**	<0.5	<0.5	<5.0	<5.0	--
	6/1/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	6/8/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	6/16/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	6/22/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	6/30/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	7/5/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	7/12/2006	<50	**78 Y**	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	7/18/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	7/27/2006	<50	<50	<300	<10	<0.5	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--
	ESLs	500	640	640	18,000	1,800	NE	NE	NE	50,000	46	130	290	100	NE	200	Varies

Table 4
GROUNDWATER ANALYTICAL RESULTS
Dewatering Wells
5885 Hollis Street
Emeryville, California

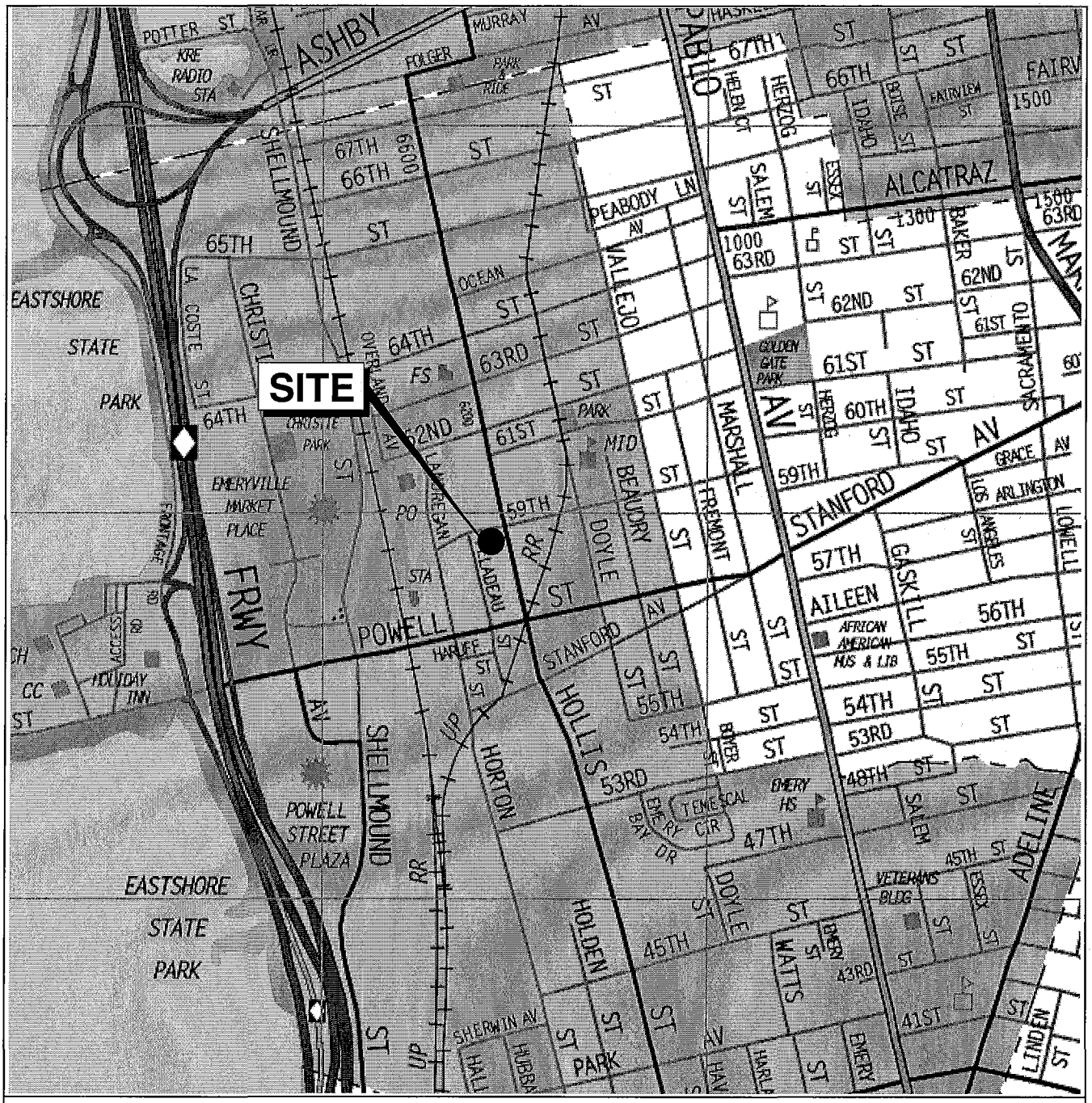
Sample ID	Sample Date	TPH			VOCs												
		Gasoline	Diesel Fuel	Motor Oil	TBA	MTBE	DIPE	ETBE	TAME	Ethanol	B	T	E	X	EDB	EDC	Other VOCs
DW-14	4/13/2006	77 L Y	<50	<300	72	<0.5	<0.5	<0.5	<0.5	<1,000	10	0.8	<0.5	0.6	--	--	--
	4/18/2006	250	110Y	<300	72	<0.5	<0.5	<0.5	<0.5	<1,000	22	1.3	6.4	5.7	<0.5	19	Isopropyl Benzene = 1.9 Propyl Benzene = 1.7 1,3,5 Trimethylbenzene = 1.9 1,2,4 Trimethylbenzene = 0.8 para-Isopropyl Toluene = 1.3 n-Butylbenzene = 0.6 All Others ND
	4/26/2006	630	440 L	<300	76	<0.5	<0.5	<0.5	<0.5	<1,000	42	4.9	14	6.8	<5.0	16	--
	5/3/2006	620	370 L Y	<300	64	<0.5	<0.5	<0.5	<0.5	<1,000	39	1.8	21	10	<5.0	18	--
	5/10/2006	450	250 L Y	<300	83	<0.5	<0.5	<0.5	<0.5	<1,000	11	2.4	8.6	4.9	<5.0	15	--
	5/17/2006	450	340 Y	<300	44	<0.5	<0.5	<0.5	<0.5	<1,000	37	0.6	9.1	6.2	<5.0	16	--
	5/23/2006	390	110 L Y	<300	30	<0.5	<0.5	<0.5	<0.5	<1,000	28	<0.5	4.9	3.3	<5.0	15	--
	6/1/2006	1,800	360 L Y	<300	58	<0.5	<0.5	<0.5	<0.5	<1,000	55	1.2	41	28	<5.0	16	--
	6/8/2006	520	130 L Y	<300	40	<0.5	<0.5	<0.5	<0.5	<1,000	37	<0.5	6.0	4.7	<5.0	16	--
	6/16/2006	580	150 L Y	<300	34	<0.5	<0.5	<0.5	<0.5	<1,000	35	<0.5	6.4	5.4	<5.0	15	--
	6/22/2006	1,200	320 L Y	<300	47	<0.5	<0.5	<0.5	<0.5	<1,000	34	0.5	7.6	9.7	<5.0	14	--
	6/30/2006	970	270 L Y	<300	35	<0.5	<0.5	<0.5	<0.5	<1,000	30	<0.5	6.7	5.6	<5.0	15	--
	7/5/2006	950	230 L Y	<300	37	<0.5	<0.5	<0.5	<0.5	<1,000	38	<0.5	6.1	5.2	<5.0	16	--
	7/12/2006	850 Y	<50	<300	24	<0.5	<0.5	<0.5	<0.5	<1,000	26	<0.5	6.9	4.6	<5.0	14	--
	7/18/2006	980	220 L Y	<300	57	<0.5	<0.5	<0.5	<0.5	<1,000	39	<0.5	6.5	4.8	<5.0	14	--
	7/27/2006	670	170 L Y	<300	51	<0.5	<0.5	<0.5	<0.5	<1,000	38	0.5	3.2	5.3	<5.0	15	--
	ESLs	500	640	640	18,000	1,800	NE	NE	NE	50,000	46	130	290	100	NE	200	Varies

Table 4
GROUNDWATER ANALYTICAL RESULTS
Dewatering Wells
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	TPH			VOCs												
		Gasoline	Diesel Fuel	Motor Oil	TBA	MTBE	DIPE	ETBE	TAME	Ethanol	B	T	E	X	EDB	EDC	Other VOCs
DW-24	4/13/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/18/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	4/26/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/3/2006	--	**63 Y**	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/10/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/17/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/23/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/1/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/8/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/22/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/30/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/5/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/12/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/18/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/27/2006	--	<50	<300	--	--	--	--	--	--	--	--	--	--	--	--	--
	ESLs	500	640	640	18,000	1,800	NE	NE	NE	50,000	46	130	290	100	--	200	Varies

Notes
All water results reported in micrograms per liter (µg/L). Detected concentrations shown in **bold**.
L = Lighter hydrocarbons contributed to the quantitation
Y = Sample exhibits chromatographic pattern which does not resemble standard.
Total petroleum hydrocarbons analyzed by EPA Method 8015M. Volatile organic compounds (VOCs) analyzed by EPA Method 8260B.
Fuel oxygenates include tert-Butyl Alcohol (TBA), Methyl tert-Butyl ether (MTBE), Isopropyl Ether (DIPE), Ethyl tert-Butyl Ether (ETBE), and Methyl tert-Amyl Ether (TAME)
B = Benzene, T = Toluene, E = Ethylbenzene, X = Total Xylenes
Lead scavengers include 1,2 dibromoethane (EDB) and 1,2 dichloroethane (EDC)
Other VOCs = Other volatile organic compounds described in the laboratory analytical report
<0.5 = Compound not detected above laboratory reporting limit.
-- = Not Analyzed
NE = Not Established
ND = Not detected above laboratory detection limits. Detection limits vary for each constituent.
ESLs = Environmental Screening Levels, California Regional Water Quality Control Board, San Francisco Bay Region, February 2005. Based on criteria where water is not a current or potential source of drinking water (Table B)
Shaded cells exceeded ESL criteria for their respective constituent.

FIGURES



Base map: The Thomas Guide
Alameda County
1999

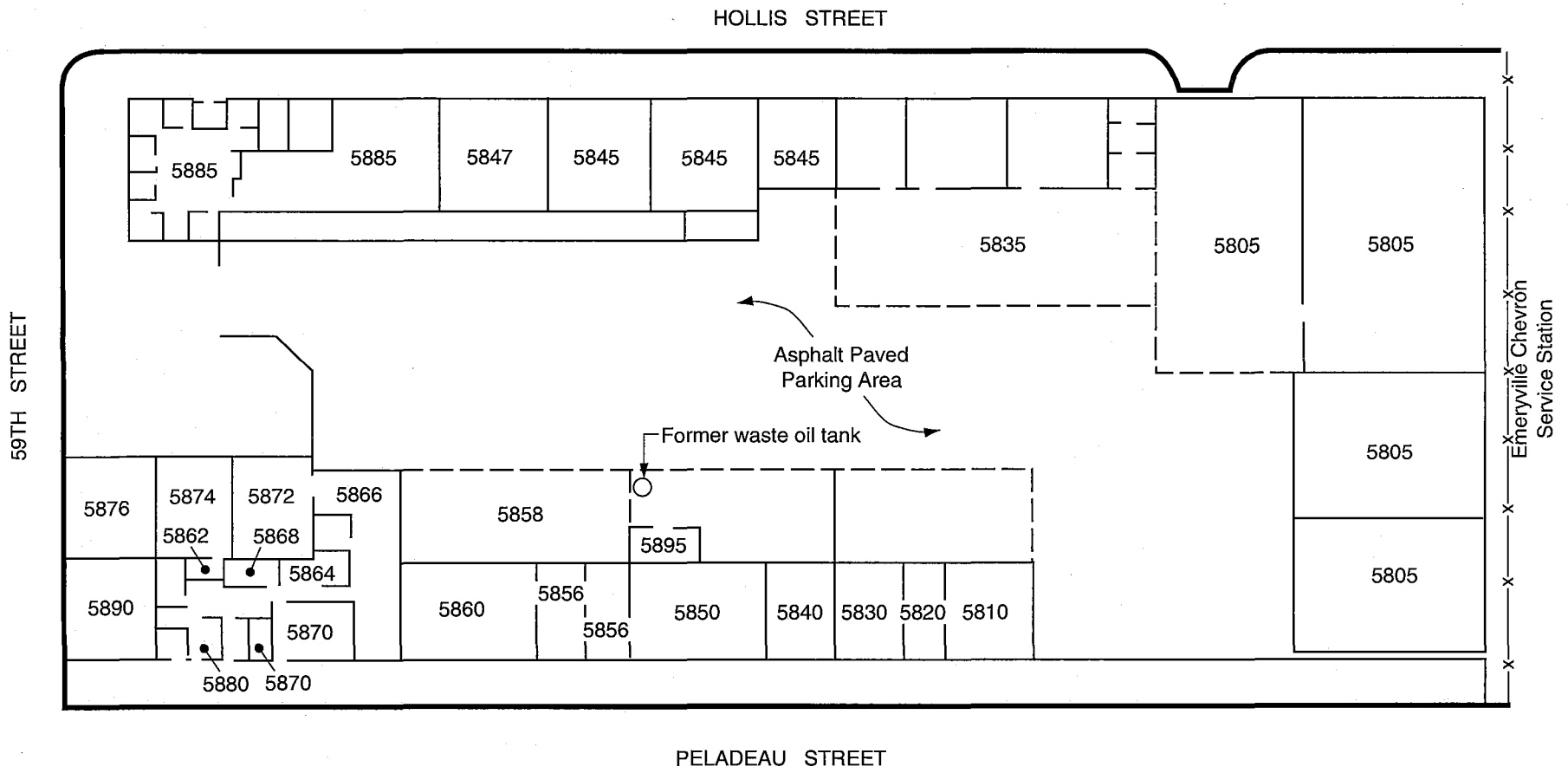
No scale

5885 HOLLIS STREET
Emeryville, California

SITE LOCATION MAP

Treadwell&Rollo

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



0 60 Feet

Approximate scale

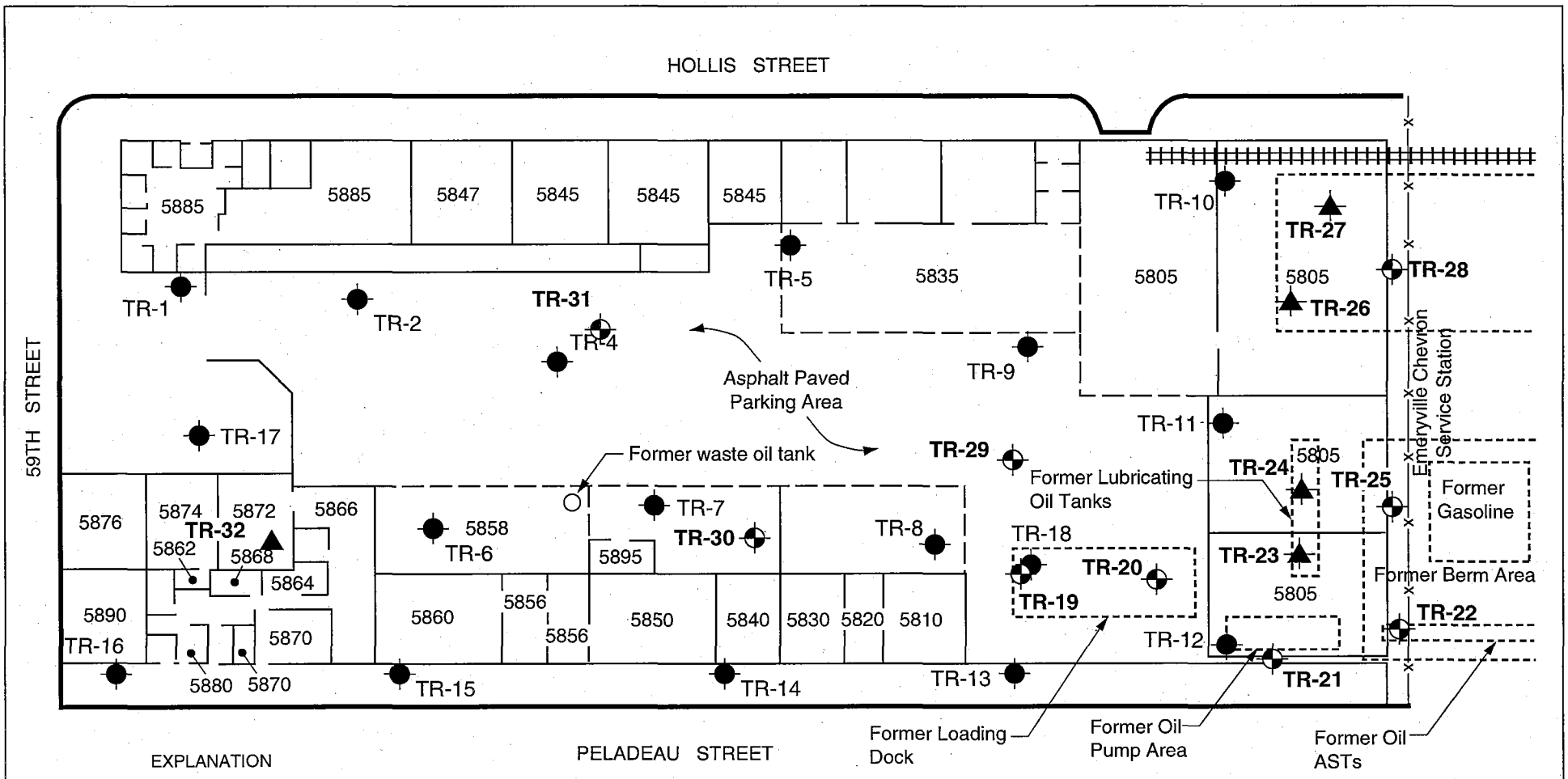
5885 HOLLIS STREET
Emeryville, California

SITE PLAN

Date 05/23/05	Project No. 4069.01	Figure 2

Treadwell&Rollo

Revised



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

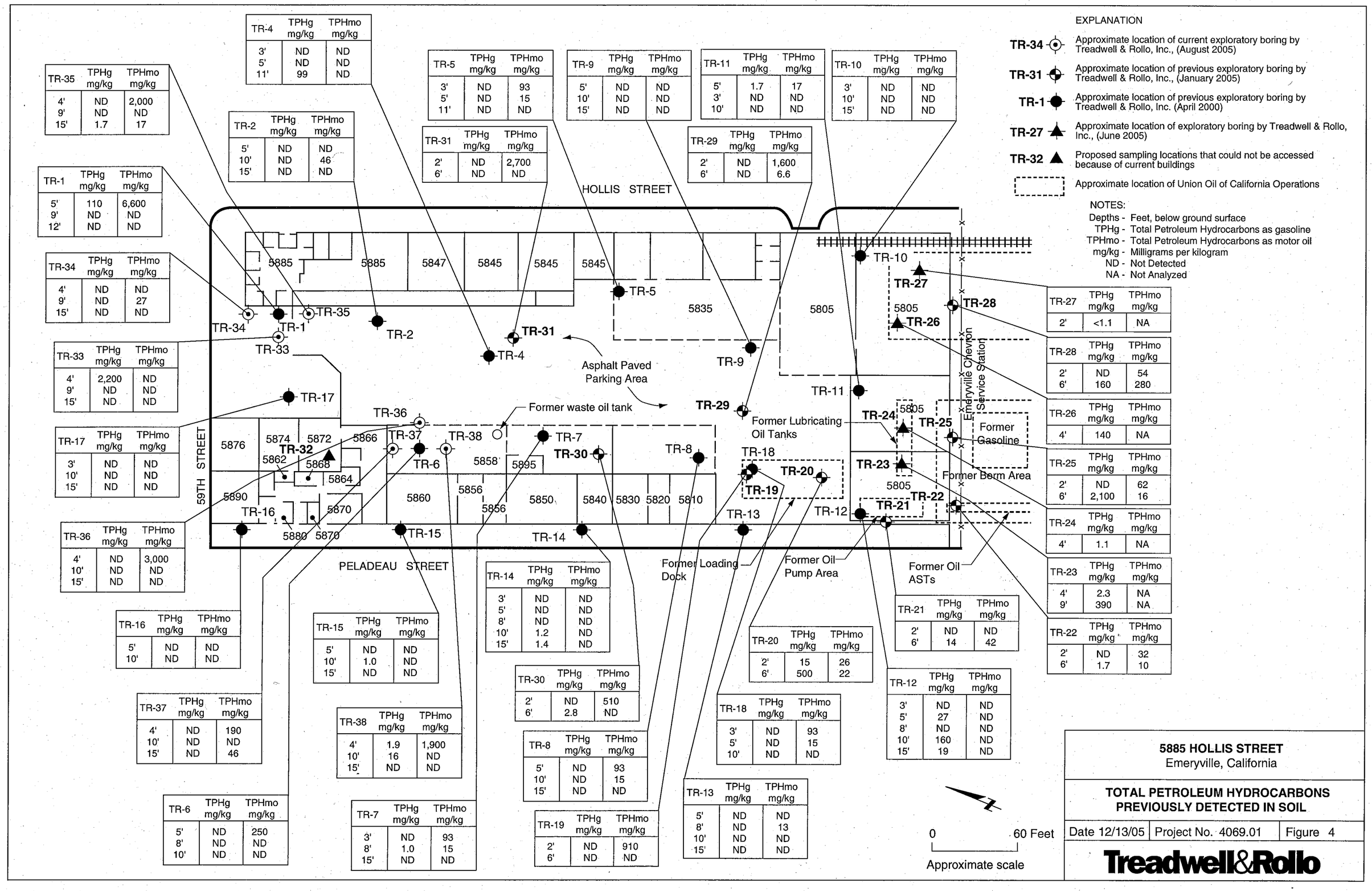
Approximate scale

5885 HOLLIS STREET
Emeryville, California

PREVIOUS SOIL SAMPLE LOCATIONS

Date 12/13/05 | Project No. 4069.01 | Figure 3

Treadwell&Rollo



TR-35	TPHg mg/kg	TPHmo mg/kg
4'	ND	2,000
9'	ND	ND
15'	1.7	17

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-2	TPHg mg/kg	TPHmo mg/kg
5'	ND	ND
10'	ND	46
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-34	TPHg mg/kg	TPHmo mg/kg
4'	ND	ND
9'	ND	27
15'	ND	ND

TR-33	TPHg mg/kg	TPHmo mg/kg
4'	2,200	ND
9'	ND	ND
15'	ND	ND

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

TR-36	TPHg mg/kg	TPHmo mg/kg
4'	ND	3,000
10'	ND	ND
15'	ND	ND

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

TR-37	TPHg mg/kg	TPHmo mg/kg
4'	ND	190
10'	ND	ND
15'	ND	46

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-38	TPHg mg/kg	TPHmo mg/kg
4'	1.9	1,900
10'	16	ND
15'	ND	ND

TR-7	TPHg mg/kg	TPHmo mg/kg
3'	ND	93
8'	1.0	15
15'	ND	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-30	TPHg mg/kg	TPHmo mg/kg
2'	ND	510
6'	2.8	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-20	TPHg mg/kg	TPHmo mg/kg
2'	15	26
6'	500	22

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

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

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

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

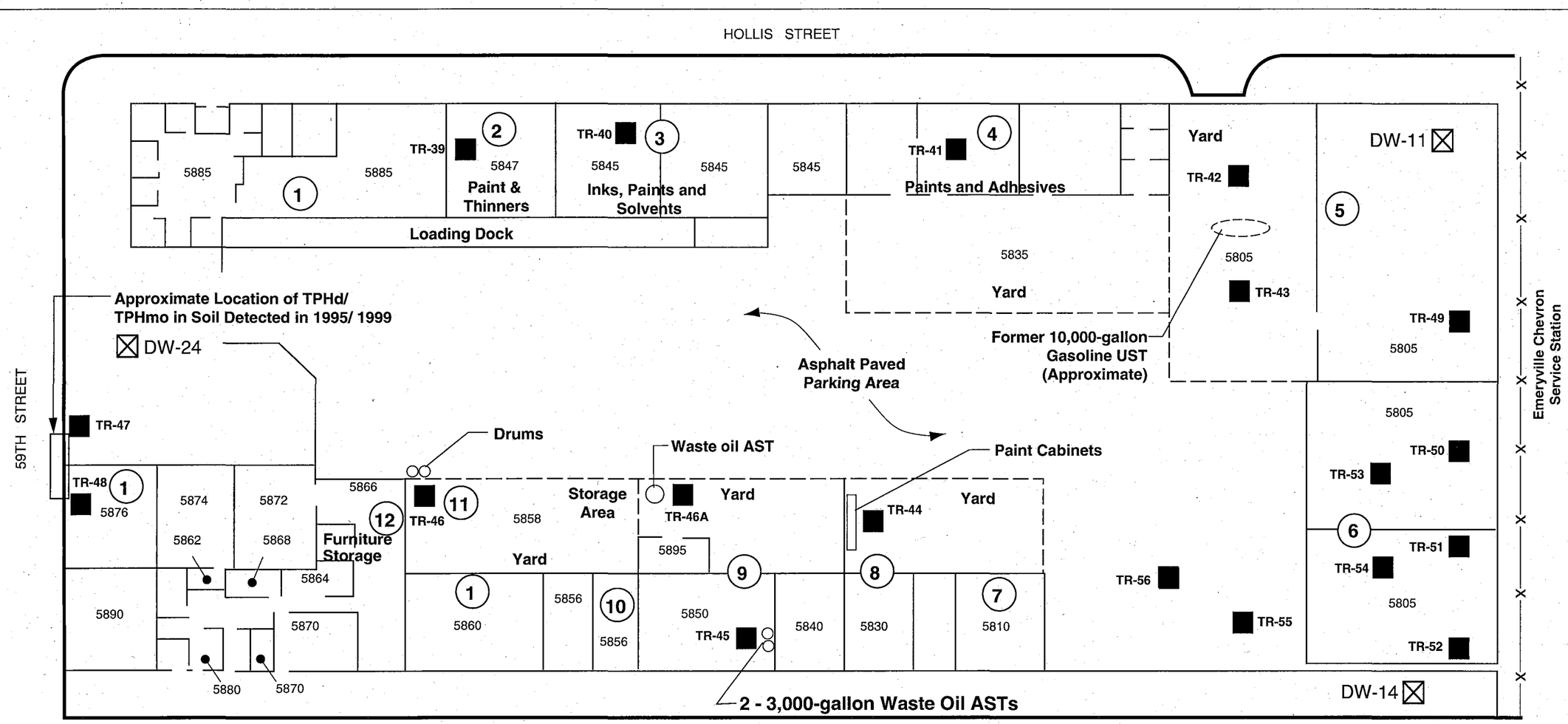
TR-22	TPHg mg/kg	TPHmo mg/kg
2'	ND	32
6'	1.7	10

5885 HOLLIS STREET
Emeryville, California

TOTAL PETROLEUM HYDROCARBONS PREVIOUSLY DETECTED IN SOIL

Date 12/13/05 | Project No. 4069.01 | Figure 4

Treadwell&Rollo



HISTORICAL TENANTS

1. McLaughlin Coffee
2. BMP Seismic Retrofitting
3. Graphic Traffic
4. Canova Marble
5. S.B. Thomas
6. Pro-Formance Lighting
7. Edy's Candy Kitchen
8. Correris Cabinets
9. Fleetcare Repair
10. TLC Windshield
11. Ellerson Weaver
12. Alpha Furniture Restoration

■ Location of Post Excavation Soil Sample

⊠ Location of Dewatering Wells Sampled

Note: Site features from Environmental Site Assessment, March 19, 1995 (Weiss Associates). All locations are approximate.

0 40 Feet

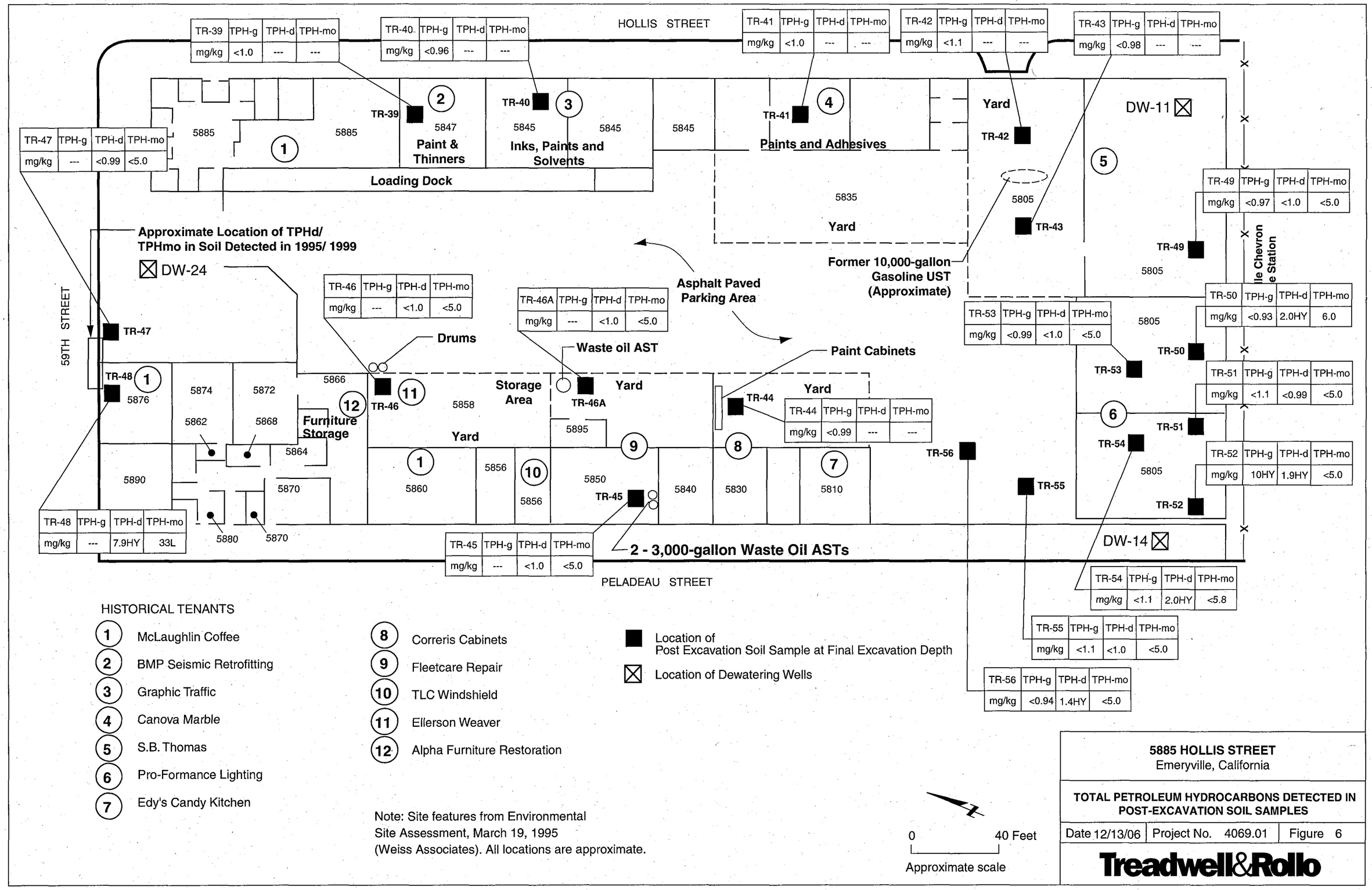
Approximate scale

5885 HOLLIS STREET
Emeryville, California

DEWATERING WELLS AND POST-EXCAVATION SOIL SAMPLE LOCATIONS

Date 12/13/06	Project No. 4069.01	Figure 5

Treadwell&Rollo



HISTORICAL TENANTS

1. McLaughlin Coffee
2. BMP Seismic Retrofitting
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5. S.B. Thomas
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8. Correris Cabinets
9. Fleetcare Repair
10. TLC Windshield
11. Ellerson Weaver
12. Alpha Furniture Restoration

■ Location of Post Excavation Soil Sample at Final Excavation Depth

⊠ Location of Dewatering Wells

Note: Site features from Environmental Site Assessment, March 19, 1995 (Weiss Associates). All locations are approximate.

0 40 Feet

Approximate scale

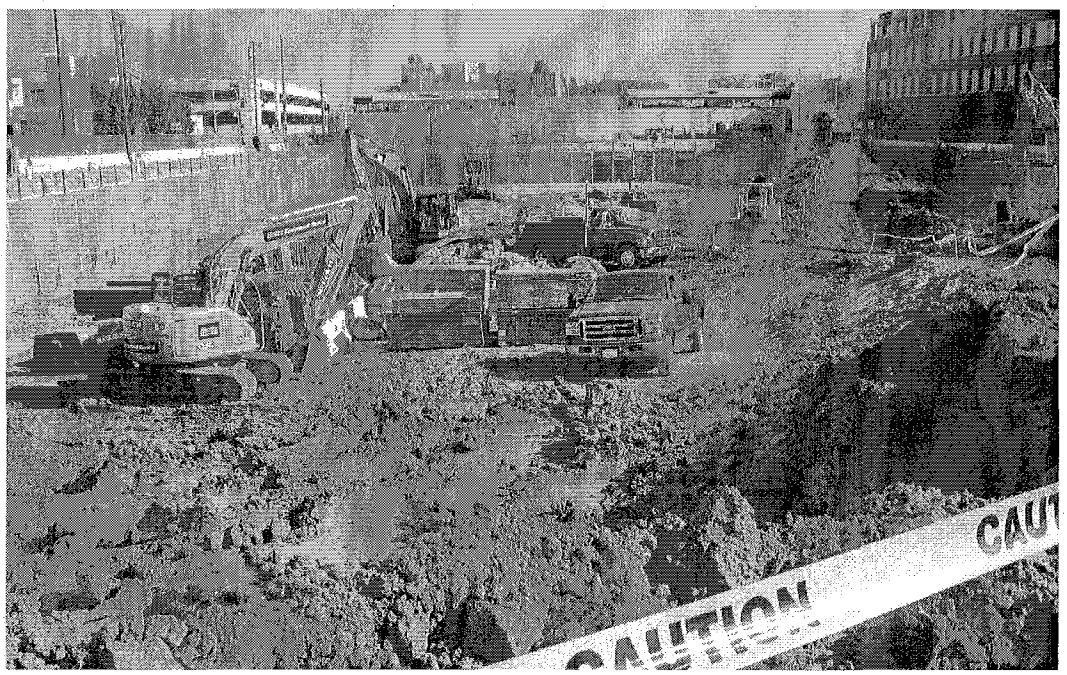
5885 HOLLIS STREET
Emeryville, California

TOTAL PETROLEUM HYDROCARBONS DETECTED IN POST-EXCAVATION SOIL SAMPLES

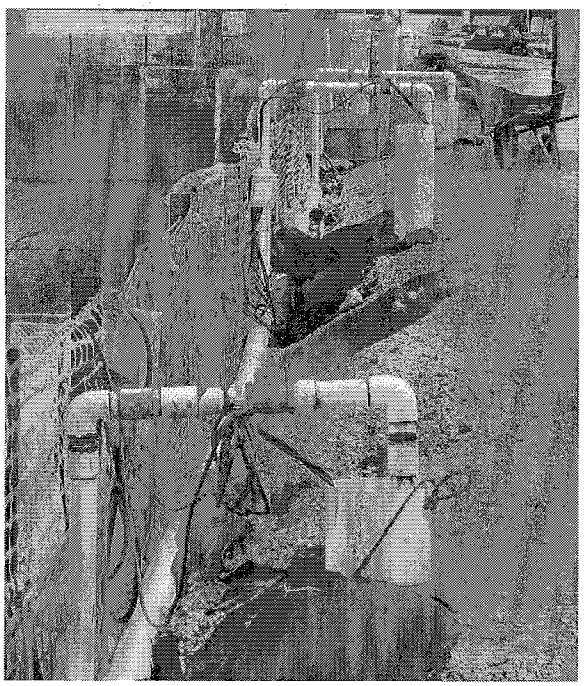
Date 12/13/06 | Project No. 4069.01 | Figure 6

Treadwell&Rollo

PHOTOGRAPHS



Photograph 1: Soil excavation and installation of lagging.



Photograph 2: Dewatering wells on the north part of the Site.

APPENDIX A
Site Management Plan and Approval Letter (on CD ROM)

APPENDIX B
Soil Manifests (on CD ROM)

APPENDIX C
Laboratory Analytical Reports (on CD ROM)

APPENDIX D
Import Fill Laboratory Analytical Reports (on CD ROM)