URBAN DESIGNS, LLC

1201 Pine Street, Unit 151 • Oakland, CA 94607-1461

RECEIVED
By Alameda County Environmental Health 11:17 am, Dec 04, 2017

December 1, 2017

Mr. Andrew York
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SOIL AND GROUNDWATER MANAGEMENT PLAN CERTIFICATION
County File # RO 3269
The Phoenix
800 Cedar St.
Oakland, CA 94607

Dear Mr. York:

You will find attached one copy of the following document prepared by P&D Environmental, Inc. for the subject site:

- Soil and Groundwater Management Plan dated December 1, 2017.

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

Should you have any questions, please do not hesitate to contact me at (510) 588-5134.

Sincerely,

Urban Designs, LLC

Rick Holliday
Manager

Attachment

0772.L2

SOIL AND GROUNDWATER MANAGEMENT PLAN

County File # RO 3269

Urban Designs, LLC

The Phoenix

800 Cedar Street

Oakland, CA

Prepared For:

Mr. Kevin Brown

Urban Designs, LLC

1201 Pine Street #151

Oakland, CA 94607

Prepared By:

P&D Environmental, Inc.

55 Santa Clara Avenue, Suite 240

Oakland, CA 94610

Paul H. King

Professional Geologist

December 1, 2017

Project # 0772

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1.0 INTRODUCTION

This Construction Soil and Groundwater Management Plan (SGMP) has been prepared by P&D Environmental, Inc. of Oakland, California (P&D) on behalf of Urban Designs, LLC (Urban Designs) for earthwork activities associated with the redevelopment project of 800 Cedar Street in Oakland, California (***Figure 1***) with Alameda County Assessor Parcel Number (APN) 006-047-1 (the Site) for what is identified on the Alameda County parcel viewer page as 800 Cedar Street. Cedar Street no longer exists, and the site is bounded on the east by Pine Street. The Site is currently vacant with a concrete surface covering almost all of the property. The redevelopment project ("Project") consists of (1) demolition of the existing concrete cover; (2) grading and soil excavation for utilities, elevator shafts, and foundations; and (3) construction of multi-story, mixed-use residential buildings and landscaped areas.

1.1 Lead Regulatory Oversight Agency for Environmental Site Cleanup

Soil and groundwater at the Site has been impacted from historical land use practices on-Site and potentially off-Site. Alameda County Department of Environmental Health's (ACDEH) Local Oversight Program for Hazardous Materials Releases (LOP) is the lead regulatory oversight agency for the environmental investigation and cleanup actions at the Site under Site Cleanup Program Case (SCP) No. RO0003269. A separate LOP Case No. RO0000417 was historically associated with a former Underground Storage Tank (UST) release that was located on a portion of the former Phoenix Iron Works that is no longer a portion of the existing property.

Due to the presence soil and groundwater contamination at the Site corrective actions are necessary to safely prepare the Site for development. Corrective actions include: (1) on-Site consolidation of lead-contaminated soil; (2) capping lead impacted soil on-Site beneath building foundations, hardscape and/or clean fill; (3) installation of a vapor mitigation barriers; and (4) installation of trench plugs in utility trenches where required to mitigate vapor migration.

A Site map showing the historical locations of USTs is attached as ***Figure 2***. No ground floor plan is presently available for the project. A complete record of environmental Site investigations at the Site may be obtained in the case files for RO0003269 (i.e., available regulatory directives and correspondence, reports, analytical data, etc.) through review of both the State Water Resources Control Board's GeoTracker database, and the ACDEH website at http://www.acgov.org/aceh/index.htm.

1.2 SGMP Purpose & Objectives

This SGMP is designed to provide Urban Designs and the construction team with guidance for the proper handling and management of contaminated soil and groundwater during redevelopment activities.

The goals of this SGMP are to provide detailed information regarding known environmental conditions at the Site and establish a decision-making structure to assist the construction team in

the identification and management of contaminated media, when and if they are encountered. The objectives of this SGMP are as follows:

- Communicate information to Site construction workers about Site environmental conditions;
- Present protocols for appropriate community protection;
- Present guidelines for health and safety precautions for on-Site workers who may access soil or groundwater that could contain residual chemicals of concern;
- Present notification and reporting requirements;
- Present protocols for management of known contaminated soil or extracted groundwater generated during Site redevelopment activities; and
- Present contingency procedures in the event that localized areas of unanticipated chemically-affected soil or other subsurface features of environmental concern are encountered during earthwork or excavation activities;

2.0 RESPONSIBILITY FOR SGMP IMPLEMENTATION

Representatives for the property Owner will oversee implementation of the SGMP at the Site. A copy of this SGMP will be maintained at the Site at all times. The Owner and General Contractor(s) will make all third-party subcontractors working at the Site aware of the requirements of the SGMP, and provide an electronic copy and hard-copy to all subcontractors that are performing activities covered by this SGMP and who may encounter suspect subsurface conditions during execution of their work.

The project Environmental Consultant will be present to assist the Owner and contractors with the implementation of this SGMP when ground-disturbing activities are being conducted in areas where contamination is known or suspected or when unknown conditions are encountered.

2.1 Activities Covered by the SGMP

The following activities constitute the work covered under this SGMP.

- **Subsurface Construction or Repair** – any activity occurring beneath the grade level of existing or future ground surface;
- **Utility Line Work** – any subterranean inspection, excavation, or repair of electrical, telephone, water, sanitary sewer or storm drains occurring within or outside of existing vaults (conducted prior to excavation); and

- **Other** – other subgrade activities not expressly listed a love (e.g., deep landscaping work, sub-slab work, etc.)

2.2 Project Construction Team Contact Information

Prior to the initiation of construction activities that are covered under this SGMP, the Owner will confirm the Owner's project representative and project Environmental Consultant listed below. Regular and 24-hour emergency contact information for these individuals will be confirmed and updated as necessary. A project contact sheet will be provided to the General Contractor and posted in an accessible and suitable location at the Site.

Project Role	Company Name	Name	Contact Information
Owner Representative	Urban Designs, LLC	David Schenker	(510) 588-5134; david@hollidaydevelopment.com
General Contractor	Cannon Constructors North, Inc.	Larry Pace	(415) 546-5500; LPace@cannongroup.com
Environmental Consultant	P&D Environmental, Inc.	Paul King	(510) 658-6916; paul.king@pdenviro.com

2.3 Worker Health and Safety

In addition to following the SGMP, each Contractor and subcontractor is responsible for the safety of its employee and Site visitors including but not limited to adherence to a health and safety plan and use of property-trained personnel:

- **Preparation of a Site-Specific Health and Safety Plan (HASP)**. A HASP will be prepared for the project in accordance with California Occupational Safety and Health Administration (CAL-OSHA) Construction Safety Orders within Title 8 of the California Code of Regulations (CCR). The General Contractor is responsible for notifying subcontractors and visitors of pertinent environmental conditions to ensure adequate protection for workers and visitors while on Site. Subcontractors may either adopt the General Contractor's HASP or prepare their own HASP. In the event that unanticipated conditions occur at the Site, the HASP will be modified accordingly.

- **Use of Properly-Trained Personnel**. Each contractor engaged in contact and management of contaminated soil or groundwater will use properly trained personnel in

accordance CCR, Title 29, Part 1910.120 Hazardous Waste Operations and Emergency Response (HAZWOPER) standards.

2.4 Community Protection During Site Redevelopment

Land use in the vicinity of the Site is mixed commercial and residential. A map of the land use in the immediate vicinity of the Site is presented on ***Figure 1***. During the development of the Site, the Owner and contractors will implement measures to control potential risks to the surrounding community from fugitive dust emissions. These activities will be implemented when there is the potential for exposed soil to affect the nearby community. It is anticipated that following placement of hardscapes and building pads, air monitoring will not be required as there will not be exposed soil surfaces.

2.5 Agreement and Acknowledgement Statement

Prior to commencement of any Site activities that disturb the ground surface, the General Contractor and subcontractors of the Owner will read this plan and sign the Agreement and Acknowledgement Statement (***Appendix A***) to certify that they have read, understood and agreed to abide by its provisions.

3.0 AGENCY NOTIFICATION & REPORTING REQUIREMENTS

The Owner will notify the ACDEH and other agencies as applicable during Site development activities in accordance with the protocols described below.

3.1 ACDEH Notification

The Owner will notify the ACDEH and the ACDEH Certified Unified Program Agency (CUPA) during Site redevelopment activities in accordance with the protocols below.

3.1.1 Twenty-four (24) Hour Notification

The ACDEH will be notified within 24 hours of discovery if any of the following potentially hazardous conditions are encountered:

- Releases spills or releases of hazardous substances or petroleum hydrocarbons to soil or water that are considered, based on best professional judgment and/or physical evidence (including but not limited to olfactory, visual, field instrument, and lab data), to be an immediate threat to human health and the environment; and/or

- Discovery of unknown conditions (underground storage tanks, sumps, vaults, piping, etc.) or newly found contamination.

In the event of the discovery of USTs, vaults, hoists, & pipelines, the ACDEH CUPA must also be notified within 24 hours of the discovery.

3.1.2 Seventy-two (72) Hour Notification

The ACDEH will be notified 72 hours in advance of ground disturbing activities in areas of known contamination or suspected contamination.

3.1.3 ACDEH and CUPA Contact Information

The primary points of contact for the ACDEH LOP and CUPA are provided below. All agency notifications must be made by phone and email. An ACDEH contact sheet will be provided to the General Contractor and posted in an accessible and suitable location at the Site.

Drew York, ACDEH Case Worker	(510) 639-1276; Andrew.York@acgov.org
Paresh Khatri, ACDEH Program Manager	(510) 777-2478; paresh.khatri@acgov.org
ACDEH CUPA	(510) 567-6700 dehalamedacers@acgov.org

3.2 Other Agency Notification

In addition to the ACDEH notification requirements discussed above, other agency notifications may be required. Contact information for other agency notifications that may be required is provided below. Prior to the initiation of construction activities that are covered under this SGMP, the Owner will confirm the contact information listed below. An agency contact sheet will be provided to the General Contractor and posted in an accessible and suitable location at the Site.

Conditions Posing an Immediate Threat. For life-threatening or serous hazardous materials incidents, the following number will be contacted immediately upon discovery.	
Local police, fire and rescue services	911
Releases to Water. For spills or releases of hazardous substances or petroleum hydrocarbons to surface water, the following agencies will be contacted immediately upon discovery.	
National Spill Response Center	(800) 424-8802
United States Coast Guard – San Francisco Sector (if spill is going to reach navigable waters)	(415) 399-3547
California Office of Emergency Services	(800) 852-7550; (916) 845-8911
California Regional Water Quality Control Board – San Francisco Bay Region	(510) 622-2300
Local Emergency Response Agency	911
VOC-Impacted Soil. If VOC-impacted soil is discovered during Site grading activities, the following agency will be notified.	

Bay Area Air Quality Management District (BAAQMD)	(415) 749-4900
Dust Complaints. For dust complaints during ground disturbing activities, the following agencies will be notified.	
City of Oakland Building Department	(510) 238-3381
BAAQMD	800-334-ODOR (6367)

3.3 LMC Record Keeping & Reporting Requirements

All groundwater removal and soil excavation, disposal and import activities will be documented in daily field reports by the Contractor and/or Environmental Consultant and will kept at the Site and made available to ACDEH upon request. Documentation will include at a minimum the following, as applicable:

- **Groundwater** – volume of groundwater that is removed, characterization, treatment, and destination (transported to temporary holding tanks, used as dust suppression, and/or disposed of off-Site);
- **Underground Structures** – type, contents, characterization, and destination (abandoned in place or disposed of off-Site);
- **Impacted Soil** – origin, volume, characterization, and destination (transported to temporary soil locations within the Site, disposed of off-Site, and/or re-used on Site);
- **Imported Soil** – origin, volume, characterization, and destination (location on-Site);
- **Off-Site Disposal Records** – date, time, trucking company, driver and vehicles used for the trip, equipment decontamination and tarping, waste/material type, volume, copies of bills-of-lading, and hazardous waste manifests; and
- **Dust Complaint Logs** – time, name and contact information, complaint description, earthwork activities associated with complaint, and measures taken to mitigate dust;
- **Analytical Reports** – copies of waste characterization laboratory analytical results.

Following completion of the work covered by this SGMP, the Environmental Consultant will prepare a report for submittal to ACDEH that documents compliance with this SGMP including soil and/or groundwater sampling, removal and management of unknown structures, chemical analysis and proper disposal of contaminated materials and soil import. The report will include at a minimum the information described in Section 3.3 above.

4.0 ENVIRONMENTAL SITE CONDITIONS

Soil and groundwater has been impacted at the Site from historical Site use and potentially from off-Site sources. A summary of known environmental conditions in soil and groundwater is provided below. Tabulated results of analytical data with figures showing the sample collection locations are provided in ***Appendix B***. ***Figures 4 through 7*** of this SGMP show the locations of contaminants historically detected at the Site at concentrations exceeding regulatory agency screening levels. All historical borehole locations are shown in attached ***Figure 3***; historical locations of petroleum and PAHs detected in soil at concentrations exceeding Tier 1 screening levels are shown in attached ***Figure 4***; historical locations of lead detected in soil at concentrations exceeding Tier 1 screening levels are shown in attached ***Figure 5***; historical locations of Total Petroleum Hydrocarbons (TPH) and Volatile Organic Compounds (VOCs) detected in groundwater at concentrations exceeding Tier 1 screening levels are shown in attached ***Figure 6***; historical locations of metals detected in groundwater at concentrations exceeding Tier 1 screening levels are shown in attached ***Figure 7***; and the historical locations of VOCs detected in soil gas at concentrations exceeding Tier 1 screening levels are shown in attached ***Figure 8***.

4.1 Soil

The concrete cover at the Site is underlain by fine to medium sand and silty sand, with poorly graded sand encountered on the eastern portion of the Site and silty sand predominantly encountered in the western portion of the Site. Where both lithologies are encountered, the poorly graded sand overlies the silty sand. Known soil contamination includes the following:

- **Petroleum Impacts.** Elevated concentrations of petroleum-related compounds, detected as Total Recoverable Petroleum Hydrocarbons (TRPH), Total Petroleum Hydrocarbons as Diesel (TPH-D), and Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) have been detected at concentrations exceeding Tier 1 soil screening levels at only a limited number of locations on the western side of the property at depths of 1.5 feet bgs or less (see ***Figure 4***). TRPH, TPH-D and TPH-MO have also been detected in soil at concentrations exceeding Tier 1 soil screening levels at locations to the west of the current property boundary (see ***Figure 4***). Petroleum related Volatile Organic Compounds (VOCs) such as Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) have only been detected in soil at very low concentrations in soil (below Tier 1 soil screening level concentrations) during historical removal activities of a former gasoline and two former solvent Underground Storage Tanks (USTs). Polyaromatic Hydrocarbons (PAHs) have only been detected on-Site in soil at two locations in the western portion of the Site at a depth of 0.5 feet bgs at concentrations exceeding Tier 1 soil screening levels, at one location to the west of the existing property (see ***Figure 4***).

- **Lead Impacts.** Lead is encountered at concentrations exceeding the Tier 1 soil screening level at a limited number of locations at the Site at a depth of 0.5 to 1.0 feet bgs. Additionally, lead exceeding the Tier 1 soil screening level is encountered on the western

edge of the property at one location at a depth of 3.0 feet bgs and at a second location at a depth of 7.0 feet bgs (see ***Figure 5***). During earthwork activities soil excavated to achieve Site grades and construct building foundations that contains lead concentrations exceeding Tier 1 soil screening levels will be consolidated on Site with on-Site burial beneath building foundations, hardscape, or clean fill material.

4.2 Groundwater

Unconfined groundwater has been encountered at depths of approximately 9 to 10 feet bgs. Petroleum hydrocarbons (TPH-D, TPH-MO and TPH Bunker Oil (TPH-BO)) and volatile organic compounds (benzene, trichloroethylene (TCE), and chloroform) are present in groundwater at concentrations exceeding Tier 1 groundwater screening levels beneath the eastern and southern portions of the Site (see ***Figure 6***). Additionally, dissolved metals (barium, beryllium, chromium, lead, and nickel) have also historically been detected at concentrations exceeding Tier 1 groundwater screening levels beneath the eastern and southern portions of the Site (see ***Figure 7***).

4.3 Discovery of Unexpected Conditions

Due to historical Site use as a commercial iron foundry, redevelopment activities may reveal unexpected conditions such as previously unidentified areas of contamination or underground structures such as USTs, vaults, hoists, sumps, maintenance pits, pipelines, etc. In the event that unexpected conditions are discovered during Site development that indicate the presence of contamination, the contractor is to stop work at the location of the discovery and notify the general contractor or the property owner of the discovered conditions. The area where the conditions have been discovered will be cordoned off and identified with caution tape and workers will be directed to not enter the area until the area has been evaluated by the general contractor or the owner and authorization has been provided by the general contractor or owner to resume work in the are identified with caution tape. Work may continue in the vicinity of the area identified with caution tape outside the area identified with caution tape.

See also section 6.3 below for procedures associated with discovery of unexpected conditions.

5.0 PRE-FIELD ACTIVITIES

The pre-field activities include a description of planning and organizational aspects of soil excavation required for excavation to begin.

5.1 Site Security and Access

During remedial activities, the Site will be secured to provide protection and safety to on-Site personnel and equipment, and to prevent unauthorized access to areas of remedial activity. A 6-foot high chain link fence exists around the perimeter of the Site and encloses the staging area and the work zones (*i.e.*, any exclusion, decontamination, and support zones). During non-

working hours, the fencing will be fully closed and locked. During remedial activities, access will be restricted to authorized personnel only.

5.2 Traffic Control

Caution will be exercised during entrance and exiting of the work area to ensure safe and uninterrupted traffic flow. Entrance into and departure from the Site by trucks will be facilitated by a flagman, or comparable contractor personnel, as necessary. Once trucks have left the Site, they will follow specific haul routes to disposal facilities as described in the Transportation Plan, Section 5.3.5.

5.3 Excavation Permit

All necessary permits for removal activities, transportation, and/or air quality will be obtained prior to remediation. The permits will be kept on-Site and made available for inspection during working hours.

The procedures proposed for remediation activities will comply with federal, State and local rules and regulations, regardless of whether permit documents are required.

5.4 Notifications and Utility Clearance

The general contractor or owner will notify the Bay Area Air Quality Management District (BAAQMD) of excavation activities at least five days prior to implementation. In addition, the general contractor or owner will also notify ACDEH of the soil excavation activities at least 72 hours prior to commencing work. The proposed excavation areas will be marked in white paint prior to contacting Underground Service Alert (USA) at least 48 hours prior to excavating, as required by law. A private utility locating service will be contracted prior to conducting the field activities to mark and/or clear proposed excavation locations relative to the presence and/or marked locations of potential subsurface utilities.

6.0 SOIL MANAGEMENT

Redevelopment activities include grading of the Site. Site grading will include removing the top concrete cover of Site material (pavement, fill material) and excavating soil in conjunction with installation of utility trenches, elevator shafts, and building foundations. Lead-impacted soil will be excavated under the observation of the Environmental Consultant in the areas shown on ***Figure 5*** prior to completing general grading activities during Site redevelopment. Any excess soil generated during grading may be temporarily stockpiled on-Site and either re-distributed for re-compaction on-Site as part of Site grading activities, or transported off-Site for disposal.

All soil management and handling activities will be conducted in accordance with applicable federal, state, and local regulations. During implementation of the project other data may be

collected for profiling purposes and to further refine the quantities and classification of potential waste materials that may be generated.

6.1 Excavation of TPH- and PAH-Contaminated Soil

TPH- and PAH-impacted soil at the Site exceeds residential human health risk-based screening levels at a limited number of locations (see ***Figure 4***). Excavation of TPH- and PAH-impacted soil will be conducted in the following general sequence:

- Develop staging areas, access paths for equipment, work zones, and decontamination areas for use during handling of contaminated soil to reduce the potential of tracking waste off-Site;

- Identify locations of perimeter air monitoring stations, as necessary, and begin monitoring to comply with BAAQMD regulations, the HASP, and the protocols in Section 10.0 of this SGMP;

- Excavate and stockpile soil for characterization or direct load onto trucks for appropriate off-Site disposal.

- Environmental consultant will collect discrete confirmation soil samples from locations where TPH- and PAH-impacted soil has been removed in accordance with the Site Remedial Action Plan to confirm that impacted soil has been removed. Areas where impacted soil has been excavated will not be filled without written authorization from the general contractor or owner.

6.2 Excavation of Lead-Contaminated Soil

Lead-impacted soil at the Site exceeds residential human health risk-based screening levels at a limited number of locations (see ***Figure 5***). Excavation of lead-impacted soil will be conducted in the following general sequence:

- Develop staging areas, access paths for equipment, work zones, and decontamination areas for use during handling of contaminated soil to reduce the potential of tracking waste off-Site;

- Identify locations of perimeter air monitoring stations, as necessary, and begin monitoring to comply with BAAQMD regulations, the HASP, and the protocols in Section 10.0 of this SGMP;

- Remove lead-impacted soil that requires consolidation to locations that have been designated for on-Site consolidation.

- The environmental consultant will collect discrete confirmation soil samples from locations where lead-impacted soil has been removed in accordance with the Site Remedial Action Plan to confirm that lead-impacted soil has been removed. Areas where lead-impacted soil have been excavated will not be filled without written authorization from the general contractor or owner.

6.3 Contingency Measures for Previously Unidentified Suspect Soils

The following contingency measures will be implemented in the event that previously unidentified suspected chemically-affected soil is identified during Site excavation. All contingency measures will be conducted by HAZWOPER-trained environmental professionals in accordance with the HASP.

Additionally, as a precaution, the Environmental Consultant will be present during excavation and grading activities in areas of historical underground storage tanks, subsurface anomaly detections, and deeper soil contamination (as shown on ***Figures 2 and 5***) in the event that unexpected contamination or subsurface structures are encountered.

6.3.1 Identification of Contaminated Soil

The Contractor will be instructed to report indicators of contaminated soil, in particular, petroleum hydrocarbons. The three primary physical indicators of petroleum-related contamination in soil include staining, sheen, and petroleum-like odor, as described below:

- **Staining:** Generally, soil that is impacted with petroleum hydrocarbons exhibits gray, black or green staining, although other contaminants and natural conditions may also cause staining.

- **Sheen:** Sheen is another indication of petroleum contamination. Soil exhibiting sheen may appear shiny and reflective. Sheens from heavily impacted soil may appear iridescent with rainbow-like colors.

- **Odor:** Soil impacted with petroleum products, volatile organics, and other types of contamination may release vapors when exposed to the atmosphere. These vapors can be interpreted as an odor. Odor can be subjective, and inhalation of vapors from impacted soil is harmful to human health. Therefore, odor is considered a qualitative field indicator and should not be used for continuous screening of soil.

If soil exhibiting evidence of contamination is encountered during excavation, the Contractor will cease excavation activities in the area and notify the general contractor, the property owner, or the Environmental Consultant within 24 hours. The Contractor will not conduct any work in the area of concern or replace any known or suspected contaminated soil in the excavation area without prior approval by either the general contractor or the property owner. The general

contractor or the property owner will not provide authorization for work within the suspected contaminated area without authorization from the ACDEH.

6.3.2 Preliminary Assessment

Preliminary assessment of the previously unidentified suspect soil will include confirmation that access control measures installed by the General Contractor are adequate to provide necessary protection to on-Site workers and the public during the evaluation phase. Confirmation will consist of visual assessment of the installed barriers as well as monitoring of the air outside the control area.

Air sampling will be conducted around the perimeter of the secured area using a combination photoionization detector (PID) meter to measure volatile organic compounds (VOCs) in the breathing zone and a lower explosive limit (LEL)/oxygen (O_2) meter to measure concentrations of combustible gases and available oxygen. If the air sampling suggests that the control measures are improperly positioned to provide necessary protection to on-Site workers, the barriers will be relocated as necessary.

The Environmental Consultant will conduct a preliminary assessment to determine if the previously unidentified suspect soil is considered a significant risk to human health or the environment. If field observations suggest that the suspect conditions are *de minimis* and: (1) do not present a threat to human health or the environment; or (2) would generally not be subject of an enforcement action if brought to the attention of appropriate governmental agencies; then the Environmental Consultant will terminate the contingency plan process and release the suspect areas to the General Contractor.

6.3.3 Evaluation of Previously Unidentified Suspect Soil

If conditions in the suspect area are not considered *de minimis*, the Environmental Consultant will notify the ACDEH on behalf of the Owner within 24-hours of discovery and evaluate the nature and extent of the potentially chemically-affected soil in accordance with the protocols below.

- **In-Situ Soil Samples.** An in-situ soil sample will be collected from the same location and depth as the previously unidentified suspect soil and at 1-foot below this depth. Additional samples will also be collected at the same depths at a minimum of four step-out locations to assess soil conditions around the suspect sample location. The four step-out locations will be located approximately 5 feet to the north, south, east, and west of the suspect sample location. The dimensions of the area of evaluation can be adjusted to a larger dimension vertically and horizontally based on the size of the impacted area. Each sample will be collected as a relatively undisturbed sample using a stainless steel tube and observed for evidence of odors and staining and screened for VOCs using a PID. If any of the in-situ soil samples show evidence of odors and staining or VOCs are detected above 10 parts per million by volume (ppmv) then environmental sample(s) will be retained for analyses.

- **Stockpiled Soil Samples.** If previously unidentified suspect soil is stockpiled on-Site, discrete samples will be obtained for off-Site disposal using stainless steel tubes at a frequency and for analytes specified by the disposal facility. For re-use at the Site soil samples will be collected at a frequency and for analysis as specified in the Department of Toxic Substances Control (DTSC) *Information Advisory – Clean Imported Fill Material* (2001). .

- **Laboratory Analysis.** Following soil sample collection, the containers will be labeled for identification and immediately placed in a chilled, thermally insulated cooler containing ice. The cooler containing the samples will then be delivered under chain-of-custody protocol to a state-certified laboratory. Any sample compositing will be performed at the laboratory. Laboratory analysis will be performed in accordance with requirements set forth by the disposal facility. For consideration for re-use of the soil at the Site, the following laboratory analysis:
    - TPH-G using EPA Method 5030B in conjunction with modified EPA Method 8015B.
    - TPH-D and TPH-MO using EPA Method 3550 in conjunction with modified EPA Method 8015B.
    - VOCs (including MTBE, benzene, toluene, ethylbenzene, and xylenes (MBTEX), and fuel oxygenates and lead scavengers, and naphthalene) using EPA Method 8260B.
    - SVOCs (including PAHs) using EPA Method 8270C.
    - Organochlorine Pesticides by EPA Method 8081.
    - PCBs by EPA Method 8082.
    - CAM 17 metals using EPA Method 6020.
    - If necessary, extractable metals tests (i.e., leaching test including waste extraction test [WET] and/or toxicity characteristic leaching procedure [TCLP] procedures) will be conducted on the samples with elevated total metals concentrations to establish if the soils are hazardous based on their leaching characteristics.

After the evaluation is complete, the Environmental Consultant will provide the Owner, General Contractor and the ACDEH with conclusions regarding potential risks of the suspect material to human health and the environment as well as recommendations for proper management of the affected soil. All soil removal and soil re-use work will be approved by the ACDEH prior to implementation. If VOC-affected soil is encountered, notification will be provided to BAAQMD as required in the guidelines and notification requirements set by Regulation 8, Rule 40 of the BAAQMD Rules and Regulations for aeration of contaminated soil.

6.4 Reuse of Concrete & Soil Importation

Reuse of crushed concrete or use of imported fill material will be characterized and approved by ACDEH prior to being placed at the Site in accordance with the DTSC *Information Advisory – Clean Imported Fill Material* (2001) and the New Jersey Department of Environmental Protection *Guidance for Characterization of Concrete and Clean Material Certification for Recycling* (updated January 12, 2010). Discrete samples will be collected from the import source for characterization and specific laboratory analyses will be based on the fill source

characteristics. The analytical results of the import soil samples will be compared to applicable screening criteria to evaluate whether the material is suitable for import to the Site.

7.0 CONTINGENCY MEAUSURES FOR DISCOVERY OF UNEXPECTED UNDERGROUND STRUCTURES

If any previously unidentified or unknown underground structures including tanks, vaults, sumps, containment structures, separators, or piping that has previously contained or has the potential to contain hazardous materials is encountered during Site grading activities, the contractor will provide notification to the general contractor or owner so that the general contractor, owner, or Environmental Consultant can provide notification to the ACDEH and CUPA within 24-hours of the discovery and consulted on appropriate next steps. USTs may be identified during grading and Site excavation activities by the presence of vent pipes that extend above the ground surface, product distribution piping that leads to the UST, fill pipes, backfill materials, or the underground structure itself. Other buried structures may not have features that extend above ground surface, and could be discovered only after contact with construction equipment.

The removal or burying of any of these structures without prior acknowledgement and approval form ACDEH is prohibited. Discovered structures will be assessed as follows:

- The structure will be inspected to assess whether it contains any indication of chemical residuals or free-phase liquids other than water. This assessment will be conducted by the Environmental Consultant, and will be based on visual evidence and the results of vapor monitoring using a PID. Under no circumstances will any personnel enter an unknown subsurface structure at any time. If chemicals are not indicated within the structure by the above-referenced means and with ACDEH approval the structure may be removed or abandoned in place in a safe manner by the contractor;

- If liquids or solids are present within the structure, measures will be taken to contain the liquids to avoid spills to the subsurface. Samples will be collected and submitted to a California-certified laboratory for analysis. Liquids or solids may be temporarily drummed, or liquids may be collected by vacuum truck, while analysis is pending. Based on analytical results, the liquids or solids will be disposed of under the direction of the Environmental Consultant in accordance with all applicable environmental laws and disposal requirements;

- If contaminated liquid or solids are present in the structure, the structure will be inspected for physical integrity following removal of the contaminated media. The Environmental Consultant will document the results of this inspection, including an estimation of the volume and former use of the structure.

- If the physical inspection of the structure suggests that chemicals may have been released to the underlying soils additional environmental investigations of the underlying

soils will be conducted to assess whether a release sufficient to warrant removal has occurred.

- If, based on the opinion of the Environmental Consultant and ACDEH, it is assessed that the structure is intact, that subsurface releases of the chemicals to the underlying soils likely did not occur, and no free-phase liquids or chemical residues remain inside, removal of the structure may not be required for environmental reasons.

- Otherwise, with ACDEH approval, the structure will be excavated and disposed of at the direction of the Environmental Professional. Once the structure is removed, soils adjacent to and beneath the structure will be assessed for contamination through visual observation and organic vapor analysis and the results documented. If soils are determined to be "contaminated" with VOCs in the context of BAAQMD Rule 8-40, the appropriate response will be determined in consultation with ACDEH.

ACDEH may require further response actions based on the discovery of hazardous materials that pose an unreasonable risk to human health and safety or the environment.

8.0 GROUNDWATER MANAGEMENT

Groundwater at the Site is typically encountered at depths 9 to 10 feet bgs. As the excavation is at most approximately 6 feet (for elevator pits), construction dewatering is not anticipated. If dewatering of an excavation will be necessary during construction activities, a wastewater discharge permit will be obtained from the East Bay Municipal Utility District (EBMUD) for discharging water encountered during construction activities to the sanitary sewer system. Alternatively, water removed from the ground will be containerized and evaluated for alternate disposal methods that will be approved by the ACDEH prior to implementation.

If dewatering effluent is to be discharged to the storm drain, a National Pollutant Discharge Elimination System (NPDES) permit from the Regional Water Quality Control Board. Permits will be obtained from the City of Oakland Public Works Department and/or the East Bay Municipal Utility District (EBMUD) if dewatering effluent is discharged to the City of Oakland sanitary sewer system.

Chemical testing will be performed in accordance with the receiving facility's requirements prior to discharge. If concentrations exceed the limits established for the discharge point, the dewatering effluent will either will be (1) transported off-Site for disposal at a licensed disposal facility or (2) treated and discharged following sampling and analysis to confirm the success of treatment.

9.0 WASTE MANAGEMENT

9.1 Soil Characterization Prior to Off-Site Disposal

Soil that has been pre-characterized by in-situ soil testing and is intended for off-Site disposal can be loaded directly into trucks for transport to the receiving facility once the appropriate off-Site disposal location acceptance approval has been provided. Some soil may need to be placed in temporary on-Site stockpiles because: (1) they require further characterization prior to off-Site disposal; (2) short-term storage is necessary until haul trucks are available to transport the soil off-Site for disposal; or (3) the need for processing or sorting prior to landfilling. If soil is not adequately characterized to directly load and haul then it may be necessary to stockpile and sample. Stockpiled soil will be characterized as required by the receiving facility.

Soil considered for re-use at the Site will be tested in accordance with methods described in section 6.3.3 of this SGMP. In the event very elevated data are found in a four-point composite sample, the Environmental Consultant may elect, in consultation with the Owner, to have the four individual subsamples analyzed for that specific compound in an attempt to isolate the soils containing the highest concentrations for disposal evaluation.

9.2 Soil Stockpile Management

Soil that is placed in temporary stockpiles will be well maintained at all times to prevent run-on/runoff and fugitive dust emissions. All stockpiled soil will be placed on impermeable plastic sheeting (minimum 6-mil-thick) with a berm around the perimeter of the stockpile. The plastic sheeting and berm will prevent the runoff of soil and potential contaminants to surrounding areas. The berm will be constructed with hay bales, dimensional lumber, or other equivalent methods. The bottom plastic sheeting will be lapped over the berm materials, and the soil stockpile will be covered with plastic sheeting to prevent erosion or leaching of contaminants to underlying soil and prevent exposure to precipitation and wind. Plastic sheeting that covers the soil stockpile will be secured using sand bags or equivalent. Following removal, the soil stockpile area will be restored to a pre-stockpile condition. Residual plastic or debris will also be disposed of following stockpile removal.

9.3 Decontamination Procedures

In order to prevent residual contamination from leaving the Site by construction equipment and personnel during remedial excavation activities, the following decontamination procedures will be followed:

- Prior to loading excavated materials into trucks, plastic sheeting will be placed on the ground such that any spilled material will be prevented from contacting the ground surface. Upon completion of loading, any debris will be placed in the transportation vessel and the plastic sheeting will be reused, or disposed of.

- To minimize the spread of contaminated soil, equipment will be cleaned prior to movement out of active work zones. The equipment wheels/tires will be cleaned over plastic sheeting by means of shovels and stiff-bristled brooms or brushes or by power washing until they are fully cleaned. Upon completion of cleaning, any debris will be placed in the appropriate transportation vessel, fluids will be containerized, and the plastic sheeting will be folded and disposed of. The rinsate water will be distributed over contaminated soil (to be exported) for dust control purposes. Equipment exiting the Site will be inspected and logged for compliance with the Site decontamination requirements.

- Personal protective equipment, such as disposable coveralls, will be removed and discarded in the contamination reduction zone. In order to decontaminate reusable items such as work boots, a two-stage decontamination process will be used. This process will include washing in a detergent solution with a stiff-bristled brush and rinsing in clean water. The rinsate water will be distributed over contaminated soil (to be exported) for dust control purposes.

9.4 Off-Site Soil Disposal & Transportation Plan

Following acceptance of the excavated soil at an appropriate-licensed disposal facility, the soil will be loaded in licensed haul trucks (such as end-dumps or transfers) and transported off the Site following appropriate California and Federal waste manifesting procedures. The appropriate waste manifest documentation will be provided to truck drivers hauling the affected soil off-Site.

Transportation equipment will be chosen to safely transport the expected volumes of soil, taking into consideration the types of roads to be traveled and their loading capacity. Routine truck maintenance and repairs will be performed at the contractor's premises prior to picking up loads of waste material from the Site.

As each truck is filled, an inspection will be made to verify that the waste soil is securely covered, to the extent practicable, and that the tires of the haul trucks are reasonably free of accumulated soil prior to leaving the Site. During loading, dust and odor emissions will be monitored and mitigated as necessary. During transportation, the hauling trucks will be equipped to fully cover all soil and debris, such as with a heavy tarpaulin. A street sweeper will be made available, as needed, to keep the loading area clean. The soil will be wetted, as necessary, to reduce the potential for dust generation during loading and transportation activities.

A detailed log of the loads hauled from the Site will be maintained. The log will include, at a minimum, the date and the time trucks were loaded and off-loaded, the destination, size (volume and weight) of the load, description of contents, name and signature of the hauler, and name and signature of the contractor's representative. The waste will be off-loaded for treatment or disposal in a manner consistent with current Federal, State, and local regulations. Shipments of hazardous waste will be tracked with the appropriate hazardous waste manifests.

9.4.1 Off-Site Disposal Facilities

If soil is classified as hazardous waste by State and Federal standards, it will be disposed of at a licensed and approved hazardous waste disposal facility.

If soil is classified as non-hazardous waste by State and Federal standards, it will likely be disposed of at a Class II licensed landfill facility such as:

- Waste Management's Altamont Landfill in Livermore, California;
- Republic Services' Vasco Road Landfill in Livermore or Keller Canyon Landfill in Pittsburg, California;
- Waste Connections' Potrero Hills Landfill in Suisun City, California: or
- Republic Services' Forward Landfill in Manteca, California.

9.4.2 Transportation Plan

All transportation activities will be performed in strict compliance with all regulations and ordinances. Hauling contractor(s) used to transport non-hazardous or hazardous waste will be fully licensed and permitted by the State of California. For hazardous waste haulers, the selected transportation company will be certified by the State of California as a hazardous waste hauler, and appropriately permitted to haul contaminated waste material. All Department of Transportation (DOT) and California Highway Patrol (CHP) safety regulations will be strictly followed by both hazardous and non-hazardous waste haulers.

Transportation routes will be developed to minimize transporting the affected soil through residential areas. The affected soil will be transported via surface streets to the closest suitable freeway, which is Interstate 880. The proposed routes for transportation to and on Interstate 880 will be established upon selection of the appropriate landfill(s).

9.5 Wastewater and Groundwater Management Protocols

Wastewater generated during Site redevelopment, such as decontamination liquids, will be temporarily stored on-Site. Decontamination water will be profiled and transported to an appropriate disposal or recycling facility, or will be distributed over contaminated soil (to be exported) for dust control purposes.

If a saturated zone is encountered during earthwork activities that produces accumulated water, the water will be temporarily containerized on-Site.. Holding tanks will be staged on the existing hardscape (i.e. concrete or asphalt) where feasible.

Collected wastewater and groundwater will be transferred into a vacuum truck, pumper truck, totes, 55-gallon steel drums, or other appropriate vessel for off-Site transportation and disposal.

9.6 Spill Response Plan

In the event of a spill, the Contractor will be responsible and prepared to respond in a safe and efficient manner, specific to the particular spill situation. Standards will be set and consistent procedures will be used for handling of spills, whether they are on-Site spills or spills occurring during transportation. Haulers will have an Emergency Spill Contingency Plan (ESCP) to ensure that all drivers and dispatchers know their responsibilities in the unlikely event that an accidental spill occurs while transporting contaminated material off-Site. The drivers and dispatchers will be required to know the procedures for emergency spill response. The ESCP will meet or exceed all Federal, State, and County regulations currently in effect. The provisions of the ESCP will be strictly adhered to, in order to ensure continued protection of the public safety and the environment. The HASP will address the handling of on-Site spills.

10.0 Dust and Odor Emissions

During excavation activities, depending on soil and weather conditions, there is potential to generate airborne dust and fugitive emissions. Standard dust and fugitive emissions control measures will be followed during the ground disturbing activities to comply with OSHA and BAAQMD rules and accomplish the following goals:

- Reduce the potential for health impacts to workers;
- Reduce the potential for health impacts to facility neighbors;
- Prevent violations of ambient air quality standards;
- Minimize nuisance dust complaints from facility neighbors; and
- Minimize the migration of contaminants adhered to fugitive dust particles outside the Site.

10.1 Erosion, Dust, and Odor Control Measures

Once the pre-construction ground surface is stripped from the Site, the exposed soil will become susceptible to erosion by wind and water. Therefore, erosion control measures and dust control measures will be in place before construction begins. Emission (dust) control measures will at a minimum comply with those established by OSHA and the BAAQMD for construction-related activities. Dust control measures will be based on "Best Management Practices" and will be used throughout all phases of construction.

10.1.1 Construction Mitigation Measures

The following basic construction mitigation measures will be implemented in accordance with recommendations for all proposed projects in the BAAQMD California Environmental Quality Act Air Quality Guidelines (BAAQMD, 2017):

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day;
- All haul trucks transporting soil, sand, or other loose material off-Site will be covered;
- All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited;
- All vehicle speeds on unpaved roads will be limited to 15 miles per hour (mph);
- All roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used;
- Idling times will be minimized either by shutting equipment off when not in use or by reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure CCR Title 13, Section 2485). Clear signage will be provided for construction workers at all access points;
- All construction equipment will be maintained and properly tuned in accordance with manufacturer‘s specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation; and
- A publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints will be posted. This person will respond and take corrective action within 48 hours. The BAAQMD’s phone number will also be visible to ensure compliance with applicable regulations.

Dust level monitoring of air will be conducted to evaluate the potential exposure to Site personnel and to off-Site downwind receptors. The presence of airborne dust will be evaluated through the use of real time personal sampling equipment and perimeter air sampling. If the difference between the upwind and downwind dust monitoring levels exceeds 50 micrograms per cubic meter ($\mu g/m^3$), additional dust control methods (i.e., applying additional water to disturbed areas) will be implemented.

10.1.2 Dust Suppression Measures

If dust is excessive, some or all of the following mitigation procedures may be implemented:

- Active areas adjacent to residences may need to be kept damp at all times.
- Apply water or (non-toxic) soil stabilizers to unpaved access roads, parking areas, and staging areas.
- Sweep (with water sweepers) paved access roads, parking areas, and staging areas.
- Cover or otherwise stabilize exposed soil stockpiles.
- Suspend construction activities that cause visible dust plumes and odors to extend beyond the limits of the Site.

10.1.3 Odor and Vapor Suppression Measures

By controlling the dust as described above, the emission of odor and vapors will be reduced to levels that likely will not pose a risk to the health of the public and Site workers. The water spray used to control dust will also significantly reduce the emissions of any potential volatiles that may be present in the soil. The selective loading and transportation of impacted soils could minimize the use of soil stockpiling, further reducing potential emissions of volatiles. Any active stockpile of contaminated soil or exposed excavation left overnight at the Site will be properly covered with plastic so emissions of volatiles will be minimized.

If odor is excessive and vapor emissions are detected, some or all of the following mitigation procedures may be implemented:

- Use of chemical suppressants mixed with water and applied using various applications such as spray or mist;
- Use of plastic sheeting to cover the sidewalls of open excavations during non-active remedial activities will minimize the migration of VOCs and odors;
- Alternative work sequencing, such that excavation of soil with potential odor during mid- day or afternoon (during hot weather) is avoided;
- Any highly odorous soil could be segregated and placed inside a roll-off bin equipped with a lid. This will minimize the amount of highly odorous soil during loading; and
- Balancing the excavation with transportation so that the need for large stockpiles is reduced.

Other emissions include exhaust from remediation equipment. The equipment proposed for the Site redevelopment will be maintained properly so that exhaust emissions will be within acceptable standards.

10.2 Air Monitoring

To the extent feasible, the presence of airborne contaminants will be evaluated through the use of portable monitoring equipment. Information gathered will be used to ensure the adequacy of the levels of protection being employed at the Site, and may be used as the basis for upgrading or downgrading levels of personal protection, at the discretion of the Site Safety Officer. In addition, this sampling equipment will be utilized to monitor the potential for the migration of contaminants off-Site (i.e. fence line monitoring). Such monitoring will incorporate off-Site receptor type, wind direction, work tasks being performed, etc.

The following air sampling equipment will be utilized for Site monitoring:

- Personal sampling pumps with appropriate sample collection media; and
- Dust monitors.

The above instruments will serve as the primary instruments for personal exposure monitoring. They will be utilized to fully characterize potential employee exposure and the need for equipment upgrades/downgrades.

10.2.1 Integrated Industrial Hygiene Sampling

Integrated Industrial Hygiene (IH) sampling for airborne contaminants and dust will be conducted during the excavation process and/or loading operation. This IH sampling will be performed to properly characterize potential employee exposures and/or to establish baseline levels. Sampling may include personnel monitoring and fence line sampling. The duration of such monitoring will be determined based upon analytical results, regulatory requirements, etc.

10.2.2 Real-Time Air Monitoring During Excavation of Contaminated Soil

Dust monitoring will also be conducted to characterize the potential for exposure to Site personnel during excavation of contaminated soil using a direct-reading dust monitor. Continuous monitoring will also be performed during operations that have not previously been characterized. After initial Site screening, monitoring will be conducted periodically or anytime Site conditions might be altered (i.e. weather, drilling, excavation, spills, etc.).

Results of monitoring information will be recorded, and will include time, date, location operations, and any other conditions that may contribute to potential exposures. Maintenance and calibration information will be maintained and made available upon request. The monitoring

equipment will be calibrated in accordance with the manufacturer's specifications, and the records of such maintained with the project HASP.

Real-time air monitoring for respirable dust will be performed during the first three days of excavation of contaminated soil. The objective of the perimeter air-monitoring program is to protect the health and safety of the nearby community and to document the effectiveness of the dust control measures.

The Site Health and Safety Officer will determine the air monitoring locations based on Site operations and the location of areas that could be adversely impacted by air emissions. In general, real-time monitoring will be conducted downwind and around the perimeter of relevant activities. Monitoring locations will be documented on a monitoring log, along with any concentrations detected.

The dust standard will be based on the PM10 ambient air quality standards adopted by BAAQMD, which specifies a ceiling level of no more than 50 micrograms per cubic meter ($\mu g/m^3$) difference between upwind and downwind sampling locations. The ceiling level of 50 $\mu g/m^3$ represents the Bay Area 24-hour time-weighted average standard for 10 micron diameter particulate matter (the PM10 24-hour standard).

The perimeter of the work area will be monitored while excavation of contaminated soil is being conducted. If any readings exceed action levels, work will be stopped, engineering controls will be implemented and the work and monitoring schedule will be adjusted until background level concentrations are achieved.

Real-time dust monitors will be used to measure mass concentrations of airborne dust and provide respirable dust, expressed as concentration of particulates smaller than 10 microns (PM10) correlated measurements. A handheld respirable air monitor (mini-RAM) will be used to provide real-time data on total dust levels as PM10. Real-time worker dust monitoring will be performed continuously during work activities where soil disturbance is anticipated, downwind of active excavations. Measurements of real-time and time-weighted averages (TWA) of airborne particulate concentrations will be recorded using a Monitoring Instruments for the Environment, Inc. (MIE) RAM, model PDR-1000 (miniRAM) or equivalent equipment. The miniRAM measures the concentration of airborne particulate matter using a high sensitivity nephelometer (photometer) using a light scatter sensor. The sensitivity of the miniRAM is reported to range from 0.001 milligrams per cubic meter (mg/m3) to 400 mg/m3. The miniRAM will be calibrated daily in the supplied calibration pouch.

Real-time monitoring will consist of the following activities:

- Determine the predominant wind direction;
- Place one instrument upwind of Site operations for ambient sampling;
- Place one or more instrument(s) downwind of Site operations, at the Site Perimeter;
- Position the instrument probe near the normal breathing zone and monitor for approximately five minutes after instrument readings have stabilized; and

- Record the following observations and readings in real-time:
  - Location;
  - Time;
  - Site activity;
  - Readings;
  - Visual observations of dust;
  - Site conditions, including current weather conditions; and
  - Odors and/or other miscellaneous observations.

11.0 STORM WATER MANAGEMENT

Other environmental controls may be required in the event that anticipated conditions at the Site change. In the event that remediation activities occur during the rainy season, then water management procedures will be implemented in addition to probable modifications of other plans, such as the HASP. The following procedures will be implemented at the Site during the rainy season:

- The weather forecast will be monitored. During the days heavy rain is forecasted, remediation activities may be stopped;

- The boundary of the remediation area will be properly bermed to prevent storm water from entering or leaving the remediation area;

- Storm water entering the remediation area from non-impacted areas and storm water originating within the excavated area will be pumped to settlement tanks and treated prior to discharge under permit;

- The excavation will be conducted in small sections so that the exposed excavated area can be covered immediately if heavy rains occur;

- Procedures will be used to prevent wet soil from sticking to the tires of trucks used to haul soil off Site. These procedures may include plastic sheeting at the loading area, a tire wash at Site egress paths, and/or a stabilized gravel construction entrance; and

- Plastic sheeting will be used extensively to cover the area of excavation during non-working hours.

In general, the excavation will be kept as dry as possible in order to minimize the waste generated and the backfilling (as necessary) of the excavation. Storm water best management practices (BMPs) will be followed in accordance with the contractors Storm Water Pollution Prevention Plan (SWPPP) to be prepared for the Site. The BMPs for the Site development activities should include: use of fiber rolls; inlet protection; stabilized construction entrance; landscape and paving; street cleaning and catch basin cleaning.

FIGURES

Figure 1
Site Aerial Photograph
Phoenix Iron Works
800 Pine Street
Oakland, California

Basemap from: Northgate Environmental Management, Inc., Phase II Investigation Report, November 9, 2011, and Google Earth March 2017

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 50 100
Approximate Scale in Feet

N

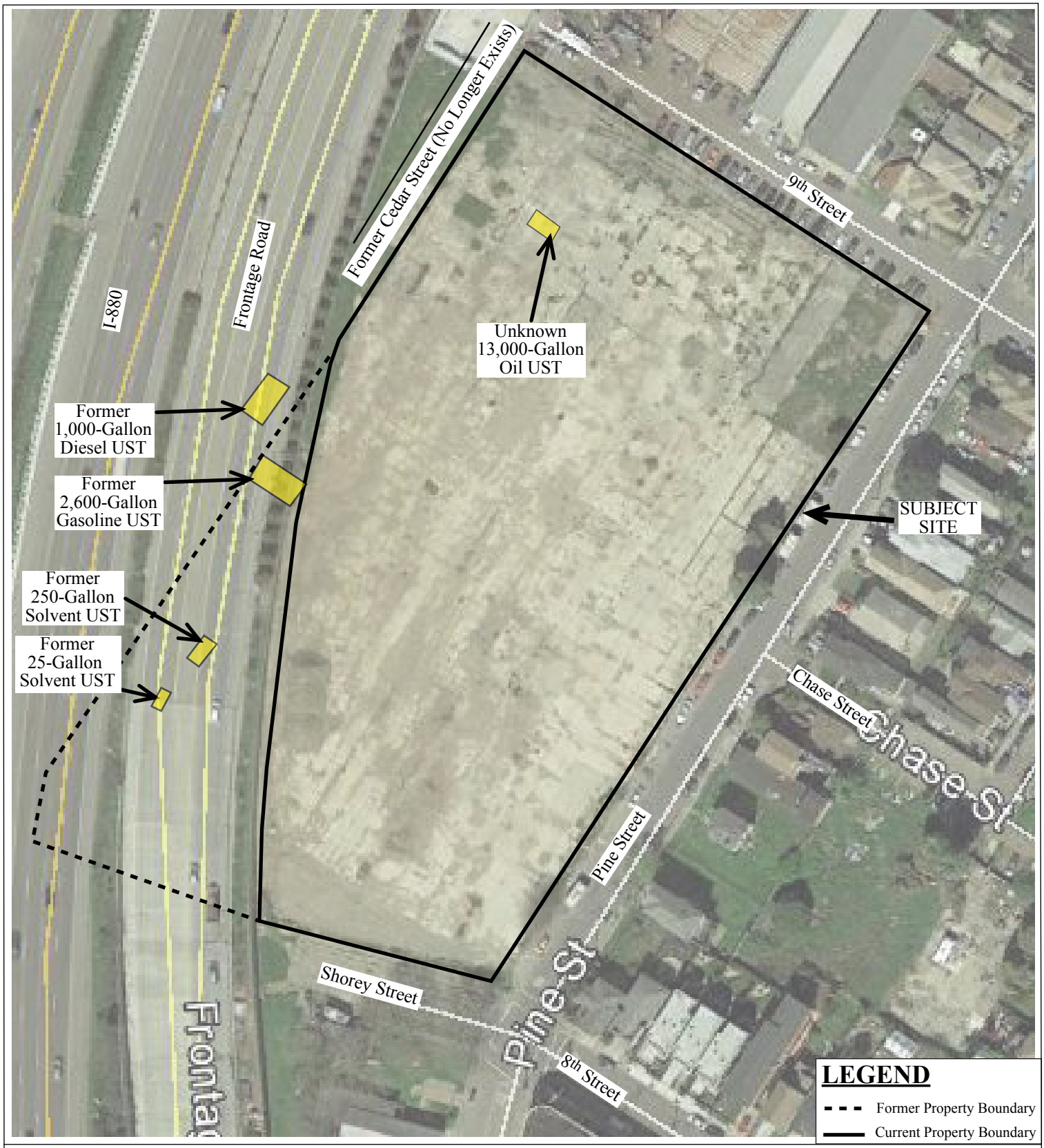

Figure 2
Site Aerial Photograph Showing Former UST Locations
Phoenix Iron Works
800 Pine Street
Oakland, California

Basemap from: Northgate Environmental Management, Inc., Phase II Investigation Report, November 9, 2011, and Google Earth March 2017

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 50 100
Approximate Scale in Feet

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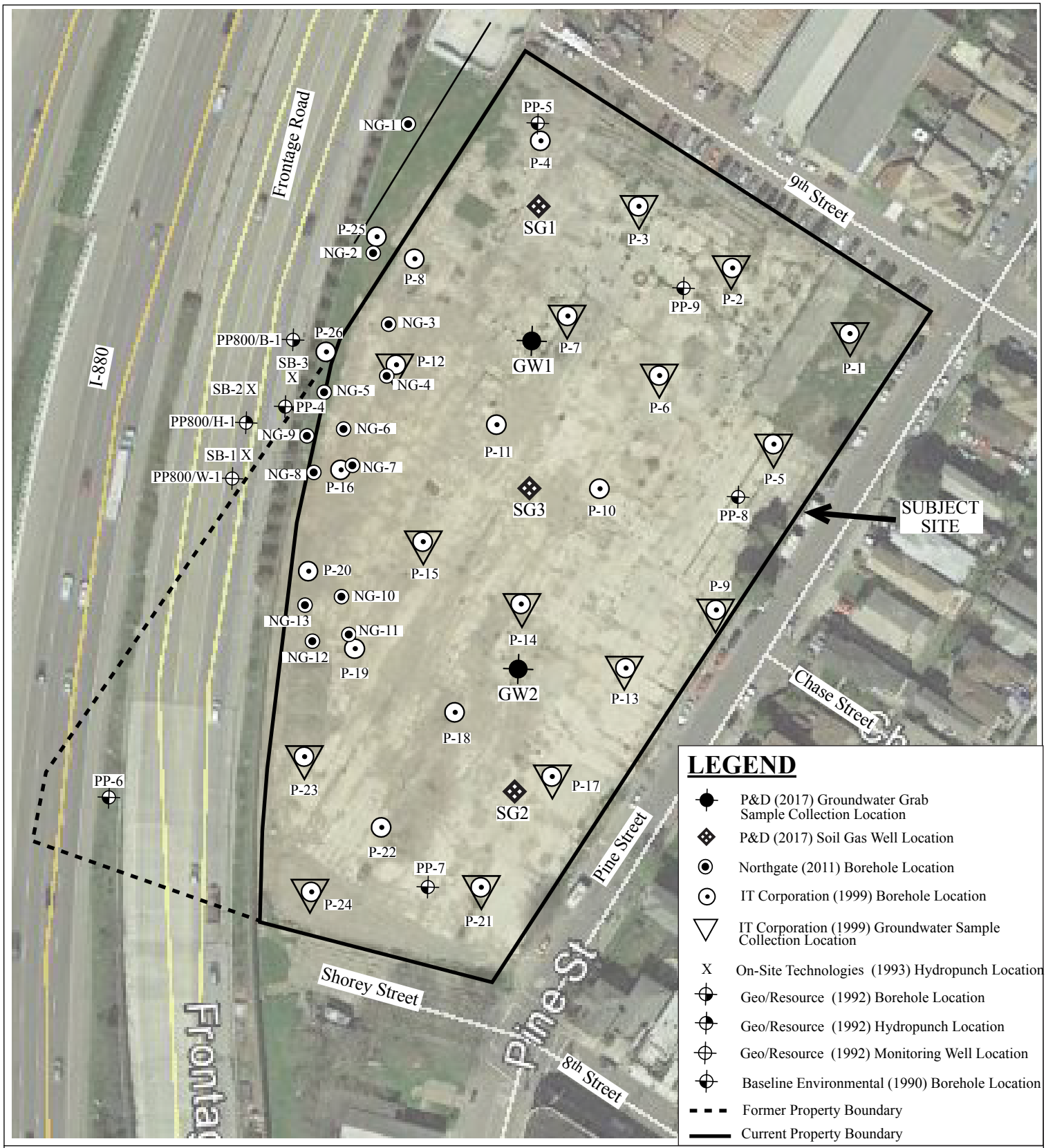


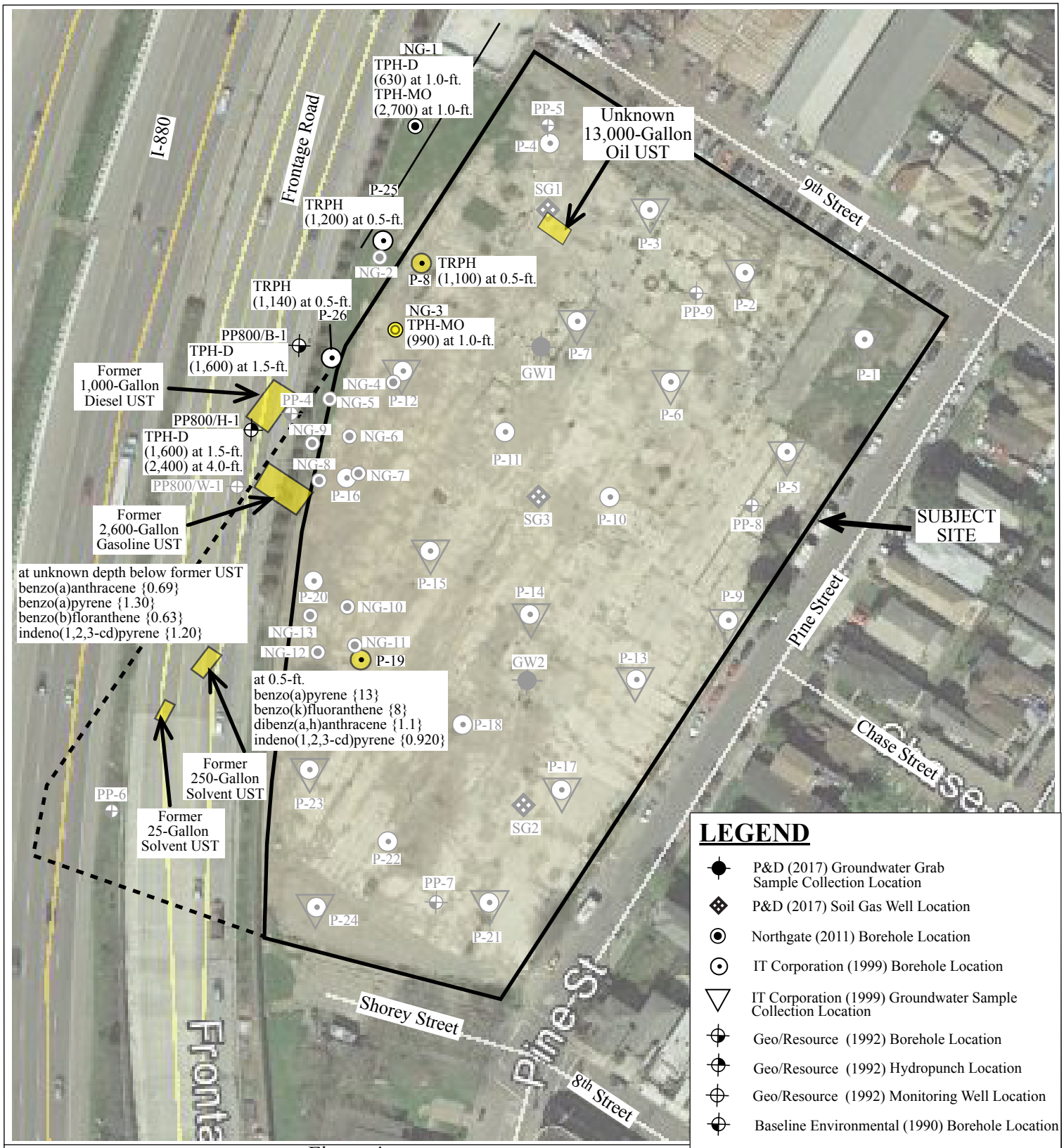
Figure 3
Site Aerial Photograph Showing Historical Sample Collection Locations
Phoenix Iron Works
800 Pine Street
Oakland, California

Basemap from: IT Corporation Site Investigation Report, Volume 1 of 2, March 8, 2000, Northgate Environmental Management, Inc., Phase II Investigation Report, November 9, 2011, and Google Earth March 2017

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 50 100
Approximate Scale in Feet

N



LEGEND

- P&D (2017) Groundwater Grab Sample Collection Location
- P&D (2017) Soil Gas Well Location
- Northgate (2011) Borehole Location
- IT Corporation (1999) Borehole Location
- IT Corporation (1999) Groundwater Sample Collection Location
- Geo/Resource (1992) Borehole Location
- Geo/Resource (1992) Hydropunch Location
- Geo/Resource (1992) Monitoring Well Location
- Baseline Environmental (1990) Borehole Location
- Former Property Boundary
- Current Property Boundary
- (1,200) TPH-D/TRPH/TPH-MO Soil Concentration (mg/kg)
- {13} PAH Soil Concentration (mg/kg)

Note: Only TPH and PAH Concentrations That Exceed Tier 1 Soil ESL Values Are Shown.

Figure 4
Site Aerial Photograph Showing Historical Petroleum and PAH Concentrations in Soil Exceeding Tier 1 Screening Levels
Phoenix Iron Works
800 Pine Street
Oakland, California

Basemap from: IT Corporation Site Investigation Report, Volume 1 of 2, March 8, 2000, Northgate Environmental Management, Inc., Phase II Investigation Report, November 9, 2011, and Google Earth March 2017

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 50 100
Approximate Scale in Feet

N

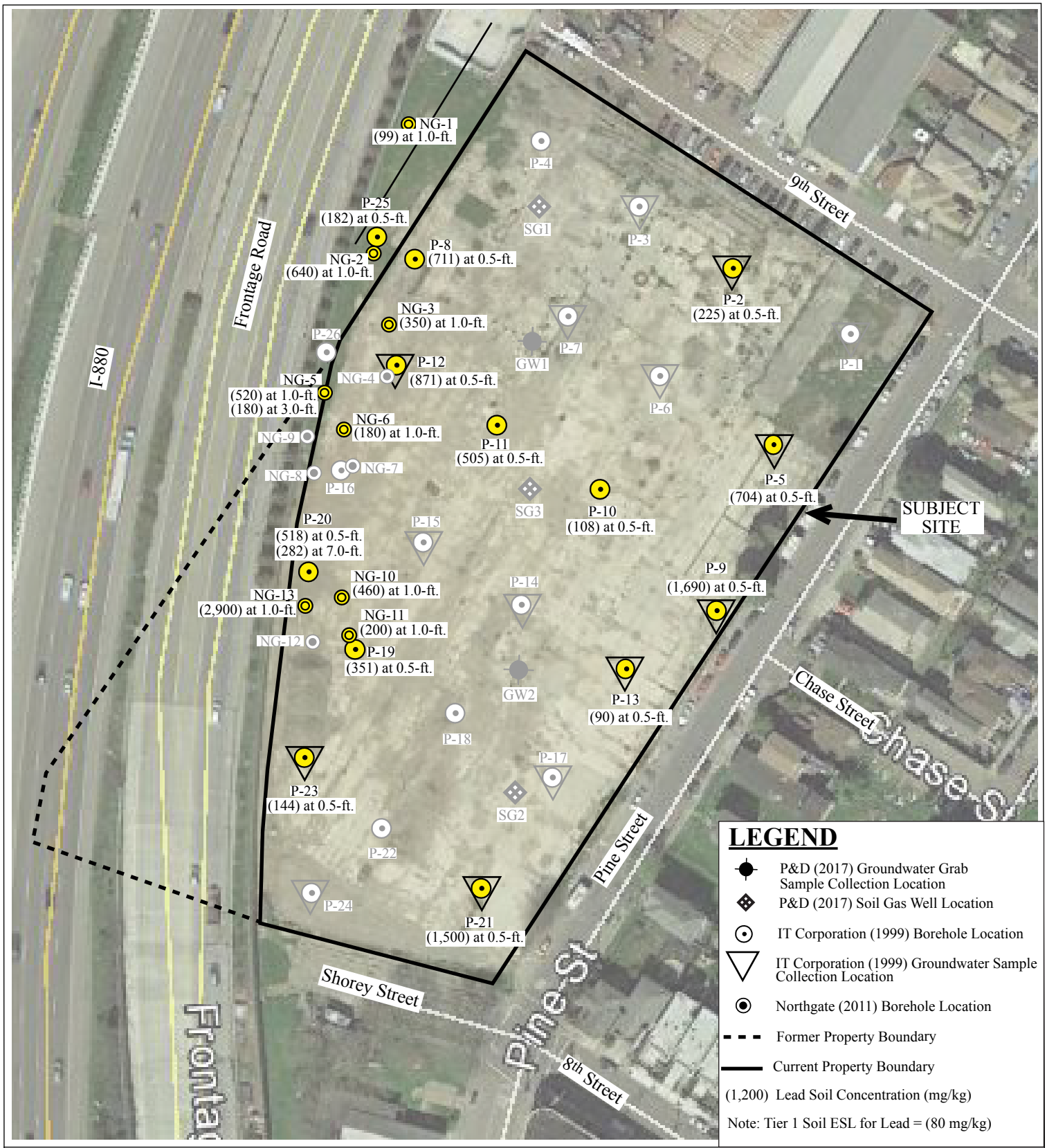


Figure 5
Site Aerial Photograph Showing Historical Lead Concentrations in Soil Exceeding Tier 1 Screening Levels
Phoenix Iron Works
800 Pine Street
Oakland, California

Basemap from: IT Corporation Site Investigation Report, Volume 1 of 2, March 8, 2000, Northgate Environmental Management, Inc., Phase II Investigation Report, November 9, 2011, and Google Earth March 2017	P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610	0 50 100 Approximate Scale in Feet N

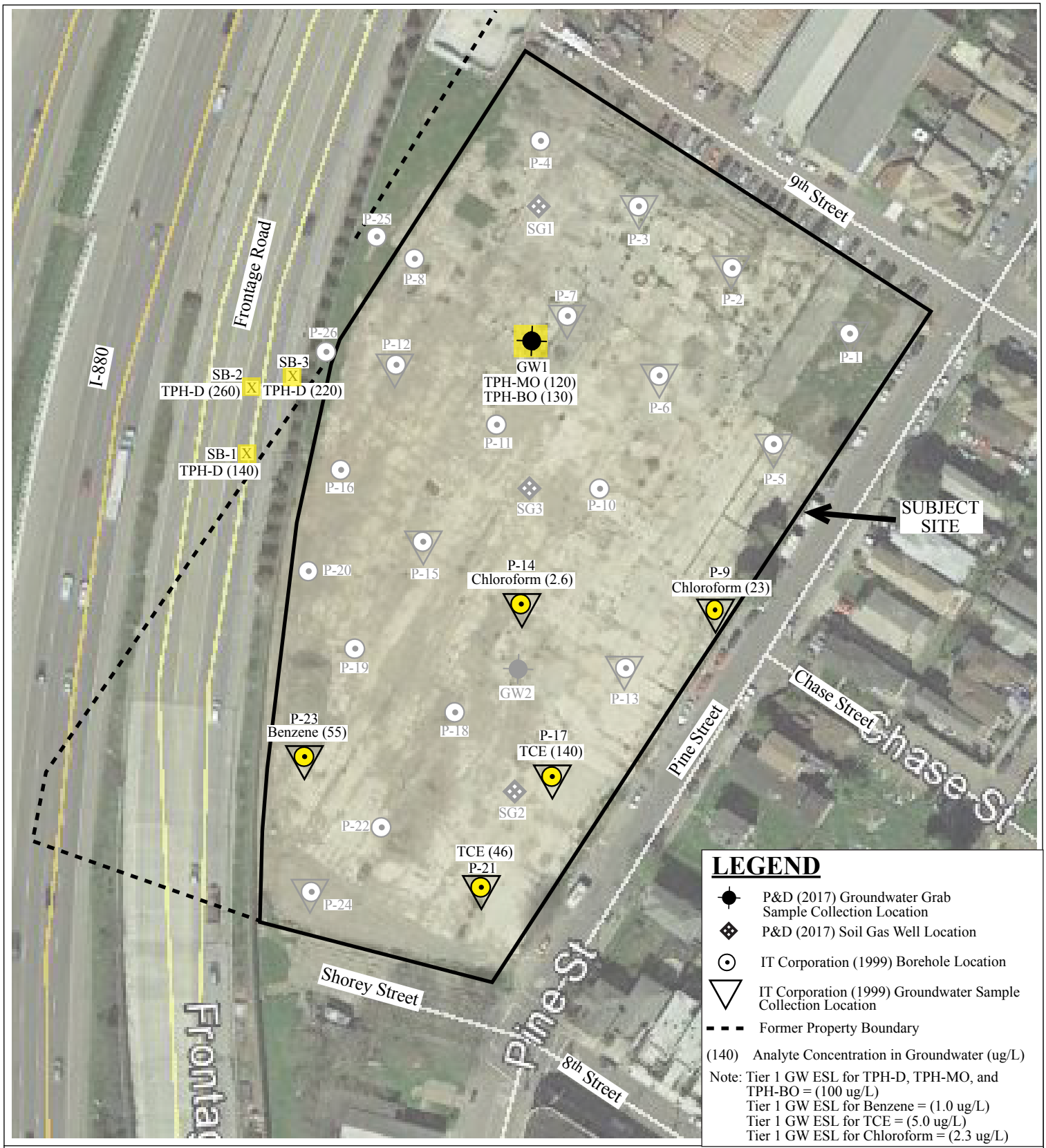


Figure 6
Site Aerial Photograph Showing Historical TPH and
VOC Concentrations in Groundwater Exceeding Tier 1 Screening Levels
Phoenix Iron Works
800 Pine Street
Oakland, California

Basemap from: IT Corporation Site Investigation Report, Volume 1 of 2, March 8, 2000, Northgate Environmental Management, Inc., Phase II Investigation Report, November 9, 2011, and Google Earth March 2017

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 50 100
Approximate Scale in Feet

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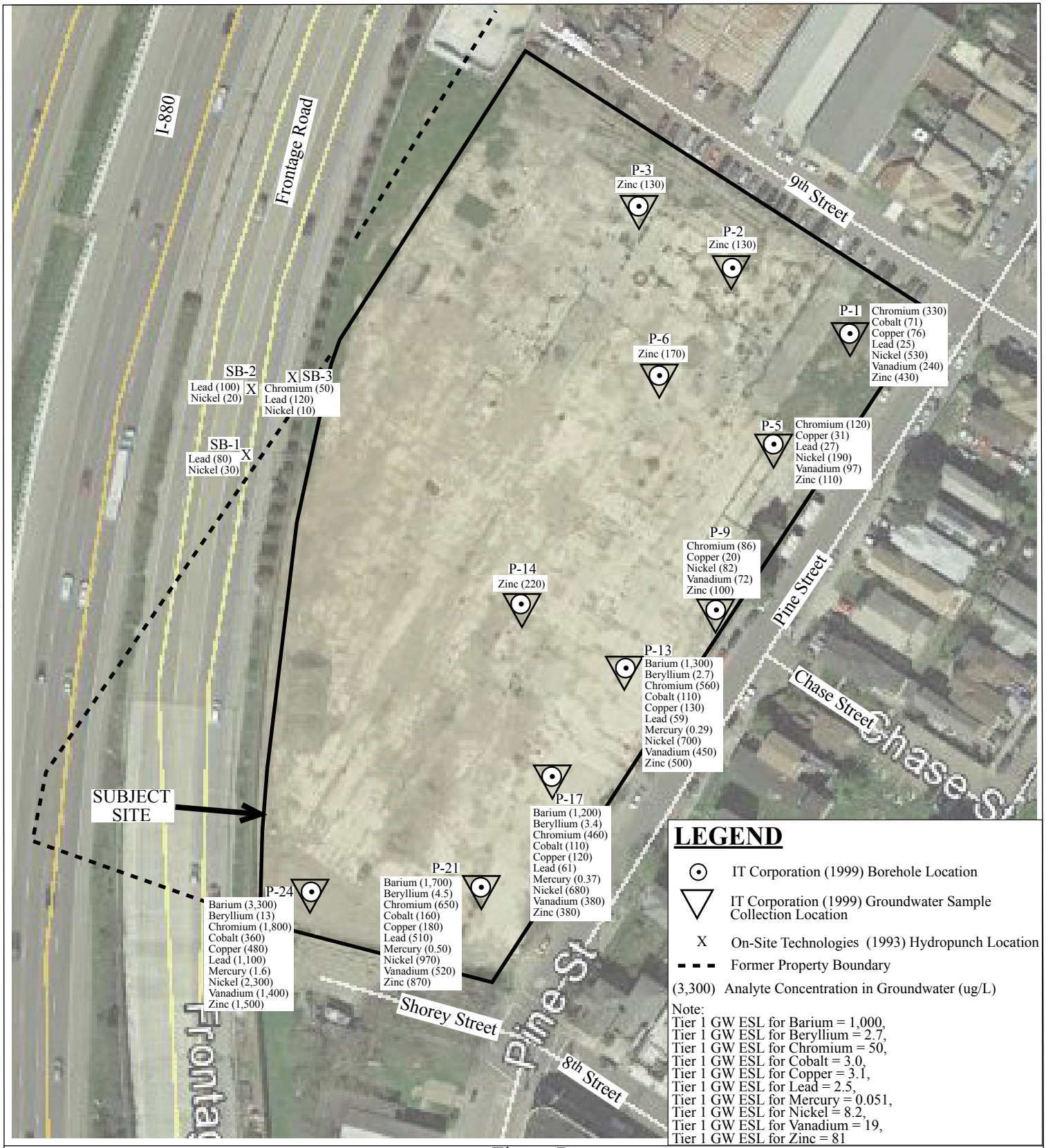


Figure 7
Site Aerial Photograph Showing Historical Metals Concentrations in Groundwater Exceeding Tier 1 Screening Levels
Phoenix Iron Works
800 Pine Street
Oakland, California

Basemap from: IT Corporation Site Investigation Report, Volume 1 of 2, March 8, 2000, Northgate Environmental Management, Inc., Phase II Investigation Report, November 9, 2011, and Google Earth March 2017	P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610	0 50 100 Approximate Scale in Feet N

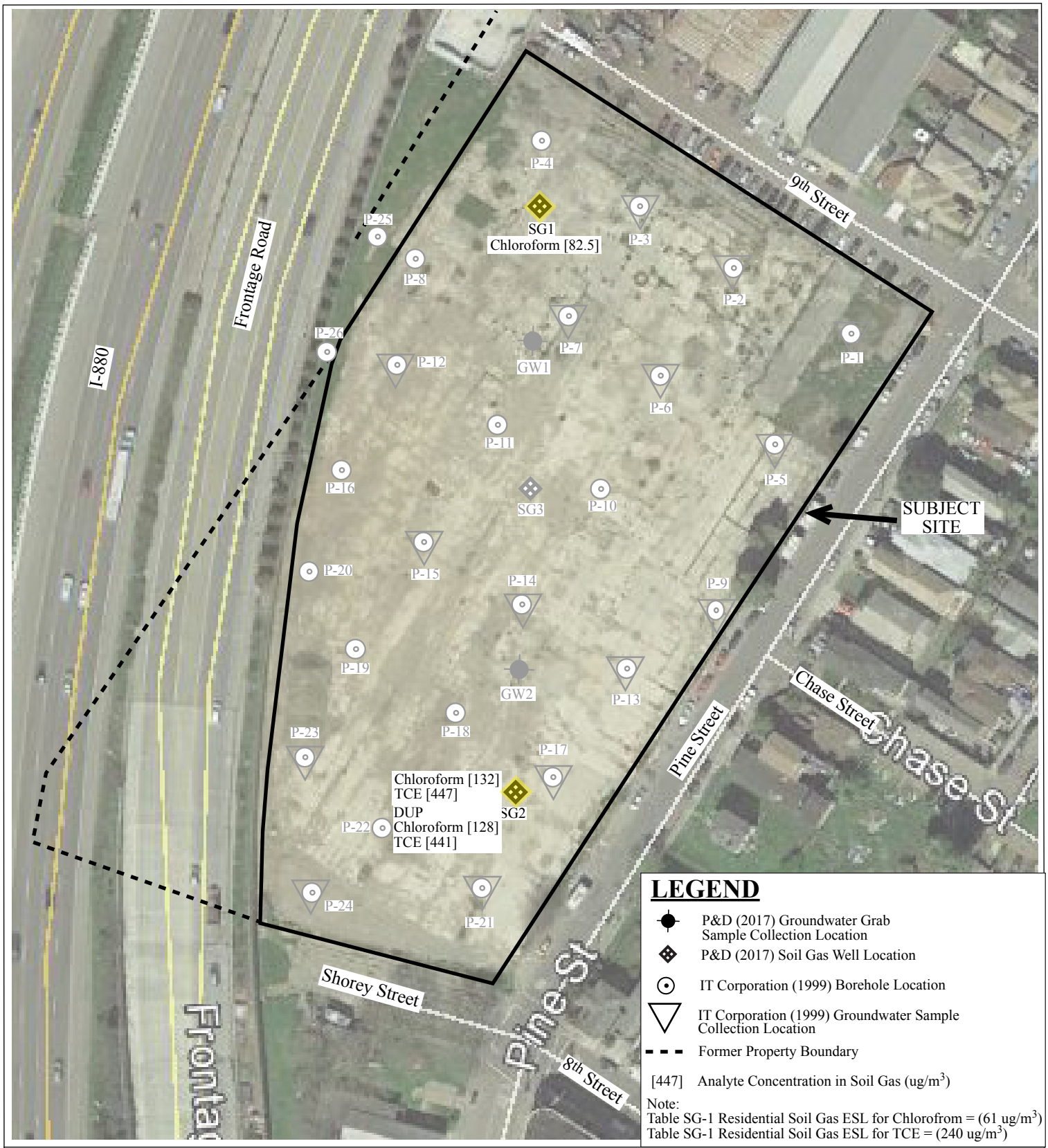


Figure 8
Site Aerial Photograph Showing Historical VOC Concentrations in Soil Gas Exceeding Tier 1 Screening Levels
Phoenix Iron Works
800 Pine Street
Oakland, California

Basemap from: IT Corporation Site Investigation Report, Volume 1 of 2, March 8, 2000, Northgate Environmental Management, Inc., Phase II Investigation Report, November 9, 2011, and Google Earth March 2017

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 50 100
Approximate Scale in Feet

N

APPENDIX A

Agreement and Acknowledgement Statement

APPENDIX A

AGREEMENT AND ACKNOWLEDGMENT STATEMENT
Multifamily Housing
800 Pine Street
Oakland, California

Soil Management Plan Agreement

All project personnel and subcontractors are required to sign the following agreement prior to conducting work at the site.

1. I have read and fully understand the plan and my individual responsibilities.

2. I agree to abide by the provisions of the plan.

Name	Signature
Company	Date
Name	Signature
Company	Date
Name	Signature
Company	Date
Name	Signature
Company	Date

(Add additional sheets if necessary)

APPENDIX B

Historical Site Investigation Sample Results Summary Tables and Figures Showing Sample Collection Locations

- **B1 - Tables 1 Through 3 and Figure 2 from Site Investigation Report - Area 4 Prepared by Geo/Resource Consultants, Inc. Dated August 1992**

- **B2 - Tables 5.3.1.c, 5.1.a, 5.1.c, and 5.1.d, and Figures 5.1 and 5.2.3 from Preliminary Endangerment Assessment - Volume 1 Prepared by On-Site Technologies, Inc. Dated November 1993**

- **B3 - Tables 2 Through 6 and Figures 2 Through 8 from Site Investigation Report Prepared by IT Corporation Dated March 8, 2000**

- **B4 - Table 1 Through 3 and Figures 2 Through 4 from Phase II Soil Investigation Report Prepared by Northgate Environmental Management, Inc. Dated November 9, 2011**

- **B5 - Table 1 Through 2B and Figure 2 from Limited Subsurface Investigation Report Prepared by P&D Environmental, Inc. Dated September 5, 2017**

B1-Tables 1 Through 3 and Figure 2 from Site Investigation Report - Area 4 Prepared by Geo/Resource Consultants, Inc. Dated August 1992 (4 pp)

TABLE 1
AREA 4

DOT - CYPRESS
SUMMARY OF ANALYTICAL RESULTS - SOIL
GENERAL

UNITS EPA No.	TRPH mg/kg 418.1	TPH-G mg/kg 8015m	TPH-D mg/kg 8015m
PHOENIX PROPERTIES, 524			
-Boring			
PP524/B-1-2	7	-	-
PP524/B-1-6	31	-	-
PP524/B-2-6	6	-	-
PP524/B-2-15	10	-	-
PP524/B-3-1.5	8	-	-
PP524/B-3-6	14	-	-
PP524/B-4-1.5	210(10)	-	-
PP524/B-4-6	1,200(150)	-	-
PP524/B-5-1.5	250	-	-
PP524/B-5-6	31	-	-
PHOENIX PROPERTIES, 800			
-Boring			
PP800/B-1-1.5	-	-	1,600
PP800/B-1-4	-	-	ND
PP800/B-1-7.5	-	-	ND
-Hydropunch			
PP800/H-1-1.5	-	10	1,600
PP800/H-1-4	-	17	2,400
PP800/H-1-7.5	-	ND	ND
-Well			
PP800/W-1-1.5	-	ND(25)	ND
PP800/W-1-6	-	ND	ND
PP800/W-1-8	-	ND	ND
Detection Limit	5.0	5.0	5

NOTES: ND = Not Detected at Detection Limit on Laboratory Data Sheets
- = Not analyzed
( ) = Detection Limit
TRPH = Total Recoverable Petroleum Hydrocarbons
TPH-G = Total Petroleum Hydrocarbons as Gasoline
TPH-D = Total Petroleum Hydrocarbons as Diesel
Laboratory Analyses performed by CKY

TABLE 2
AREA 4

DOT - CYPRESS

SUMMARY OF ANALYTICAL RESULTS - SOIL

METALS

UNITS EPD No.	ANTIMONY mg/kg 6010	ARSENIC mg/kg 6010	BARIUM mg/kg 6010	BERYLLIUM mg/kg 6010	CADMIUM mg/kg 6010	CHROMIUM TOTAL mg/kg 6010	COBALT mg/kg 6010	COPPER mg/kg 6010	LEAD mg/kg 6010	MERCURY mg/kg 6010	MOLYBDENUM mg/kg 6010	NICKEL mg/kg 6010	SELENIUM mg/kg 6010	SILVER mg/kg 6010	THALLIUM mg/kg 6010	VANADIUM mg/kg 6010	ZINC mg/kg 6010
PHOENIX PROPERTIES, 524																	
-Boring																	
PP524/B-1-2	ND	ND	30	ND	2	27	3.3	5.7	9.5	ND	ND	14	ND	ND	ND	21	15
PP524/B-1-6	5.6	21	67	0.81	5.2	57	2.9	8.4	N25	0.09	ND	27	ND	ND	ND	47	21
PP524/B-2-1.5	6.5	ND	47	ND	2.1	28	4.5	8.5	13	ND	ND	15	ND	ND	ND	21	17
PP524/B-2-6	ND	12	68	0.64	4	44	7.4	14	17	ND	ND	40	ND	ND	ND	35	29
PP524/B-3-1.5	6	ND	51	0.51	2.8	29	4.9	11	18	ND	ND	18	ND	ND	ND	23	23
PP524/B-3-6	6.1	10	73	0.65	4.8	52	5.4	11	18	ND	0.70	42	ND	ND	16	41	31
PP524/B-4-1.5	7.9	19	160	0.55	9.7	120	7.3	120	1,100**	0.24	2.8	30	ND	ND	ND	32	500
PP524/B-4-6	55	22	970	0.55	30	150	11	250*	3,500**	0.66	5.6	57	ND	ND	ND	37	2,300
WET	-	-	-	-	-	-	-	1.3(0.01)mg/l	-	-	-	-	-	-	-	-	-
PP524/B-5-1.5	12	15	540	0.55	12	75	9	130	23,000**	1	1.7	40	ND	ND	ND	29	1,400
PP524/B-5-6	6	12	51	0.55	4.3	36	5.9	9.3	20	ND	ND	33	ND	ND	13	29	26
PHOENIX PROPERTIES, 766																	
-Boring																	
PP766/B-1-1	8.4	35	280	0.56	12	39	10	89	3,600**	0.33	1.1	30	ND	ND	ND	26	500
PP766/B-1-3	ND	ND	47	0.51	2.6	29	5.1	6.5	11	ND	0.80	18	ND	ND	ND	22	18
PP766/B-2-1	ND	ND	50	ND	2.5	30	4.9	6.4	12	ND	ND	15	ND	ND	16	22	16
PP766/B-2-3	5.8	ND	50	0.50	2.4	29	5.4	7	11	ND	ND	19	ND	ND	ND	21	17
PP766/B-3-1	5.3	10	150	0.5	2.6	29	5.5	24	160*	0.18	0.60	21	ND	ND	ND	23	160
WET	-	-	-	-	-	-	-	-	8(0.10)mg/l	-	-	-	-	-	-	-	-
PP766/B-3-3	ND	ND	46	ND	2.4	27	4.5	6.8	10	ND	ND	18	ND	ND	ND	22	16
PP766/B-4-1	ND	10	170	0.50	2.8	30	5.5	23	170*	0.28	0.80	19	ND	ND	ND	22	110
WET	-	-	-	-	-	-	-	-	13(0.10)mg/l	-	-	-	-	-	-	-	-
PP766/B-4-3	5.1	ND	45	ND	2.8	27	5.3	9.5	9	0.07	ND	16	ND	ND	11	22	18
PP766/B-5-1	ND	ND	200	0.55	4.9	28	5.1	30	390*	0.58	1.2	19	ND	ND	ND	27	170
WET	-	-	-	-	-	-	-	-	31(0.10)mg/l	-	-	-	-	-	-	-	-
PP766/B-5-3	ND	ND	72	ND	2.9	27	4.6	18	110*	0.07	0.60	17	ND	ND	ND	24	67
PP766/B-6-1	ND	ND	41	ND	2.3	28	4.9	9.9	24	0.07	0.50	16	ND	ND	11	22	25
PP766/B-6-3	ND	ND	57	ND	1.8	27	4	8.1	15	ND	0.70	17	ND	ND	10	21	20
TTLC(mg/kg)	500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
STLC(mg/L)	15	5.0	100	0.75	1.0	560	80	25	5.0	0.2	350	20	1.0	5	7.0	24	250
Detection Limit	5.0	10	2.5	0.50	0.50	0.50	1.0	0.50	5.0	0.05	0.50	2.5	10	0.50	10	1.0	0.50

NOTES: ND = Not Detected at Detection Limit on Laboratory Data Sheets
( ) = Detection Limit
- = Not Analyzed
TTLC = Total Threshold Lomit Concentration (mg/kg)
STLC = Soluble Threshold Limit Concentration (mg/l)
* = Concentration values 10x greater than STLC values, according to CCR Title 22
** = Concentration values greater than TTLC values, according to CCR Title 22
Laboratory Analyses performed by CKY

TABLE 3

AREA 4

DOT - CYPRESS

SUMMARY OF ANALYTICAL RESULTS - GROUNDWATER

	EPA No.	PP800/H-1	PP800/W-1	DETECTION LIMIT
TPH-G (mg/L)	8015m	ND	ND(1.0)	0.1
TPH-D (mg/L)	8015m	ND	ND	1.0

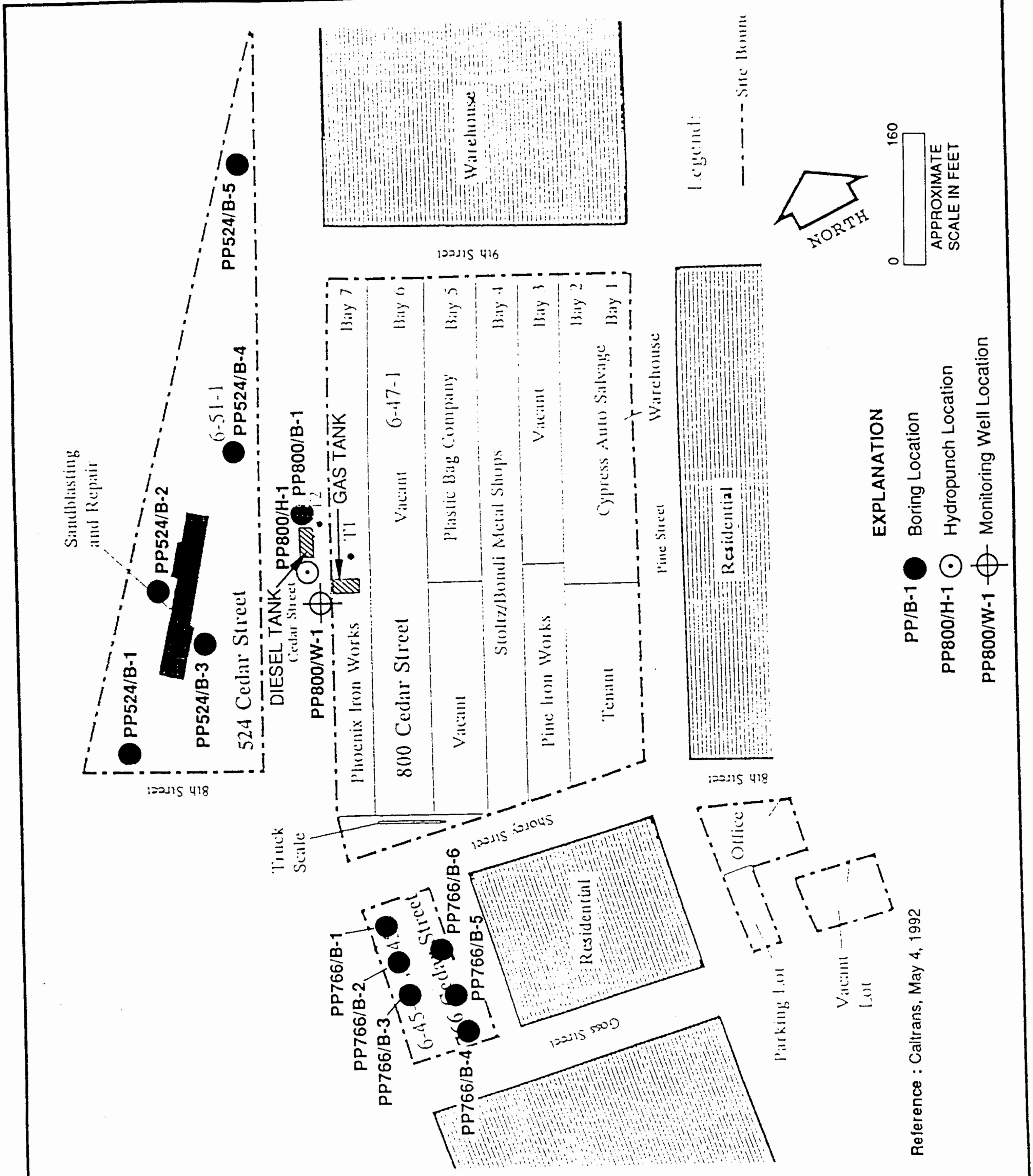
NOTES: ND = Not Detected at Detection Limit on Laboratory Data Sheets

- = Not analyzed

TPH-G = Total Petroleum Hydrocarbons as Gasoline

TPH-D = Total Petroleum Hydrocarbons as Diesel

Laboratory Analyses performed by CKY



Geo/ Resource Consultants, Inc.
GEOLOGISTS / ENGINEERS / ENVIRONMENTAL SCIENTISTS
505 BEACH STREET, SAN FRANCISCO, CALIFORNIA 94133

Job No. 1689-019-00 Appr. ______ Date 7/20/92

SITE PLAN - AREA 4
PHOENIX PROPERTIES - PARCEL No.17
D.O.T. - INTERSTATE 880
CYPRESS STRUCTURE RECONSTRUCTION
OAKLAND, CALIFORNIA

FIGURE
2

B2-Tables 5.1.a, 5.1.b, 5.1.c, 5.1.d, 5.3.1.c, and 5.3.1.d, and Figures 5.1 and 5.2.3 from Preliminary Endangerment Assessment - Volume 1 Prepared by On-Site Technologies, Inc. Dated November 1993 (8 pp)

TABLE 5.1.a

Preliminary Endangerment Assessment

Phoenix 800
800 Cedar Street
Oakland, Alameda County, California

Soil Analytical Results - Organics
Baseline Environmental Consultant's - First Phase Site Investigation

Boring	Sample Depth	TPH-D	TPH-G	Benzene	Toluene	EthylBenzene	Total Xylenes
	(FBGS)	(mg/kg)	(mg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
PP-4	4.5-5.0	ND	ND	ND	ND	ND	ND
PP-5	5.0-5.5	ND	ND	ND	ND	ND	ND
PP-6	5.0-5.5	ND	ND	ND	ND	ND	ND
PP-7	5.5-6.0	ND	ND	ND	ND	ND	ND
PP-9	4.5-5.0	ND	ND	ND	ND	ND	ND
REPORTING LIMIT		2.5	5.0	5.0	5.0	5.0	5.0

(FBGS) Feet below ground surface
TPH-D Total petroleum hydrocarbons as diesel
TPH-G Total petroleum hydrocarbons as gasoline
mg/kg milligrams/kilogram
µg/kg micrograms/kilogram
ND Not detected in excess of Reporting Limit

TABLE 5.1.b

Preliminary Endangerment Assessment
Phoenix 800
800 Cedar Street
Oakland, Alameda County, California

Soil Analytical Results - Metals
Baseline Environmental Consultant's - First Phase Site Investigation

Boring	PP-5 2.0-2.5 FT	PP-6 2.0-2.5 FT	PP-7 2.0-2.5 FT	PP-8 2.0-2.5 FT	PP-9 1.5-2.0 FT	Report Limit
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/k
Analyte						
Antimony	1	1	ND	1	2	1
Arsenic	4	4	3	5	ND	3
Barium	47	59	46	45	49	4
Beryllium	0.2	0.3	0.2	0.2	0.2	0.1
Cadmium	ND	0.2	ND	ND	0.2	0.2
Total Chromium	30	34	28	31	31	6
Cobalt	3.8	4.8	4.0	3.7	4.4	0.5
Copper	6	10	6	7	7	1
Lead	14	52 (2.26)	10	13	13	3
Mercury	ND	ND	ND	ND	ND	0.2
Molybdenum	0.7	0.8	0.7	0.7	0.8	0.5
Nickel	18	19	15	14	18	2
Selenium	3	2	ND	3	4	2
Silver	ND	ND	ND	ND	ND	0.5
Thallium	8	8	7	8	3	2
Vanadium	19	21	17	21	20	4
Zinc	18	56	15	19	19	2

mg/kg milligrams/kilogram
ND Not detected in excess of Reporting Limit
(2.26) Soluble concentration in mg/l

TABLE 5.1.c

Preliminary Endangerment Assessment

Phoenix 800
800 Cedar Street
Oakland, Alameda County, California

Soil Analytical Results - 601/8010 & 8270
Baseline Environmental Consultant's - First Phase Site Investigation

Boring	Sample Depth	EPA 601/8010	EPA 8270
	(FBGS)	(ug/kg)	(mg/kg)
PP-5	5.0-5.5	ND	ND
PP-6	5.0-5.5	ND	ND
PP-7	5.5-6.0	ND	ND
PP-8	4.5-5.0	ND	ND
PP-9	4.5-5.0	ND	ND
REPORTING LIMIT		5.0	0.5

(FBGS) Feet below ground surface
mg/kg milligrams/kilogram
ug/kg micrograms/kilogram
ND Not detected in excess of Reporting Limit

TABLE 5.1.d

Preliminary Endangerment Assessment
Phoenix 800
800 Cedar Street
Oakland, Alameda County, California

Soil and Ground Water Analytical Results - Organics
Geo/Resource Consultant's - First Phase Site Investigation

Boring	Sample Depth	TRPH	TPH-G	TPH-D
	(FBGS)	(mg/kg)	(mg/kg)	(mg/kg)
PP800/B-1	1.5	NA	NA	ND
	4.0	NA	ND	ND
	7.5	NA	ND	ND
PP800/H-1	1.5	NA	10	1,600
	4.0	NA	17	2,400
	7.5	NA	ND	ND
PP800/W-1	1.5	NA	ND	ND
	6.0	NA	ND	ND
	8.0	NA	ND	ND
PP800/W-1 (Ground Water Sample)			ND	ND
REPORTING LIMITS		5.0 (1.0)	5.0 (1.0)	5.0

(FBGS)	Feet below ground surface
TRPH	Total recoverable petroleum hydrocarbons
TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
mg/kg	milligrams/kilogram
NA	Not analyzed
ND	Not detected in excess of Reporting Limit
(1.0)	Reporting limit for ground water analyses

TABLE 5.3.1.c

Preliminary Endangerment Assessment

Phoenix 800
800 Cedar Street
Oakland, Alameda County, California

Soil Analytical Results - Metals/Organics

ANALYTE		Cd	Cr	Pb	Ni	Zn	TPH-G	TPH-D	VOC	SV
CONCENTRATION		mg/kg							µg/kg	mg/
DETECTION LIMIT	**SAMPLE DEPTH**	0.05	0.50	0.50	0.50	0.50	1.0	1.0	VARIOUS	VARIO
SAMPLE ID										
SB1A	3.0	ND	24	2.7	18	14	ND	ND	ND	ND
SBIB	5.5							ND		
SBIC	7.0							ND		
SB1D	9.0							ND	ND	
SBIE	11.0							ND		
SB2A	3.5	ND	21	2.5	18	13	ND	ND	ND	ND
SB2B	5.5							ND		
SB2C	7.5							ND		
SB2D	9.5							ND	ND	
SB3A	3.0	ND	21	6.3	16	16	ND	ND	ND	ND
SB3B	5.5							ND		
SB3C	7.0							ND		
SB3D	9.5							ND	ND	

Cd	Cadmium
Cr	Total chromium
Pb	Lead
Ni	Nickel
Zn	Zinc
TPH-D	Total petroleum hydrocarbons as diesel
TPH-G	Total petroleum hydrocarbons as gasoline
mg/kg	Milligrams per kilogram
ND	Not detected in excess of detection limit
VOC	Volatile organic compounds
SVO	Semivolatile organic compounds

TABLE 5.3.1.d

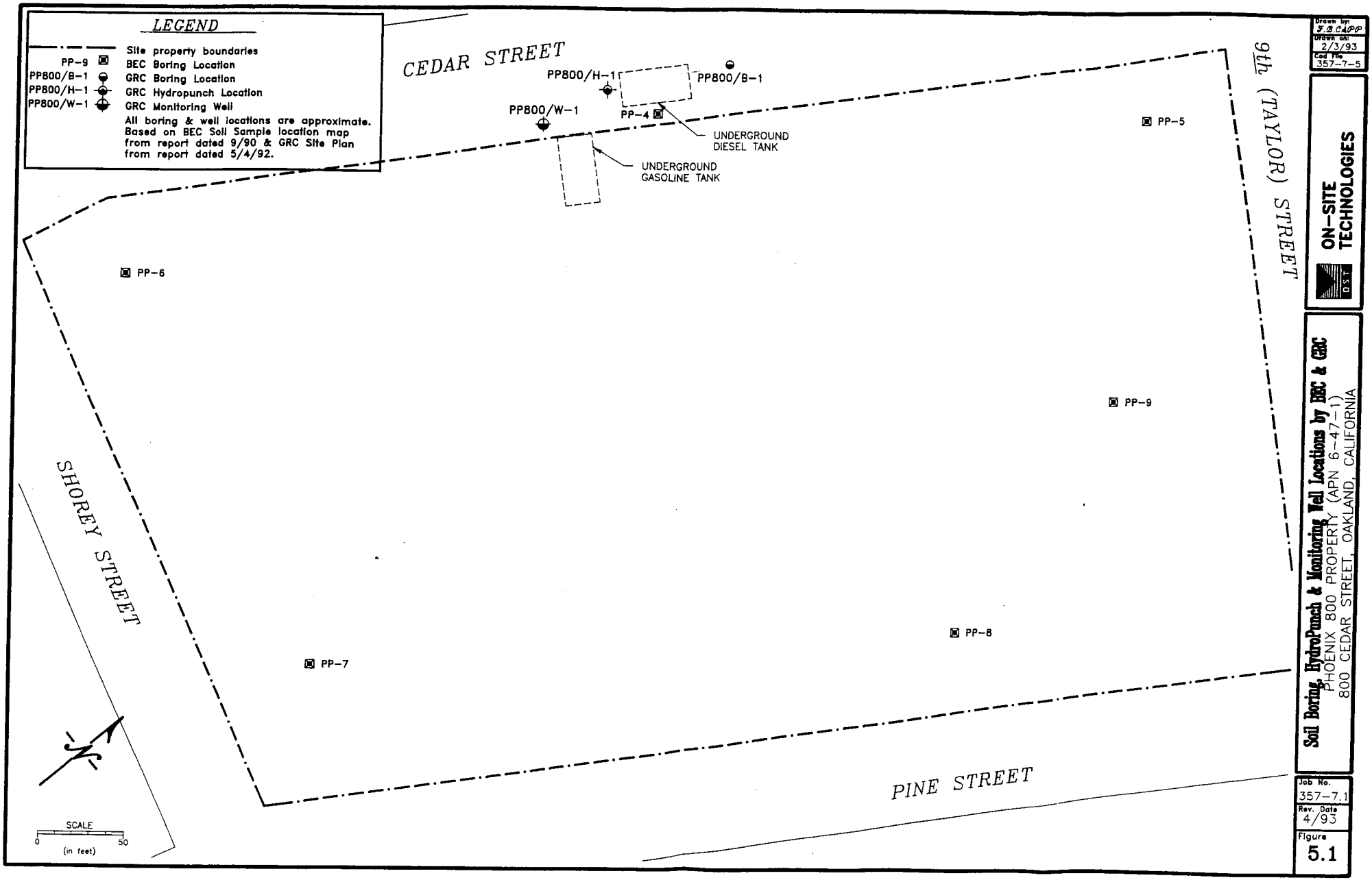
Preliminary Endangerment Assessment

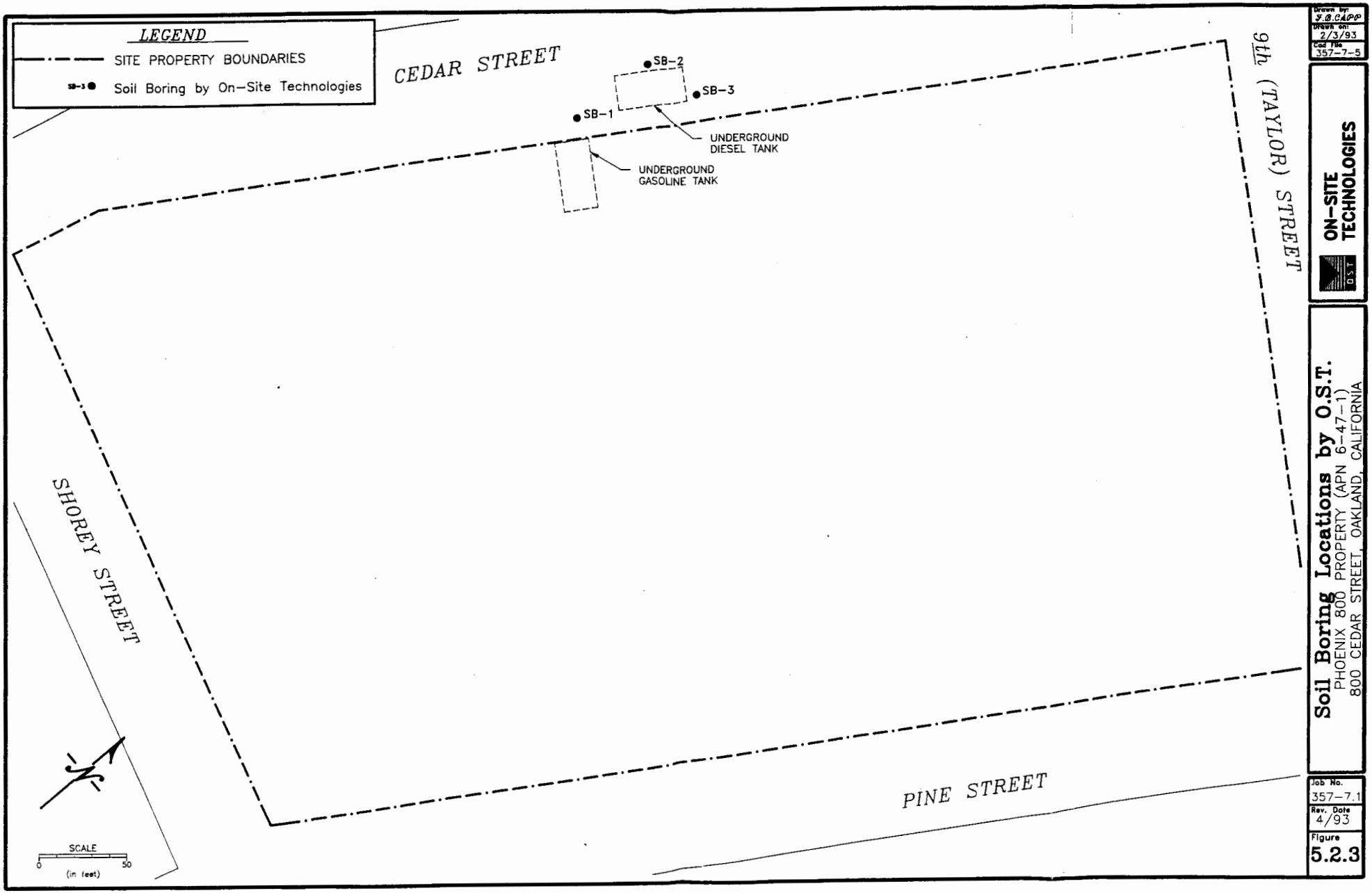
Phoenix 800
800 Cedar Street
Oakland, Alameda County, California

Ground Water Analytical Results - Metals/Organics

ANALYTE	Cd	Cr	Pb	Ni	Zn	TPH-D	VOC	SVO
CONCENTRATION	mg/l	mg/l	mg/l	mg/l	mg/l	µg/l	µg/l	mg/l
DETECTION LIMIT	0.001	0.01	0.01	0.02	0.005	50	VARIOUS	VARIOUS
SAMPLE ID								
HPSB1	ND	0.04	0.08	0.03	0.04	140	ND	ND
HPSB2	ND	0.04	0.10	0.02	0.02	260	ND	ND
HPSB3	ND	0.05	0.12	0.01	0.02	220	ND	ND

Cd	Cadmium
Cr	Total chromium
Pb	Lead
Ni	Nickel
Zn	Zinc
TPH-D	Total petroleum hydrocarbons as diesel
mg/l	Milligrams per kilogram
µg/l	micrograms per kilogram
ND	Not detected in excess of detection limit
VOC	Volatile organic compounds
SVO	Semivolatile organic compounds


LEGEND
Site property boundaries
PP-9 BEC Boring Location
PP800/B-1 GRC Boring Location
PP800/H-1 GRC Hydropunch Location
PP800/W-1 GRC Monitoring Well
All boring & well locations are approximate. Based on BEC Soil Sample location map from report dated 9/90 & GRC Site Plan from report dated 5/4/92.
CEDAR STREET
9th (TAYLOR) STREET
SHOREY STREET
PINE STREET
PP800/H-1
PP800/B-1
PP800/W-1
PP-4
PP-5
PP-6
PP-7
PP-8
PP-9
UNDERGROUND DIESEL TANK
UNDERGROUND GASOLINE TANK
SCALE
0
50
(in feet)
Drawn by: S.B.CAPP
Drawn on: 2/3/93
Cad File: 357-7-5
ON-SITE TECHNOLOGIES
Soil Boring, HydroPunch & Monitoring Well Locations by BEC & GRC
PHOENIX 800 PROPERTY (APN 6-47-1)
800 CEDAR STREET, OAKLAND, CALIFORNIA
Job No. 357-7.1
Rev. Date 4/93
Figure 5.1



Drawn by: F.B.CAPP
Drawn on: 2/3/93
Cad file: 357-7-5

ON-SITE TECHNOLOGIES

Soil Boring Locations by O.S.T.
PHOENIX 800 PROPERTY (APN 6-47-1)
800 CEDAR STREET, OAKLAND, CALIFORNIA

Job No. 357-7.1
Rev. Date 4/93
Figure 5.2.3

B3-Tables 2 Through 6 and Figures 2 Through 8 from Site Investigation Report - Area 4 Prepared by IT Corporation Dated March 8, 2000 (14 pp)

TABLE 2

ORGANIC RESULTS - SOIL

Caltrans - Phoenix Iron Works (Phoenix 800) Investigation

Boring Number	Sample Depth (m)	Sample Depth (ft)	DHS-LUFT TPHg	DHS-LUFT TPHd	1664 TRPH	8260 VOCs	8270 SVOCs
P-1	0.15	0.5	ND	ND	100	ND	ND
	0.9	3	ND	ND	60	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	120	ND	ND
P-2	0.15	0.5	ND	ND	ND	ND	ND
	0.9	3	ND	ND	ND	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND
P-3	0.15	0.5	ND	ND	ND	ND	ND
	0.9	3	ND	ND	ND	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND
P-4	0.15	0.5	ND	ND	ND	trichloroethene - 0.012	ND
	0.9	3	ND	ND	ND	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	trichloroethene - 0.0068	ND
P-5	0.15	0.5	ND	ND	ND	ND	ND
	0.9	3	ND	ND	140	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	120	ND	ND
P-6	0.9	3	ND	ND	ND	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND
P-7	0.15	0.5	ND	ND	ND	ND	ND
	0.9	3	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND
P-8	0.15	0.5	ND	ND	1,100	ND	ND
	0.9	3	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND
P-9	0.15	0.5	ND	ND	ND	ND	ND
	0.9	3	ND	ND	60	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND
P-10	0.15	0.5	ND	ND	180	tetrachloroethene - 0.010	ND
	0.9	3	ND	ND	80	ND	ND
	2.1	7	ND	ND	120	ND	ND
	3.1	10	ND	ND	240	ND	ND
P-11	0.15	0.5	ND	ND	160	ND	ND
	0.9	3	ND	ND	60	ND	ND
	3.1	10	ND	ND	80	ND	ND
P-12	0.15	0.5	ND	ND	ND	trichloroethene - 0.026	ND
	0.9	3	ND	ND	ND	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND
P-13	0.15	0.5	ND	ND	60	tetrachloroethene - 0.015	ND
	0.9	3	ND	ND	80	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	60	ND	ND
P-14	0.15	0.5	ND	ND	ND	ND	ND
	0.9	3	ND	ND	ND	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND
P-15	0.15	0.5	ND	ND	ND	ND	ND
	0.9	3	ND	ND	ND	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND

TABLE 2

ORGANIC RESULTS - SOIL

Caltrans - Phoenix Iron Works (Phoenix 800) Investigation

Boring Number	Sample Depth (m)	Sample Depth (ft)	DHS-LUFT TPHg	DHS-LUFT TPHd	1664 TRPH	8260 VOCs	8270 SVOCs
P-16	0.15	0.5	ND	ND	100	ND	anthracene - 0.780 benzo(a)anthracene - 0.340 benzo(b)fluoranthene - 0.520 benzo(k)fluoranthene - 0.520 benzo(g,h,I)perylene - 0.430 benzo(a)pyrene - 0.500 chrysene - 0.440 fluoranthene - 0.910 pyrene - 0.960
	0.9	3	ND	ND	120	ND	ND
	2.1	7	ND	ND	ND	ND	ND
P-17	0.15	0.5	ND	ND	180	ND	ND
	0.9	3	ND	ND	ND	ND	ND
	2.1	7	ND	ND	60	trichloroethene - 0.015	ND
	3.1	10	ND	ND	ND	trichloroethene - 0.028	ND
P-18	0.15	0.5	ND	ND	ND	ND	ND
	0.9	3	ND	ND	320	ND	ND
	2.1	7	ND	ND	ND	ND	ND
P-19	0.15	0.5	ND	ND	80	ND	benzo(k)fluoranthene - 8 benzo(g,h,I)perylene - 2 benzo(a)pyrene - 13 di-n-octyl phthalate - 1.4 dibenz(a,h)anthracene - 1.1 indeno(1,2,3-cd)pyrene - 0.920
	0.9	3	ND	ND	100	ND	ND
	2.1	7	ND	ND	100	ND	ND
	3.1	10	ND	ND	60	ND	ND
P-20	0.15	0.5	ND	ND	140	ND	ND
	0.9	3	ND	ND	80	ND	ND
	2.1	7	ND	ND	120	ND	ND
	3.1	10	ND	ND	160	ND	ND
P-21	0.15	0.5	ND	ND	260	trichloroethene - 0.023	ND
	0.9	3	ND	ND	ND	ND	ND
	2.1	7	ND	ND	ND	trichloroethene - 0.0042	ND
	3.1	10	ND	ND	ND	trichloroethene - 0.0057	ND
P-22	0.15	0.5	ND	ND	80	ND	ND
	0.9	3	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND
P-23	0.15	0.5	ND	ND	ND	ND	ND
	0.9	3	ND	ND	100	ND	ND
	3.1	10	ND	ND	100	ND	ND
P-24	0.9	3	ND	ND	ND	styrene - 0.0037	ND
	2.1	7	ND	ND	60	ND	ND
	3.1	10	ND	ND	ND	ND	ND
P-25	0.15	0.5	ND	ND	1,200	ND	ND
	0.9	3	ND	ND	ND	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND
P-26	0.15	0.5	ND	ND	1,140	ND	ND
	0.9	3	ND	ND	ND	ND	ND
	2.1	7	ND	ND	ND	ND	ND
	3.1	10	ND	ND	ND	ND	ND
Reporting Limits			1.0	1.0	50	0.002 to 0.0071	0.33 to 1.6

Notes:

1. Analyses conducted in general accordance with the U.S. Environmental Protection Agency Method listed. DHS-LUFT = Department of Health Services Leaking Underground Tank Manual method.
2. Sample depths reported in approximate meters (m) / feet (ft) below the ground surface.
3. Concentrations reported in milligrams per kilogram.
4. ND = not detected in concentrations exceeding the listed reporting limit.
5. VOCs = volatile organic compounds. SVOCs = semivolatile organic compounds. TPHg = total petroleum hydrocarbons as gasoline. TPHd = total petroleum hydrocarbons as diesel. TRPH = total recoverable petroleum hydrocarbons.
6. Soil samples labeled as follows: boring no.-depth-sample tube no. with 1 being from the bottom. Ex.: P1-0.5': boring P-1, 0.5-foot depth.

TABLE 3

INORGANIC RESULTS - SOIL

Caltrans - Phoenix Iron Works (Phoenix 800) Investigation

Boring Number	Sample Depth (m)	Sample Depth (ft)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
P-1	0.15	0.5	ND	ND	78	ND	ND	28	4.2	17	13	ND	ND	20	ND	ND	ND	21	40
	0.9	3	ND	ND	46	ND	ND	32	ND	16	3.2	ND	ND	23	ND	ND	ND	25	27
	2.1	7	ND	ND	115	ND	ND	60	5.8	35	2.6	0.028	ND	53	ND	ND	ND	38	43
	3.1	10	ND	ND	97	ND	ND	55	9.2	103	2.9	ND	ND	63	ND	ND	ND	38	78
P-2	0.15	0.5	ND	ND	88	ND	ND	34	ND	19	**225**	0.450	ND	22	ND	ND	ND	23	79
	0.9	3	ND	ND	56	ND	ND	30	ND	12	1.5	0.011	ND	21	ND	ND	ND	22	21
	2.1	7	ND	ND	67	ND	ND	53	6.1	13	1.8	ND	ND	46	ND	ND	ND	28	29
	3.1	10	ND	ND	84	ND	1.1	45	8.6	16	2.4	0.014	ND	54	ND	ND	ND	33	34
P-3	0.15	0.5	ND	ND	80	0.46	ND	27	ND	24	5.9	0.021	ND	16	ND	ND	ND	21	29
	0.9	3	ND	ND	46	ND	ND	33	ND	12	2.0	0.011	ND	20	ND	ND	ND	26	21
	2.1	7	ND	ND	67	ND	ND	43	5.1	15	1.9	ND	ND	38	ND	ND	ND	28	27
	3.1	10	ND	ND	78	0.32	ND	46	8.2	12	2.8	ND	ND	66	ND	ND	ND	34	35
P-4	0.15	0.5	ND	ND	61	ND	ND	31	ND	18	2.3	0.014	ND	18	ND	ND	ND	20	27
	0.9	3	ND	ND	51	ND	ND	35	ND	13	1.7	ND	ND	22	ND	ND	ND	23	21
	2.1	7	ND	ND	72	ND	ND	46	6.7	12	2.2	0.013	ND	45	ND	ND	ND	28	27
	3.1	10	ND	ND	84	ND	ND	81	ND	18	2.2	ND	ND	54	ND	ND	ND	34	34
P-5	0.15	0.5	ND	ND	380	0.43	1.4	34	7.7	65	704	0.566	ND	33	ND	ND	ND	33	831
	0.9	3	ND	ND	53	ND	ND	32	ND	20	3.5	ND	ND	23	ND	ND	ND	25	24
	2.1	7	ND	ND	44	ND	ND	36	5.8	15	1.6	0.022	ND	32	ND	ND	ND	25	23
	3.1	10	ND	ND	64	ND	ND	38	6.1	25	2.2	ND	ND	41	ND	ND	ND	26	32
P-6	0.9	3	ND	ND	36	ND	ND	32	ND	12	1.8	0.012	ND	24	ND	ND	ND	22	462
	2.1	7	ND	ND	61	ND	ND	44	7.6	12	2.5	ND	ND	54	ND	ND	ND	32	33
	3.1	10	ND	ND	64	ND	ND	52	7.1	16	2.3	ND	ND	55	ND	ND	ND	ND	36
P-7	0.15	0.5	ND	ND	108	ND	ND	37	5.9	40	6.2	0.018	ND	28	ND	ND	ND	28	49
	0.9	3	ND	ND	46	ND	ND	32	ND	12	2.7	0.011	ND	20	ND	ND	ND	23	20
	3.1	10	ND	ND	66	ND	ND	48	6.6	14	1.9	0.011	ND	53	ND	ND	ND	28	34
P-8	0.15	0.5	ND	ND	172	ND	ND	31	5.7	38	711	0.24	ND	30	ND	ND	ND	22	194
	0.9	3	ND	ND	57	ND	ND	39	ND	7.1	2.5	ND	ND	21	ND	ND	ND	25	57
	3.1	10	ND	ND	57	ND	ND	34	6.0	8.3	1.8	ND	ND	42	ND	ND	ND	26	24
P-9	0.15	0.5	ND	ND	236	0.41	ND	29	5.5	161	***1,690***	1.1	ND	19	ND	ND	ND	27	254
	0.9	3	ND	ND	46	ND	ND	27	ND	15	1.9	ND	ND	19	ND	ND	ND	21	23
	2.1	7	ND	ND	69	0.32	ND	38	7.0	31	3.0	0.023	ND	48	ND	ND	ND	35	35
	3.1	10	ND	ND	67	ND	ND	37	6.8	43	2.0	ND	ND	46	ND	ND	ND	26	42
P-10	0.15	0.5	ND	ND	108	ND	ND	27	ND	17	108	0.263	ND	20	ND	ND	ND	23	100
	0.9	3	ND	ND	42	ND	ND	27	ND	5.5	8.5	ND	ND	19	ND	ND	ND	21	14
	2.1	7	ND	ND	79	ND	ND	36	7.0	9.8	2.0	ND	ND	47	ND	ND	ND	29	26
	3.1	10	ND	ND	71	ND	ND	39	6.0	9.9	1.5	ND	ND	45	ND	ND	ND	26	25
P-11	0.15	0.5	ND	ND	207	ND	0.91	27	5.6	36	505	0.665	ND	28	ND	ND	ND	21	510
	0.9	3	ND	ND	56	ND	ND	30	ND	5.4	1.2	ND	ND	22	ND	ND	ND	22	17
	3.1	10	ND	ND	68	ND	ND	39	5.8	8.4	1.4	ND	ND	48	ND	ND	ND	27	24
P-12	0.15	0.5	ND	ND	334	ND	0.95	25	5.0	33	***871***	0.17	ND	23	ND	ND	ND	23	822
	0.9	3	ND	ND	46	ND	ND	27	ND	5.2	1.7	ND	ND	18	ND	ND	ND	21	16
	2.1	7	ND	ND	54	ND	ND	33	6.7	11	2.0	ND	ND	38	ND	ND	ND	26	25
	3.1	10	ND	ND	72	ND	ND	28	6.4	8.3	2.4	ND	ND	43	ND	ND	ND	26	23
P-13	0.15	0.5	ND	ND	204	ND	ND	ND	ND	31	**90**	0.090	ND	17	ND	ND	ND	19	65
	0.9	3	ND	ND	51	ND	ND	32	ND	32	2.0	ND	ND	17	ND	ND	ND	20	31
	2.1	7	ND	ND	97	0.37	ND	60	9.7	69	2.9	ND	ND	60	ND	ND	ND	40	58
	3.1	10	ND	ND	67	ND	ND	67	6.1	28	1.9	0.012	ND	46	ND	ND	ND	28	34
P-14	0.15	0.5	ND	ND	66	ND	ND	38	ND	21	9.9	0.035	ND	21	ND	ND	ND	23	48
	0.9	3	ND	ND	36	ND	ND	33	ND	13	2.9	0.012	ND	19	ND	ND	ND	22	24
	2.1	7	ND	ND	72	ND	ND	47	7.6	11	2.3	ND	ND	54	ND	ND	ND	32	33
	3.1	10	ND	ND	74	ND	ND	50	8.2	29	3.3	ND	ND	61	ND	ND	ND	34	46
P-15	0.15	0.5	ND	ND	134	ND	ND	26	ND	11	27	0.088	ND	19	ND	ND	ND	20	38
	0.9	3	ND	ND	54	ND	ND	30	ND	7.9	1.5	ND	ND	22	ND	ND	ND	24	20
	2.1	7	ND	ND	27	ND	ND	27	ND	5.1	1.2	0.017	ND	19	ND	ND	ND	18	14
	3.1	10	ND	ND	58	ND	ND	30	5.1	6.8	1.6	ND	ND	36	ND	ND	ND	20	21

TABLE 3

INORGANIC RESULTS - SOIL
Caltrans - Phoenix Iron Works (Phoenix 800) Investigation

Boring Number	Sample Depth (m)	Sample Depth (ft)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
P-16	0.15	0.5	ND	ND	107	ND	ND	28	ND	32	**53**	0.078	ND	21	ND	ND	ND	22	43
	0.9	3	ND	ND	51	ND	ND	30	ND	4.8	1.0	ND	ND	18	ND	ND	ND	20	27
	2.1	7	ND	ND	59	ND	ND	32	5.5	7.3	1.4	ND	ND	38	ND	ND	ND	24	23
P-17	0.15	0.5	ND	ND	74	ND	ND	35	ND	16	2.1	0.034	ND	19	ND	ND	ND	21	38
	0.9	3	ND	ND	44	ND	ND	32	ND	13	1.6	ND	ND	20	ND	ND	ND	23	22
	2.1	7	ND	ND	85	ND	ND	47	7.3	28	2.6	0.032	ND	55	ND	ND	ND	33	39
	3.1	10	ND	ND	80	ND	ND	53	7.5	28	2.0	0.10	ND	54	ND	ND	ND	30	47
P-18	0.15	0.5	ND	ND	56	ND	ND	21	ND	6.6	11	ND	ND	16	ND	ND	ND	18	48
	0.9	3	ND	ND	51	ND	ND	27	ND	5.6	1.7	ND	ND	18	ND	ND	ND	23	18
	2.1	7	ND	ND	77	0.39	ND	44	ND	11	2.1	ND	ND	41	ND	ND	ND	34	29
P-19	0.15	0.5	ND	ND	158	ND	ND	21	ND	29	**351**	0.24	ND	16	ND	ND	ND	20	203
	0.9	3	ND	ND	50	ND	ND	26	ND	8.6	1.7	0.024	ND	18	ND	ND	ND	24	20
	2.1	7	ND	ND	59	0.30	ND	35	6.2	7.5	2.1	ND	ND	36	ND	ND	ND	27	26
	3.1	10	ND	ND	58	ND	ND	31	6.3	20	3.5	ND	ND	39	ND	ND	ND	28	42
P-20	0.15	0.5	ND	ND	238	ND	ND	25	6.0	44	**518**	0.28	ND	32	ND	ND	ND	24	274
	0.9	3	ND	ND	54	ND	ND	35	5.1	8.2	2.4	ND	ND	22	ND	ND	ND	28	23
	2.1	7	ND	ND	168	0.44	ND	37	7.8	52	**282**	0.16	ND	31	ND	ND	ND	36	168
	3.1	10	ND	ND	77	0.30	ND	31	6.0	7.5	2.2	ND	ND	38	ND	ND	ND	27	28
P-21	0.15	0.5	ND	ND	313	ND	4.2	23	6.0	75	***1,500***	0.20	ND	28	ND	ND	ND	20	1,690
	0.9	3	ND	ND	55	ND	ND	30	7.2	15	6.8	0.011	ND	23	ND	ND	ND	23	22
	2.1	7	ND	ND	91	0.42	ND	57	12	54	3.8	ND	ND	64	ND	ND	ND	44	54
	3.1	10	ND	ND	64	ND	ND	38	6.0	11	2.1	ND	ND	42	ND	ND	ND	26	26
P-22	0.15	0.5	ND	ND	60	ND	ND	25	ND	5.3	1.6	0.017	ND	17	ND	ND	ND	20	29
	0.9	3	ND	ND	29	ND	ND	25	ND	5.6	1.4	ND	ND	16	ND	ND	ND	20	15
	3.1	10	ND	ND	47	ND	ND	33	ND	6.0	1.4	ND	ND	33	ND	ND	ND	20	22
P-23	0.15	0.5	ND	ND	154	ND	ND	30	ND	15	**144**	0.20	ND	20	ND	ND	ND	23	61
	0.9	3	ND	ND	47	ND	ND	22	ND	4.8	1.4	ND	ND	18	ND	ND	ND	21	15
	3.1	10	ND	ND	59	ND	ND	30	ND	6.7	1.5	ND	ND	35	ND	ND	ND	22	22
P-24	0.9	3	ND	ND	54	ND	ND	38	5.6	46	10	0.15	ND	27	ND	ND	ND	25	41
	2.1	7	ND	ND	28	ND	ND	33	ND	12	1.1	0.14	ND	22	ND	ND	ND	18	26
	3.1	10	ND	ND	82	ND	ND	46	10	43	5.5	ND	ND	54	ND	ND	ND	31	62
P-25	0.15	0.5	ND	ND	123	ND	ND	42	7.4	76	**182**	0.216	ND	40	ND	ND	ND	35	196
	0.9	3	ND	ND	47	ND	ND	29	ND	7.3	ND	ND	ND	18	ND	ND	ND	20	18
	2.1	7	ND	ND	56	ND	ND	37	6.0	28	2.0	0.010	ND	42	ND	ND	ND	25	34
	3.1	10	ND	ND	69	ND	ND	48	6.8	29	1.8	ND	ND	57	ND	ND	ND	30	44
P-26	0.15	0.5	ND	ND	289	ND	ND	28	5.9	39	70	0.073	ND	29	ND	ND	ND	36	81
	0.9	3	ND	ND	92	ND	ND	24	ND	11	19	0.092	ND	16	ND	ND	ND	20	50
	2.1	7	ND	ND	86	ND	ND	44	5.7	16	2.2	0.043	ND	43	ND	ND	ND	28	34
	3.1	10	ND	ND	83	0.32	ND	49	5.5	10	2.4	ND	ND	52	ND	ND	ND	35	30
TTLC			500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
10X STLC			150	50	1,000	7.5	10	5,600	800	250	50	2	3,500	200	10	50	70	240	2,500
PRG			67	19	12,000	1.8	24	170,000	22	5,000	840	45	830	400	830	830	27	1,200	50,000
Reporting Limit			6.0	10	2.0	0.30	0.50	1.0	5.0	2.0	1.0	0.010	5.0	4.0	10	1.0	10	5.0	1.5

Notes:
1. Metals analyses conducted in general accordance with U.S. Environmental Protection Agency (EPA) Methods 6010 and 7471.
2. Sample depths reported in approximate meters (m) / feet (ft) below the ground surface.
3. Concentrations reported in milligrams per kilogram.
4. ND = not detected in concentrations exceeding the listed reporting limit.
5. Soil samples labeled as follows: boring no.-depth. Ex.: P1-0.5': boring P-1, 0.5-foot depth.
6. TTLC = Total Threshold Limit Concentration.
7. 10X STLC = 10 times the Soluble Threshold Limit Concentration. Values listed in milligrams per liter.
8. PRG = preliminary remediation goal established for the Cypress area of investigation by the Office of Scientific Affairs. PRG for chromium is for trivalent chromium.
9. Bold results equal or exceed 10X STLC values. Bold and italics results equal or exceed the TTLC. Underlined results equal or exceed the PRG.

TABLE 4

SOLUBLE METAL RESULTS - SOIL

Caltrans - Phoenix Iron Works (Phoenix 800) Investigation

Boring Number	Sample Depth meters	Sample Depth feet	Lead Total	Lead WET	Lead TCLP
P-2	0.15	0.5	225	**11**	**17**
P-5	0.15	0.5	704		0.42
P-8	0.15	0.5	711		**60**
P-9	0.15	0.5	**1,690**		1.2
P-10	0.15	0.5	108	**14**	
P-11	0.15	0.5	505		0.57
P-12	0.15	0.5	871		0.12
P-13	0.15	0.5	90	**6.2**	
P-16	0.15	0.5	53	0.26	
P-19	0.15	0.5	351	**33**	0.066
P-20	0.15	0.5	518		0.16
	2.1	7	282	0.077	0.063
P-21	0.15	0.5	**1,500**		3.1
P-23	0.15	0.5	144	**10**	
P-25	0.15	0.5	182	**35**	
P-26	0.15	0.5	70	**10**	
TTLC			1,000		
STLC				5.0	
TCLP					5.0
Reporting Limit			1.0	0.050	0.050

Notes:

1. TTLC = total threshold limit concentration. STLC = soluble threshold limit concentration. WET = waste extraction test. TCLP = toxicity characteristic leaching procedure.
2. Sample depths reported in approximate meters (m) / feet (ft) below the ground surface.
3. WET conducted in general accordance with California Title 22 procedures. TCLP extraction and metal analyses conducted in general accordance with U.S. Environmental Protection Agency methods.
4. Total metal results reported in milligrams per kilogram. WET and TCLP results reported in milligrams per liter.
5. ND = not detected in concentrations exceeding the listed reporting limit.
6. Soil samples labeled as follows: boring no.-depth. Ex.: P1-0.3 - boring P-1, 0.3-meter depth.
7. Bold values exceed the TTLC, STLC, or TCLP.

TABLE 5

ORGANIC RESULTS - WATER

Caltrans - Phoenix Iron Works (Phoenix 800) Investigation

Boring Number	Sample Type	DHS-LUFT TPHg	DHS-LUFT TPHd	1664 TRPH	8260 VOCs	8270 SVOCs
P-1	GW	ND	ND	ND	ND	ND
P-2	GW	ND	ND	ND	styrene - 0.0028	ND
P-3	GW	ND	ND	ND	ND	ND
P-5	GW	ND	ND	ND	ND	ND
P-6	GW	ND	ND	ND	ND	ND
P-7	GW	ND	ND	ND	ND	ND
P-9	GW	ND	ND	ND	chloroform - 0.023	ND
P-12	GW	ND	ND	ND	ND	ND
P-13	GW	ND	ND	ND	2-hexanone - 0.370	ND
P-14	GW	ND	ND	ND	vinyl acetate - 0.0055 chloroform - 0.0026	ND
P-15	GW	ND	ND	ND	ND	ND
P-17	GW	ND	ND	ND	carbon disulfide - 0.0037 trichloroethene - 0.140	ND
P-21	GW	ND	ND	ND	trichloroethene - 0.046	ND
P-23	GW	ND	ND	ND	carbon disulfide - 0.0022 benzene - 0.055 toluene - 0.0055	ND
P-24	GW	ND	ND	ND	carbon disulfide - 0.0070 trichloroethene - 0.0023	ND
P-10	ER	ND	ND	ND	ND	ND
Reporting Limits		0.05	0.05	5.0	0.002 to 0.0071	0.01 to 0.05

Notes:

1. Analyses conducted in general accordance with the U.S. Environmental Protection Agency Method listed. DHS-LUFT = Department of Health Services Leaking Underground Tank Manual method.
2. Sample types: GW = groundwater grab sample. ER = equipment rinse sample.
3. Concentrations reported in milligrams per liter (mg/l).
4. ND = not detected in concentrations exceeding the listed reporting limit.
5. VOCs = volatile organic compounds. SVOCs = semivolatile organic compounds. TPHg = total petroleum hydrocarbons as gasoline. TPHd = total petroleum hydrocarbons as diesel. TRPH = total recoverable petroleum hydrocarbons.
6. Groundwater samples labeled as follows: boring no.-GW. Ex.: P-1-GW for the groundwater sample collected from boring P-1.

TABLE 6

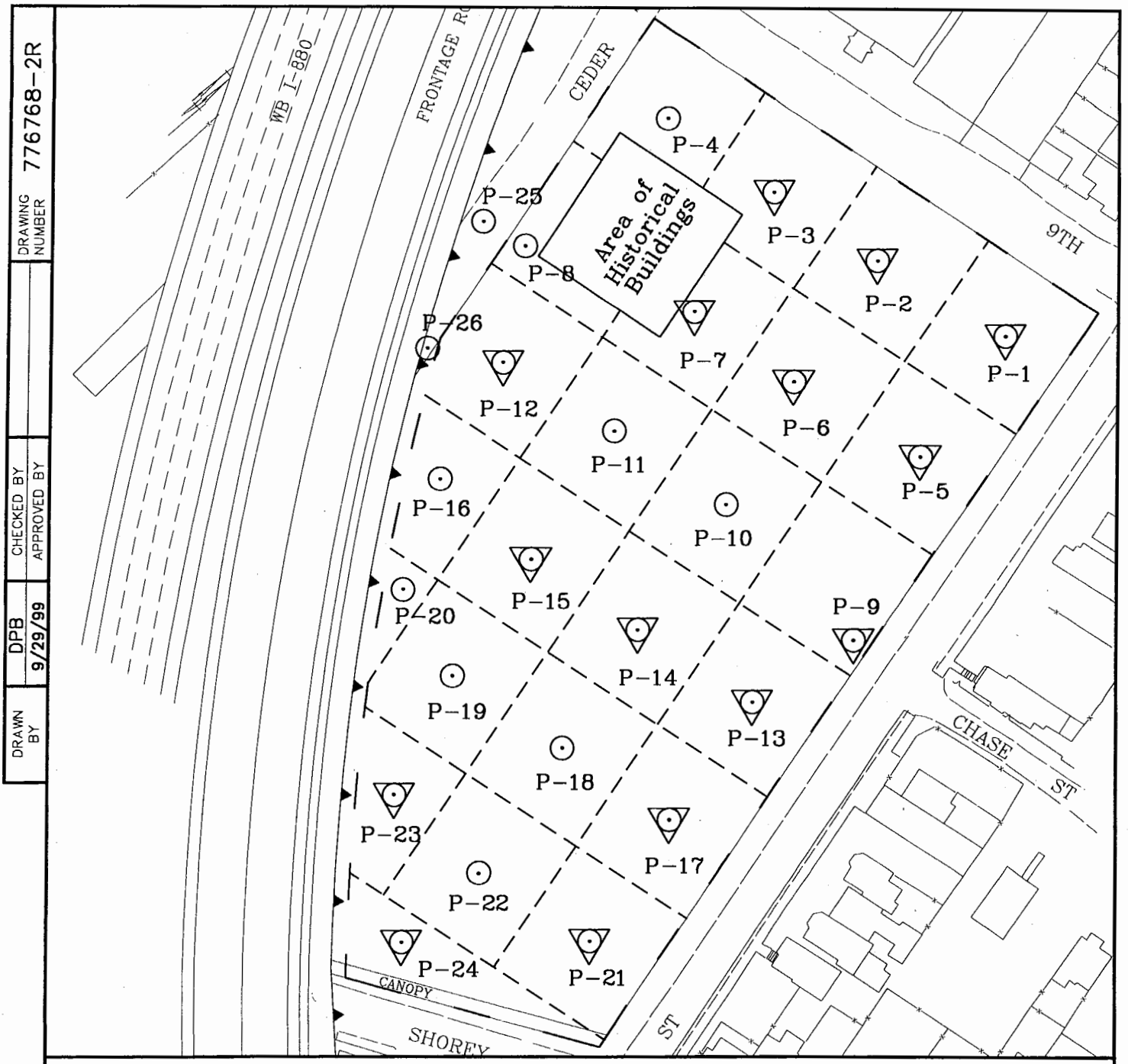
INORGANIC RESULTS - WATER

Caltrans - Phoenix Iron Works (Phoenix 800) Investigation

Boring Number	Sample Type	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	TDS
P-1	GW	ND	ND	0.92	ND	ND	**0.33**	0.071	0.076	**0.025**	ND	ND	**0.53**	ND	ND	ND	0.24	0.43	**809**
P-2	GW	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.13	393
P-3	GW	ND	ND	0.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.13	**961**
P-5	GW	ND	ND	0.35	ND	ND	**0.12**	ND	0.031	**0.027**	ND	ND	**0.19**	ND	ND	ND	0.097	0.11	**926**
P-6	GW	ND	ND	0.17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	**531**
P-7	GW	ND	ND	0.030	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.049	**898**
P-9	GW	ND	ND	0.28	ND	ND	**0.086**	ND	0.020	ND	ND	ND	0.082	ND	ND	ND	0.072	0.10	287
P-12	GW	ND	ND	0.098	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**749**
P-13	GW	ND	ND	**1.3**	**0.0042**	ND	**0.56**	0.11	0.13	**0.059**	0.00029	ND	**0.70**	ND	ND	ND	0.45	0.50	320
P-14	GW	ND	ND	0.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22	470
P-15	GW	ND	ND	0.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.028	**744**
P-17	GW	ND	ND	**1.2**	0.0034	ND	**0.46**	0.11	0.12	**0.061**	0.00037	ND	**0.68**	ND	ND	ND	0.38	0.38	**609**
P-21	GW	ND	ND	**1.7**	**0.0045**	ND	**0.65**	0.16	0.18	**0.51**	0.00050	ND	**0.97**	ND	ND	ND	0.52	0.87	**979**
P-23	GW	ND	ND	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.016	**735**
P-24	GW	ND	ND	**3.3**	**0.013**	ND	**1.8**	0.36	0.48	**1.1**	0.0016	ND	**2.3**	ND	ND	ND	1.4	1.5	**1,312**
P-10	ER	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Drinking Water Standards	CA MCL	0.006	0.05	1	0.004	0.005	0.05		1.3	0.015	0.002		0.1	0.05		0.002			
	CA 2 MCL								1						0.1			5	500
	US MCL	0.006	0.05	2	0.004	0.005	0.1		1.3	0.015	0.002		0.1	0.05		0.002			
	US 2 MCL								1						0.1			5	500
Reporting Limits		0.060	0.10	0.020	0.0030	0.0050	0.010	0.050	0.020	0.010	0.00020	0.050	0.040	0.10	0.010	0.10	0.050	0.015	10

Notes:

1. Metals analyses conducted in general accordance with U.S. Environmental Protection Agency (EPA) Methods 6010 and 7471. TDS analysis conducted in general accordance with EPA Method 160.1.
2. Sample type: GW = groundwater grab sample. ER = equipment rinse sample.
3. Concentrations reported in milligrams per liter.
4. TDS = total dissolved solids.
5. Bold results exceed drinking water standard levels.
6. ND = not detected in concentrations exceeding the listed reporting limit.
7. Groundwater samples labeled as follows: boring no.-GW. Ex.: P-1-GW for the groundwater sample collected from boring P-1.
8. CA MCL = California primary maximum contaminant level (MCL). CA 2 MCL = California secondary MCL. US MCL = U.S. primary MCL. US 2 MCL = U.S. secondary MCL.



DRAWING NUMBER 776768-2R

DRAWN BY	CHECKED BY
DPB	
9/29/99	APPROVED BY

LEGEND

P-2 BORING LOCATION AND DESIGNATION

GROUNDWATER SAMPLE LOCATION

Notes:

1. All locations and dimensions are approximate.
2. Base map provided by Caltrans.

APPROXIMATE SCALE

0 30 61 METERS
0 100 200 FEET

N

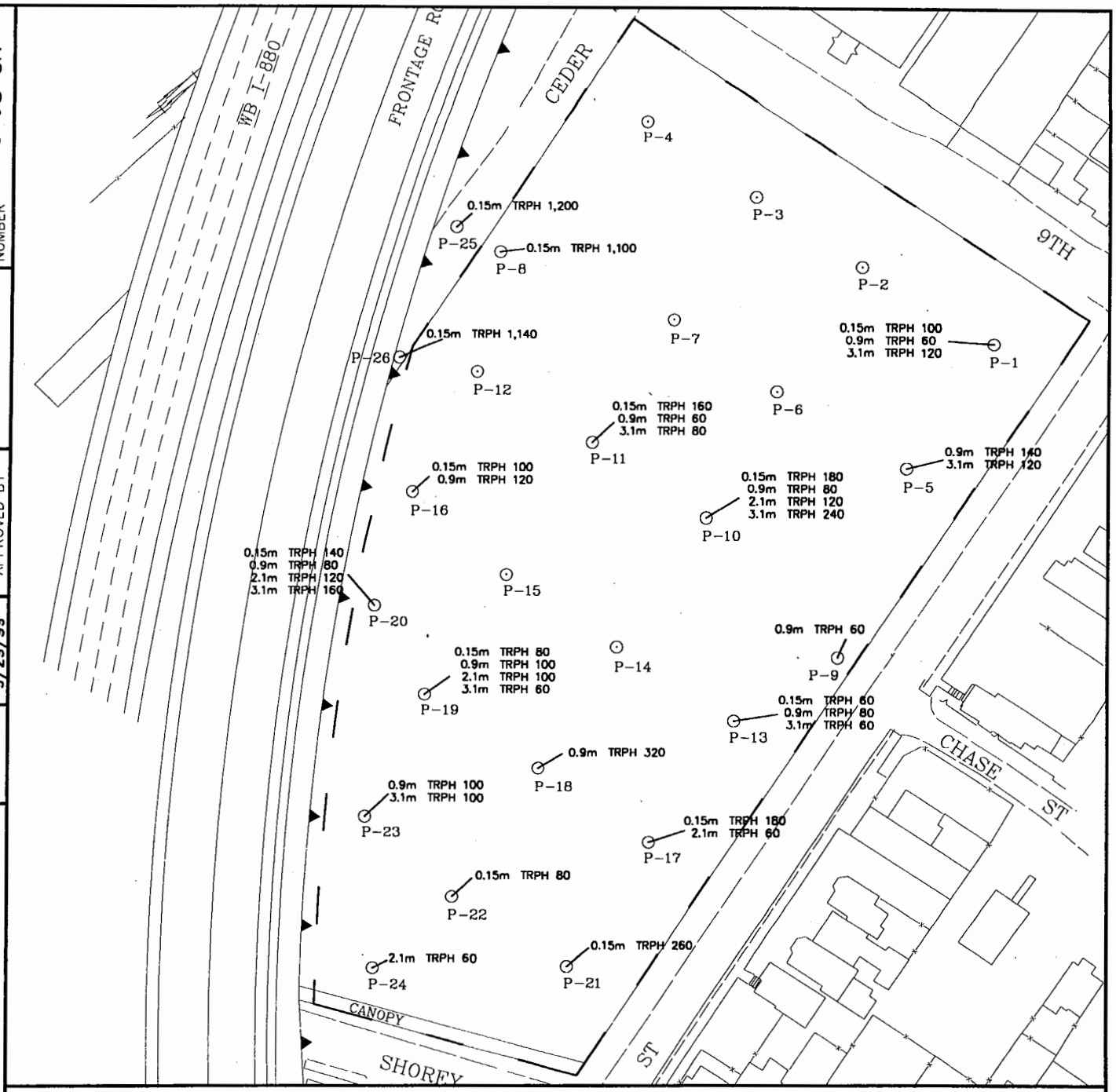
FIGURE 2

SOIL AND GROUNDWATER SAMPLE LOCATIONS

PHOENIX IRON WORKS
OAKLAND, CALIFORNIA

IT CORPORATION
A Member of the IT Group

PHXFIG2R.DWG



DRAWING NUMBER 776768-3R

DRAWN BY	CHECKED BY
DPB	APPROVED BY
9/29/99	

LEGEND

P-2 — BORING LOCATION AND DESIGNATION

0.15m TRPH 180 — SAMPLE DEPTH (meters) AND TOTAL RECOVERABLE PETROLEUM HYDROCARBON CONCENTRATION (milligrams per kilogram)

Notes:

1. All locations and dimensions are approximate.
2. Base map provided by Caltrans.

APPROXIMATE SCALE

0 30 61 METERS
0 100 200 FEET

N

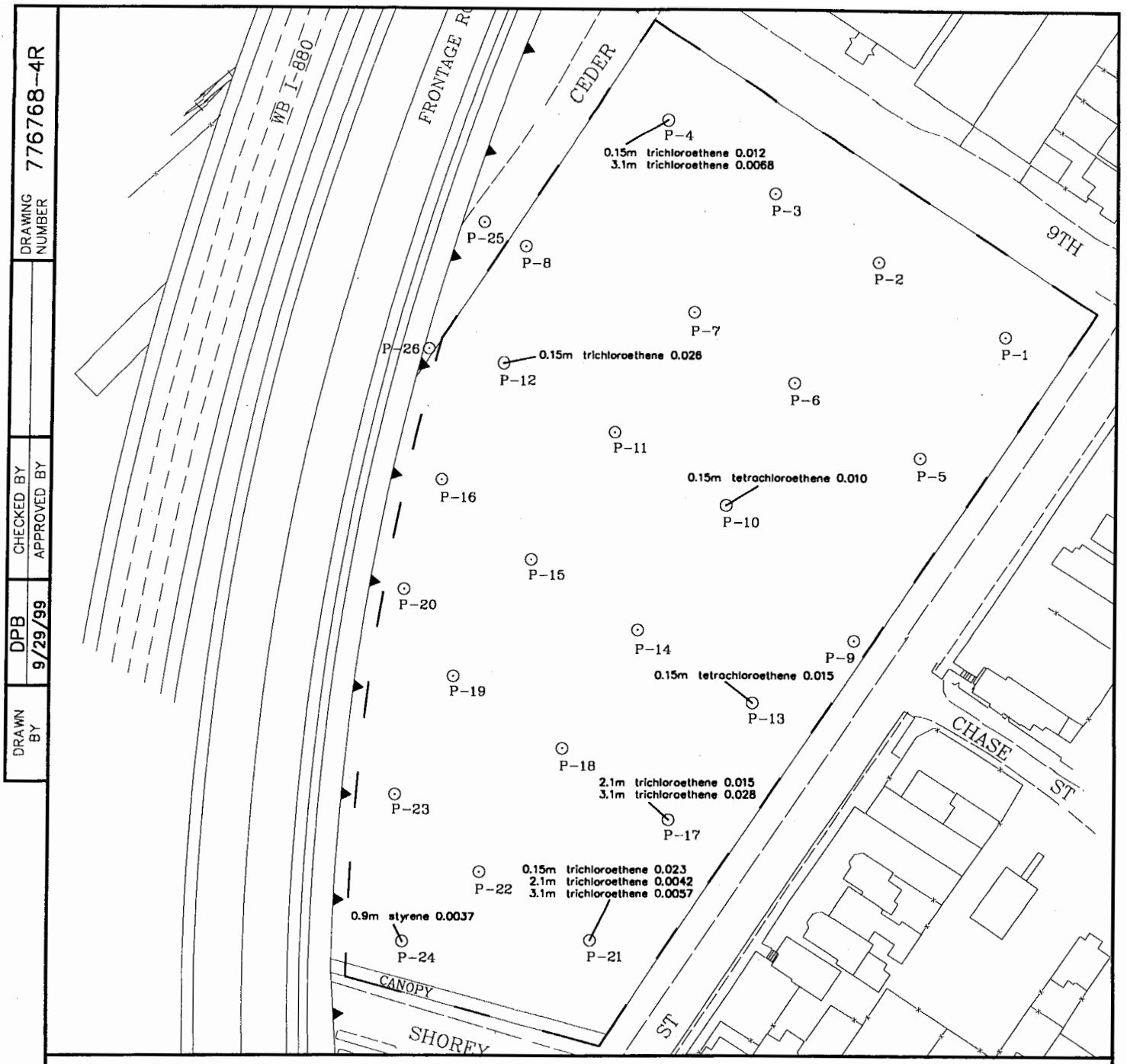
FIGURE 3

PETROLEUM HYDROCARBON DETECTIONS IN SOIL

PHOENIX IRON WORKS
OAKLAND, CALIFORNIA

IT CORPORATION
A Member of the IT Group

PHXFIG3R.DWG/HYDROCARBONS



DRAWING NUMBER 776768-4R

DRAWN BY	CHECKED BY
DPB	
9/29/99	APPROVED BY

LEGEND

P-2 — BORING LOCATION AND DESIGNATION

0.15m trichloroethene 0.012 — SAMPLE DEPTH (meters) AND VOLATILE ORGANIC COMPOUND CONCENTRATION (milligrams per kilogram)

Notes:

1. All locations and dimensions are approximate.
2. Base map provided by Caltrans.

APPROXIMATE SCALE

0 30 61 METERS
0 100 200 FEET

FIGURE 4

VOLATILE ORGANIC COMPOUND DETECTIONS IN SOIL

PHOENIX IRON WORKS
OAKLAND, CALIFORNIA

IT CORPORATION
A Member of the IT Group

PHXFIG3R.DWG/VOCS

DRAWING NUMBER 776768-5R

DRAWN BY	DPB	CHECKED BY	
	9/29/99	APPROVED BY	

LEGEND

⊙ P-2 — BORING LOCATION AND DESIGNATION

0.15m chrysene 0.440 — SAMPLE DEPTH (meters) AND SEMIVOLATILE ORGANIC COMPOUND CONCENTRATION (milligrams per kilogram)

Notes:

1. All locations and dimensions are approximate.
2. Base map provided by Caltrans.

APPROXIMATE SCALE

0 30 61 METERS
0 100 200 FEET

N

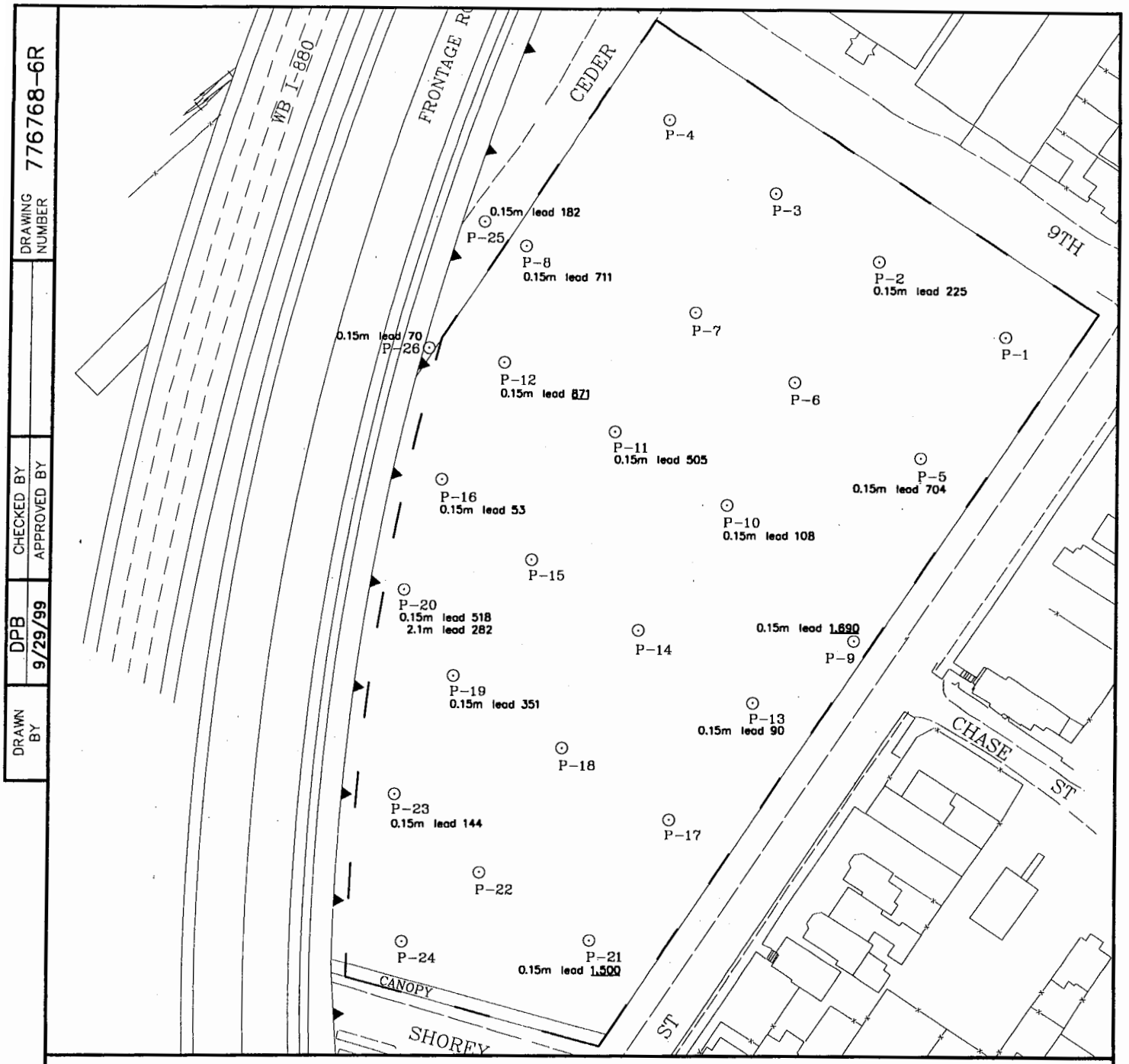
FIGURE 5

SEMIVOLATILE ORGANIC COMPOUND DETECTIONS IN SOIL

PHOENIX IRON WORKS
OAKLAND, CALIFORNIA

IT CORPORATION
A Member of the IT Group

PHXFIG3R.DWG/SVOCS



DRAWING NUMBER 776768-6R

DRAWN BY	CHECKED BY
DPB	
9/29/99	APPROVED BY

LEGEND

P-2 — BORING LOCATION AND DESIGNATION

0.15m lead 225 — SAMPLE DEPTH (meters) AND TOTAL LEAD CONCENTRATION (milligrams per kilogram)

Notes:

1. All locations and dimensions are approximate.
2. Base map provided by Caltrans.
3. Underlined concentrations exceed the Preliminary Remediation Goal.

APPROXIMATE SCALE

0 30 61 METERS
0 100 200 FEET

N

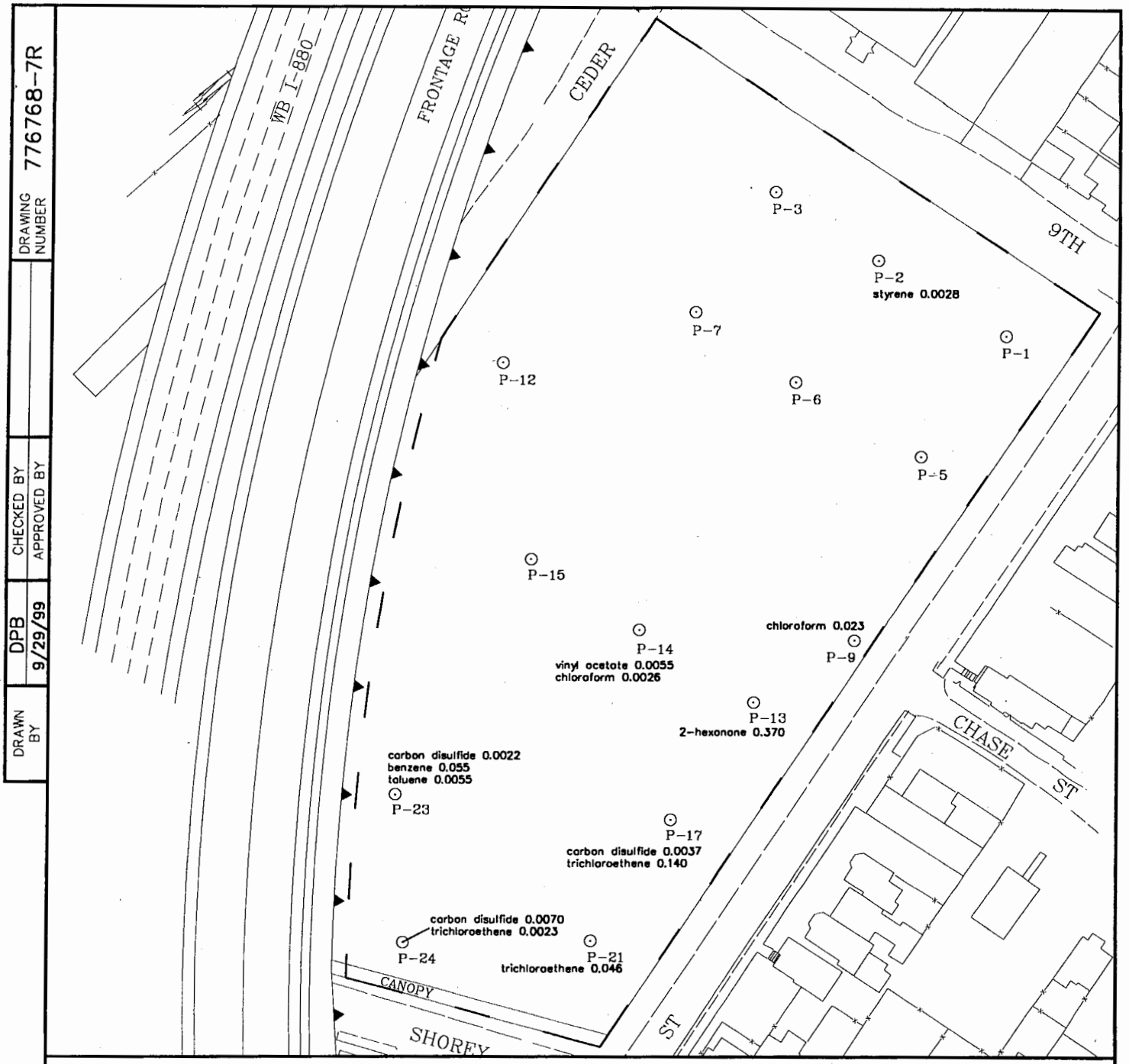
FIGURE 6

SELECTED TOTAL LEAD DETECTIONS IN SOIL

PHOENIX IRON WORKS
OAKLAND, CALIFORNIA

IT CORPORATION
A Member of the IT Group

PHXFIG3R.DWG/LEAD



DRAWING NUMBER 776768-7R

DRAWN BY	CHECKED BY
DPB	APPROVED BY
9/29/99	

LEGEND

⊙ P-2 — GROUNDWATER SAMPLE; BORING LOCATION AND DESIGNATION

styrene 0.0028 — ORGANIC COMPOUND CONCENTRATION (milligrams per liter)

Notes:

1. All locations and dimensions are approximate.
2. Base map provided by Caltrans.
3. TDS = total dissolved solids.
4. Only results exceeding Drinking Woter Stondards shown.

APPROXIMATE SCALE

0 30 61 METERS
0 100 200 FEET

N

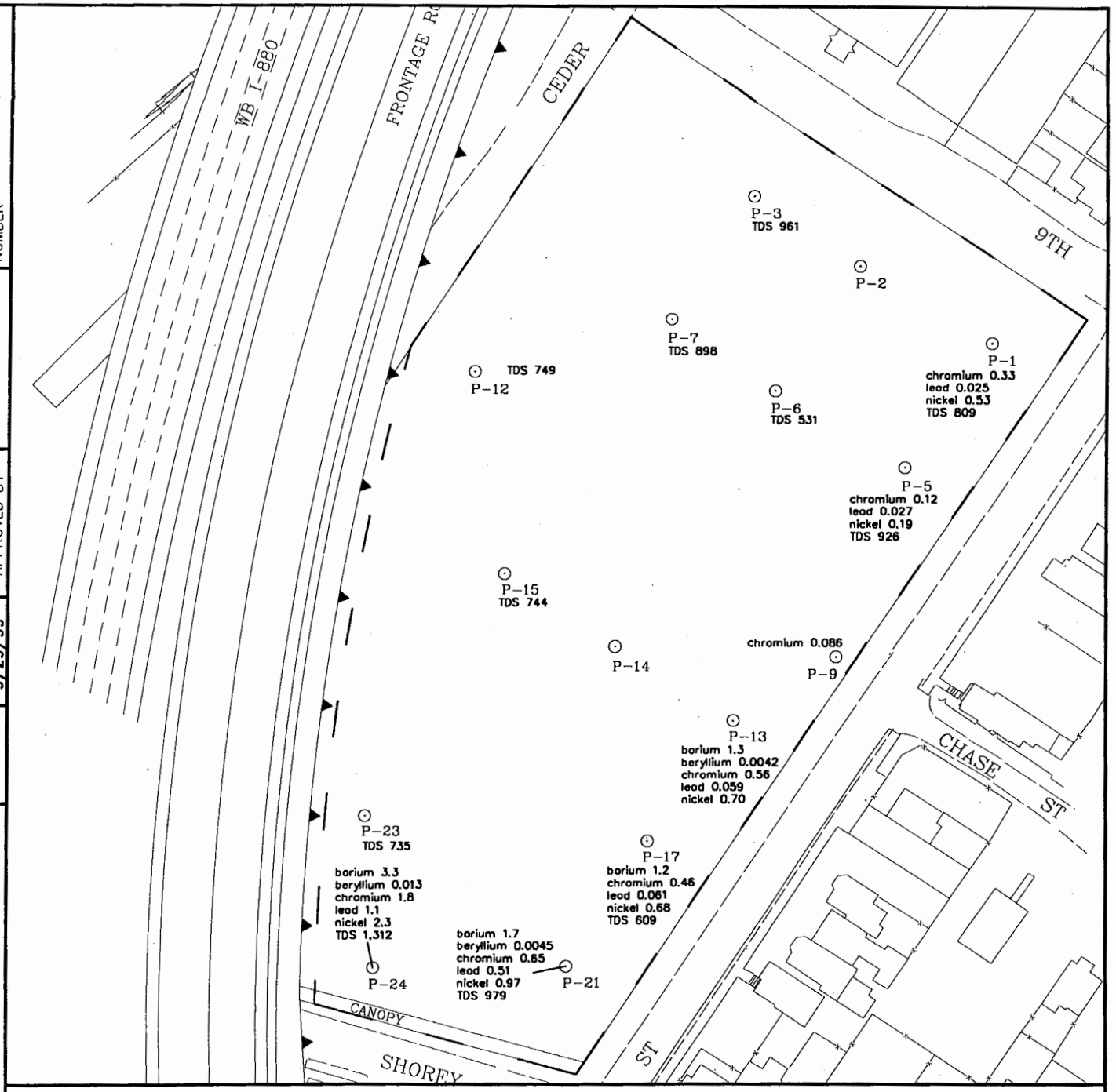
FIGURE 7

ORGANIC COMPOUND DETECTIONS IN GROUNDWATER

PHOENIX IRON WORKS
OAKLAND, CALIFORNIA

IT CORPORATION
A Member of the IT Group

PHXFIG4R.DWG/ORGANICS



DRAWING NUMBER 776768-8R

DRAWN BY	CHECKED BY
DPB	
9/29/99	APPROVED BY

LEGEND

⊙ P-2 — GROUNDWATER SAMPLE; BORING LOCATION AND DESIGNATION

lead 0.025 — HEAVY METAL OR TDS CONCENTRATION (milligrams per liter)

Notes:

1. All locations and dimensions are approximate.
2. Base map provided by Caltrans.
3. TDS = total dissolved solids.
4. Only results exceeding Drinking Water Standards shown.

APPROXIMATE SCALE

0 30 61 METERS
0 100 200 FEET

N

FIGURE 8

SELECTED INORGANIC ANALYSIS DETECTIONS IN GROUNDWATER

PHOENIX IRON WORKS
OAKLAND, CALIFORNIA

IT CORPORATION
A Member of the IT Group

PHXFIG4R.DWG/INORGANICS

B4-Table 1 Through 3 and Figures 2 Through 4 from Phase II Soil Investigation Report Prepared by Northgate Environmental Management, Inc. Dated November 9, 2011 (7 pp)

TABLE 1
Soil Sample Analytical Results - TEPH

Sample ID	Sample Depth (feet bgs)	TPH as diesel (mg/kg)	TPH as motor oil (mg/kg)
NG-1-1.0	1.0	**630**	**2,700**
NG-1-3.0	3.0	< 0.1	**14**
NG-1-5.0	5.0	< 0.1	**13**
NG-2-1.0	1.0	**4.4**	**130**
NG-2-1.0-D	1.0	< 0.1	**77**
NG-2-3.0	3.0	< 0.1	**8.1**
NG-2-5.0	5.0	< 0.1	< 2.0
NG-3-1.0	1.0	< 0.1	**190**
NG-3-1.0-D	1.0	< 0.1	**990**
NG-3-3.0	3.0	< 0.1	< 2.0
NG-3-5.0	5.0	< 0.1	< 2.0
NG-4-1.0	1.0	< 0.1	< 2.0
NG-4-3.0	3.0	< 0.1	**4.8**
NG-4-5.0	5.0	< 0.1	< 2.0
NG-5-1.0	1.0	< 0.1	**28**
NG-5-3.0	3.0	< 0.1	**6.9**
NG-5-5.0	5.0	< 0.1	< 1.53
Regulatory Standards			
RWQCB ESL - Residential		83	370
RWQCB ESL - Commercial/Industrial		83	2,500
RWQCB ESL - Construction Worker		4,200	12,000

NOTES:

TPH: Total Petroleum Hydrocarbons

mg/kg: milligrams per kilogram (parts per million)

<: Not detected at or above the indicated Practical Quantitation Limit (PQL)

RWQCB ESL - Residential: From Table A-1, Shallows Soil Screening Levels, Residential Land Use (RWQCB, 2008)

RWQCB ESL - Commercial From Table A-2, Shallows Soil Screening Levels, Commercial/Industrial Land Use (RWQCB, 2008)

RWQCB ESL - Construction Worker: Values from Table K-3, Direct Exposure Soil Screening Levels, Construction/Trench Worker Exposure Scenario (RWQCB, 2008)

TABLE 2
Soil Sample Analytical Results - Metals

Soil Sample ID	Sample Depth	ANALYTE																	
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Soluble Lead*	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
NG-1-1.0	1.0	<5.0	**9.3**	**64**	<2.0	<1.0	**21**	6.3	**71**	**99**	**6.1**	<0.10	<5.0	**21**	<5.0	<1.0	<5.0	**36**	**160**
NG-1-3.0	3.0	**5.1**	**65**	**170**	<2.0	**1.7**	**21**	<5.0	**23**	**22**	--	<0.10	<5.0	**15**	<5.0	**1.2**	<5.0	**27**	**17**
NG-2-1.0	1.0	<5.0	**17**	**88**	<2.0	**2.1**	**26**	**11**	**100**	**640**	**18**	**0.13**	<5.0	**25**	<5.0	<1.0	<5.0	**25**	**260**
NG-2-1.0-D	1.0	<5.0	**4.9**	**95**	<2.0	<1.0	**33**	**6.1**	**31**	**340**	**18**	**0.10**	<5.0	**26**	<5.0	<1.0	<5.0	**23**	**140**
NG-2-3.0	3.0	<5.0	**1.7**	**46**	<2.0	<1.0	**25**	<5.0	**5.6**	**2.8**	--	<0.10	<5.0	**15**	<5.0	<1.0	<5.0	**20**	**12**
NG-3-1.0	1.0	**6.1**	**7.8**	**110**	<2.0	**1.9**	**30**	**8.4**	**94**	**350**	**29**	**0.30**	<5.0	**31**	<5.0	<1.0	<5.0	**18**	**370**
NG-3-3.0	3.0	<5.0	<1.7	**65**	<2.0	<1.0	**25**	<5.0	**6.3**	**6.3**	--	<0.10	<5.0	**16**	<5.0	<1.0	<5.0	**18**	**190**
NG-4-1.0	1.0	<5.0	<1.7	**31**	<2.0	<1.0	**27**	<5.0	<5.0	**2.2**	--	<0.10	<5.0	**18**	<5.0	<1.0	<5.0	**19**	**12**
NG-4-3.0	3.0	<5.0	<1.7	**42**	<2.0	<1.0	**23**	<5.0	**5.7**	**1.4**	--	<0.10	<5.0	**15**	<5.0	<1.0	<5.0	**18**	**10**
NG-5-1.0	1.0	<5.0	**3.5**	**100**	<2.0	<1.0	**39**	**6.5**	**40**	**520**	**3.4**	<0.10	<5.0	**33**	<5.0	<1.0	<5.0	**25**	**190**
NG-5-3.0	3.0	<5.0	**7.4**	**64**	<2.0	<1.0	**53**	**11**	**150**	**180**	--	**0.24**	<5.0	**56**	<5.0	<1.0	<5.0	**26**	**93**
NG-6-1.0	1.0	<5.0	**2.8**	**96**	<2.0	<1.0	**23**	<5.0	**22**	**180**	**5.2**	<0.10	<5.0	**18**	<5.0	<1.0	<5.0	**20**	**49**
NG-6-3.0	3.0	<5.0	<1.7	**49**	<2.0	<1.0	**26**	**5.4**	**6.4**	**2.1**	--	<0.10	<5.0	**17**	<5.0	<1.0	<5.0	**20**	**12**
NG-7-1.0	1.0	<5.0	<1.7	**53**	<2.0	<1.0	**26**	<5.0	**6.5**	**5.8**	--	<0.10	<5.0	**19**	<5.0	<1.0	<5.0	**19**	**16**
NG-7-3.0	3.0	<5.0	<1.7	**40**	<2.0	<1.0	**29**	<5.0	**5.6**	**1.3**	--	<0.10	<5.0	**15**	<5.0	<1.0	<5.0	**18**	**10**
NG-8-1.0	1.0	<5.0	<1.7	**58**	<2.0	<1.0	**26**	<5.0	**6.5**	**10**	--	<0.10	<5.0	**16**	<5.0	<1.0	<5.0	**19**	**19**
NG-8-3.0	3.0	<5.0	<1.7	**38**	<2.0	<1.0	**24**	<5.0	**5.2**	**1.3**	--	<0.10	<5.0	**15**	<5.0	<1.0	<5.0	**19**	**9.7**
NG-9-1.0	1.0	<5.0	**3.0**	**62**	<2.0	<1.0	**39**	**6.5**	**11**	**21**	--	<0.10	<5.0	**33**	<5.0	<1.0	<5.0	**26**	**34**
NG-9-3.0	3.0	<5.0	<1.7	**47**	<2.0	<1.0	**27**	<5.0	**5.4**	**1.8**	--	<0.10	<5.0	**15**	<5.0	<1.0	<5.0	**19**	**11**
NG-10-1.0	1.0	<5.0	**3.6**	**200**	<2.0	<1.0	**26**	<5.0	**34**	**460**	**58**	**0.54**	<5.0	**18**	<5.0	<1.0	<5.0	**20**	**240**
NG-10-3.0	3.0	<5.0	<1.7	**32**	<2.0	<1.0	**25**	<5.0	**5.1**	**1.6**	--	<0.10	<5.0	**16**	<5.0	<1.0	<5.0	**18**	**9.2**
NG-11-1.0	1.0	<5.0	**2.6**	**180**	<2.0	<1.0	**21**	<5.0	**45**	**200**	**3.9**	**0.29**	<5.0	**16**	<5.0	<1.0	<5.0	**16**	**470**
NG-11-3.0	3.0	<5.0	**1.7**	**49**	<2.0	<1.0	**27**	<5.0	**7.3**	**4.9**	--	<0.10	<5.0	**15**	<5.0	<1.0	<5.0	**21**	**130**
NG-12-1.0	1.0	<5.0	**1.8**	**49**	<2.0	<1.0	**25**	<5.0	**6.8**	**25**	--	<0.10	<5.0	**16**	<5.0	<1.0	<5.0	**20**	**27**
NG-12-3.0	3.0	<5.0	<1.7	**44**	<2.0	<1.0	**26**	<5.0	**9.3**	**1.9**	--	<0.10	<5.0	**15**	<5.0	<1.0	<5.0	**20**	**11**
NG-13-1.0	1.0	**15**	**9.2**	**1,100**	<2.0	**4.9**	**54**	<5.0	**150**	**2,900**	--	**0.27**	<5.0	**30**	<5.0	<1.0	<5.0	**21**	**2000**
NG-13-1.0-D	1.0	<5.0	**3.5**	**82**	<2.0	<1.0	**29**	**8.4**	**26**	**200**	**520**	**0.22**	<5.0	**19**	<5.0	<1.0	<5.0	**22**	**100**
NG-13-3.0	3.0	<5.0	<1.7	**43**	<2.0	<1.0	**23**	<5.0	<5.0	**6.1**	--	<0.10	<5.0	**15**	<5.0	<1.0	<5.0	**17**	**610**

TABLE 2
Soil Sample Analytical Results - Metals

Soil Sample ID	Sample Depth	ANALYTE																	
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Soluble Lead*	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Regulatory Standards																			
CHHSLs - Residential		30	0.07	5,200	150	1.7	100,000	660	3,000	80	ne	18	380	1,600	380	380	5.0	530	23,000
CHHSLs - Commercial/Industrial		380	0.2	63,000	1,700	7.5	100,000	3,200	38,000	320	ne	180	4,800	16,000	4,800	4,800	63	6,700	100,000
RWQCB ESL - Construction Worker		310	15	2,600	98	39	1,200,000	94	310,000	750	ne	58	3,900	260	3,900	3,900	62	770	230,000
Background Metals - City of Oakland		<3 -7.1	1.8-31	ne	<0.25 - 1.1	<0.25 - 3.3	24.8 - 99.7	ne	11.8 - 99.7	3.3 - 144.3	ne	<0.1 - 7.0	ne	2.9 - 144.3	ne	ne	ne	ne	9.3 - 474
TTLC		500	500	10,000	75	100	2,500	8,000	2,500	1,000	5**	20	3,500	2,000	100	500	700	2,400	5,000

NOTES:

mg/kg: milligrams per kilogram (parts per million)

<: Not detected at or above the indicated laboratory practical quantitation limit

ne: Not established

--: Not analyzed

CHSSLs - Residential: California Human Health Screening Level for residential land use established by California EPA (September 2009, January 2005)

CHSSLs -Commercial/Industrial: California Human Health Screening Level for commercial/industrial land use established by California EPA (September 2009, January 2005)

RWQCB ESL - Construction Worker: Values from Table K-3, Direct Exposure Soil Screening Levels, Construction/Trench Worker Exposure Scenario (RWQCB, 2008)

Background Metals - City of Oakland: 'Values taken from City of Oakland Urban Land Redevelopment Program, Survey of Background Metal Concentration Studies, 1995.

TTLC: Total Threshold Limit Concentration for defining a waste as a hazardous waste

STLC: Soluble Threshold Limit Concentration for defining a waste as a hazardous waste

*: Soluable lead determined using the California Waste Extraction Test

****** : STLC

TABLE 3
Soil Sample Analytical Results - SVOCs

Soil Sample ID	Sample Depth (feet bgs)	Fluoranthene mg/kg	Pyrene mg/kg
NG-6-1.0	1.0	**21 J**	**25 J**
NG-6-3.0	3.0	<0.132	<0.147
NG-6-5.0	5.0	<0.132	<0.147
NG-7-1.0	1.0	<0.132	<0.147
NG-7-1.0-D	1.0	<20.1	<22.3
NG-7-3.0	3.0	<0.132	<0.147
NG-7-5.0	5.0	<0.132	<0.147
NG-8-1.0	1.0	<0.132	<0.147
NG-8-3.0	3.0	<0.132	<0.147
NG-8-5.0	5.0	<0.132	<0.147
NG-9-1.0	1.0	<0.132	<0.147
NG-9-3.0	3.0	<0.132	<0.147
NG-9-5.0	5.0	<0.132	<0.147
NG-10.1.0	1.0	<20.1	<22.3
NG-10-1.0-D	1.0	<0.132	<0.147
NG-10-3.0	3.0	<0.132	<0.147
NG-10-5.0	5.0	<0.132	<0.147
NG-11-1.0	1.0	<0.132	<0.147
NG-11-3.0	3.0	<0.132	<0.147
NG-11-5.0	5.0	<0.132	<0.147
NG-12-1.0	1.0	<40.1	<44.5
NG-12-3.0	3.0	<0.132	<0.147
NG-12-5.0	5.0	<0.132	<0.147
NG-13-1.0	1.0	<80.2	<89.0
NG-13-1.0-D	1.0	<20.1	<22.3
NG-13-3.0	3.0	<0.132	<0.147
NG-13-5.0	5.0	<0.132	<0.147
Regulatory Standards			
RWQCB ESL - Residential		40	85
RWQCB ESL - Commercial/Industrial		40	85
RWQCB ESL - Construction Worker		14,000	21,000

NOTES:

mg/kg: milligrams per kilogram (parts per million)

J: Indicates a value between the method detection limit and the practical quantitiation limit and that the reported concentration should be considered as estimated

<: Not detected at or above the indicated laboratory practical quantitation limit

RWQCB ESL - Residential: From Table A-1, Shallows Soil Screening Levels, Residential Land Use (RWQCB, 2008)

RWQCB ESL - Commercial/Industrial: From Table A-2, Shallows Soil Screening Levels, Commercial/Industrial Land Use (RWQCB, 2008)

RWQCB ESL - Construction Worker: Values from Table K-3, Direct Exposure Soil Screening Levels, Construction/Trench Worker Exposure Scenario (RWQCB, 2008)

LEGEND:

- Soil boring locations
- P-25 1999 Soil borings
- Approximate site boundary
- Site boundary from PEA Report (1993)

N

0 50 100

Scale (Feet)

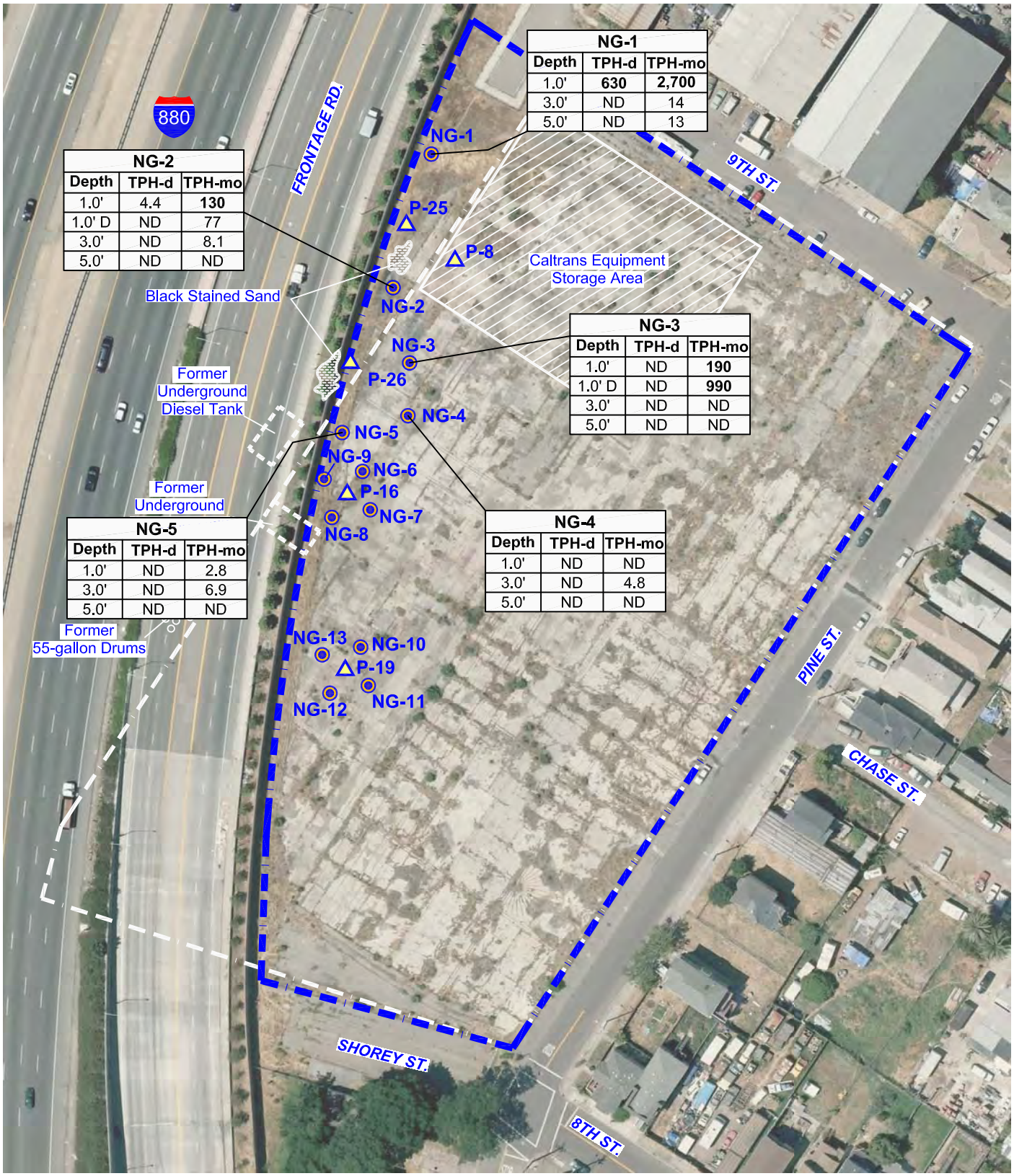
northgate environmental management, inc.

FIGURE 2
Site Plan

800 Cedar Street
Oakland, California

Project No. 1204.18

G:\Projects\Temp\1204 City of Oakland\1204.18 800 Cedar\1204.18 Figures\Phase II Rpt\Figure 2 - Site Plan.dwg Layout: Fig2_Sample_Locs User: oleg Sep 15, 2011 - 3:00pm



LEGEND:

- Soil boring locations
- P-25 1999 Soil borings
- Approximate site boundary
- Site boundary from PEA Report (1993)

Notes:
- Data in mg/Kg
- **Bold** = Exceeds RWQCB ESL of 83 mg/Kg for TPH-d and TPH-mo

0 50 100
Scale (Feet)

N

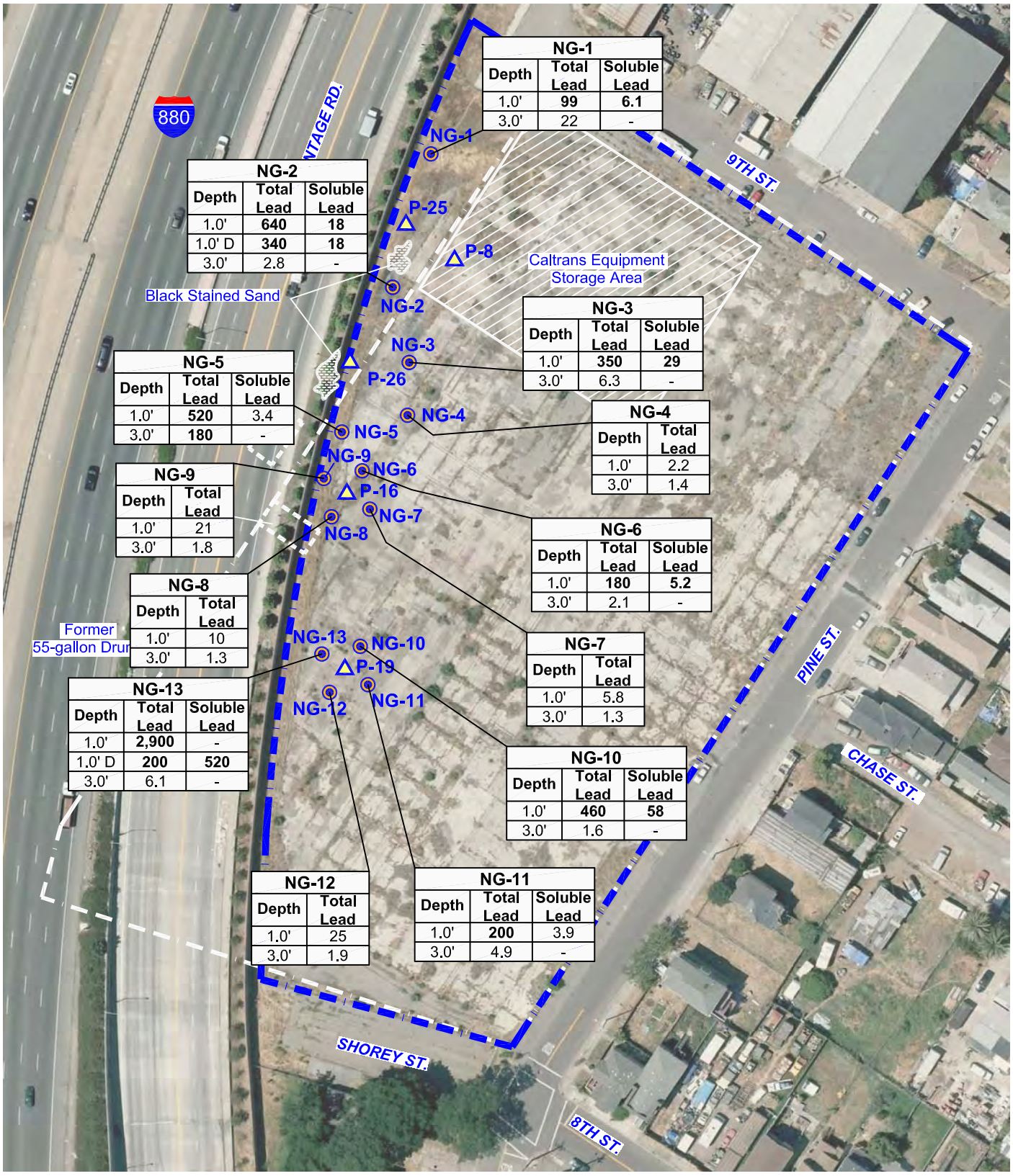
FIGURE 3
TPH Concentrations in Soil

800 Cedar Street
Oakland, California

northgate environmental management, inc.

Project No. 1204.18

G:\Projects\Temp\1204 City of Oakland\1204.18 800 Cedar\1204.18 Figures\Phase II Rpt\Figure 3-4 - TPH-Lead-Soil.dwg Layout: Fig3 TPH User: deg Sep 07, 2011 - 2:58pm



LEGEND:

- Soil boring locations
- P-25 1999 Soil borings
- Approximate site boundary
- Site boundary from PEA Report (1993)

Notes:
- Data in mg/Kg
- **Bold** = Exceeds Residential CHHSL of 80 mg/Kg for Total Lead and STLC of 5 mg/Kg for Soluble Lead
- Soluble lead based on the WET

0 50 100
Scale (Feet)

N

FIGURE 4
Lead Concentrations in Soil

800 Cedar Street
Oakland, California

northgate environmental management, inc.

Project No. 1204.18

G:\Projects\Temp\1204 City of Oakland\1204.18 800 Cedar\1204.18 Figures\Phase II Rpt\Figure 3-4 - TPH-Lead-Soil.dwg Layout: Fig4_Lead User: oleg Sep 15, 2011 - 3:00pm

B5-Table 1 Through 2B and Figure 2 from Limited Subsurface Investigation Report Prepared by P&D Environmental, Inc. Dated September 5, 2017 (4 pp)

Table 1
Summary of Borehole Groundwater Sample Analytical Results

Sample ID	Sample Date	TPH-G	TPH-D	TPH-MO	TPH-BO	MTBE	Benzene	Toluene	Ethylbenzene	Total Xylenes	Other VOCs Using EPA Method 8260
GW1	8/10/2017	ND<50	63, a,b	120, a,b	130, a,b	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND
GW2	8/11/2017	ND<50	ND<38	ND<82	ND<110	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	All ND, except PCE = 2.1
ESL[1]		100	100	50,000	50,000	5.0	1.0	40	13	20	PCE = 3.0
ESL[2]		No Value	No Value	No Value	No Value	1,200	1.1	3,600	13	1,300	PCE = 3.0
ESL[3]		No Value	No Value	No Value	No Value	11,000	9.7	30,000	110	11,000	PCE =26

NOTES:
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.
TPH-BO = Total Petroleum Hydrocarbons as Bunker Oil.
MTBE = Methyl-tert-Butyl Ether.
VOCs = Volatile Organic Compounds.
PCE = Tetrachloroethene
ND = Not Detected.
a = Laboratory note: oil range compounds are significant.
b = Laboratory note: diesel range compounds are significant; no recognizable pattern.
ESL[1] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 2016 (Revision 3), Groundwater Tier 1 ESL from Summary of Groundwater ESLs.
ESL[2] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 2016 (Revision 3), from Table GW-3 – Groundwater Vapor Intrusion Human Health Risk Screening Levels. Shallow Groundwater. Sand Scenario. Residential Land Use.
ESL[3] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 2016 (Revision 3), from Table GW-3 – Groundwater Vapor Intrusion Human Health Risk Screening Levels. Shallow Groundwater. Sand Scenario. Commercial/Industrial Land Use.
Results and ESLs reported in micrograms per liter (µg/L) unless otherwise indicated.

Table 2A

Summary of Sub-Slab Soil Gas Sample Analytical Results

Sample ID	Land Use	Sample Date	Probe Depth (Feet bgs)	Benzene	Toluene	Ethyl-benzene	m,p-Xylenes	o-Xylenes	PCE	TCE	cis-1,2-DCE	Vinyl Chloride	Other VOCs by EPA Method TO-15	DFA	Percent Shroud
SG1	Commercial	8/14/2017	5.5	ND<3.19	4.11	ND<4.34	ND<8.68	ND<4.34	ND<6.78	ND<5.37	ND<3.97	ND<2.56	ND, except	ND<27,014	0
													Chloroform = **82.5**,		
													Trichlorofluoromethane = 16.3		
SG2	Commercial	8/14/2017	5.5	ND<3.19	10.6	ND<4.34	ND<8.68	ND<4.34	28.6	**447**	ND<3.97	ND<2.56	ND, except	ND<27,014	0
													Chloroform = **132**		
SG2 DUP	Commercial	8/14/2017	5.5	ND<3.19	10.4	ND<4.34	ND<8.68	ND<4.34	28.2	**441**	ND<3.97	ND<2.56	ND, except	ND<27,014	0
													Chloroform = **128**		
SG3	Commercial	8/14/2017	5.5	ND<3.19	ND<3.77	ND<4.34	ND<8.68	ND<4.34	42.6	ND<5.37	ND<3.97	ND<2.56	ND, except	ND<27,014	0
													Chloroform = 14.8,		
													Methylene Chloride = 4.27,		
													1,1,1-TCA = 21.3,		
													Trichlorofluoromethane = 6.01		
ESL [1]				*48*	*160,000*	*560*	*Combined = 52,000*		*240*	*240*	*4,200*	*4.7*	*Chloroform = 61,*	*No Value*	*No Value*
													Methylene Chloride = 510,		
													1,1,1-TCA = 520,000,		
													Trichlorofluoromethane = No Value		
ESL [2]				*420*	*1,300,000*	*4,900*	*Combined = 440,000*		*2,100*	*3,000*	*35,000*	*160.0*	*Chloroform = 530,*	*No Value*	*No Value*
													Methylene Chloride = 12,000,		
													1,1,1-TCA = 4,400,000,		
													Trichlorofluoromethane = No Value		

Notes:

Feet bgs = Feet Below Ground Surface.

PCE = Tetrachloroethene.

TCE = Trichloroethene.

cis-1,2-DCE = cis-1,2-Dichloroethene.

1,1,1-TCA = 1,1,1-Trichloroethane.

DFA = 1,1-Difluoroethane. (tracer gas)

ND = Not Detected.

Percent Shroud = The ratio of tracer gas concentration detected in the soil gas sample to the tracer gas concentration detected in the shroud air sample, expressed as a percentage.

ESL[1] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 2016 (Revision 3), from Table SG1 – Subslab/Soil Gas Vapor Intrusion:

Human Health Risk Levels for Residential Land Use.

ESL[2] = Environmental Screening Level, by San Francisco Bay – Regional Water Quality Control Board, updated February 2016 (Revision 3), from Table SG1 – Subslab/Soil Gas Vapor Intrusion:

Human Health Risk Levels for Commercial/Industrial Land Use.

BOLDED concentrations exceed their respective ESL[1] value.

Results and ESLs in micrograms per cubic meter (µg/m3), unless otherwise indicated.

Table 2B

Summary of Shroud Air Sample Analytical Results

Sample ID	Sample Date	DFA, #
SG1 DFA	8/14/2017	1,072,468.3
SG2 DFA	8/14/2017	71,587.93
SG3 DFA	8/14/2017	3,079,631.9
Notes:		
# = 1,1-Difluoroethane (DFA) used as leak detection compound for TO-15 analysis.		
Results in micrograms per cubic meter (ug/m^3), unless otherwise indicated.		

Figure 2
Site Aerial Photograph Showing Sample Collection Locations
Phoenix Iron Works
800 Pine Street
Oakland, California

Basemap from: Alisto Engineering Group September 2005, and Google Earth October 2009	P&D Environmental, Inc. 55 Santa Clara Ave., Suite 240 Oakland, CA 94610	0 50 100 Approximate Scale in Feet N