ConocoPhillips
76 Broadway
Sacramento, California 95818

May 20, 2010

Mark Detterman
Alameda County Health Agency
1131 Harbor Bay parkway, Suite250
Alameda, California 94502-577

Re: ***Work Plan for Soil and Groundwater Investigation***
76 Service Station # 3737 RO 067
1400 Powell Street
Emeryville, CA

Dear Mr. Detterman,

I declare under penalty of perjury that to the best of my knowledge the information and/or recommendations contained in the attached report is/are true and correct.

If you have any questions or need additional information, please call me at (916) 558-7666.

Sincerely,

Terry L. Grayson
Site Manager
Risk Management & Remediation

May 19, 2010

Mr. Mark E. Detterman
Hazardous Materials Specialist
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Subject: Work Plan for Soil and Groundwater Investigation
76 Service Station No. 3737
1400 Powell Street
Emeryville, California
Case No. RO0000067

DELTA

Dear Mr. Detterman:

On behalf of ConocoPhillips Company (ConocoPhillips), Delta Consultants (Delta) has prepared this *Work Plan for Soil and Water Investigation* to investigate current concentrations of petroleum hydrocarbons and halogenated volatile organic compounds (HVOCs) dissolved in groundwater beneath 76 Service Station Number 3737, located at 1400 Powell Street, Emeryville, CA (the Site). A site location map is included as **Figure 1**. This work plan has been prepared in response to a letter from the Alameda County Environmental Health Department (ACEH) dated November 18, 2009. The submittal of this work plan was delayed at the request of ACEH to allow for the completion of an investigation associated with 5885 Hollis Street to the north of the service station. ACEH requested that the two responsible parties share investigative data for the purpose of completing a comprehensive environmental assessment. Agency correspondence relating to the production of this work plan is included as **Attachment A**.

Petroleum hydrocarbons were detected in groundwater at elevated concentrations during the 2009 cone penetrometer test (CPT) investigation to a maximum depth of 55 feet below ground surface (bgs). The geologic cross sections and soil and groundwater analytical data summary tables associated with this investigation are presented as **Attachment B**.

Delta proposes to install three groundwater monitoring well clusters (MW-1B,C,D, MW-2A,B,C and MW-3A,B,C) and one single

312 Piercy Road San Jose, California 95138 USA
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Fax +1 408.225.8506 www.deltaenv.com

groundwater monitoring well (MW-4A), with casings screened to monitor four permeable zones (A, B, C and D) in the vicinity of former CPT borings (**Figure 2**) for the purpose of assessing and monitoring current concentrations petroleum hydrocarbons and volatile organic compounds (VOCs) in soil and groundwater beneath the site. Wells installed within the A, B, C, and D zones will be screened to target permeable zones located at approximately 5-15 feet bgs, 17-24 feet bgs, 36-38 feet bgs, and 50-55 feet bgs, respectively. The monitoring wells within the A, B, and C, zones will also be used to determine groundwater flow patterns beneath the site.

GENERAL SITE DESCRIPTION

The site is located at 1400 Powell Street, Emeryville, California and is currently an active Chevron Service Station and overlies the southern portion of a former Unocal bulk storage facility that operated from 1917 to 1964. **Figure 2** shows the layout of current features on the property as well has the approximate location of former site features that occupied the property while it operated as a Unocal bulk storage facility. Properties in the immediate site vicinity are predominantly residential and commercial. Local topography is generally flat with an average site elevation of approximately 15 feet above mean sea level (MSL). Site soils consist of silts and clays with thin layers of sand and gravel. Groundwater beneath the site is reportedly encountered at approximately 10 feet bgs.

2009 CPT Investigation

In July 2009, Delta conducted a cone penetrometer test (CPT) investigation during which seven CPT borings (CPT-1 through CPT-7) were advanced on the site. Locations of the CPT borings were based on proximity to site features and locations of former above ground storage tanks (ASTs) shown on a 1951 Sanborn map. Soil and groundwater samples were collected in clay layers and permeable zones, respectively, to a depth of approximately 55 feet bgs.

TPH-G was detected above laboratory reporting limits in soil in four sampled locations at concentrations ranging from 570 mg/Kg (CPT-1@7 bgs) to 1.1 mg/Kg (CPT-7@52 bgs). TPH-D was reported in six sampled locations at concentrations ranging from 5.6 mg/Kg (CPT-1@7 bgs) to 2 mg/Kg (CPT-1@50 bgs).

Benzene was detected above laboratory reporting limits in groundwater at three sampled locations at concentrations ranging from 42 ug/L (CPT-1@6-9 bgs) to 1.4 ug/L (CPT-4@52-55 bgs). MTBE was reported in three sampled locations at concentrations ranging from 1.3

ug/L (CPT-4@20-23 bgs) to 0.96 ug/L (CPT-5@28-31 bgs). TPH-G was reported in four sampled locations at concentrations ranging from 690 ug/L (CPT-1@6-9 bgs) to 56 ug/L (CPT-4@20-23 bgs). TPH-D was reported in nine sampled locations at concentrations ranging from 630 ug/L (CPT-5@28-31 bgs) to 50 ug/L (CPT-6@51-54 bgs). Geologic cross sections and analytical data summary tables are included in **Attachment A**.

2010 Treadwell and Rollo CPT Investigation

March 31 through April 5, 2010, Treadwell and Rollo conducted an investigation associated with 5885 Hollis street, the neighboring site to the north. During this investigation, Treadwell & Rollo (TR) advanced 9 CPT borings; TRCPT-1 through TRCPT-8 were advanced immediately west of the two properties along the length of Peladeau Street and TRCPT-9 was advanced within the loading dock area between the two properties, north of the service station. Data summary tables and figures associated with this investigation are provided as **Attachment C**.

Soil and groundwater samples collected from TRCPT-5 through TRCPT-9 were analyzed for TPH-D and TPH-MO by EPA Method 8015 and TPH-G and VOCs by EPA Method 8260. TR compared the soil analytical results to the San Francisco Regional Water Quality Control Board's "*Table B-2. 1Shallow Soil Screening Levels (<3m bgs) Commercial/industrial Land Use (groundwater is not a current or potential drinking water resource)* and compared groundwater detections to "*Table D. Environmental Screening Levels (ESLs) Deep Soils (>3m bgs) Groundwater is not a Current or Potential Source of Drinking Water."*

Analytes were detected only in shallow soils collected from three of the borings (5 to 6 feet bgs in TRCPT-5 and TRCPT-7 and 10 feet bgs in TRCPT-9), but were not detected in deeper samples collected from the borings nor were analytes detected in soil samples from CPT-6 or CPT-8 (**Attachment C – Table 2**). TPH-G, TPH-D, and naphthalene were the only analytes reported above the ESL Table D values in the shallow samples. Benzene was not detected in any of the soil samples collected from TRCPT-5 through TRCPT9.

Groundwater analytical results showed that TPH-G, benzene, ethylbenzene, and naphthalene detections in TRCPT-5 exceeded ESL Table D. values. In TRCPT-6, ESL Table D values were exceeded for the TPH-D, TPH-MO, and TPH-G detections, while in TRCPT-7 and TRCPT-9, the Table D ESL value was only exceeded for TPH-G (**Attachment C –Table 4**). However, detection limits of TPH-D and TPH-MO were elevated such that reporting limits exceeded ESL values, therefore, for these two constituents, accurate comparisons to ESLs,

and the determination of whether or not ESLs have been exceeded, cannot be concluded with the groundwater data available from TRCPT-7 through TRCPT-9. ESLs have not been established for all constituents analyzed.

PROPOSED SCOPE OF WORK

Monitoring Well Installation

Delta proposes the installation of ten monitoring wells consisting of three on-site monitoring well clusters, and one single shallow on-site monitoring well in order to determine the local groundwater flow direction, to further investigate the source and extent of petroleum hydrocarbon and HVOC impacted groundwater beneath the site. Proposed well locations have been selected to target those areas having elevated petroleum hydrocarbon detections during the Delta 2009 CPT investigation, and to determine, with groundwater flow direction, whether on-site impacts may have contributed to off-site impacts detected adjacent to the service station during the April 2010 TR investigation. Additionally, groundwater samples must be collected from properly developed and purged wells to obtain groundwater data that is representative of actual site conditions. The proposed monitoring well locations are shown in **Figure 2**.

The groundwater monitoring wells will be installed at the site as follows:

- MW-1 wells will be installed in the vicinity of CPT-5 where TPH-D was reported at 270 µg/l at a depth of 55 feet bgs. The TPH-D concentration reported was the maximum concentration for groundwater samples at this depth during the 2009 CPT investigation. Three monitoring wells (MW-1B through MW-1D) will be installed in this location to depths of approximately 24 feet bgs, 38 feet bgs and 55 feet bgs, respectively.
- MW-2 wells (MW-2A, MW-2B and MW-2C) will be installed to the north of CPT-7 near the former waste oil UST, to depths of approximately 15 feet bgs, 24 feet bgs, and 38 feet bgs, respectively.
- MW-3 wells (MW-3A, MW-3B and MW-3C) will be installed between CPT-2 and CPT-3 to the east of the dispenser islands, to depths of approximately 15 feet bgs, 24 feet bgs, and 38 feet bgs, respectively.
- MW-4A will be installed adjacent to CPT-1, south of the dry cleaning facility, to a depth of approximately 15 feet bgs to monitor only shallow groundwater. Benzene,

TPH-G and TPH-D were reported at a depth of approximately 7 feet bgs at concentrations of 42 µg/l, 690 µg/l and 260 µg/l, respectively.

Monitoring wells are proposed to be installed based on semi-continuous permeable zones inferred from cross sections reported during the 2009 CPT investigation (**Attachment B**). If these zones are not encountered during drilling, the corresponding well will not be installed.

The borings for the wells will be advanced to approximately 15 to 55 feet using a hollow-stem auger drilling rig equipped with 8-inch outer diameter auger flights. The wells will be screened from approximately 5 feet bgs to 15 feet bgs in A-Zone wells, 17-24 feet bgs in B-Zone wells, 36-38 feet in C-Zone wells and 50-54 feet bgs in D-Zone wells within coarse-grained deposits. The wells will be constructed using 2-inch diameter PVC casing with 0.010-inch slotted casing in the screen interval. Monterey 2/12 sand filter packing will be installed in the annular space to one foot above the top of the screened interval, overlain by a 2-foot thick bentonite seal (saturated in place). Each well will be capped with Portland cement grout and boxed at grade with a locking, water-tight cap and traffic-rated well box.

Following a minimum of 72 hours after completion of the well installations, the wells will be properly developed by surging the well to remove sediment and fines from both the filter pack and the formation at the filter pack-aquifer contact in the screened interval. During development, wells will be purged a minimum of ten casing volumes. A minimum of 72 hours following development, the wells will be purged an additional three casing volumes to ensure the collection of representative groundwater samples.

During drilling, soil will be logged continuously to ensure that wells are screened within the targeted zones. Soil samples will be screened for the presence of VOCs at roughly 5 foot intervals using a photoionization detector (PID). A lithologic description of each soil sample will be recorded by a Delta geologist on a boring log form. From the borings, three soil samples will be collected for laboratory analysis from the depth that exhibits the highest PID value or at depths exhibiting significant change in lithology. Should all collected samples indicate PID readings below the instruments detection limit, the deepest unsaturated soil sample will be submitted to the laboratory for analysis.

In addition, shallow soil samples will be collected via hand auger from each boring for the MW-2 wells at approximately five feet bgs to investigate whether an on-site release has

contributed to shallow soil detections found (TRCPT-5 at 5 feet bgs and TRCPT-7 at 6 feet bgs) during the April 2010 investigation conducted by Treadwell and Rollo.

Delta will request that the laboratory conduct the full scan analysis of volatile organic compounds (VOCs) including TPH-G, benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds) and MTBE by EPA Method 8260B on soil and groundwater samples. Samples will also be analyzed for TPH-D with silica gel cleanup by EPA method 8015M, and total petroleum hydrocarbons as motor oil (TPH-MO) by EPA Method 8015M - with silica gel cleanup. Soil and groundwater samples selected for laboratory analysis will be individually labeled, registered on a chain-of-custody form, and placed on ice pending delivery to a certified analytical laboratory. Strict chain-of-custody protocols will be followed during the storage and transport of the samples.

Down-hole tools will be cleaned prior to and between each boring to prevent cross-contamination. Waste materials will be stored onsite in DOT approved 55-gallon drums pending proper disposal by a ConocoPhillips-approved waste hauling firm. Following monitoring well completion and development activities, the newly installed wells will be placed on a quarterly monitoring program. Newly-installed wells will be surveyed by a licensed surveying company in accordance with State of California requirements for the GeoTracker database, and all field point data, soil and water sample analytical data will be uploaded to the GeoTracker system per current standards.

SCHEDULE

Delta will obtain all necessary permits following approval of this work plan by the ACEH and will commence field activities within approximately 30 days of receipt work plan approval by the ACEH.

REPORTING

Upon completion of the fieldwork, Delta will prepare a report describing field activities, methods, and analytical results. Delta will include recommendations for additional assessment work at the site, as appropriate.

It is further estimated that the final report will be ready for submittal approximately 45 days after receipt of the sample analytical results.

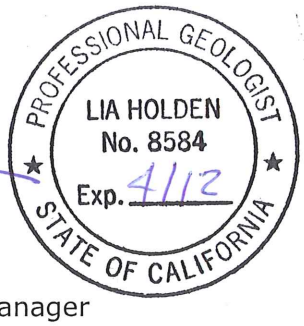
REMARKS

The descriptions, conclusions, and recommendations contained in this document represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Delta, the data from those reports is used "as is" and is assumed to be accurate. Delta does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This document is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this document were conducted. This document is intended only for the use of Delta's Client and anyone else specifically listed on this document. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this document.

If you have any questions regarding this work plan or need and additional information about this Site, please do not hesitate to contact the undersigned at (408) 826-1863.

Sincerely,

DELTA CONSULTANTS



Nadine Periat
Senior Staff Geologist

Lia Holden, PG
Geologist – Project Manager

Figures:

Figure 1 - Site Location Map
Figure 2 - Site Map

Attachments:

Attachment A – Agency Correspondence
Attachment B - Delta Consultants 2009—Analytical Data Summary Tables & Geologic Cross Sections
Attachment C - Treadwell & Rollo 2010—Analytical Data Summary Tables and Figures

Cc: Mr. Terry Grayson, ConocoPhillips, Sacramento, California (electronic copy)

REFERENCES:

Union Oil Company, General Arrangement, Service Station No. 3737, July 27, 1979.

The Sanborn Library LLC, Site Plan, 1951.

Treadwell & Rollo, Site Management Completion Report, 5885 Hollis Street, Emeryville, California, January 5, 2007

Delta Consultants, Report of CPT Delineation of Fuel Hydrocarbon Affected Soil and Groundwater, 76 Service Station No. 3737, 1400 Powell Street, Emeryville, CA, August 18, 2009.

California Regional Quality Control Board, San Francisco Bay Region. Screening For Environmental Concerns at Site with Contaminated Soil and Groundwater, March 2008.

Alameda County Environmental Health Department, Request for Work Plan, Fuel Leak Case No. RO0000067 and Geotracker Global ID T0601745736, Tosco 76 #3737, 1400 Powell Street, Emeryville, CA, 94608. November 18, 2009.

Treadwell and Rollo, Soil and Groundwater Investigation Letter Report, 5885 Hollis Street, Emeryville, California, May 14, 2010.

FIGURES

North

0 900 1800 FT

SCALE

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND WEST (1996) QUADRANGLE

FIGURE 1

SITE LOCATION MAP

FORMER 76 STATION #3737
1400 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO. C1037-3705-1	DRAWN BY DR 12/31/08
FILE NO. 3737-SiteLocator	PREPARED BY JH
REVISION NO.	REVIEWED BY EC

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LEGEND:

- TANK CAVITY WELL
- APPOROXIMATE LOCATION OF DEWATERING WELL (OFFSITE)
- APPROXIMATE BORING LOCATION BY TREADWELL AND ROLLO (OFFSITE), 2000–2005
- HISTORICAL BORING LOCATION (ONSITE)
- CPT BORING LOCATION, 2009
- APPOROXIMATE LOCATION OF SITE FEATURES ON 1951 SANBORN MAP
- PROPOSED MONITORING WELL LOCATION

N

0 20 FT

SCALE

SITE PLAN ADAPTED FROM A MAP CREATED BY TRC FROM UNION OIL CO. SITE PLAN (1979).

FIGURE 2
SITE PLAN

FORMER 76 STATION #3737
1400 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C103737	NP	JH
DATE	REVIEWED BY	FILE NAME
05/19/10	LH	76-3737

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ATTACHMENT A

Agency Correspondence

From: Detterman, Mark, Env. Health
To: Lia Holden; Grayson, Terry L (DXT Services);
cc: Geoff Sears; Phil Smith; Matt Hall;
Subject: RE: Work Plan Extension: RO 67: 1400 Powell Street
Date: Friday, April 02, 2010 2:39:28 PM

I have been in communication with Matt Hall of Treadwell & Rollo in regards to the implementation of field work at the Former Emeryville Industrial Court site (RO2621) at 5885 Hollis St. Because it has taken longer than expected to implement the field work to obtain environmental data on which ConocoPhillips and Delta Environmental will in part be basing a work plan on, I thought it appropriate to extend the work plan submittal deadline by 30 days. This would allow data sharing as previously requested by ACEH, and incorporation of the data in the work plan for RO67 (Tosco 76 #3737 / Chevron at 1400 Powell St). The revised deadline will be May 31, 2010. Please let me know if there are questions.

Mark Detterman
Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
Direct: 510.567.6876
Fax: 510.337.9335
Email: mark.detterman@acgov.org

PDF copies of case files can be downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

From: Lia Holden [mailto:LHolden@deltaenv.com]
Sent: Monday, January 11, 2010 12:00 PM
To: Detterman, Mark, Env. Health; Grayson, Terry L (DXT Services)
Cc: Geoff Sears; Phil Smith; Matt Hall
Subject: RE: Work Plan Extension: RO 67: 1400 Powell Street

Thank you Mr. Detterman. We will await the results of the neighboring investigation, and submit our work plan on or before April 30, 2010.

Lia Holden, PG | Geologist - Project Manager | Global Oil & Gas Business Group
Delta Consultants, an Oranjewoud N.V. Company
Direct (408) 826-1863 | Fax (408) 225 8506 | Mobile (408) 410-9781 | USA Toll Free 800 477 7411
lholden@deltaenv.com | www.deltaenv.com

THE TRUSTED PARTNER FOR MAXIMIZED ASSET VALUE

From: Detterman, Mark, Env. Health [mailto:Mark.Detterman@acgov.org]
Sent: Monday, January 11, 2010 10:44 AM
To: Grayson, Terry L (DXT Services); Lia Holden
Cc: Geoff Sears; Phil Smith; 'Matt Hall'
Subject: Work Plan Extension: RO 67: 1400 Powell Street

Hi all,

I wanted to provide the official Work Plan submittal extension that has been under discussion for the referenced site. The extension will allow ConocoPhillips / Delta to utilize the data generated at the adjacent site (RO 2621; Emeryville Industrial Court) as requested in recent directive letters. Both properties overlie the former Unocal bulk fuel plant and share a common source area; the data will help further progress site investigations and allow better placing of future site investigation bores. As a consequence ACEH extends the schedule for the submittal of the Work Plan for Soil and Water Investigation by 90 days to April 30, 2010.
Should you have questions, please contact me.
Best,

Mark Detterman
Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
Direct: 510.567.6876
Fax: 510.337.9335
Email: mark.detterman@acgov.org

PDF copies of case files can be downloaded at:

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Acting Director

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

November 18, 2009

Mr. Terry Grayson
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Mr. Najmeddin Revan
Emeryville Chevron
1400 Powell Street
Emeryville, CA 94608

Subject: Request for Work Plan; Fuel Leak Case No. RO0000067 and Geotracker Global ID T0601745736, Tosco 76 #3737, 1400 Powell Street, Emeryville, CA 94608

Dear Mr. Grayson and Mr. Revan:

I have recently joined Alameda County Environmental Health (ACEH) and am now the case worker for Emeryville sites. Please direct all correspondence to my attention. ACEH staff has reviewed the case file for the referenced site including the *Report of CPT Delineation of Fuel Hydrocarbon Affected Soil and Groundwater,* dated August 18, 2009. Thank you for submitting the report. We request that you address the following technical comments, and send us the technical documents by the due date requested below.

TECHNICAL COMMENTS

1. **Soil and Groundwater Investigation Work Plan** - ACEH is in general agreement with the recommendation to install three wells at the site; however, ACEH does not concur with the proposal to install nested wells, but prefers clustered wells, multi-level wells, or etc., due to the potential of cross contamination.

2. **Soil and Water Sample Analysis** – In the November 5, 2005 and May 8, 2009 directive letters, ACEH requested analysis of samples from the area of the dry cleaners and the former bulk fuel plant for HVOCs and motor oil. The case cannot progress toward closure without all of the releases or potential sources being characterized. Please include soil and water analysis for the full VOC analysis by EPA Method 8260 and motor oil by EPA Method 8015 in the borings located near these features.

3. **Data Sharing** – As directed in the November 13, 2008 meeting, ACEH requested that ConocoPhillips and Wareham Development share data for their sites since both properties overlie the former Unocal bulk fuel plant and share a common source area. Please also send Wareham Development and their consultant a copy of the report requested below.

TECHNICAL REPORT REQUEST

Please conduct the proposed work and submit technical reports to Alameda County Environmental Health (Attention: Mark Detterman), according to the following schedule:

- **January 30, 2010** – Work Plan for Soil and Water Investigation

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

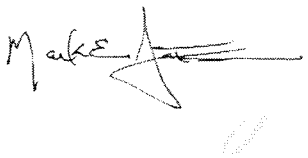
The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For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

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6876 or send me an electronic mail message at mark.detterman@acgov.org.

Sincerely,



Digitally signed by Mark E. Detterman
DN: cn=Mark E. Detterman, c=US
Reason: I am the author of this document
Date: 2009.11.18 16:05:18 -08'00'

Mark E. Detterman, PG, CEG
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: John Reay, Delta Environmental Consultants, 11050 White Rock Rd., Suite 110 Rancho Cordova, CA 95670, (sent via electronic mail to JReay@deltaenv.com)
Geoffrey Sears (sent via electronic mail to gsears@warehamproperties.com)
Glenn Leong (sent via electronic mail to glenn@leongenv.com)
Donna Drogos, (sent via electronic mail to donna.drogos@acgov.org)
Mark Detterman (sent via electronic mail to mark.detterman@acgov.org)
GeoTracker, File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**ISSUE DATE:** July 5, 2005
	REVISION DATE: March 27, 2009
	PREVIOUS REVISIONS: December 16, 2005, October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         Or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

http://www.acgov.org/aceh/lop/ust.htm

ATTACHMENT B

Delta Consultants 2009— Analytical Data Summary Tables
& Geologic Cross Sections

TABLE 1
Summary of Soil Analytical Results
ConocoPhillips Service Station No. 3737
1400 Powell Street
Emeryville, CA

Contaminant	Sample Depth									Reporting Limit	Units
	CPT-1@7'	CPT-1@12'	CPT-1@22'	CPT-1@30'	CPT-1@50'	CPT-2@20'	CPT-2@30'	CPT-2@37'	CPT-2@55'		
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Ethylbenzene	**1.1**	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Total Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	mg/kg
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	mg/kg
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	mg/kg
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Gasoline Range Organics (C4 - C12)	**570**	ND	ND	ND	ND	ND	ND	ND	ND	1	mg/kg
Diesel Range Organics (C12 - C24)	**5.6**	**2.5**	ND	ND	**2**	ND	ND	ND	ND	2	mg/kg

ND = below laboratory reporting limits mg/kg = milligrams per kilogram
bold = above laboratory reporting limits

TABLE 1
Summary of Soil Analytical Results
ConocoPhillips Service Station No. 3737
1400 Powell Street
Emeryville, CA

Contaminant	Sample Depth									Reporting Limit	Units
	CPT-3@20'	CPT-3@36'	CPT-3@50'	CPT-4@22'	CPT-4@39'	CPT-4@53'	CPT-5@10'	CPT-5@30'	CPT-5@38'		
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Total Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	mg/kg
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	mg/kg
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	mg/kg
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Gasoline Range Organics (C4 - C12)	ND	ND	ND	ND	**4.7**	ND	**1.5**	ND	ND	1	mg/kg
Diesel Range Organics (C12 - C24)	**2.4**	ND	ND	ND	ND	ND	**4.3**	ND	ND	2	mg/kg

ND = below laboratory reporting limits
mg/kg = milligrams per kilogram
bold = above laboratory reporting limits

TABLE 1
Summary of Soil Analytical Results
ConocoPhillips Service Station No. 3737
1400 Powell Street
Emeryville, CA

Contaminant	Sample Depths								Reporting Limit	Units
	CPT-5@46'	CPT-5@54'	CPT-6@21'	CPT-6@38'	CPT-6@53'	CPT-7@39'	CPT-7@47'	CPT-7@52'		
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Methyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Total Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	0.01	mg/kg
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	0.05	mg/kg
Diisopropyl ether	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Ethanol	ND	ND	ND	ND	ND	ND	ND	ND	1	mg/kg
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	0.005	mg/kg
Gasoline Range Organics (C4 - C12)	ND	ND	ND	ND	ND	ND	ND	**1.1**	1	mg/kg
Diesel Range Organics (C12 - C24)	**2.2**	ND	ND	ND	ND	ND	ND	ND	2	mg/kg

ND = below laboratory reporting limits
mg/kg = milligrams per kilogram
bold = above laboratory reporting limits

TABLE 2
Summary of Groundwater Analytical Results
ConocoPhillips Service Station No. 3737
1400 Powell Street
Emeryville, CA

Contaminant	Sample Depth						Reporting Limit	Units
	CPT-1@6-9'	CPT-1@29-32'	CPT-1@50-52'	CPT-2@19-22'	CPT-2@29-32'	CPT-2@35-38'		
Benzene	**42**	ND	ND	ND	ND	ND	0.5	ug/L
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	0.5	ug/L
1,2-Dichloroethane	**4.4**	ND	ND	ND	ND	ND	0.5	ug/L
Ethylbenzene	**59**	ND	ND	ND	ND	ND	0.5	ug/L
Methyl t-butyl ether	ND	ND	ND	**0.99**	ND	ND	0.5	ug/L
Toluene	**4**	ND	ND	ND	ND	ND	0.5	ug/L
Total Xylenes	**11**	ND	ND	ND	ND	ND	1	ug/L
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	10	ug/L
Diisopropyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
Ethanol	ND	ND	ND	ND	ND	ND	250	ug/L
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
Gasoline Range Organics (C4 - C12)	**690**	ND	ND	ND	ND	ND	50	ug/L
Diesel Range Organics (C12 - C24)	**260**	ND	ND	ND	ND	ND	59	ug/L

ND = below laboratory reporting limits ug/L = micrograms per liter
bold = above laboratory reporting limits

TABLE 2
Summary of Groundwater Analytical Results
ConocoPhillips Service Station No. 3737
1400 Powell Street
Emeryville, CA

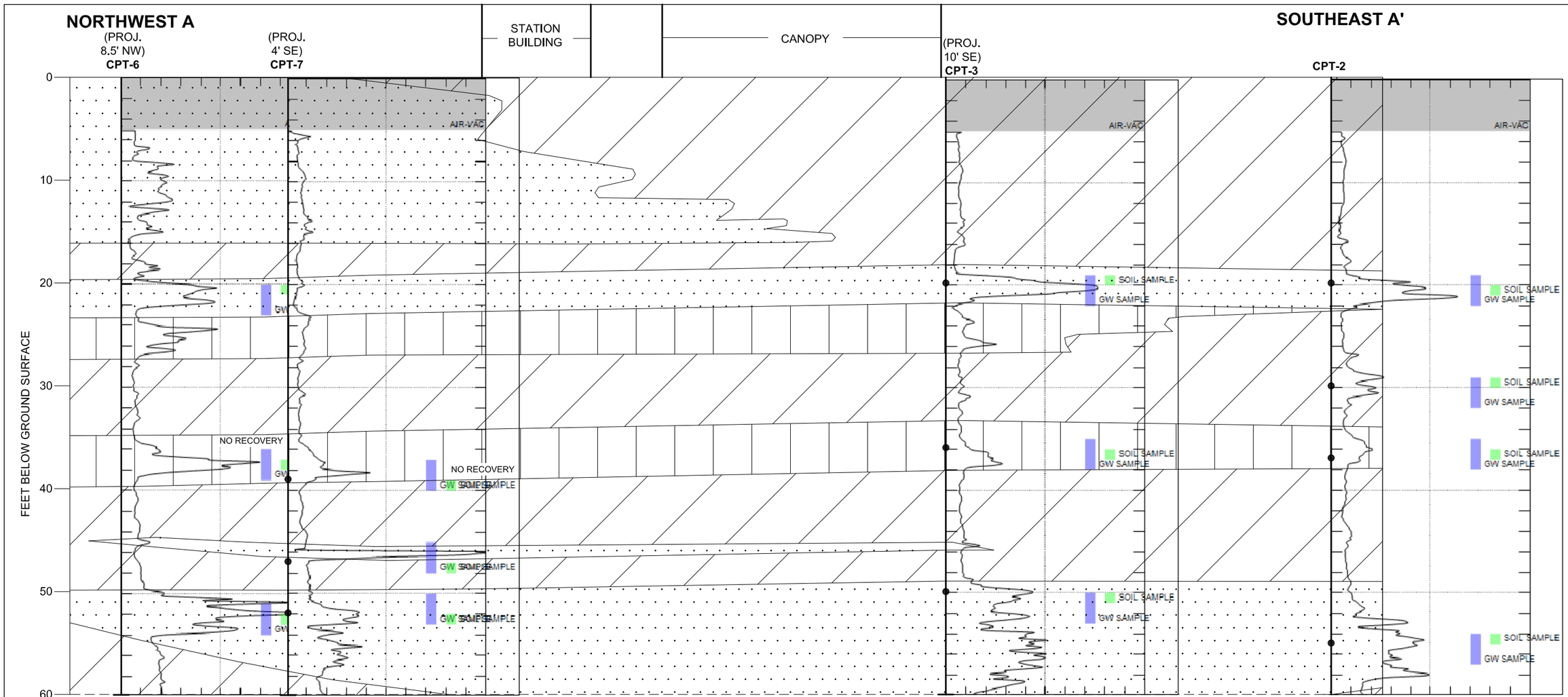
Contaminant	Sample Depth						Reporting Limit	Units
	CPT-5@28-31'	CPT-5@52-55'	CPT-6@20-23'	CPT-6@51-54'	CPT-7@45-48'	CPT-7@50-53'		
Benzene	ND	ND	ND	ND	ND	ND	0.5	ug/L
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	0.5	ug/L
1,2-Dichloroethane	**3.4**	ND	**1.5**	ND	ND	ND	0.5	ug/L
Ethylbenzene	ND	ND	ND	ND	ND	ND	0.5	ug/L
Methyl t-butyl ether	**0.96**	ND	ND	ND	ND	ND	0.5	ug/L
Toluene	ND	ND	ND	ND	ND	ND	0.5	ug/L
Total Xylenes	ND	ND	ND	ND	ND	ND	1	ug/L
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	10	ug/L
Diisopropyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
Ethanol	ND	ND	ND	ND	ND	ND	250	ug/L
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
Gasoline Range Organics (C4 - C12)	**59**	**ND**	ND	ND	ND	ND	50	ug/L
Diesel Range Organics (C12 - C24)	**630**	**270**	ND	**50**	**200**	**110**	59	ug/L

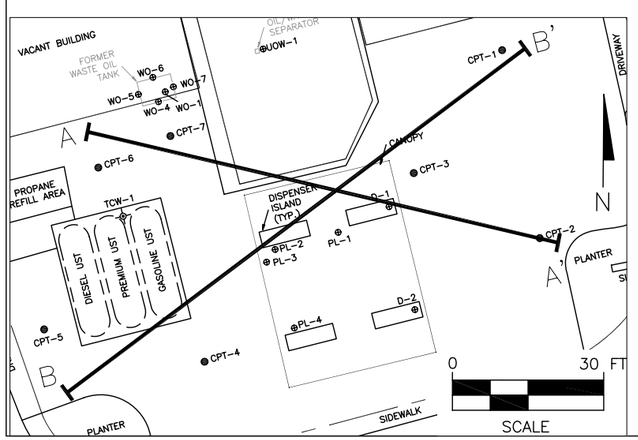
ND = below laboratory reporting limits ug/L = micrograms per liter
bold = above laboratory reporting limits

TABLE 2
Summary of Groundwater Analytical Results
ConocoPhillips Service Station No. 3737
1400 Powell Street
Emeryville, CA

Contaminant	Sample Depth						Reporting Limit	Units
	CPT-2@50-53'	CPT-3@19-22'	CPT-3@35-38'	CPT-3@50-53'	CPT-4@20-23'	CPT-4@52-55'		
Benzene	ND	ND	ND	ND	**1.8**	**1.4**	0.5	ug/L
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	0.5	ug/L
1,2-Dichloroethane	ND	ND	ND	ND	**43**	ND	0.5	ug/L
Ethylbenzene	ND	ND	ND	ND	**0.84**	**2.1**	0.5	ug/L
Methyl t-butyl ether	ND	ND	ND	ND	**1.3**	ND	0.5	ug/L
Toluene	ND	ND	ND	ND	ND	ND	0.5	ug/L
Total Xylenes	ND	ND	ND	ND	ND	ND	1	ug/L
t-Amyl Methyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
t-Butyl alcohol	ND	ND	ND	ND	ND	ND	10	ug/L
Diisopropyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
Ethanol	ND	ND	ND	ND	ND	ND	250	ug/L
Ethyl t-butyl ether	ND	ND	ND	ND	ND	ND	0.5	ug/L
Gasoline Range Organics (C4 - C12)	ND	ND	ND	ND	**56**	**99**	50	ug/L
Diesel Range Organics (C12 - C24)	ND	ND	ND	**90**	**66**	**91**	59	ug/L

ND = below laboratory reporting limits ug/L = micrograms per liter
bold = above laboratory reporting limits





LEGEND

CPT-1 — BORING NAME

EXPLORATORY BORING

SOIL SAMPLE LOCATION

GROUNDWATER SAMPLE LOCATION

DEPTH TO FIRST ENCOUNTERED GROUNDWATER

DEPTH TO STATIC GROUNDWATER

(ND / ND / 570 / 5.6) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: BENZENE, MTBE, GASOLINE, DIESEL (mg/kg)

42 / ND / 690 / 260 — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: BENZENE, MTBE, GASOLINE, DIESEL (ug/L)

0 10 SCALE IN FEET 10

LOW PERMEABILITY (CLAY, SILT)

MEDIUM PERMEABILITY (SAND, GRAVEL WITH CLAY, SILT)

HIGH PERMEABILITY (SANDS AND GRAVELS)

APPROXIMATE STRATIGRAPHIC BOUNDARY

NOTES:

1) ND=BELOW THE LABORATORY'S INDICATED REPORTING LIMIT
MTBE=METHYL TERT BUTYL ETHER
GASOLINE=GASOLINE RANGE ORGANICS (C-4-C-12)
DIESEL=DIESEL RANGE ORGANICS (C-12-C-24)
mg/kg=MILLIGRAMS PER KILOGRAM
ug/L=MICROGRAMS PER LITER

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

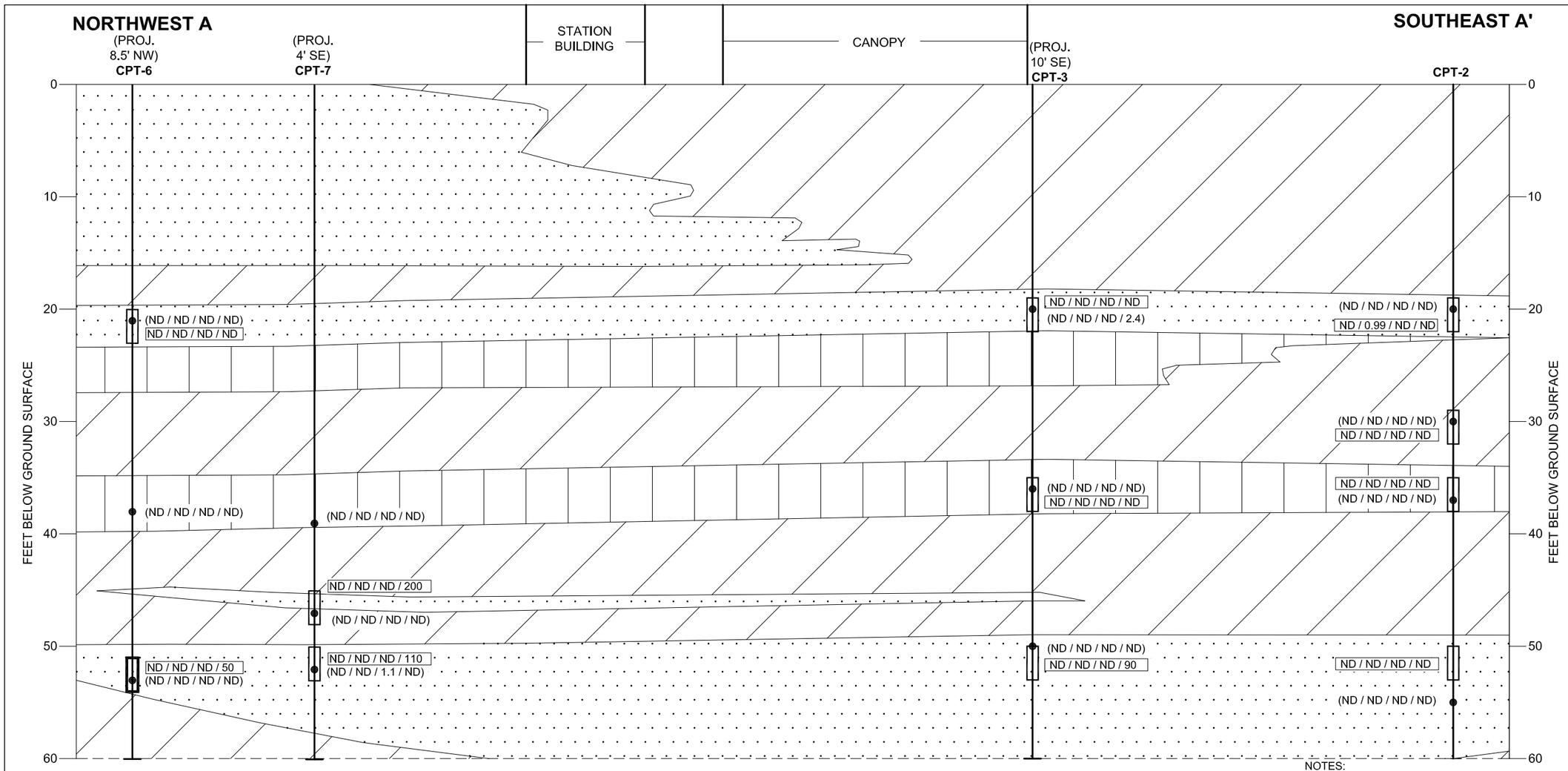
3) CPT LOGS SHOWN ARE q_t LOGS.

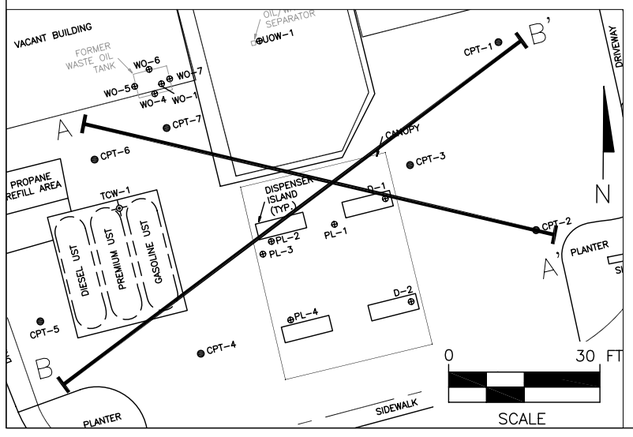
FIGURE 5a

GEOLOGIC CROSS SECTION A–A'
CPT DATA
FORMER 76 STATION #3737
1400 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C103737	AB	JH
DATE	REVIEWED BY	FILE NAME
08/13/09	JR	76-3737

DELTA®





LEGEND

- **CPT-1** — BORING NAME
- EXPLORATORY BORING
- SOIL SAMPLE LOCATION
- GROUNDWATER SAMPLE LOCATION
- DEPTH TO FIRST ENCOUNTERED GROUNDWATER
- DEPTH TO STATIC GROUNDWATER
- (ND / ND / 570 / 5.6) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: BENZENE, MTBE, GASOLINE, DIESEL (mg/kg)
- 42 / ND / 690 / 260 — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: BENZENE, MTBE, GASOLINE, DIESEL (ug/L)

0 10
SCALE IN FEET
10

- LOW PERMEABILITY (CLAY, SILT)
- MEDIUM PERMEABILITY (SAND, GRAVEL WITH CLAY, SILT)
- HIGH PERMEABILITY (SANDS AND GRAVELS)
- APPROXIMATE STRATIGRAPHIC BOUNDARY

NOTES:

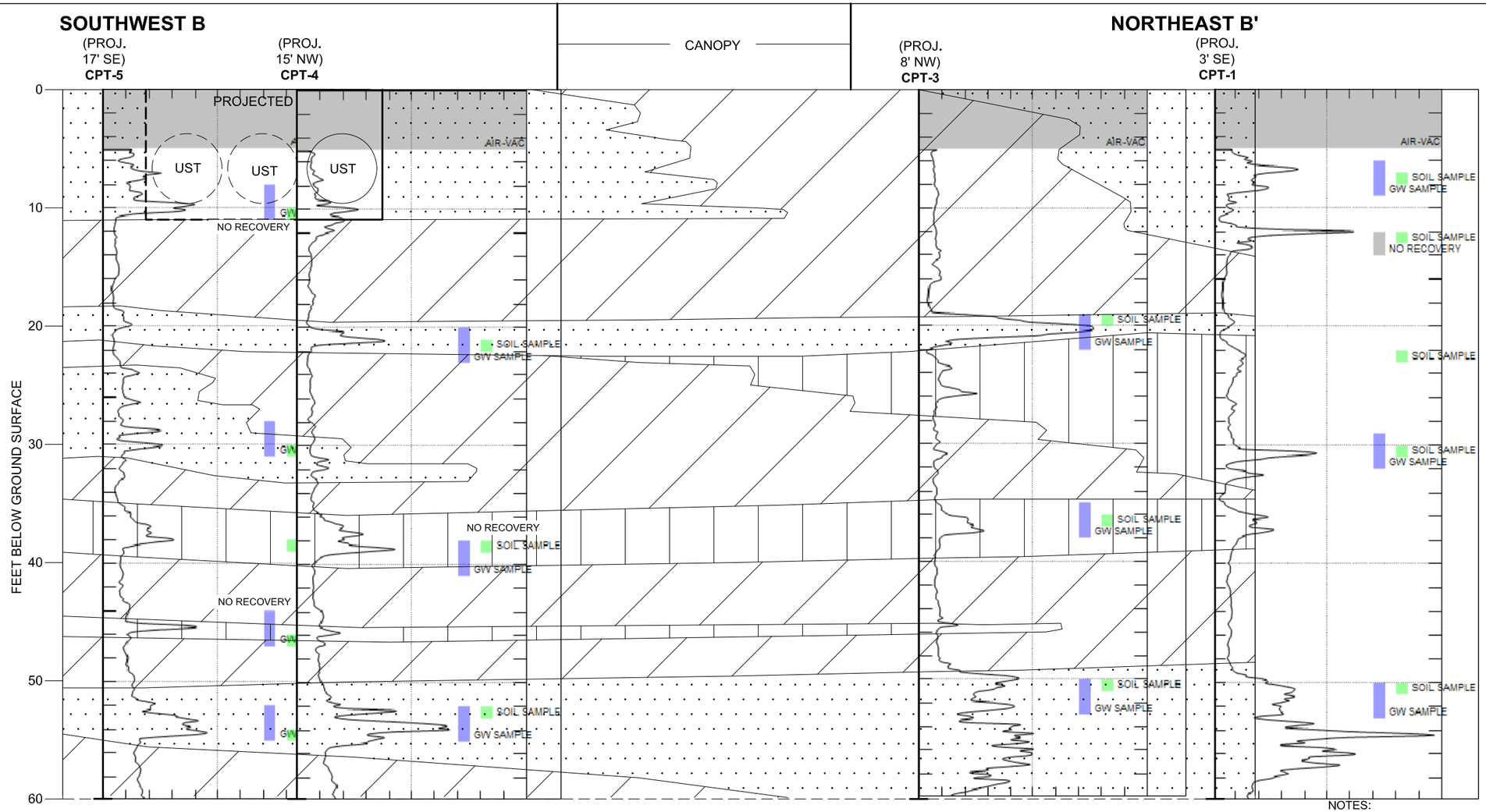
1) ND=BELOW THE LABORATORY'S INDICATED REPORTING LIMIT
   MTBE=METHYL TERT BUTYL ETHER
   GASOLINE=GASOLINE RANGE ORGANICS (C-4-C-12)
   DIESEL=DIESEL RANGE ORGANICS (C-12-C-24)
   mg/kg=MILLIGRAMS PER KILOGRAM
   ug/L=MICROGRAMS PER LITER
2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.
3) GROUNDWATER SAMPLES FOR SOIL BORINGS TAKEN ON DRILLING DATE.

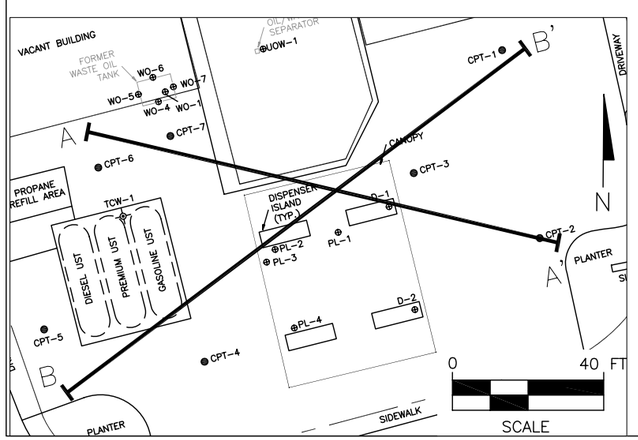
FIGURE 5b

GEOLOGIC CROSS SECTION A–A'
ANALYTICAL DATA
FORMER 76 STATION #3737
1400 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C103737	AB	JH
DATE	REVIEWED BY	FILE NAME
08/13/09	JR	76-3737

DELTA®





LEGEND

CPT-1 — BORING NAME

EXPLORATORY BORING

SOIL SAMPLE LOCATION

GROUNDWATER SAMPLE LOCATION

DEPTH TO FIRST ENCOUNTERED GROUNDWATER

DEPTH TO STATIC GROUNDWATER

(ND / ND / 570 / 5.6) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: BENZENE, MTBE, GASOLINE, DIESEL (mg/kg)

42 / ND / 690 / 260 — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: BENZENE, MTBE, GASOLINE, DIESEL (ug/L)

0 15
SCALE IN FEET
10

LOW PERMEABILITY (CLAY, SILT)

MEDIUM PERMEABILITY (SAND, GRAVEL WITH CLAY, SILT)

HIGH PERMEABILITY (SANDS AND GRAVELS)

APPROXIMATE STRATIGRAPHIC BOUNDARY

NOTES:

1) ND=BELOW THE LABORATORY'S INDICATED REPORTING LIMIT
MTBE=METHYL TERT BUTYL ETHER
GASOLINE=GASOLINE RANGE ORGANICS (C-4-C-12)
DIESEL=DIESEL RANGE ORGANICS (C-12-C-24)
mg/kg=MILLIGRAMS PER KILOGRAM
ug/L=MICROGRAMS PER LITER

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

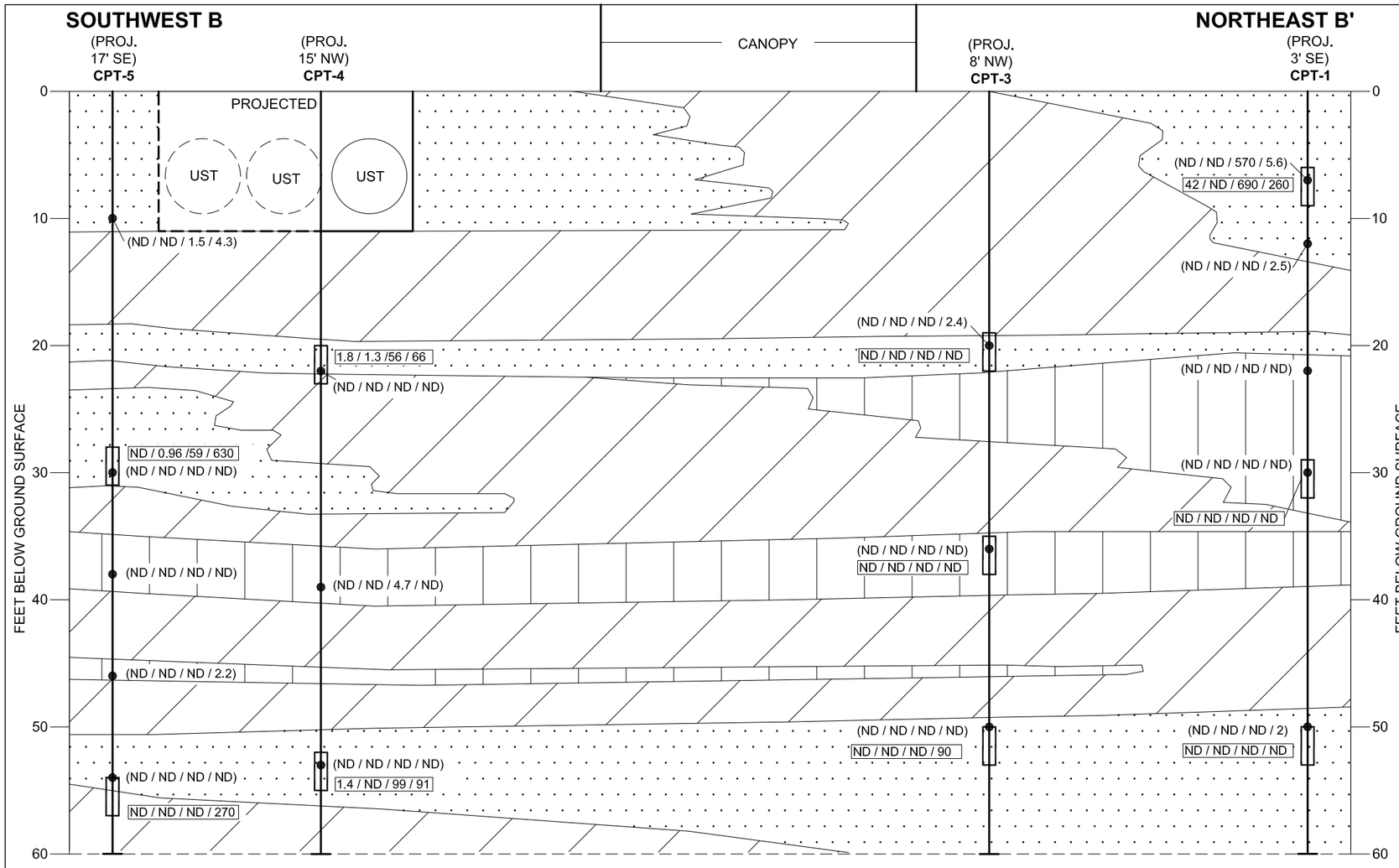
3) CPT LOGS SHOWN ARE q_t LOGS.

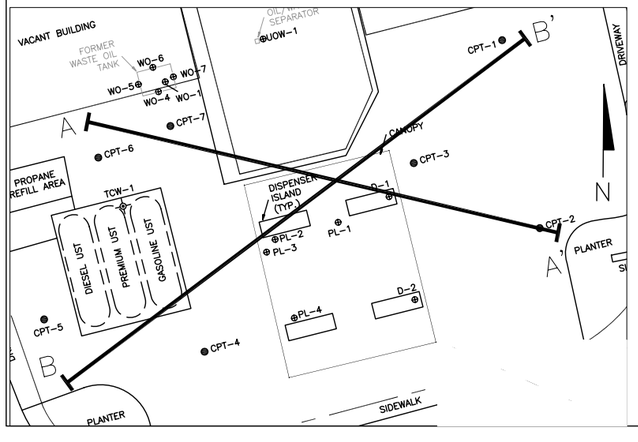
FIGURE 6a

GEOLOGIC CROSS SECTION B–B'
CPT DATA
FORMER 76 STATION #3737
1400 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C103737	AB	JH
DATE	REVIEWED BY	FILE NAME
08/13/09	JR	76-3737

DELTA®





LEGEND

- **CPT-1** — BORING NAME
- EXPLORATORY BORING
- SOIL SAMPLE LOCATION
- GROUNDWATER SAMPLE LOCATION
- DEPTH TO FIRST ENCOUNTERED GROUNDWATER
- DEPTH TO STATIC GROUNDWATER
- (ND / ND / 570 / 5.6) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: BENZENE, MTBE, GASOLINE, DIESEL (mg/kg)
- 42 / ND / 690 / 260 — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: BENZENE, MTBE, GASOLINE, DIESEL (ug/L)

0 15
SCALE IN FEET
10

- LOW PERMEABILITY (CLAY, SILT)
- MEDIUM PERMEABILITY (SAND, GRAVEL WITH CLAY, SILT)
- HIGH PERMEABILITY (SANDS AND GRAVELS)
- APPROXIMATE STRATIGRAPHIC BOUNDARY

NOTES:

1) ND=BELOW THE LABORATORY'S INDICATED REPORTING LIMIT
MTBE=METHYL TERT BUTYL ETHER
GASOLINE=GASOLINE RANGE ORGANICS (C-4-C-12)
DIESEL=DIESEL RANGE ORGANICS (C-12-C-24)
mg/kg=MILLIGRAMS PER KILOGRAM
ug/L=MICROGRAMS PER LITER

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

3) GROUNDWATER SAMPLES FOR SOIL BORINGS TAKEN ON DRILLING DATE.

FIGURE 6b

GEOLOGIC CROSS SECTION B–B'
ANALYTICAL DATA
FORMER 76 STATION #3737
1400 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C103737	AB	JH
DATE	REVIEWED BY	FILE NAME
08/13/09	JR	76-3737

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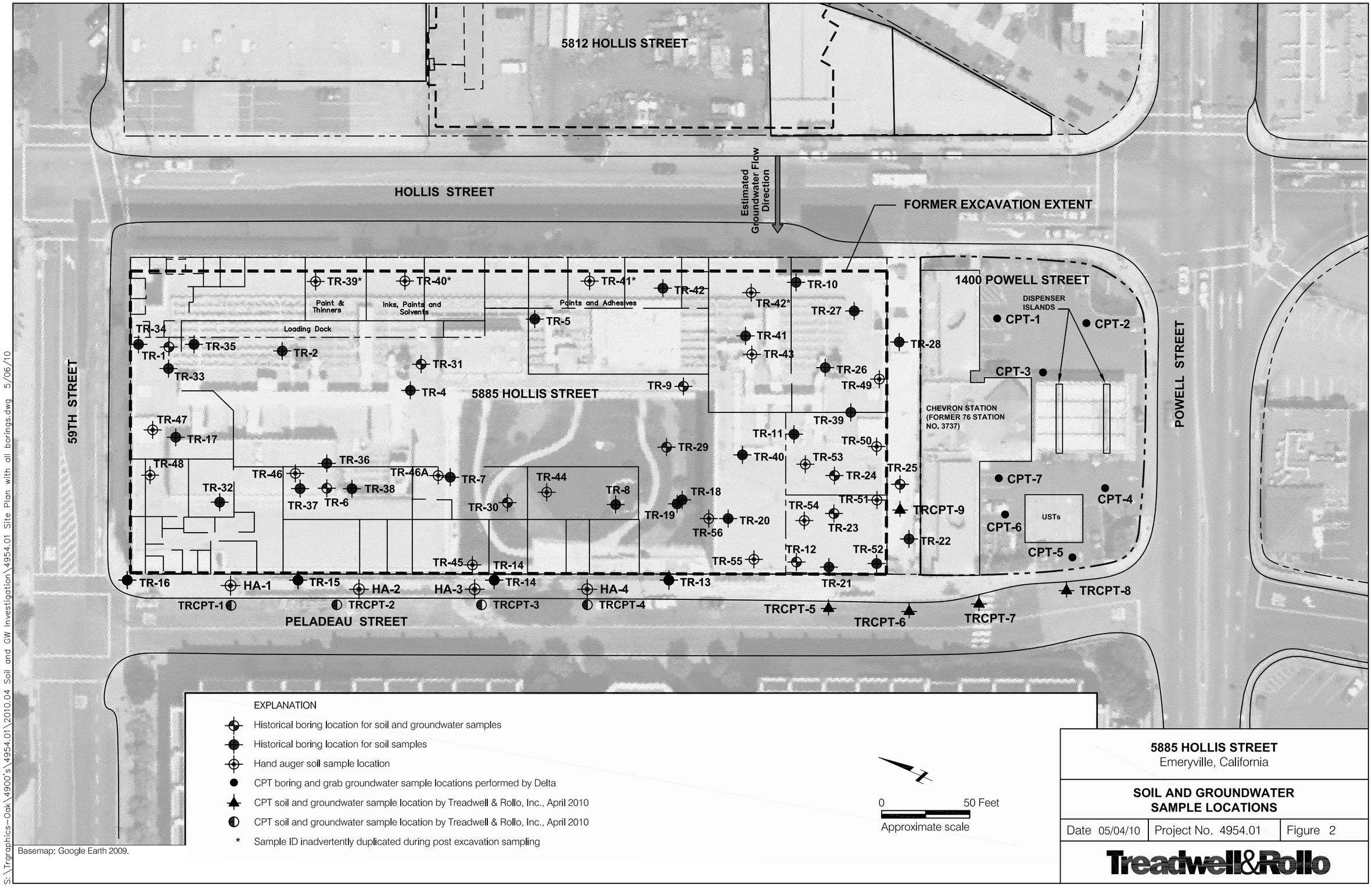
ATTACHMENT C

Treadwell & Rollo 2010—Analytical Data Summary Tables & Figures



EXPLANATION

- Historical boring location for soil and groundwater samples
- Historical boring location for soil samples
- Hand auger soil sample location
- CPT boring and grab groundwater sample locations performed by Delta
- CPT soil and groundwater sample location by Treadwell & Rollo, Inc., April 2010
- CPT soil and groundwater sample location by Treadwell & Rollo, Inc., April 2010
- * Sample ID inadvertently duplicated during post excavation sampling

0 50 Feet

Approximate scale

Basemap: Google Earth 2009.

5885 HOLLIS STREET
Emeryville, California

SOIL AND GROUNDWATER SAMPLE LOCATIONS

Date 05/04/10	Project No. 4954.01	Figure 2

Treadwell&Rollo

S:\Trgraphics-Oak\4900's\4954.01\2010.04 Soil and GW Investigation\4954.01 Site Plan with all borings.dwg 5/06/10

Table 2
Soil Analytical Results from April 2010 Investigation
5885 Hollis Street
Emeryville, California

Sample Location	Sample Date	Sample Depth feet bgs	TPHd mg/kg	TPHmo mg/kg	TPHg mg/kg	Benzene mg/kg	Ethylbenzene mg/kg	Total Xylenes mg/kg	Isopropyl-benzene mg/kg	Propyl-benzene mg/kg	1,3,5-Trimethyl-benzene mg/kg	1,2,4-Trimethyl-benzene mg/kg	sec-Butyl-benzene mg/kg	para-isopropyl toluene mg/kg	n-butylbenzene mg/kg	Naphthalene (8260) mg/kg	Acetone mg/kg	2-Butanone mg/kg	1,2-Dichloro-ethane mg/kg	Other VOCs mg/kg	Benzo(a) pyrene mg/kg	Napthalene (8270) mg/kg	Phenanthrene mg/kg	Other SVOCs
HA-1	4/5/2010	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.067	<0.067	<0.067	ND
HA-2	4/5/2010	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.066	<0.066	<0.066	ND
HA-3	4/5/2010	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.066	<0.066	<0.066	ND
HA-4	4/5/2010	2.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.066	<0.066	<0.066	ND
TRCPT-1	4/5/2010	5.0	--	--	--	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.019	<0.0096	<0.0048	ND	<0.0049	<0.0049	<0.0049	ND
		9.5	--	--	--	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.019	<0.0093	<0.0047	ND	<0.005	<0.005	<0.005	ND
		18.0	--	--	--	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.019	<0.0093	<0.0046	ND	<0.005	<0.005	<0.005	ND
TRCPT-2	4/5/2010	5.0	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	<0.010	<0.005	ND	<0.0049	<0.0049	<0.0049	ND
		9.5	--	--	--	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.019	<0.0097	<0.0049	ND	<0.005	<0.005	<0.005	ND
		18.0	--	--	--	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.019	<0.0097	<0.0048	ND	<0.0049	<0.0049	<0.0049	ND
TRCPT-3	4/2/2010	5.0	--	--	--	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.019	<0.0094	<0.0047	ND	<0.005	<0.005	<0.005	ND
		9.5	--	--	--	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.018	<0.0092	<0.0046	ND	<0.0049	<0.0049	<0.0049	ND
		18.0	--	--	--	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.019	<0.0094	<0.0047	ND	<0.0049	<0.0049	<0.0049	ND
TRCPT-4	4/2/2010	5.0	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	<0.010	<0.005	ND	<0.0049	<0.0049	<0.0049	ND
		10.0	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	<0.0099	<0.005	ND	<0.005	<0.005	<0.005	ND
		18.0	--	--	--	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.019	<0.0097	<0.0049	ND	<0.005	<0.005	<0.005	ND
TRCPT-5	4/2/2010	5.0	67	6.3	**680Y**	<0.5	4	<0.5	1.3	4.8	1.1	<0.5	1	<0.5	4.6	**4.9**	<2	<1	<0.5	ND	--	--	--	--
		16.0	<0.99	<5.0	<1.0	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.020	<0.0098	<0.0049	ND	--	--	--	--
TRCPT-6	4/2/2010	7.0	<1.0	<5.0	<0.99	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.020	<0.0098	<0.0049	ND	--	--	--	--
		19.0	<0.99	<5.0	<1.0	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.020	<0.0098	<0.0049	ND	--	--	--	--
TRCPT-7	4/1/2010	6.0	**220**	80	**690Y**	<0.25	<0.25	<0.25	0.39	0.89	0.34	<0.25	0.52	0.64	1.2	<0.25	<1	<0.5	<0.25	ND	--	--	--	--
		16.0	<0.99	<5.0	<0.96	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.019	<0.096	<0.0048	ND	--	--	--	--
TRCPT-8	4/1/2010	10.0	<1.0	<5.0	<0.95	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.019	<0.0094	<0.0047	ND	--	--	--	--
		19.0	<1.0	<5.0	<0.98	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.019	<0.0093	<0.0047	ND	--	--	--	--
TRCPT-9	3/31/2010	10.0	2.5	<5.0	5.5	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048	0.28	0.062	<0.0048	ND	--	--	--	--
		22.0	<1.0	<5.0	<0.93	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.019	<0.0094	<0.0047	ND	--	--	--	--
ESL-C NDW (Table B-2)			180	2,500	180	0.27	4.7	11	NE	NE	NE	NE	NE	NE	NE	2.8	0.5	NE	0.48	--	0.13	2.8	11	--

Notes:
Results presented in units indicated at top of table.
mg/kg = milligrams per kilogram (parts per million)
TPHd = Total Petroleum Hydrcarbons quantified as diesel fuel
TPHmo = Total Petroleum Hydrocarbons quantified as motor oi
TPHg = Total Petroleum Hydrocarbons quantified as gasoline
VOCs = Volatile Organic Compounds (see laboratory data sheets for complete list of VOCs analyzed)
SVOCs = Semivolatile Organic Comounds (see laboratory data sheets for complete list of SVOCs analyzed)
< 1 = indicates not detected at the indicated laboratory detection limit
ND = Not detected at or greater than the laboratory detection limit which varies, see laboratory repor
Y = Laboratory flag indicating sample exhibits chromatographic pattern which does not resemble standard
-- = not analyzed
TPHg and VOCs analyzed by EPA Method 8260
TPHmo and TPHd analyzed by EPA Method 8015
SVOCs analyzed by EPA Method 8270

ESL = Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater by the San Francisco Bay Regional Water Quality Control Board (2007, revised May 2008).
ESL-C NDW (Table B-2): Shallow soils (less than 10 feet bgs) where groundwater is NOT a current or potential source of drinking water for commercial/industrial land use (SF-RWQCB, May 2008
Concentrations in **bold** exceed the ESL
NE= Not established

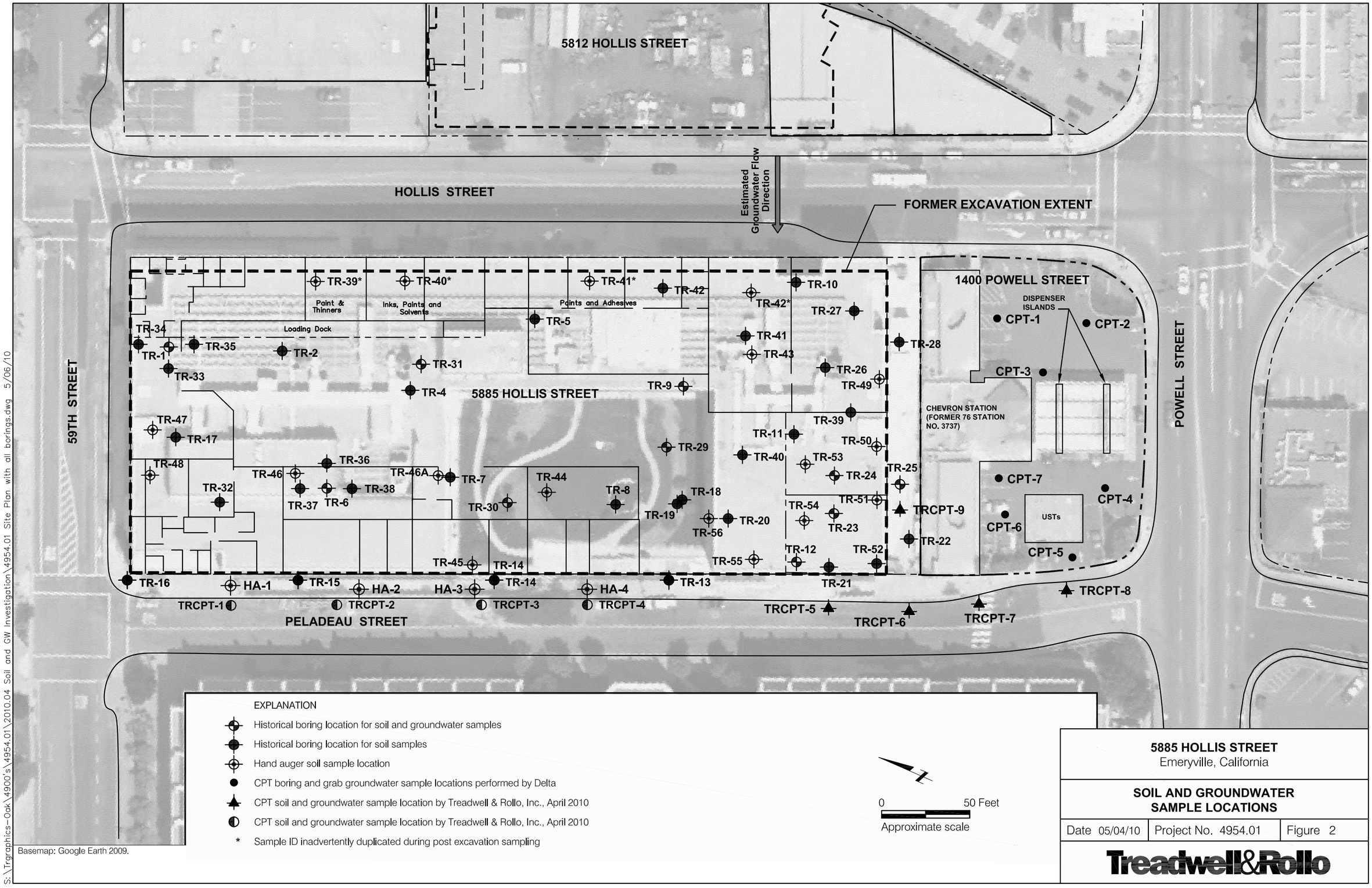
Table 4
Groundwater Analytical Results from April 2010 Investigation
5885 Hollis Street
Emeryville, California

Sample ID	Sample Date	Sample Depth feet bgs	TPHd µg/L	TPHmo µg/L	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes µg/L	m,p-Xylene µg/L	o-Xylene µg/L	Isopropyl-benzene µg/L	Propyl-benzene µg/L	1,3,5-Trimethyl-benzene µg/L	1,2,4-Trimethyl-benzene µg/L	sec-Butyl-benzene µg/L	para-isopropyl toluene µg/L	n-butyl-benzene µg/L	Naphthalene (8260) µg/L	Acetone µg/L	MtBE µg/L	2-Butanone µg/L	1,2-Dichloro-ethane µg/L	Other VOCs µg/L	Benzo(a) pyrene µg/L	Napthalene (8270) µg/L	Phenanthrene µg/L	Other SVOCs µg/L
TRCPT-1-GW	4/6/2010	20	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<10	<0.5	<10	<0.5	ND	--	--	--	--
TRCPT-2-GW	4/5/2010	20	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<10	<0.5	<10	<0.5	ND	<0.1	<0.1	<0.1	ND
TRCPT-3-GW	4/2/2010	20	--	--	--	<0.5	0.6	0.7	3.5	2.3	1.2	<0.5	<0.5	1.3	3.4	<0.5	<0.5	0.7	<2.0	21	<0.5	<10	<0.5	ND	<0.1	0.3	0.1	ND
TRCPT-4-GW	Boring left open for 6 hours. No measurable water.																											
TRCPT-5-GW	4/2/2010	20	210	<300	**2,500y**	**140**	0.7	**100**	11	10	1	23	56	4	6.6	6.8	3.8	23	**46**	42	<0.5	17	<0.5	ND				
TRCPT-6-GW	4/2/2010	11	**240**	**1,700**	**300y**	0.6	0.6	0.8	2.3	1.6	0.7	2.6	4.1	0.6	2	0.7	1	1.4	<2.0	34	0.8	11	<0.5	ND				
TRCPT-7-GW	4/1/2010	9	<500	<3,000	**460y**	<0.5	<0.5	0.6	0.5	0.5	<0.5	5.5	8.2	<0.5	<0.5	1.7	2.5	3.2	<2.0	<10	61	<10	11	ND				
TRCPT-8-GW	4/1/2010	20	<100	<600	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<10	<0.5	<10	<0.5	ND				
TRCPT-9-GW	4/1/2010	17	<100	<600	**830y**	24	<0.5	6.5	0.6	0.6	<0.5	5.3	5.9	1.7	0.6	1.4	2.1	2	<2.0	53	0.6	21	1.4	ND				
		50	<50	<300	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<10	<0.5	<10	<0.5	ND				
		ESL - NDW (Summary Table D)	210	210	210	46	130	43	100	NE	NE	NE	NE	NE	NE	NE	NE	NE	24	1,500	1,800	NE	200	--		24	4.6	--

Notes:
Results presented in units indicated at top of table.
ug/l = micrograms per liter (parts per billion)
TPHd = Total Petroleum Hydrcarbons quantified as diesel fuel
TPHmo = Total Petroleum Hydrocarbons quantified as motor oil
TPHg = Total Petroleum Hydrocarbons quantified as gasoline
VOCs = Volatile Organic Compounds (see laboratory data sheets for complete list of VOCs analyzed)
<0.5 = indicates not detected at the indicated laboratory detection limit
ND = Not detected at or greater than the laboratory detection limit which varies, see laboratory report
Y = Laboratory flag indicating sample exhibits chromatographic pattern which does not resemble standard
-- = not analyzed
TPHg and VOC analyzed using EPA Method 8260
TPHd and TPHmo analyzed using EPA Method 8015
SVOCs analyzed using EPA Method 8270

ESL = Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater by the San Francisco Bay Regional Water Quality Control Board (2007, revised May 2008).

ESL-NDW (Summary Table D): Deep soils (> 3 meters bgs) where groundwater is NOT a current or potential source of drinking water for commercial/industrial land use (SF-RWQCB, May 2008)
Concentrations in **bold** exceed the ESL
NE = not established



EXPLANATION

- Historical boring location for soil and groundwater samples
- Historical boring location for soil samples
- Hand auger soil sample location
- CPT boring and grab groundwater sample locations performed by Delta
- CPT soil and groundwater sample location by Treadwell & Rollo, Inc., April 2010
- CPT soil and groundwater sample location by Treadwell & Rollo, Inc., April 2010
- * Sample ID inadvertently duplicated during post excavation sampling

0 50 Feet

Approximate scale

Basemap: Google Earth 2009.

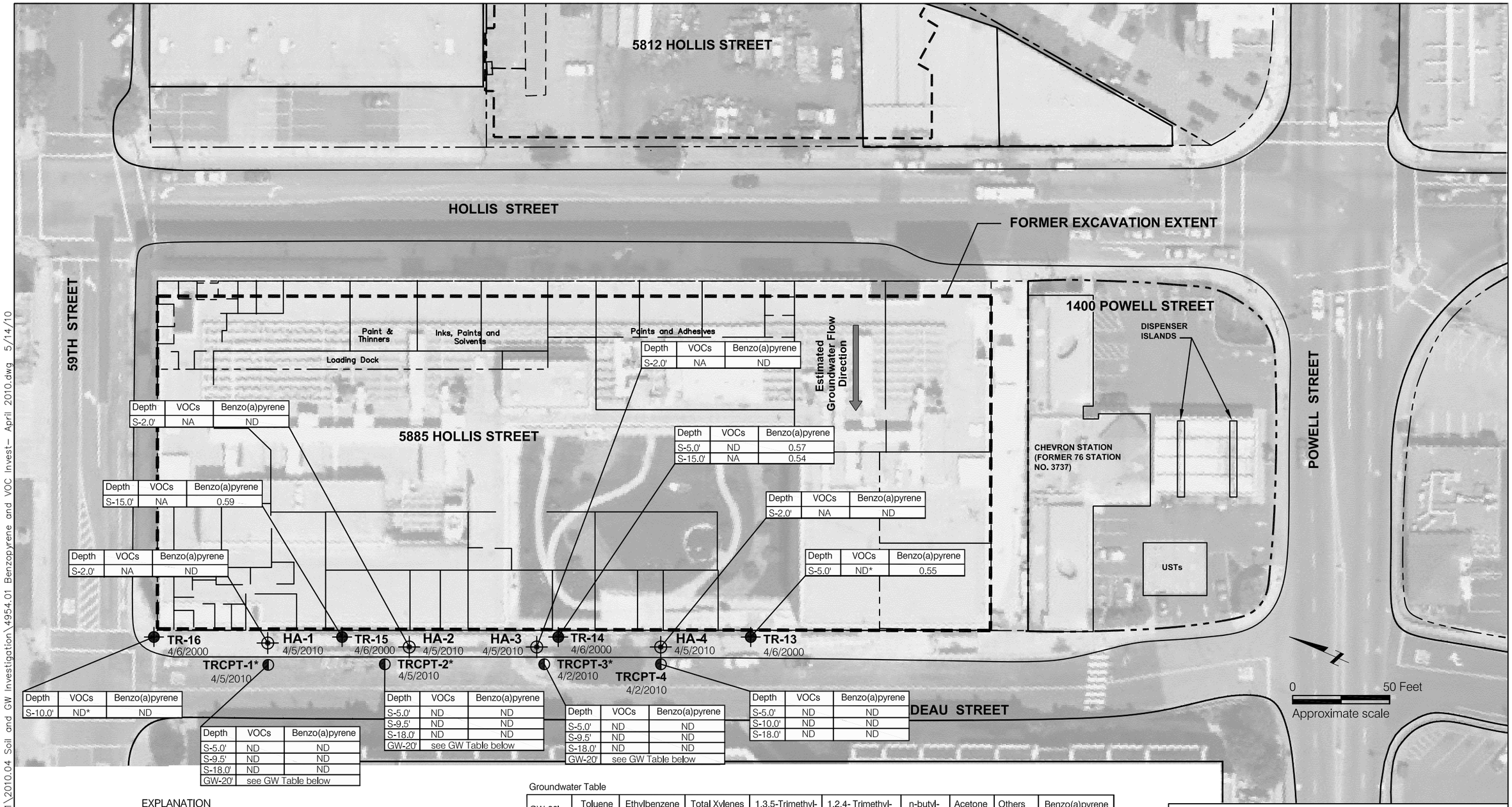
5885 HOLLIS STREET
Emeryville, California

SOIL AND GROUNDWATER SAMPLE LOCATIONS

Date 05/04/10	Project No. 4954.01	Figure 2

Treadwell&Rollo

S:\Trgraphics-Oak\4900's\4954.01\2010.04 Soil and GW Investigation\4954.01 Site Plan with all borings.dwg 5/06/10



Depth	VOCs	Benzo(a)pyrene
S-2.0'	NA	ND

Depth	VOCs	Benzo(a)pyrene
S-5.0'	ND	0.57
S-15.0'	NA	0.54

Depth	VOCs	Benzo(a)pyrene
S-15.0'	NA	0.59

Depth	VOCs	Benzo(a)pyrene
S-2.0'	NA	ND

Depth	VOCs	Benzo(a)pyrene
S-2.0'	NA	ND

Depth	VOCs	Benzo(a)pyrene
S-5.0'	ND*	0.55

Depth	VOCs	Benzo(a)pyrene
S-10.0'	ND*	ND

Depth	VOCs	Benzo(a)pyrene
S-5.0'	ND	ND
S-9.5'	ND	ND
S-18.0'	ND	ND
GW-20'	see GW Table below	

Depth	VOCs	Benzo(a)pyrene
S-5.0'	ND	ND
S-9.5'	ND	ND
S-18.0'	ND	ND
GW-20'	see GW Table below	

Depth	VOCs	Benzo(a)pyrene
S-5.0'	ND	ND
S-10.0'	ND	ND
S-18.0'	ND	ND

EXPLANATION

HA-1 4/5/2010 — Hand auger and soil sample locations, performed by Treadwell & Rollo, Inc., April 2010 (date of boring)

TRCPT-1 4/5/2010 — Soil and groundwater sampling location for VOC's & PAH's, performed by Treadwell & Rollo, Inc., April 2010 (date of boring)

TR-16 4/6/2000 — Historical boring location for soil samples (date of boring)

* VOCs analyzed by EPA Method 8010

Basemap: Google Earth 2009.

Groundwater Table

GW-20'	Toluene	Ethylbenzene	Total Xylenes	1,3,5-Trimethyl-benzene	1,2,4- Trimethyl-benzene	n-butyl-benzene	Acetone	Others	Benzo(a)pyrene
TRCPT-1	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRCPT-2	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRCPT-3	0.6	0.7	3.5	1.3	3.4	0.7	21	ND	ND

ND = not detected
NA = not analyzed
S-5.0 = Soil Sample and depth sample collected
GW-20.0' = Groundwater sample and depth collected
All soil analytical data is reported in mg/kg
All groundwater analytical data is reported in µg/L
All VOC analyses performed by EPA Method 8260 unless otherwise noted
Benzo(a)pyrene analyzed by EPA Method 8270

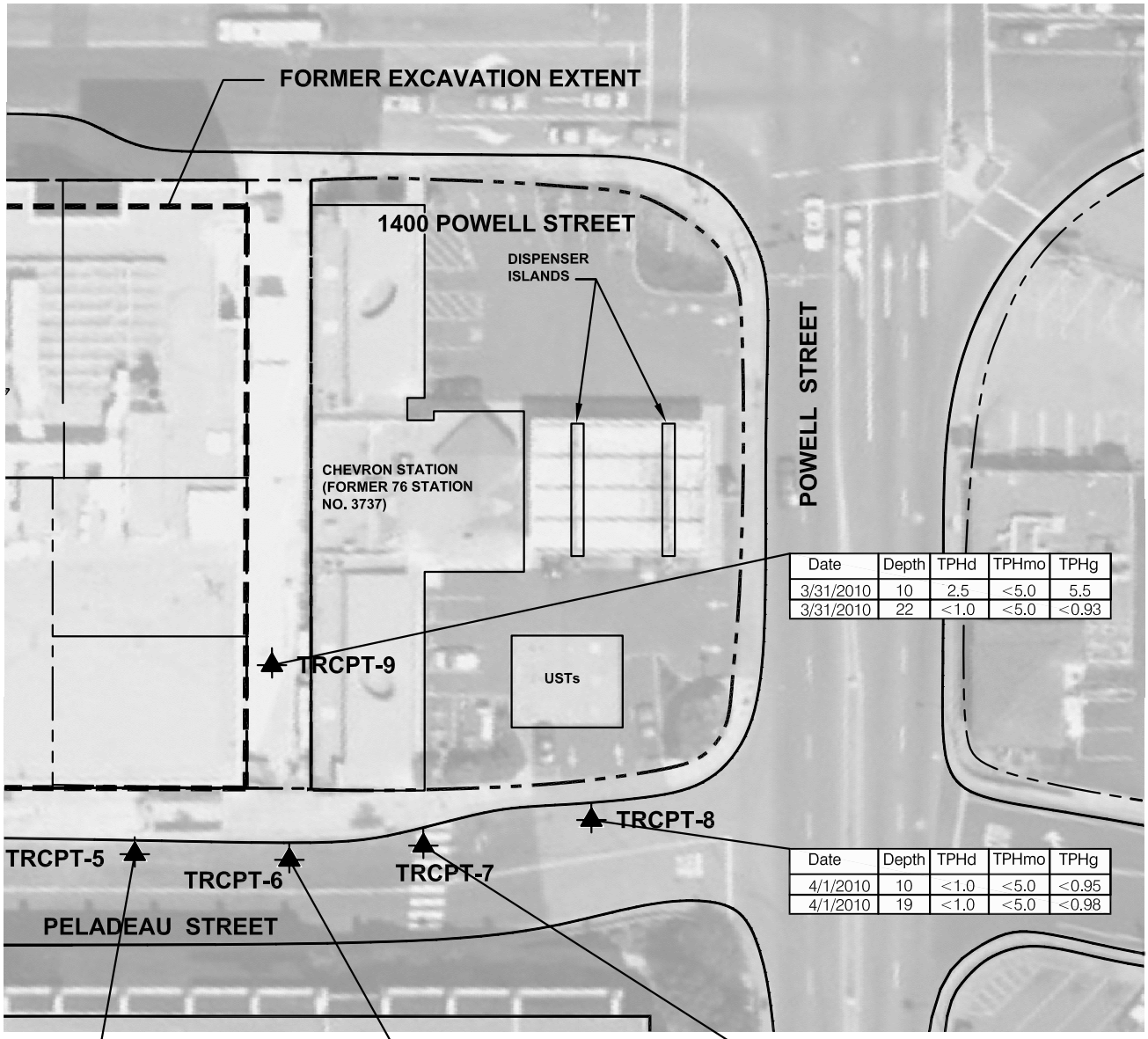
5885 HOLLIS STREET
Emeryville, California

BENZO(A)PYRENE AND VOC INVESTIGATION
APRIL 2010

Date 05/14/10 | Project No. 4954.01 | Figure 3

Treadwell&Rollo

S:\Trgraphics-Oak\4900's\4954.01\2010.04 Soil and GW Investigation\4954.01 Benzopyrene and VOC Invest- April 2010.dwg 5/14/10



Date	Depth	TPHd	TPHmo	TPHg
3/31/2010	10	2.5	<5.0	5.5
3/31/2010	22	<1.0	<5.0	<0.93

Date	Depth	TPHd	TPHmo	TPHg
4/1/2010	10	<1.0	<5.0	<0.95
4/1/2010	19	<1.0	<5.0	<0.98

Basemap: Google Earth 2009.

Date	Depth	TPHd	TPHmo	TPHg
4/1/2010	6	220	80	690
4/1/2010	16	<0.99	<5.0	<0.96

Date	Depth	TPHd	TPHmo	TPHg
4/2/2010	7	<1.0	<5.0	<0.99
4/2/2010	19	<0.99	<5.0	<1.0

Date	Depth	TPHd	TPHmo	TPHg
4/2/2010	5	67	6.3	680
4/2/2010	16	<0.99	<5.0	<1.0

EXPLANATION

Additional CPT and soil and groundwater sampling location for dissolved petroleum hydrocarbon delineation, performed by Treadwell & Rollo, Inc., April 2010

All concentrations reported in mg/kg

0 50 Feet

Approximate scale

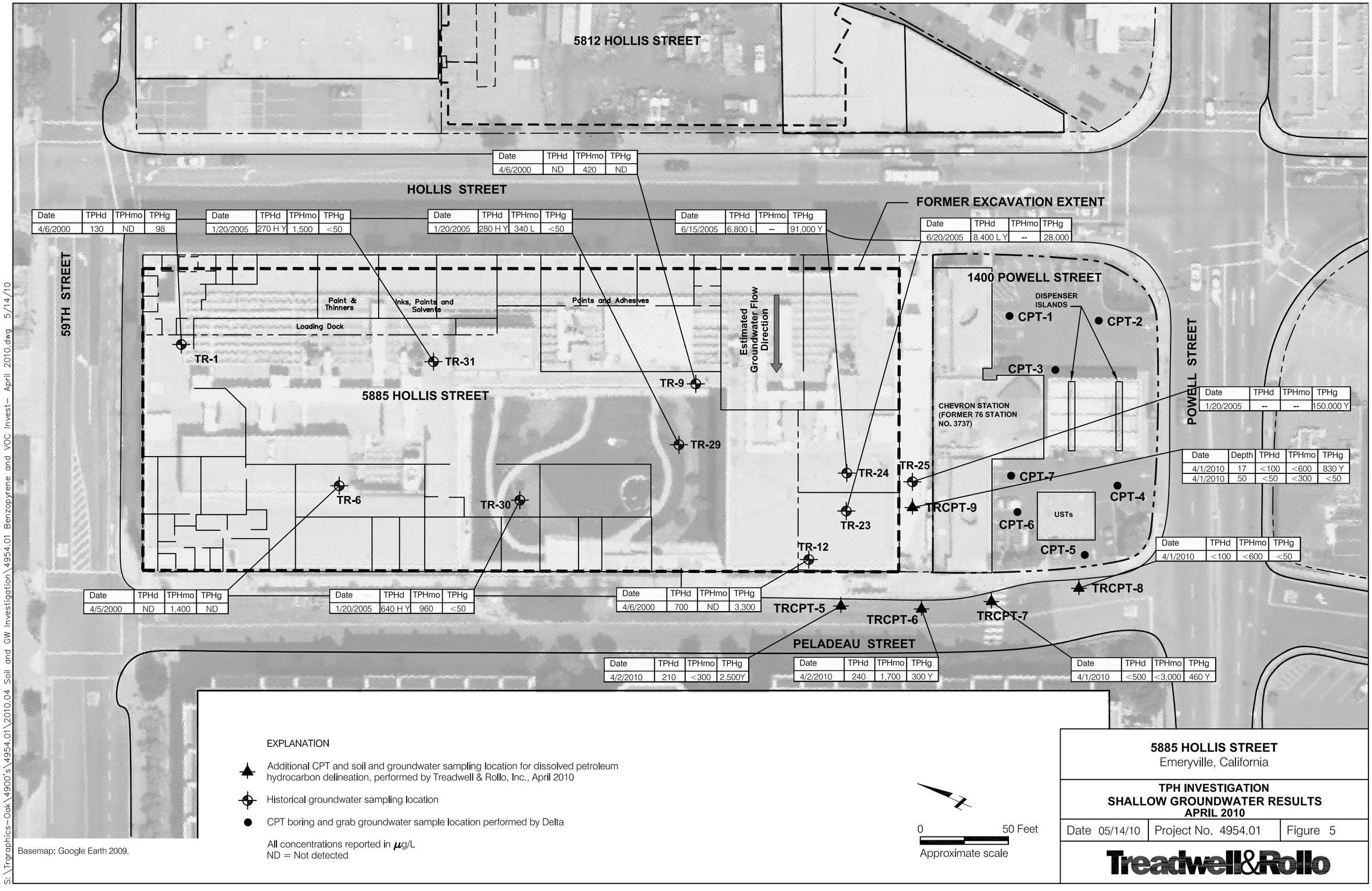
5885 HOLLIS STREET
Emeryville, California

TPH INVESTIGATION SOIL RESULTS FROM APRIL 2010

Treadwell&Rollo

Date 05/14/10 | Project No. 4954.01 | Figure 4

S:\Trgraphics-Oak\4900's\4954.01\2010.04 Soil and GW Investigation\4954.01 Benzopyrene and VOC Invest- April 2010.dwg 5/14/10



Date	TPHd	TPHmo	TPHg
4/6/2000	ND	420	ND

Date	TPHd	TPHmo	TPHg
4/6/2000	130	ND	98

Date	TPHd	TPHmo	TPHg
1/20/2005	270 H Y	1,500	<50

Date	TPHd	TPHmo	TPHg
1/20/2005	280 H Y	340 L	<50

Date	TPHd	TPHmo	TPHg
6/15/2005	6,800 L	--	91,000 Y

Date	TPHd	TPHmo	TPHg
6/20/2005	8,400 L Y	--	28,000

Date	TPHd	TPHmo	TPHg
1/20/2005	--	--	150,000 Y

Date	Depth	TPHd	TPHmo	TPHg
4/1/2010	17	<100	<600	830 Y
4/1/2010	50	<50	<300	<50

Date	TPHd	TPHmo	TPHg
4/1/2010	<100	<600	<50

Date	TPHd	TPHmo	TPHg
4/5/2000	ND	1,400	ND

Date	TPHd	TPHmo	TPHg
1/20/2005	640 H Y	960	<50

Date	TPHd	TPHmo	TPHg
4/6/2000	700	ND	3,300

Date	TPHd	TPHmo	TPHg
4/2/2010	210	<300	2,500Y

Date	TPHd	TPHmo	TPHg
4/2/2010	240	1,700	300 Y

Date	TPHd	TPHmo	TPHg
4/1/2010	<500	<3,000	460 Y

EXPLANATION

Additional CPT and soil and groundwater sampling location for dissolved petroleum hydrocarbon delineation, performed by Treadwell & Rollo, Inc., April 2010

Historical groundwater sampling location

CPT boring and grab groundwater sample location performed by Delta

All concentrations reported in μg/L
ND = Not detected

0 50 Feet
Approximate scale

Basemap: Google Earth 2009.

5885 HOLLIS STREET
Emeryville, California

TPH INVESTIGATION
SHALLOW GROUNDWATER RESULTS
APRIL 2010

Date 05/14/10 | Project No. 4954.01 | Figure 5

Treadwell&Rollo

S:\Trgraphics-Oak\4900's\4954.01\2010.04 Soil and GW Investigation\4954.01 Benzopyrene and VOC Invest- April 2010.dwg 5/14/10