ConocoPhillips
76 Broadway
Sacramento, California 95818

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Alameda County
Environmental Health

March 17, 2011

Mr. Mark Detterman
Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-577

Re: Report Submittal
Quarterly Summary Report
76 Service Station #3737
1400 Powell Street
Emeryville, Alameda County, CA
Case# RO 067

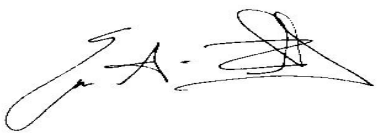
Dear Mr. Detterman:

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:

Ted Moise (Contractor)
ConocoPhillips
Risk Management & Remediation
76 Broadway
Sacramento, CA 95818
Phone: (510) 245-5162
Fax: (918) 662-4480

Sincerely,



Eric G. Hetrick
Site Manager
Risk Management & Remediation

Quarterly Summary Report
First Quarter 2011

ConocoPhillips 76 Service Station No. 3737
1400 Powell Street
Emeryville, CA USA
Alameda County Health Agency
Department of Environmental Health
File Case No. 0067

Antea Group Project No. C1Q3737101
March 17, 2011

Prepared for:
Mark Detterman
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Prepared by:
Antea™Group
312 Piercy Road
San Jose, CA USA
+1 800 477 7411

Inogen Environmental Alliance

Quarterly Summary Report
First Quarter 2011

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1.0 INTRODUCTION

On behalf of ConocoPhillips Company (ConocoPhillips), Antea™Group (Antea Group), formerly Delta Consultants (Delta), is submitting this quarterly status report for the following site:

Service Station	Location
ConocoPhillips Station #3737	1400 Powell Street Emeryville, California

2.0 SITE DESCRIPTION

The site is located at 1400 Powell Street, Emeryville, California and is currently an active service station. A site vicinity map is provided as **Figure 1**. The approximate locations of current and historic site features are shown on **Figure 2**. 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 interbedded silts, lean clays, and gravely and sandy clays. Groundwater beneath the site is encountered at approximately six to ten below grade (fbg). The site overlies a former Unocal bulk fuel plant, as does one adjacent open case (RO#2621, Emeryville Industrial Court); the responsible party for this neighboring case is Wareham Development.

3.0 SITE BACKGROUND AND ACTIVITY

Between 1917 and 1964 Union Oil Company of California operated a Distribution Plant that was bounded by Powell Street to the south, 59th Street to the north, Peladeau Street to the west, and Hollis Street to the east. This distribution facility contained numerous above ground and underground storage tanks (ASTs and USTs), a garage along Hollis Street and an auto repair shop along Peladeau Street (Treadwell & Rollo, 2007). The entire gasoline service station was constructed on what was Union Oil Company of California Distribution Plant property. On the portion of the former Distribution Plant that the Subject site currently occupies, there were a total of eight ASTs

containing oil and gasoline on the west side, and an oil warehouse, oil pump, and asphalt staging area on the east side.

The eight former ASTs located on the western portion of the Site had a combined storage capacity of 624,000 gallons, and were installed within the former berm. The lateral extent of this former bermed area includes the location of the three existing USTs as well as a majority of the existing underground piping and dispensers currently at the site. According to Treadwell & Rollo's Site Management Completion report for 5885 Hollis Street, Emeryville, dated January 5, 2007, elevated levels of hydrocarbons were observed in soils of the Emeryville Industrial Court, now Emerystation East, the property located north of the subject site, soil samples collected from soil borings TR-25 and TR-28, located approximately 5 feet north of the Site's northern property line, contained maximum concentrations of 2,100 milligrams per kilogram *(mg/kg)* of total petroleum hydrocarbons as gasoline (TPH-G) and 280 *mg/kg* of total petroleum hydrocarbons as motor oil (TPH-MO), respectively, at 6 fbg. A grab groundwater sample collected from TR-25 contained 150,000 micrograms per liter *(ug/L)* TPH-G and 2,500 *ug/L* benzene.

The entire Emerystation East property was excavated to a total depth of approximately 12 to 15 fbg to prepare the foundation of the building that currently occupies the site. Confirmation soil samples collected in the area to the north of the Subject site on the Emerystation East property indicated that TPH-G and TPH-MO were detected at maximum concentrations of 10 *mg/kg* and 6.0 *mg/kg,* respectively. During the excavation of the foundation for the Emerystation East building, three dewatering wells were installed and sampled on a weekly basis. Dewatering well DW-14, located in the southwestern corner of the property, had high levels of TPH-G, total petroleum hydrocarbons as diesel (TPH-D), and benzene, toluene, ethyl benzene, and total xylenes (BTEX) throughout the course of the excavation work. The maximum concentrations of TPH-G and TPH-D detected in extracted groundwater were 1,800 ug/L and 370 ug/L, respectively (Treadwell & Rollo, 2007).

August 11, 1993: GeoStrategies oversaw the removal of an Oil-Water separator.

September 10, 1997: A soil gas survey was conducted by Pacific Environmental Group Inc.

May 7, 1999: Under the supervision of TRC, Norman and Norman completed the removal of product piping associated with the former fuel dispenser islands. Immediately following the piping removal soil samples D-I, D-2, PL-I, PL-2, PL-3, and PL-4 were collected at selected points along the former product line trench and at the former dispenser islands, at depths ranging from 1.5 to 4.0 fbg. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G), total petroleum hydrocarbons as diesel (TPH-D), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Methods *8015/8020.*

May 11, 1999: Norman and Norman under the supervision of TRC and Robert Weston with Alameda County Environmental Health Services, over excavated soil from below the former northwest dispenser and product piping. Approximately six cubic yards of soil was removed. Soil sample PL-2 was collected from below the excavation, at a depth of 4 fbg. In addition, a groundwater sample (TCW-I) was collected and analyzed for TPH-G, TPH-D, BTEX, and MTBE by EPA Methods *8015/8020.*

May 24, 1999: One single-walled 550-gallon steel waste oil UST, located west of the station building was removed under the direction of Susan Hugo with ACHCS and supervision of TRC. Soil samples WO-4 through WO-7 and WO-I were collected from the bottom and sidewalls of the excavation at depths of 7.5 and 10 fbg and analyzed for TPH-G, TPH-D, total petroleum hydrocarbons as motor oil (TPH-MO), BTEX, and MTBE.

November 6, 2007: Site transferred to Delta Consultants.

July 2009: Delta oversaw the advancement of CPT borings CPT-1 through CPT-7 to depths of approximately 60 fbg. Details of this investigation are presented in Delta's *Report of CPT Delineation of Fuel Hydrocarbon Affected Soil and Groundwater*, dated August 18, 2009.

January 2011: Delta oversaw the installation of six groundwater monitoring wells (MW-1A/1B, MW-2A/2B, MW-3A/3B) in the southwest, northwest, and northeast portions of the station (**Figure 2**). In soil samples, TPH-G, TPH-D and benzene were reported at maximum concentrations of 460 mg/kg (MW-2B at 5 feet bgs), 520 mg/kg (MW-2B at 5 feet bgs, and 0.40 mg/kg (MW-2B 5 feet bgs). In groundwater, TPH-G, TPH-D, benzene and MTBE were reported at maximum concentrations of 3,100 µg/L in MW-3A, 1,200 µg/L in MW-2A, 160 µg/L in MW-3A, and 140 µg/L in MW-2A. Groundwater flow direction in the B Zone wells was reportedly directed to the south-southeast at a hydraulic gradient of 0.108 feet per foot. Shallow (A-Zone) groundwater flow direction and gradient was not calculated due to the fact that MW 2A did not recharge after development. Elevated pH readings were reported in wells MW 2B and MW 3A. pH in MW 2B eventually reached background levels after development, while MW 3A continued to exhibit high pH. This is likely due to grout from MW 3B (located less than three feet away) mixing with shallow perched groundwater in MW-3A. Soil contamination at the site was determined to be vertically delineated, with the only ESL exceedances in soils from MW-2B, to a depth of only 7.5 feet bgs.

Dissolved phase hydrocarbon concentrations were reportedly contained primarily in shallow groundwater. All analytes exceeding ESLs were contained in A-Zone wells, with the exception of 1,2-DCA in well MW-1B. Refer to Antea Group's *Soil and Groundwater Investigation Report* dated February 22, 2011 for further discussion and complete analytical results.

4.0 SENSITIVE RECEPTORS

In January 2010, Delta conducted a sensitive receptor survey, identifying sensitive receptors within a one-half mile radius of the site. The survey entailed contacting the Department of Water Resources (DWR) to obtain a well search report. Delta used this report to identify all wells within a one-half mile radius of the site, including domestic, municipal, and irrigation wells. No domestic, municipal, or agricultural wells were located within a one-half mile radius of the site.

Additional sensitive receptors located within a one-half mile radius of the site include four schools and two child day care centers. The nearest body of surface water located is the San Francisco Bay, which is approximately one-half mile to the west of the site. Complete details of this survey are presented in Delta's *Sensitive Receptor Survey*, dated January 18, 2010.

5.0 GROUNDWATER MONITORING AND SAMPLING

Groundwater sampling was conducted on January 26th, 2011, as part of the soil and groundwater investigation performed at the site. The groundwater sampling event was the first monitoring and sampling event at the site. Refer to Antea Group's *Soil and Groundwater Investigation Report* for further details.

6.0 REMEDIATION STATUS

Remediation is not currently conducted at this site.

7.0 RECENT CORRESPONDENCE

In an email dated January 3rd, 2011, Antea Group (formerly Delta Consultants) requested a deadline extension of February 28th, 2011 for the Soil and Groundwater Investigation Report; in an email dated January 3rd, the ACEH granted Antea Groups request for an extension.

On February 22nd, 2011, Antea Group submitted the *Soil and Groundwater Investigation Report* to the ACEH.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Dissolved phase hydrocarbon concentrations appear to be contained primarily in shallow groundwater. In the current quarter, all analytes exceeding ESLs were contained in A-Zone wells, with the exception of 1,2-DCA in well MW-1B. During the 2009 CPT investigation, only minor ESL exceedances in groundwater were reported in deeper water bearing zones (deeper than the B-zone). These exceedances were primarily for diesel detections in groundwater (CPT-5 and CPT-7) with one deep detection of benzene (1.4 µg/L) in CPT-2; however, groundwater

samples from the CPT investigation are grab groundwater samples, typically containing high levels of sediment, which can contribute to concentrations that are biased high.

High pH values (over 12) were reported in wells MW-3A and MW-2B during well development. pH values declined in MW-2B after development, but remained high in MW-3A. Antea group believes that the pH value in MW-3A is due to close proximity to the annular seal of MW-3B, and that pH in the well will decline. Antea group will continue to monitor pH values in the wells to determine whether replacement is necessary.

Antea Group recommends quarterly monitoring for the newly installed wells for four consecutive quarters. Groundwater analyses will include a full volatile organic compound (VOC) scan including all fuel oxygenates, lead scavengers, BTEX compounds, MTBE and TPH-G by Environmental Protection Agency (EPA) test method 8260B, and TPH-D by EPA method 8015M with silica gel cleanup.

Antea Group recommends that the TPH-motor oil (TPH-MO) analysis be excluded from the quarterly analyte suite, since no detections were made above laboratory reporting limits in groundwater samples collected in the first quarter of 2011.

9.0 THIS QUARTER'S ACTIVITIES (FIRST QUARTER 2011)

- Antea Group oversaw the installation of three well pairs at the site.
- Antea Group sampled the newly installed wells as part of the well installation investigation.
- Antea Group prepared and submitted a Soil and Groundwater Investigation Report dated February 22, 2011.
- Antea Group submitted the first quarter 2011 quarterly status report (provided herein).

10.0 NEXT QUARTER'S ACTIVITIES (SECOND QUARTER 2011)

- TRC to conduct a quarterly monitoring and sampling event.
- The Second Quarter 2011 Quarterly Summary Report will be prepared.

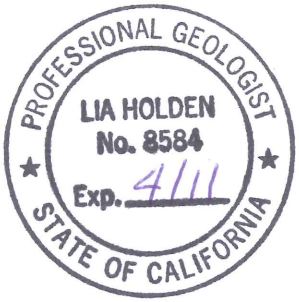
11.0 REMARKS

The recommendations contained in this report represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This report is based upon a specific scope of work requested by the client. For any reports cited that were not generated by Antea USA, Inc., the data from those reports are used "as is" and is assumed to be accurate. Antea USA, Inc does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated

in these reports. This report is based upon a specific scope of work requested by the client. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this report. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this report.

Nadine Periat
Senior Staff Geologist
Antea Group

Reviewed by:



Lia Holden, PG #8584
Geologist - Project Manager
Antea Group

cc: Mr. Ted Moise – ConocoPhillips (electronic copy only)

REFERENCES:

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GeoStrategies, Inc., *Oil/Water Separator Abandonment*, Unocal Service Station No. 3737, 1400 Powell Street, Emeryville, California, August 11, 1993.

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

Delta Consultants, *Sensitive Receptor Survey*, 76 Service Station No. 3737, 1400 Powell Street, Emeryville, California, January 18, 2010.

Delta Consultants, *Work Plan for Soil and Groundwater Investigation*, 76 Service Station No. 3737, 1400 Powell Street, Emeryville, CA, May 19, 2010.

Alameda County Environmental Health, Correspondence Letter: Modified Work Plan Approval; Fuel Leak Case No. RO0000067 and Geotracker ID T0601745736, Tosco 76# 3737/ Chevron, 1400 Powell Street, Emeryville, CA, 94608, December 2, 2010.

Antea Group, 2011, *Soil and Groundwater Investigation Report*, Chevron Branded Service Station No. 3737, 1400 Powell Street, Emeryville, California, February 22, 2011.

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 KYM 2/22/11
FILE NO. 3737-SiteLocator	PREPARED BY NaP
REVISION NO.	REVIEWED BY

antea group

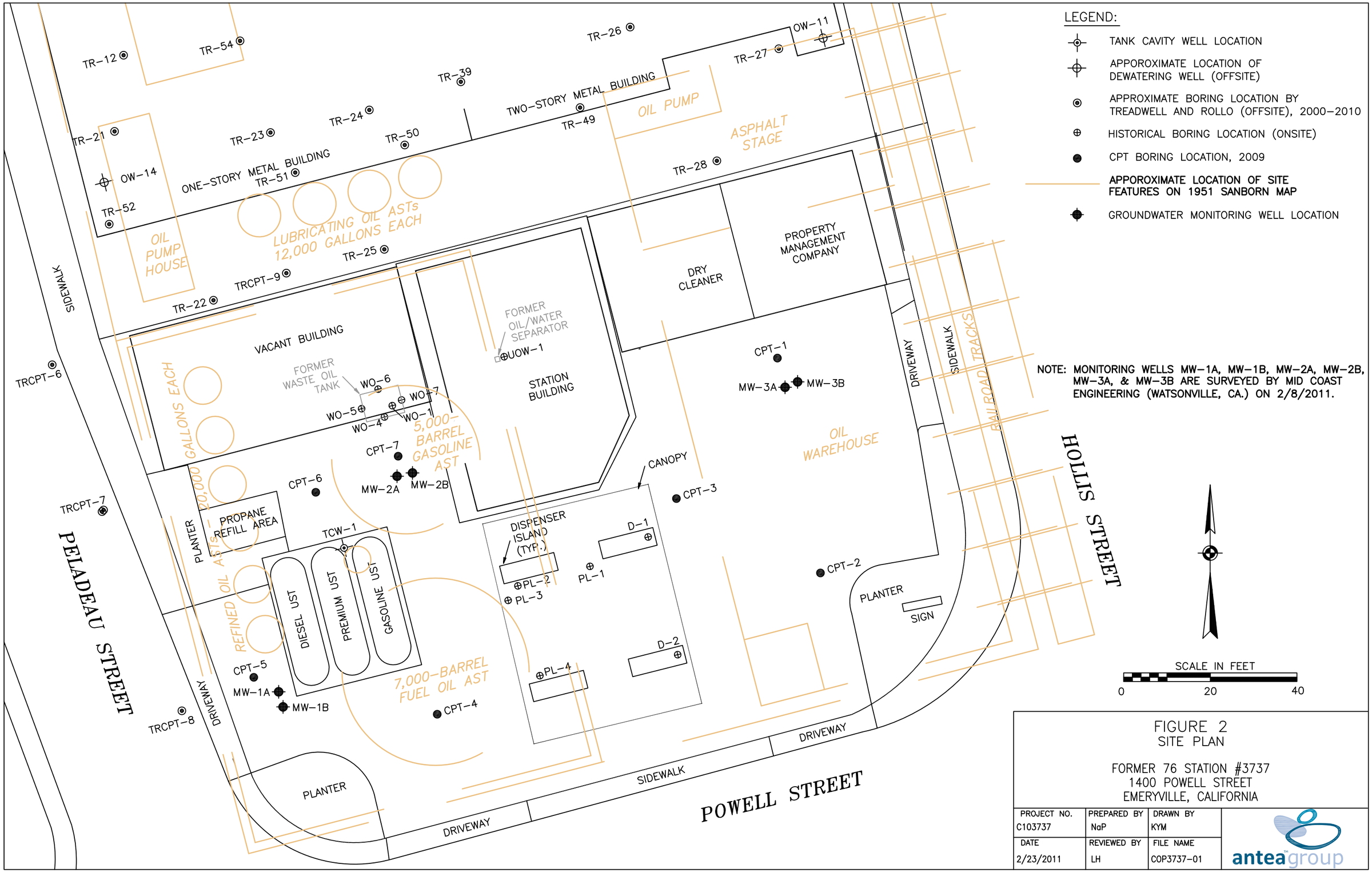

FIGURE 2
SITE PLAN

FORMER 76 STATION #3737
1400 POWELL STREET
EMERYVILLE, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C103737	NaP	KYM
DATE	REVIEWED BY	FILE NAME
2/23/2011	LH	COP3737–01

antea group