



January 16, 2012

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Alameda County
Environmental Health

Mr. Paresh C. Khatri

Hazardous Materials Specialist

Alameda County Health Care Services Agency

Department of Environmental Health

1131 Harbor Bay Parkway, Suite 250

Alameda, CA 94502

Re: **Semi Annual Status Report - Fourth Quarter 2011**

76 Service Station Facility No. 2611270

3255 Mecartney Road

Alameda, California

Dear Mr. Khatri:

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 Ms. Lia Holden at (408) 826-1863.

Sincerely,

September 18, 2002

Page 2

PLATINUM ENERGY

A handwritten signature in black ink, appearing to read "Shane Nolan", with a long horizontal flourish extending to the right.

SHANE NOLAN

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Semi Annual Status Report Fourth Quarter 2011

*76 (Former BP) Service Station No. 11270
3255 Mecartney Road
Alameda, California, USA
Alameda County Case No. RO0000511*

*Antea Group Project No. I42611270
January 19, 2012*

Prepared for:
Mr. Paresh C. Khatri
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1311 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Prepared by:
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Semi Annual Status Report

Fourth Quarter 2011

76 (Former BP) Service Station No. 11270
3255 Mecartney Road
Alameda, California, USA
Alameda County Case No. R00000511

1.0 INTRODUCTION

Antea™Group (Antea Group) is forwarding the Semi Annual Status Report for the referenced site in Alameda, California (Figure 1). The site is an operational 76 service station within a shopping center located on the northwest corner of the intersection of Mecartney Road and Island Drive in Alameda, California. The site is located in a mixed commercial and residential neighborhood (**Figure 1**).

Site features include three gasoline underground storage tanks (USTs), two fuel dispenser islands, and a station building with a service bay containing two hoists. The capacity of the three fiberglass fuel USTs are 12,000-gallon, 10,000-gallon, and 6,000-gallons. Currently, there are two onsite (MW-5, MW-6) and four offsite active groundwater monitoring wells (MW-7, XW-1 through XW-3), and five onsite soil vapor monitoring wells (SV-1 through SV-5). Pertinent site features are shown on **Figure 2**.

1.1 Work Performed in the Third and Fourth Quarters 2011

1. No groundwater monitoring or sampling was conducted during the third and fourth quarters 2011.

1.2 Work Proposed for the First and Second Quarters 2012

1. No groundwater monitoring or sampling is scheduled for the first and second quarters 2012.
2. Antea Group will perform a well head inspection for all monitoring wells at the site.
3. Antea Group will decommission all site associated wells, upon regulatory concurrence for site closure.

2.0 PREVIOUS ASSESSMENTS

May 1990 - During a routine dispenser modification, hydrocarbon contaminated soils were reported in samples P-1 and P-2 from a depth of 4.5 feet below ground surface (bgs). The dispenser area, including sample locations, was subsequently over-excavated to 4.5 feet bgs and confirmation soil samples SW1 through SW9 were collected. Total petroleum hydrocarbons as gasoline (TPH-G) and benzene were reported at maximum concentrations in sidewall samples SW1 and SW3 at concentrations of 2,000 milligrams per kilogram (mg/kg) and 18 mg/kg in SW1, and 860 mg/kg and 5 mg/kg in SW3, respectively at a depth of 8 feet bgs. SW3 could not be over-excavated to the southwest due to proximity to fuel USTs (KEI 1990). Additional excavation to 8.5 feet bgs was reported to have taken place to the south of SW-1, but it appears that additional excavation to the north of the sample was not conducted. Soil south of SW1 was excavated to 8.5 feet bgs, and soil to the north was excavated to 4.5 feet bgs,

the same depth as SW1. Approximately 195 cubic yards of soil were excavated and disposed of at Class I and Class III facilities (KEI 1990).

August 1992 - A preliminary site assessment was conducted at the site including the sampling of two pre-existing Mobil groundwater monitoring wells MW-2 and MW-4. Groundwater flow direction was reportedly to the west. Groundwater samples could not be collected from monitoring wells MW-1 and MW-3 due to insufficient recharge. Product sheen was observed in the purge water from all of the monitoring wells. TPH-G, benzene and total petroleum hydrocarbons as diesel (TPH-D) were reported at maximum concentrations of 2,600 micrograms per liter ($\mu\text{g/L}$) and 250 $\mu\text{g/L}$ in MW-4 and 3,900 $\mu\text{g/L}$ in MW-2 (Hydro 1993). Locations of monitoring wells are shown on **Figure 2**.

May 4, 1993 - In a correspondence letter from the BP Oil Company, the recent installation of three monitoring wells (XW-1 through XW-3) surrounding the site on Harbor Bay Landing shopping center property was acknowledged. No information to the wells installation, ownership or purpose was known. The wells were included into the site's quarterly monitoring program in June of 1993 (BP 1993). Well locations are shown on **Figure 2**.

June 1993 - One 4-inch diameter groundwater monitoring well, MW-5, was installed in the western corner of the property to a depth of 15 feet bgs (**Figure 2**). TPH-D was reported at a concentration of 11,000 mg/kg at a depth of five feet bgs (Hydro 1995). The first groundwater sample collected from the well was reported to only contain TPH-D above the laboratory reporting limit (LRL), at a concentration of 100 parts per billion (ppb).

October 1994 - Two exploratory borings (TB-1 and TB-2) were advanced to a depth of 11.5 feet bgs as part of a baseline property assessment. No analytes were reported above their respective laboratory reporting limits (LRLs) in any soil samples. Groundwater samples collected from borings, TB-1 and TB-2, contained 1,500 $\mu\text{g/L}$ and 310 $\mu\text{g/L}$ TPH-G, respectively.

January 1995 - Monitoring wells, MW-1 through MW-4, were destroyed in January 1995. Additionally, one 4-inch diameter monitoring well, MW-6, was installed on-site and one 2-inch diameter monitoring well, MW-7, was installed approximately five feet to the northwest of the site (**Figure 2**). Monitoring well MW-6 was constructed to a depth of 15 feet bgs and MW-7 was constructed to a depth of 16.5 feet bgs. TPH-D, TPH-G, ethylbenzene, xylenes and toluene were reported in the soil sample from MW-6 at a depth of 5 feet bgs at concentrations of 480 mg/kg, 89 mg/kg, 0.63 mg/kg, 4.8 mg/kg and 0.21 mg/kg, respectively. In a soil sample from MW-7 from a depth of five feet, TPH-D was reported at a concentration of 110 mg/kg. Groundwater was encountered in the monitoring wells at depths ranging from 5 to 7.5 feet bgs (Hydro 1995).

November 1996 - The oil/water separator located in the floor of the vehicle service bay on the west side of the service station building was removed. Two soil samples (OWS-1, 0.5' and OWS-1, 2') were collected from beneath the former oil/water separator. Total recoverable petroleum hydrocarbons (TRPH) were present in the both soil samples with a maximum concentration of 49 mg/kg. All other analytes were below LRLs (EMCON 1998). Details regarding the sampling event were obtained through EMCON's *Baseline Assessment Report* dated July 28, 1998.

August 1997 - Samples of pea gravel base material (S-1, through S-4) were collected from below each fuel dispenser. Only toluene and xylenes were reported above the LRLs in the samples. The original report for the sampling could not be located. Details regarding the sampling event were obtained through URS's *Case Closure Summary* dated October 27, 2004.

July 9, 1998 - One 1,000-gallon single-walled fiberglass used-oil UST was removed from the site. The UST was noted to be intact with no visible holes or cracks. One native soil sample (S-6-T1E) was collected from the eastern sidewall of the UST cavity at a depth of approximately 7 feet bgs. No analytes were detected above the LRL in the soil sample (ERI 1998).

August 2000 - Site fuel dispensers and product lines were removed and replaced. A total of four pea gravel samples (PD-1-2', PD-2-1.5', PD-3-1.5', and PD-4-1.5') were collected from beneath each of the four fuel dispensers, and four pea gravel samples (PL-3-1.5', PL-4-1.5', PL-6-1.5', and PL-7-1.5') were collected from beneath the product lines. Three pea gravel samples were also collected at each of the ends of the fuel USTs (F-1-4', F-2-4', and F-5-3'). No analytes were reported above LRLs in any of the samples submitted for laboratory analysis (SECOR 2000).

October 31, 2001: the Alameda County Environmental Health (ACEH) Department issued a letter of intent to make a determination that no further action (NFA) would be required, or to issue a closure letter for the site's environmental case (ACEH 2001). In a letter dated November 7, 2001, BP Oil notified the ACEH that monitoring and sampling of the site's monitoring wells would cease pending case closure/ the issue of an NFA (BP 2001).

October 21, 2004: URS submitted a Case Closure Summary (URS 2004).

August 21, 2008: The ACEH denied URS case closure. The ACEH stated that it was unclear whether sample SW1 was over-excavated. The sample was collected from a depth of 4.5 feet bgs, and appeared to be a sidewall sample for the 8 foot deep excavation to the south. The ACEH then stated that concentrations reported in SW1 would require additional investigation (ACEH 2008).

February 2009: Broadbent & Associates, Inc (BAI) attempted to advance soil boring B-4 to assess the presence of residual petroleum hydrocarbon-impacted soil onsite in the vicinity of the UST complex and the pump islands. Field activities were stopped in accordance with BP's safety protocol after encountering. According to the manager who has operated the facility for 24 years, during original construction, a large area of the subsurface soil was excavated from the site and backfilled with pea gravel (BAI 2009). The approximate extent of the pea gravel is shown on **Figure 2**. BAI also conducted a preferential pathway study, but stated that results of the study were inconclusive. BAI recommended case closure based on historically low hydrocarbon concentrations.

May 8, 2009: The ACEH denied BAI's closure request and stated that investigation had not been performed to confirm or repudiate concentrations in SW1. Further, the ACEH stated that since pea gravel covers much of the subsurface at the site, that vapor intrusion should be investigated.

December 10, 2009: Delta (now Antea Group) installed five soil vapor wells (SV -1 through SV-5) at the site. One soil sample was collected from 4.5 feet bgs in each well, and soil vapor samples were collected on January 10,

2010. TPH-D and methyl tertiary butyl ether (MTBE) were reported in soil sample SV-5 at concentrations of 50.9 mg/kg and 0.022 mg/kg, respectively. TPH-G was reported in soil vapor samples from wells SV-2, SV-4 and SV-5 at concentrations of 1,400 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), 35,000 $\mu\text{g}/\text{m}^3$ and 16,000 $\mu\text{g}/\text{m}^3$, respectively. MTBE was reported in the same wells at concentrations of 60 $\mu\text{g}/\text{m}^3$, 92 $\mu\text{g}/\text{m}^3$ and 4,700 $\mu\text{g}/\text{m}^3$ respectively. Benzene was reported in all wells at concentrations ranging from 9.9 $\mu\text{g}/\text{m}^3$ in well SV-1 to 33 $\mu\text{g}/\text{m}^3$ in well SV-2 (Delta 2010). Based on the distance from the station building and the soil vapor TPH-G concentrations in wells SV-1 (<920 $\mu\text{g}/\text{m}^3$) and SV-2 (1,400 $\mu\text{g}/\text{m}^3$) adjacent to the station building, Delta concluded that intrusion of soil vapor into the service station building is not a concern at the site, and that the site is capped with asphalt and concrete, impeding the upward movement of soil vapor towards potential receptors. Therefore, Delta recommended suspension of additional soil vapor sampling events.

September 9, 2010: Delta performed an additional soil vapor sampling event at the site upon a request from the ACEH that two sampling events be performed at different times in the year. During the event, all five wells were sampled. TPH-G, benzene and MTBE were reported at maximum concentrations of 92,000 $\mu\text{g}/\text{m}^3$ (SV-4), 26 $\mu\text{g}/\text{m}^3$ (SV-2) and 6,300 $\mu\text{g}/\text{m}^3$. Based on the results of this and previous sampling events, case closure was recommended. Complete results of the investigation are presented in *Delta's Soil Vapor Sampling Report and Request for Case Closure* dated November 8, 2010.

2.1 Sensitive Receptors

November 1992 - A sensitive receptor survey and existing well search were conducted. No public water supply wells were identified within approximately 2,500 feet of the site. No private water supply wells were identified within 1,000 feet of the site. Additionally, no subways, basements, and schools were identified within 1,000 feet of the site.

The one-page checklist survey identified a surface water body located approximately 500 feet from the site, but did not name it (Hydro 1993). As observed during a site visit by URS, this surface water body is a channel excavated as part of a residential development. The channel appears to connect to the San Francisco Bay which is located, at its closest, approximately 600 feet to the north of the site (URS 2004).

Delta has identified one (circa 1910) irrigation well located approximately 2000 feet west of the site. The well was reported by the California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) to be less than 100 feet deep, and was allegedly abandoned in the 1930s when development of Sierra Nevada reservoirs provided an alternate water supply. Four additional irrigation wells deeper than 100 feet were identified within a mile to the north and northeast of the site in the same report (RWQCB 1999). Specifically, the approximate distances of these wells from the site are as follows: 2000 feet north, 2400 feet northeast, 3800 feet northeast, and 4400 feet to the east.

3.0 CURRENT PROJECT STATUS

3.1 Remediation Status

Active soil and/or groundwater remediation is not currently being conducted at the site. Monitoring and sampling has been suspended while ACEH reviews the case for closure.

3.2 Characterization Status

During the last groundwater monitoring and sampling event, July 6, 2010, only MTBE was reported above laboratory reporting limits at a maximum concentration of 1.0 µg/L in well MW-6. Only TPH-G was reported above ESLs in wells SV-4 and SV-5. Based on these results, Antea Group believes the site's hydrocarbon plume in groundwater and soil to be appropriately defined.

3.3 Groundwater Monitoring

Currently, the groundwater monitoring and sampling program at the site has been suspended pending a review for case closure. Antea Group continues to perform annual wellhead inspection for all site associated monitoring wells.

4.0 CORRESPONDENCE

In an email dated May 5, 2011, Antea Group requested that groundwater monitoring and sampling be discontinued while the site is being considered for case closure.

In an email dated May 5, 2011, the ACEH agreed to discontinue groundwater monitoring and sampling. The ACEH requested that the integrity of the monitoring wells be maintained in the interim.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Delta (now Antea Group) requested case closure for this site in the *Soil Vapor Sampling Report and Request for Case Closure* dated November 8, 2010. Currently, no monitoring activities are being performed at the site while case closure is being considered.

On May 25, 2011, Antea Group performed a well head inspection of all groundwater monitoring wells at the site. The site wells are accessible for sampling and are sealed with tight fitting locking caps. Only minor issues with the well boxes were noted (i.e.: missing bolts, missing well box gaskets).

Antea Group continues to request formal ACEH concurrence with the November 8, 2010 request for case closure.

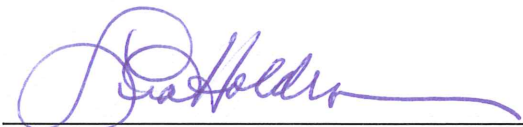
6.0 REMARKS

The findings contained in this report represent Antea Group'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 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 Group 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 Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this report.



Caitlin Morgan
Staff Professional

Reviewed by:



Lia Holden, P.G. # 8584
Geologist – Project Manager



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***Semi Annual Status Report
76 (Former BP) Service Station No. 11270
3255 Mecartney Road Alameda, California, USA
Antea Group Project No. I42611270***



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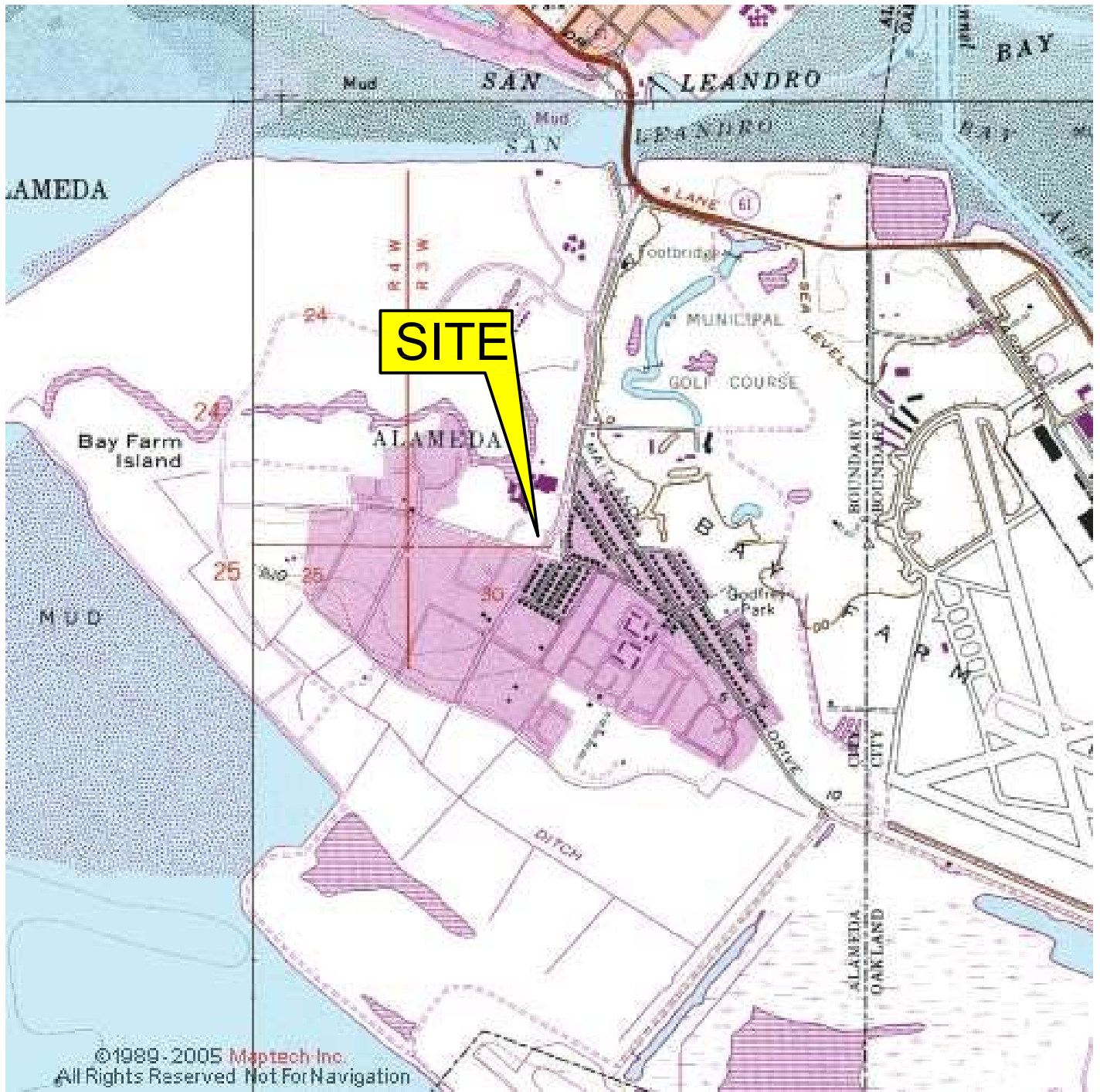
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Figures

- Figure 1 Site Location Map
- Figure 2 Site Plan



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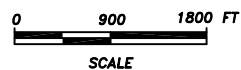


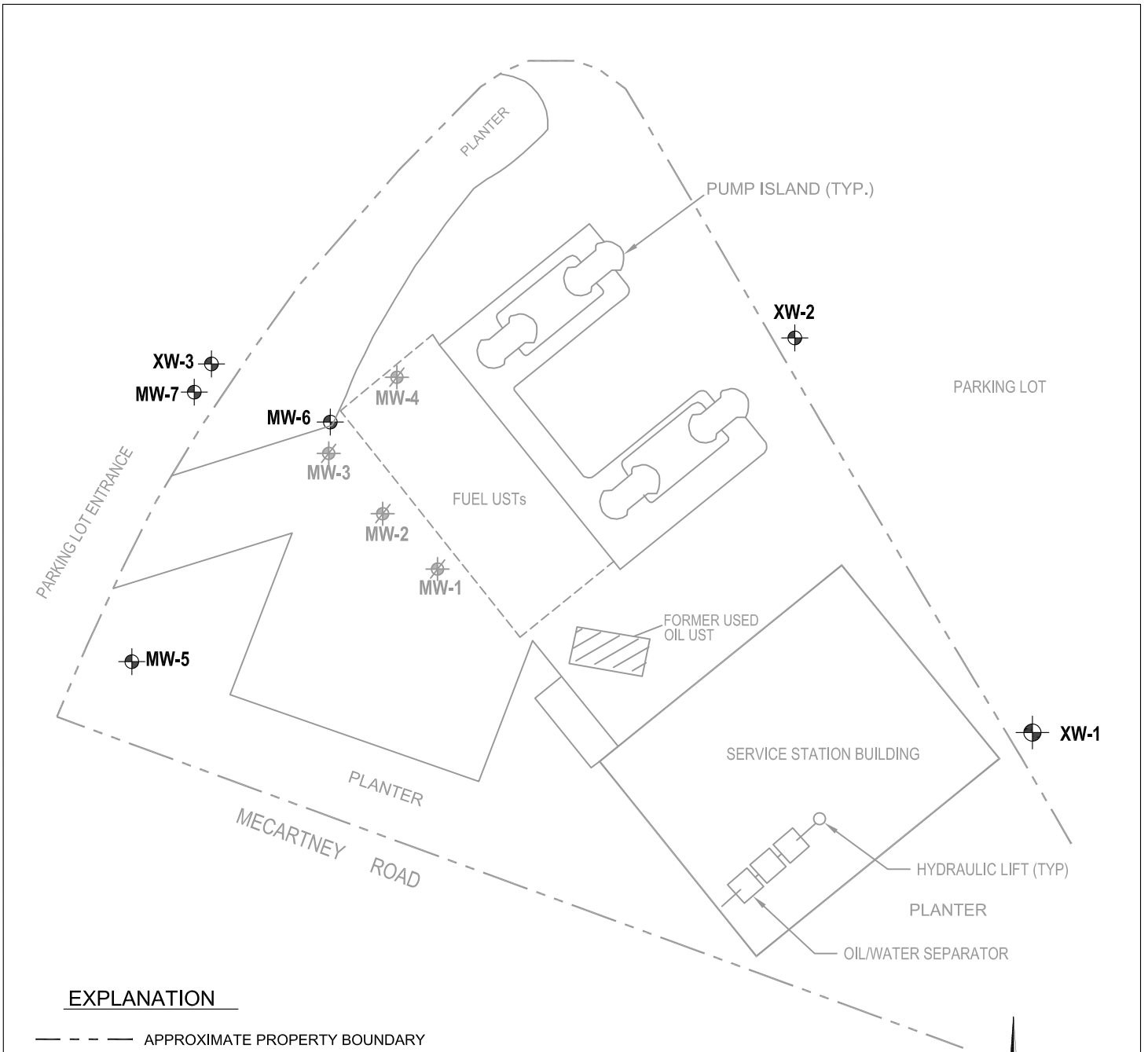
FIGURE 1

SITE LOCATION MAP

BP STATION NO. 11270
3255 MECARTNEY ROAD
ALAMEDA, CALIFORNIA

PROJECT NO. 142611270	DRAWN BY JH 06/02/09
FILE NO. 11270-SiteLocator	PREPARED BY DD
REVISION NO.	REVIEWED BY





EXPLANATION

- APPROXIMATE PROPERTY BOUNDARY
- MW-5** MONITORING WELL LOCATION
- MW-1** ABANDONED MONITORING WELL LOCATION

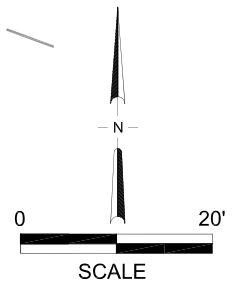


FIGURE 2
SITE MAP

BP STATION NO. 11270
3255 MECARTNEY ROAD
ALAMEDA, CALIFORNIA

PROJECT NO. 142611270	PREPARED BY NP	DRAWN BY AD
DATE 7/28/11	REVIEWED BY NP	FILE NAME 11270-Site



NOTE:
MAP ADAPTED FROM A MAP DATED 10/14/08 BY
BROADBENT & ASSOCIATES, INC ENTITLED "SITE MAP".