Atlantic Richfield Company
(a BP affiliated company)

P.O. Box 1257
San Ramon, California 94583
Phone: (925) 275-3801
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20 October 2008

Re: Work Plan for On-Site Soil Investigation with Private Well Survey
Former BP Service Station # 11270
3255 Mecartney Road
Alameda, California
ACEH Case #RO0000511

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

Submitted by:

Paul Supple
Environmental Business Manager

Work Plan for On-Site Soil Investigation with Private Well Survey
Former BP Service Station #11270
3255 Mecartney Road
Alameda, California

Prepared for

Mr. Paul Supple
Environmental Business Manager
Atlantic Richfield Company
P.O. Box 1257
San Ramon, California 94583

Prepared by

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

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20 October 2008

Project No. 06-08-661-001

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BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL

20 October 2008

Job No. 06-08-661-001

Mr. Paul Supple
Environmental Business Manager
Atlantic Richfield Company (a BP affiliated company)
PO Box 1257
San Ramon, California 94583
Submitted via ENFOS

RE: Work Plan for On-Site Soil Investigation with Private Well Survey
Former Atlantic Richfield Company Station No. 11270
3255 Mecartney Road, Alameda, California;
ACEH Case No. RO0000511

Dear Mr. Supple,

Broadbent & Associates, Inc. (BAI) is pleased to present this *Work Plan for On-Site Soil Investigation with Private Well Survey* for additional subsurface characterization at the Former Atlantic Richfield Company (ARCO) Station No. 11270, located at 3255 Mecartney Road, Oakland, California (Site). BAI prepared this work plan in response to the 21 August 2008 letter request from Mr. Paresh Khatri of the Alameda County Environmental Health Services (ACEH).

Should you have any questions concerning this work plan, please do not hesitate to contact us at (530) 566-1400.

Sincerely,
BROADBENT & ASSOCIATES, INC.

Thomas A. Venus, P.E.
Senior Engineer

Robert H. Miller, P.G.
Principal Hydrogeologist

cc: Mr. Paresh Khatri, ACEH (Submitted via ACEH ftp site)
Electronic copy uploaded to GeoTracker

WORK PLAN FOR ON-SITE SOIL INVESTIGATION
WITH PRIVATE WELL SURVEY
Former BP Service Station No. 11270
3255 Mecartney Road, Alameda, California
Fuel Leak Case No. RO0000511

TABLE OF CONTENTS

WORK PLAN FOR ON-SITE SOIL INVESTIGATION
WITH PRIVATE WELL SURVEY
Former BP Service Station No. 11270
3255 Mecartney Road, Alameda, California
Fuel Leak Case No. RO0000511

1.0 INTRODUCTION

Broadbent & Associates, Inc. (BAI) is pleased to present this Work Plan for On-Site Soil Investigation with Private Well Survey for additional subsurface characterization at the Former BP Service Station No. 11270, located at 3255 Mecartney Road, Oakland, California (Site). BAI prepared this work plan in response to the 21 August 2008 letter request from Mr. Paresh Khatri of the Alameda County Environmental Health Services (ACEH). Specifically, technical comments within the ACEH letter requested the characterization of potential residual hydrocarbon concentrations within the soil between the pump islands onsite. Conduct of a preferential pathway evaluation and well survey were also requested. A copy of recent regulatory correspondence for this Site is contained in Appendix A. This work plan includes brief discussions on the Site background and previous investigations, regional and Site geology and hydrogeology, discussion regarding the preferential pathway evaluation, private well survey, historical document review, the scope of work for the proposed soil borings, and completion schedule.

2.0 SITE BACKGROUND

The Site is currently an operational gasoline retail station located within a developed shopping center at the northern corner of the intersection of Island Drive and Mecartney Road in Alameda, California (Drawing 1). The Site is located in a mixed commercial and residential area. BP acquired the Site from Mobil in 1989 and TOSCO subsequently acquired the Site from BP in 1994. The Site consists of a station building, three gasoline underground storage tanks (USTs), two pump islands, and a service bay with two hoists. The Site is predominantly covered with concrete and asphalt.

In May 1990, two soil samples (P1 and P2) were collected from beneath the product dispensers during a routine dispenser modification. The respective samples were collected from material excavated to a depth of approximately 4.5 feet below ground surface (bgs). After additional excavation in the area of sample P1, one additional soil sample P1(8) was collected at a depth of approximately eight feet bgs. Two sidewall samples (SW1 and SW2) were collected from the sidewalls of the product line trench in the vicinity of sample point P1 at a depth of approximately 4.5 feet bgs. All soil samples collected were analyzed for Total Petroleum Hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, xylenes (BTEX), and total lead. The respective sample locations are shown in Appendix B and the analytical results are presented in Appendix C. Based on the hydrocarbon concentrations detected in sample SW1, additional soils were excavated eight feet laterally and to a depth of approximately eight feet bgs in the area of sample SW1. During over-excavation, water was encountered at approximately eight feet bgs. Three soil samples (SW3, SW4, and SW5) were subsequently collected at depths of eight, 4.5, and 4.5 feet bgs and analyzed for TPH-g, BTEX, and total lead (Appendices B and C). Based on the hydrocarbon concentrations detected in samples SW4 and SW5, additional soils were excavated seven feet laterally and to a depth of about eight feet bgs in the vicinity of samples SW4 and SW5. Four soil samples (SW6 through SW9) were collected from material excavated

by a backhoe to a depth of approximately 4.5 feet bgs and analyzed for TPH-g, BTEX, and total lead (Appendices B and C). Soil was not excavated south of sample SW3 because of its proximity to the UST complex. A total of approximately 195 cubic yards of soils were excavated, aerated onsite, and appropriately disposed offsite.

In August 1992, a preliminary site assessment was conducted at the Site involving the sampling of two pre-existing Mobil ground-water monitoring wells MW-2 and MW-4. The analytical results of the respective samples are included in Appendix D. Samples could not be collected from the two additional pre-existing wells MW-1 and MW-3 due to insufficient recharge. The well locations (MW-1 through MW-4) are shown in Appendix B. Product sheens were observed on the purge water from each of the monitoring wells. However, it was indicated that age, outdated construction of the wells, and silting of wells MW-1 and MW-3 likely decreased their hydraulic connection to the ground water at the Site. Records of boring logs and well construction details for wells MW-1 through MW-4 could not be located.

In October 1994, as part of a supplemental site assessment, two exploratory soil borings (TB-1 and TB-2) were advanced to 10 feet bgs (Appendix B). The analytical results of soil samples collected from the respective borings are included in Appendix C.

In June 1993, a four-inch ground-water monitoring well, MW-5, was installed offsite near the western corner of the Site. In January 1995 one four-inch monitoring well, MW-6, was installed onsite and one two-inch monitoring well, MW-7, was installed offsite. Borings for wells MW-5 and MW-6 were advanced to 15 feet bgs and the boring for well MW-7 was advanced to 16.5 feet bgs. Ground-water was encountered in the wells at depths ranging between five and 7.5 feet bgs. The respective well locations are shown in Appendix B and the analytical results of soil samples collected from the borings for wells MW-5 through MW-7 are included in Appendix C. Wells MW-1 through MW-4 were subsequently destroyed in January 1995. The boring logs and well construction details for wells MW-5 through MW-7 and the well destruction logs for wells MW-1 through MW-4 are included in Appendix E.

In November 1996, a Tier 2 risk-based corrective action (RBCA) evaluation was conducted to determine the potential exposure risk associated with residual benzene concentrations in onsite soils. The results of the evaluation indicated that the levels of benzene in soil eight feet bgs should not pose a risk to onsite workers. Risks to potential hypothetical future residents reportedly exceeded the lower, more protective end of the United States Environmental Protection Agency's acceptable risk range. The evaluation also concluded that ongoing natural attenuation was likely to reduce residual benzene concentrations to below the acceptable risk range prior to the unlikely scenario of the Site being converted to residential use.

In December 1996, the oil-water separator located on the floor of the vehicle service bay at the west side of the service station building was cleaned and removed. Two soil samples (OWS-1, 0.5' and OWS-1,2') were collected from beneath the former oil-water separator location. The respective sampling locations are shown in Appendix B and the analytical results are included in Appendix C.

In August 1997, samples of pea gravel base material (S-1 through S-4) were collected from the bottom of each dispenser and analyzed for TPH-g, BTEX and methyl tertiary butyl ether

(MTBE). The respective sampling locations are provided in Appendix B and the analytical results are presented in Appendix C.

In July 1998, one 1,000 gallon single walled fiberglass used oil UST was removed from the Site (Appendix B). The removed 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 seven feet bgs. The analytical results of the respective soil sample are provided in Appendix C.

In August 2000, onsite 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 product 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 (Appendix B). 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'). The analytical results of the respective soil samples are included in Appendix C.

A ground-water monitoring program was initiated in October 1992 utilizing wells MW-1 through MW-4 and was continued until September 2001, incorporating wells MW-5 through MW-7 and offsite wells XW-1 through XW-3 not associated with the Site. The analytical results of the ground-water monitoring program are included in Appendix D. The potentiometric ground-water elevation contour map and a figure depicting the concentrations of petroleum hydrocarbons in ground water during the monitoring session conducted in September 2001 are also included in Appendix D. The monitoring program was discontinued in September 2001, pending possible case closure.

3.0 SITE GEOLOGY AND HYDROGEOLOGY

The Site is situated approximately 4,500 feet south of San Leandro Bay and approximately 3,500 to 5,400 feet northeast of the present shoreline of the San Francisco Bay. Sediments encountered at the Site generally consisted of silty to gravelly sand and sandy gravel to the explored depth of 16.5 feet bgs. Lean clay was encountered in the boring of well MW-5 from 13 to 15 feet bgs and gravelly clay (possibly fill) from 3.5 to five feet bgs in the boring of well MW-7. Ground water was encountered during drilling activities between five and 7.5 feet bgs. Copies of the boring logs and well construction diagrams are included in Appendix E.

In 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 or schools were identified within 1,000 feet of the Site. The survey identified a surface water body located approximately 500 feet from the Site but did not provide a name. As observed during a site visit by URS, this surface water body is a channel excavated as part of a residential development; it is uncertain if it is connected to the San Francisco Bay, located greater than ½ mile from the Site.

According to the Regional Water Quality Control Board (RWQCB) San Francisco Bay Region "East Bay Plain Ground-water Basin Beneficial Use Evaluation Report," Figures 16 and 17, June 1999, there are one shallow (less than 100 feet bgs) and four deep (greater than 100 feet bgs)

irrigation wells located within 0.5 miles of the Site. During the ground-water monitoring program, the depth to water in onsite and offsite wells has ranged between 5.24 feet bgs and 9.15 feet bgs. Historically, the ground-water flow direction at the Site has ranged from west to northeast. During the monitoring event in September 2001, the ground-water flow direction at the Site was to the west at a hydraulic gradient of 0.01 foot per foot (Appendix D).

4.0 PREFERENTIAL PATHWAY EVALUATION

A preferential pathway evaluation was requested by ACEH in their letter dated 21 August 2008. Initial contact with various agencies including the City of Alameda Engineering Department, City of Alameda Building Department and Alameda Power and Telecom has occurred in order to evaluate underground utilities located on or near the Site that could potentially act as preferential migration pathways for contamination. However, after contacting the City of Alameda Building Department, BAI was informed that a signature from the consulting engineers involved with the original development of the shopping center is required prior to release of the utility plans (dated 1980). The engineering company listed on the plans appears to no longer be in business. The City of Alameda Building Department requires a 45 day period to make an attempt to contact the engineering company. After this period of time, the signature of the current property owner will enable the release of the utility plans. The current property owner has already agreed to this request.

However, upon recent receipt of ground-water analytical data acquired from sampling activities conducted at the Site on 19 September 2008, a preferential pathway evaluation does not appear to be necessary. Gasoline Range Organics (GRO), ethylbenzene, toluene, and total xylenes were detected above laboratory reporting limits in one of the six wells sampled at concentrations of 83 micrograms per liter (µg/L), 2.0 µg/L, 4.1 µg/L, and 17 µg/L, respectively, in well MW-6. MTBE was detected above laboratory reporting limits in four of the six wells sampled at concentrations up to 3.4 µg/L in well MW-6. MTBE was the only constituent detected in offsite wells XW-3 and MW-7 at concentrations of 1.3 µg/L and 1.6 µg/L, respectively. The remaining fuel additives and oxygenates were not detected above their respective laboratory reporting limits. At this time, these minor concentrations and little to no evidence of offsite contaminant migration does not appear to warrant conduct of a preferential pathway evaluation. Future ground-water monitoring and sampling to be conducted on an annual basis will be used to further evaluate the need for a preferential pathway evaluation.

5.0 PRIVATE WELL SURVEY

Well Completion Report Release Agreement forms were submitted to the Alameda County Public Works Agency (ACPWA) and Department of Water Resources (DWR) in order to obtain records for wells within a 1/4 mile of the Site address at 3255 Mecartney Drive, Alameda, California. The Site address is located within Township 2 South, Range 3 West Section 19 relative to the Mount Diablo Baseline and Meridian of Northern California. The records received from DWR and ACPWA were believed to be all well records within Township 2 South, Range 3 West Section 19. The results of these searches returned four monitoring wells (MON) within a ¼ mile radius of the Site. These wells correspond to wells MW-1 through MW-3 and one unnamed monitoring well associated with the Site. Records on file with the DWR and ACPWA indicated that there were no

municipal (MUN), domestic (DOM), irrigation (IRR), or industrial process (IND) water supply wells within a ¼ mile radius of the Site. According to the data obtained during the private well survey, it is evident that there are no wells within a ¼ mile radius of the Site that could potentially act as a preferential pathway or conduit for contaminant migration.

6.0 HISTORICAL DOCUMENT REVIEW

A review of historical aerial photographs from Pacific Aerial Surveys in Oakland, California dated from 1950 to 2002 depict the Site as vacant and undeveloped until sometime between 1975 and 1985 (See Appendix F). An irrigation canal does appear to the east of the Site in the photograph dated 2 July 1968 and is still evident in the 5 May 1975 photograph. The canal is no longer visible in the photograph dated 4 October 1985, when the gasoline service station first becomes evident. The Site remains unchanged in the aerial photographs dated 29 November 1994 and 17 June 2002.

A certified Sanborn map dated 1987 was the only map available for the Site. This Sanborn map depicts the Site as an operational gasoline service station. A copy of the map is provided in Appendix G. A review of the permit history on file for the property indicates that a building permit for a service station was issued on 15 December 1980. Based on a review of available historical aerial photographs and Sanborn maps, the current Site location has not been utilized for purposes other than the existing gasoline service station.

7.0 PROPOSED SCOPE OF WORK

At the request of ACEH, the purpose of the proposed additional Site investigation is to further evaluate onsite soil for the presence of petroleum hydrocarbons to the northeast of the UST complex in between the two pump islands. Specifically, a historical sidewall soil sample (SW1) collected in May 1990 within the product line trench (See Appendix B) containing elevated hydrocarbon concentrations was identified in the ACEH directive letter dated 21 August 2008 as a potential concern. However, as a result of the concentrations detected within this sample, further excavation was completed in order to remove the contaminated soil in the vicinity of sample SW1 according to URS' *Case Closure Summary, Case#RO0000511, Former BP Service Station #11270* dated 27 October 2004. The other area of concern referenced in the ACEH letter was due to elevated hydrocarbon concentrations associated with soil sample SW3, which was collected along the southwestern portion of the excavation pit in between the two pump islands (Appendix B). BAI proposes advancing two direct-push technology (DPT) borings to evaluate potential petroleum hydrocarbon impacts to soil. Two borings (B-3 and B-4) are proposed; boring B-3 to the northeast of the UST complex in between the two pump islands to address the aforementioned historical SW3 sample location and boring B-4 to the north of the UST complex to address the aforementioned historical SW1 sample location while at the same time selecting a safe drilling location. Due to the proximity of each boring to the dispensers and UST complex, it is possible that actual boring locations may vary due to the presence of underground utility conflicts. If pea gravel is encountered during drilling activities, the boring must be abandoned immediately. The proposed boring locations are shown in Drawing 2.

Prior to initiating field activities, Stratus will obtain the necessary drilling permit with Alameda County; prepare a site health and safety plan (HASP) for the proposed work; clear the Site for

subsurface utilities; and provide 72-hour advance written notification to ACEH prior to start of field activities. The utility clearance will include notifying Underground Service Alert (USA) of the pending work a minimum of 48 hours prior to initiating the field investigation, and securing the services of a private utility locating company to confirm the absence of underground utilities at each boring location. Boreholes will be physically cleared to five feet bgs using hand auger or air knife methods.

The Site-specific HASP will be prepared for use by personnel implementing the work plan. The HASP will address the proposed soil borings. A copy of the HASP will be available onsite during work. The subcontractor(s) performing filed activities will be provided with a copy of the HASP prior to initiating work. A safety tailgate meeting will also be conducted daily to review the Site hazards and drilling work scope.

A Stratus Environmental Inc. (Stratus) field geologist will observe a California-licensed driller advance the soil borings using a Geoprobe or similar DPT drilling rig to a total approximate depth of 15-20 feet bgs or until a distinct layer of clay is observed. A limited access drill rig may be required due to the location of boring B-3 beneath the pump islands canopy. Soils will be classified according to the Unified Soil Classification System (USCS), and will be examined using visual and manual methods for parameters including odor, staining, color, grain size, and moisture content. Soil samples will be collected continuously and preserved at five-foot intervals, at changes in lithology, and at areas of obvious chemical impact. For each soil sample collected for laboratory analysis (anticipate samples from five, ten and fifteen ft bgs), an extra soil sample will be collected and placed in a sealable plastic bag for field screening. The soil samples collected for field screening will be allowed to volatilize and later analyzed using a photo-ionization detector (PID) for the presence of volatile petroleum compounds. Based on field screening results and observations, soil samples will be selected and submitted to the laboratory for analysis.

Soil samples collected for possible chemical analysis will be retained in sampling tubes, covered at each end with Teflon sheeting, capped with plastic end caps, labeled, and placed in an ice-filled cooler for preservation.

The samples will be submitted under chain-of-custody protocol to Calscience Environmental Laboratories, Inc. (Garden Grove), a California State-certified environmental laboratory. Soil samples will be analyzed for the following:

> GRO, BTEX, MTBE, Ethyl tert-butyl ether (ETBE), tert-Amyl methyl ether (TAME), Di-isopropyl ether (DIPE), 1,2-Dichloroethane (1,2-DCA), 1,2-Dibromoethane (EDB), tert-Butyl alcohol (TBA), and ethanol using EPA Method 8260B.

Investigation-derived residuals will be temporarily stored onsite in 55-gallon, DOT-approved 17H drums, pending characterization for proper disposal. Stratus will coordinate the transportation and disposal of surplus soils and liquids to the appropriate California-regulated facilities.

Upon completion of field activities and receipt of certified field data package (including copies of permits, field data sheets, boring logs, and the laboratory analytical report with chain-of-custody documentation), BAI will prepare a Soil Investigation Report. The report will document

the results of the investigation, field activities, copies of required permit(s), copies of field notes, soil boring logs, laboratory analytical reports with copies of chain-of-custody records, discussion of findings, conclusions and recommendations. Deviations from the work plan or data inconsistencies will be discussed in the report.

8.0 PROPOSED SCHEDULE

The schedule for the above-noted work shall proceed as follows:

- Implement Onsite Soil Investigation – Upon approval of this work plan and obtaining the necessary permits.
- Submittal of Onsite Soil Investigation Report – Within 60 days after completion of fieldwork.

In accordance with direction received from ACEH in their letter of 21 August 2008 (provided within Appendix A), ground-water monitoring and sampling was conducted at the Site on 19 September 2008. A ground-water monitoring report will be submitted to ACEH by 30 October 2008.

9.0 CLOSURE

The findings presented in this document are based upon: observation of field personnel from previous consultants, the points investigated, and results of laboratory tests performed by various laboratories. Our services were performed in accordance with the generally accepted standard of practice at the time this document was written. No other warranty, expressed on implied was made. This report has been prepared for the exclusive use of Atlantic Richfield Company. It is possible that variations in soil or ground-water conditions could exist beyond points explored in this investigation. Also changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

10.0 REFERENCES

Environmental Data Resources, 29 August 2008. Sanborn Map Report: Former BP Sta#11270, 3255 Mecartney Road, Alameda, CA 94502 (Inquiry No.2305516.1s).

Pacific Aerial Surveys, 14 April 1950. Historical aerial photograph. Scale 1 in. = 600 ft.

Pacific Aerial Surveys, 3 July 1959. Historical aerial photograph. Scale 1 in. = 800 ft.

Pacific Aerial Surveys, 2 July 1968. Historical aerial photograph. Scale 1 in. = 1,000 ft.

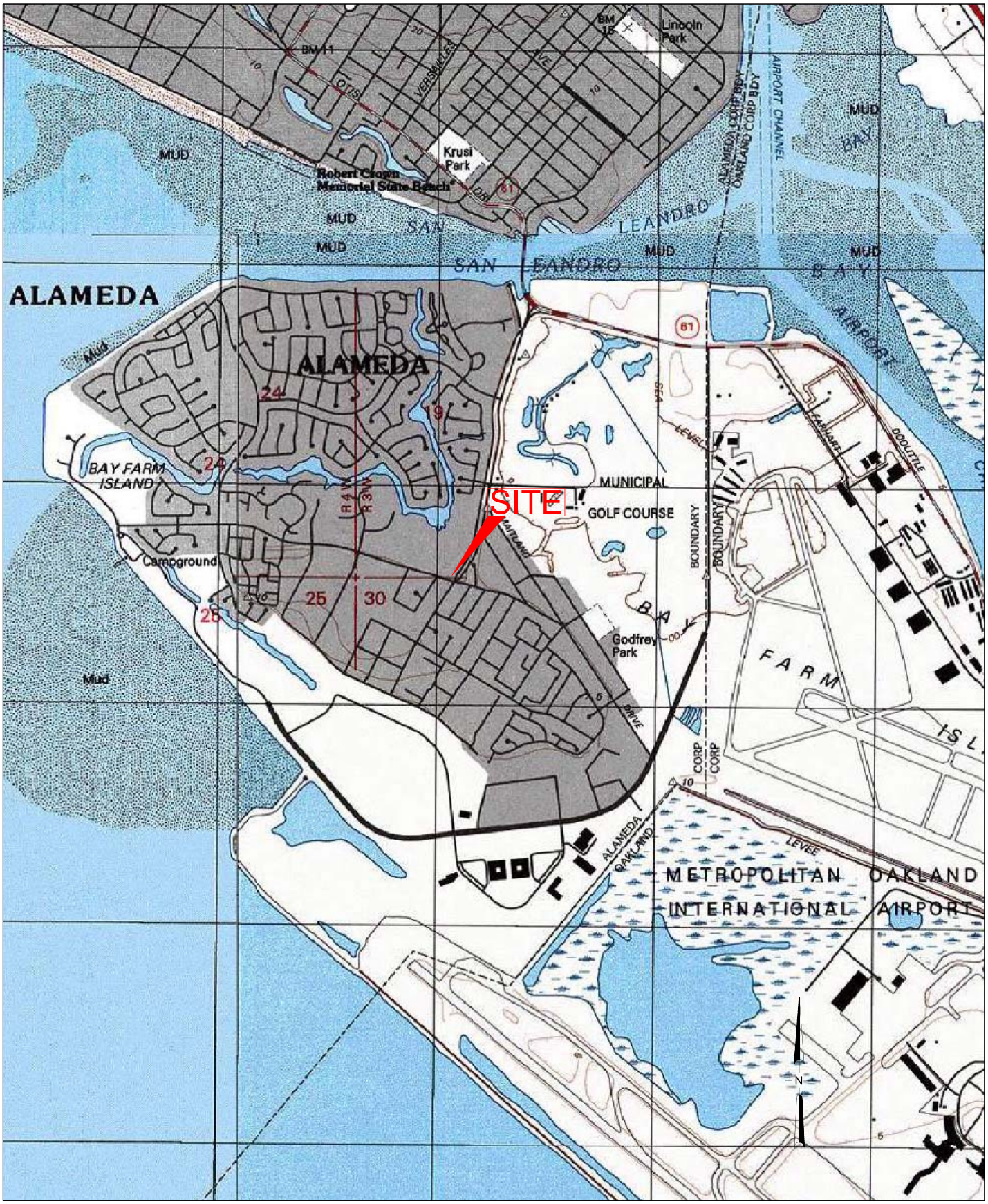
Pacific Aerial Surveys, 29 May 1975. Historical aerial photograph. Scale 1 in. = 1,000 ft.

Pacific Aerial Surveys, 4 October 1985. Historical aerial photograph. Scale 1 in. = 600 ft.

Pacific Aerial Surveys, 29 November 1994. Historical aerial photograph. Scale 1 in. = 1,000 ft.

Pacific Aerial Surveys, 17 June 2002. Historical aerial photograph. Scale 1 in. = 1,000 ft.

URS, 27 October 2004. *Case Closure Summary, Case #RO0000511, Former BP Service Station #11270, 3255 Mecartney Road, Alameda, California*. Prepared for Atlantic Richfield Company.

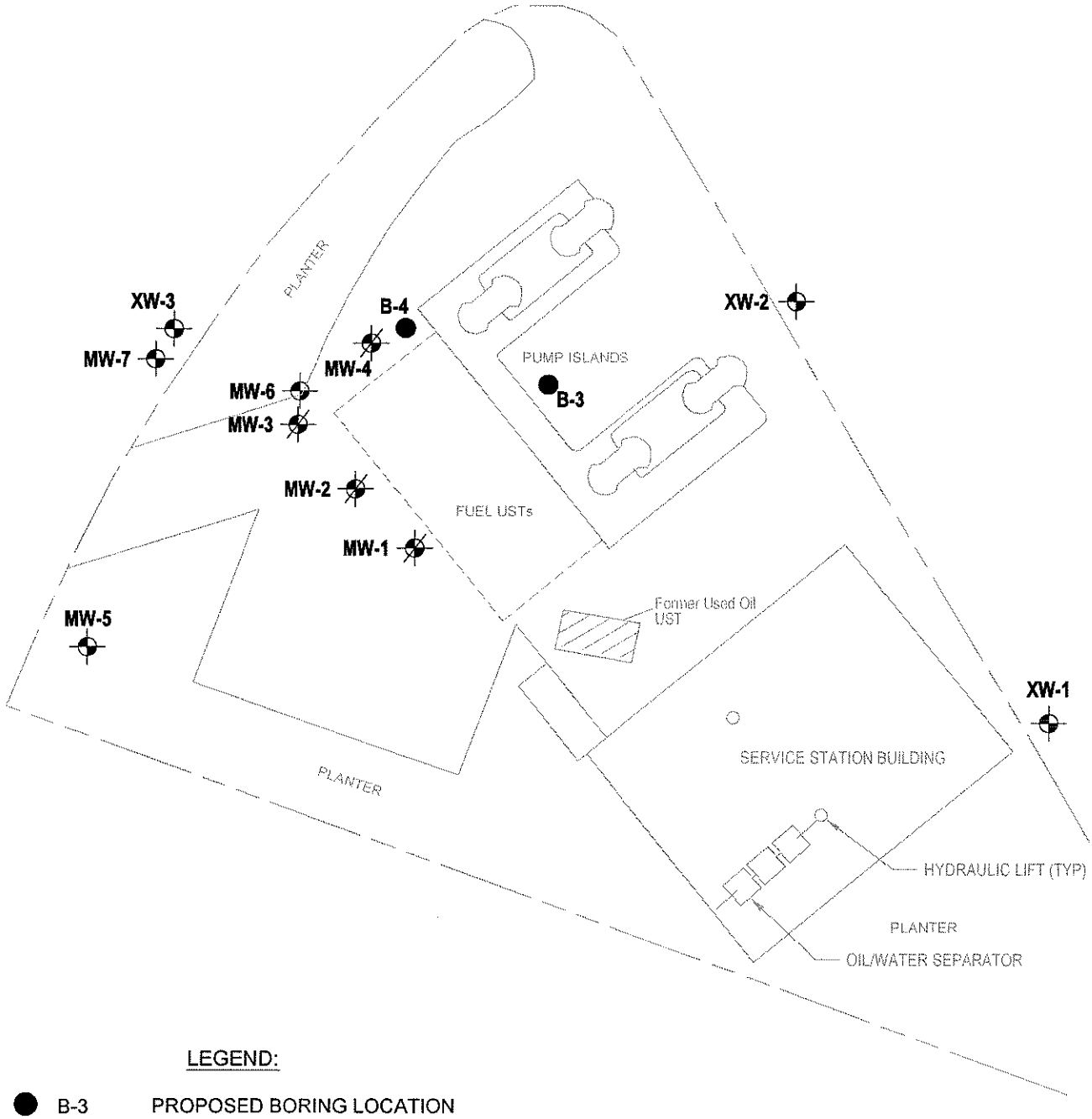


BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California
Project No.: 06-08-661 Date: 9/11/08

Former BP Station #11270
3255 Mecartney Road
Alameda, California

Site Location Map

Drawing
1



LEGEND:

- B-3 PROPOSED BORING LOCATION
- MW-5 MONITORING WELL LOCATION
- MW-1 ABANDONED MONITOR WELL LOCATION

N

0 20 40

SCALE (ft)

BROADBENT & ASSOCIATES, INC. ENGINEERING, WATER RESOURCES & ENVIRONMENTAL 1324 Mangrove Ave. Suite 212, Chico, California Project No.: 06-08-661 Date: 10/14/08	Station #11270 3255 Mecartney Road Alameda, California	Site Map with Proposed Boring Locations

Drawing 2

APPENDIX A.

RECENT REGULATORY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
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(510) 567-6700
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August 21, 2008

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Ping Liu Chien
Harbor Bay Landing, LLC.
P.O. Box 117610
Burlingame, CA 93950

Subject: Fuel Leak Case No. RO0000511 and Geotracker Global ID T0600101198, BP #11270, 3255 Mecartney Road, Alameda, CA 94501

Dear Mr. Supple:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the document entitled, "Case Closure Summary," dated October 27, 2004, which was prepared by URS Corporation for the subject site. URS submitted the case closure summary to assist in ACEH's case closure evaluation for the site. In the closure summary, URS stated that the elevated residual total petroleum hydrocarbons (TPH) as gasoline (g) and benzene concentrations of 860 mg/kg and 5 mg/kg, respectively, in soil at eight feet below the ground surface (bgs) should not pose a risk to on-site workers based on a risk assessment conducted by Foster Wheeler Environmental Corporation (Foster Wheeler) for the subject site. However, Foster Wheeler also stated that risks to potential hypothetical future residents are exceeded. Based on the analytical data, the site appears to pose a significant risk to human health and the environment and hence, the case closure does not appear adequately justified for the site. In addition, ACEH's review has identified a few data gaps, which are summarized below, that need to be addressed prior to case closure evaluation.

Therefore, ACEH cannot consider case closure for the subject site at this time. This decision to deny closure is subject to appeal to the State Water Resources Control Board (SWRCB), pursuant to Section 25299.39.2(b) of the Health and Safety Code (Thompson-Richter Underground Storage Tank Reform Act - Senate Bill 562). Please contact the SWRCB Underground Storage Tank Program at (916) 341-5851 for information regarding the appeal process.

ACEH requests that you address the following technical comments and send us the technical reports requested below.

TECHNICAL COMMENTS

1. **Residual Hydrocarbons in Soil** – As stated above, elevated residual TPH-g and benzene concentrations of 860 mg/kg and 5 mg/kg, respectively, were detected in the soil at eight feet bgs. However, in another sidewall sample SW1 collected at 4.5 feet bgs, TPH-g and benzene were detected at 2,000 mg/kg and 18 mg/kg, respectively. It is not clear whether this sidewall was over-excavated or that the concentration of TPH-g and benzene remains in place. The limits of the excavation depicted on Figure 1 of the above-mentioned report appears to indicated that SW1 is the sidewall soil sample collected from the 1 to 4.5 feet excavation conducted between the two dispenser islands, while SW3 is the sidewall sample collected from the 8.5 feet excavation. In Table 1 of the above-mentioned report, all the soil samples are listed and are not differentiated as excavation and/or over-excavation soil samples. Therefore, it is reasonable to assume that concentrations up to 2,000 mg/kg TPH-g and 18 mg/kg benzene remain in place. Also, based on the soil analytical data, the vertical extent of contamination appears undefined since 860 mg/kg TPH-g and 5 mg/kg benzene was detected at 8 feet bgs. Please propose a scope of work to address the above-mentioned concerns and submit a work plan by the date specified below.

2. **Preferential Pathway Study**- Depth to groundwater at the site has ranged between 5 to 9 feet below the ground surface (bgs). Since groundwater is relatively shallow at the site, a preferential pathway evaluation appears prudent. The purpose of the preferential pathway study is to locate potential migration pathways and conduits and determine the probability of the NAPL and/or plume encountering preferential pathways and conduits that could spread contamination. Since significantly elevated concentrations of MtBE were detected in 1998 in groundwater monitoring well MW-6, we request that you perform a preferential pathway study that details the potential migration pathways and potential conduits (wells, utilities, pipelines, etc.) for vertical and lateral migration that may be present in the vicinity of the site.

   Discuss your analysis and interpretation of the results of the preferential pathway study (including the well survey and utility survey requested below) and report your results in the Soil and Groundwater Investigation Work Plan requested below. The results of your study shall contain all information required by California Code of Regulations, Title 23, Division 3, Chapter 16, §2654(b).

   a. Utility Survey

   An evaluation of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s) is required as part of your study. Please include maps and cross-sections illustrating the location and depth of all utility lines and trenches within and near the site and plume areas(s) as part of your study.

   b. Well Survey

   A well survey was conducted in November 1992. Since several years have lapsed since the survey was conducted, it appears prudent to obtain current data regarding potential sensitive receptors. Please note that the preferential pathway evaluation shall include a detailed well survey of all wells (monitoring and production wells: active, inactive, standby, decommissioned (sealed with concrete), abandoned (improperly decommissioned or lost); and dewatering, drainage, and cathodic protection wells) within a ¼ mile radius of the subject

site. As part of your detailed well survey, please perform a background study of the historical land uses of the site and properties in the vicinity of the site. Use the results of your background study to determine the existence of unrecorded/unknown (abandoned) wells, which can act as contaminant migration pathways at or from your site. Please review and submit copies of historical maps, such as Sanborn maps, aerial photographs, etc., when conducting the background study. Please incorporate the results of the evaluation and present it in the work plan due by the date specified below.

3. **Groundwater Contaminant Plume Monitoring** - According to our records, the most recent groundwater monitoring event was conducted on September 18, 2001. Please initiate groundwater monitoring at the site. Prior to collecting groundwater samples, it is recommended that the monitoring wells be re-developed so that groundwater samples representative of actual site conditions are collected. Please collect the groundwater samples and submit a report by the due date specified below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Paresh Khatri), according to the following schedule:

- **October 20, 2008 –** Soil and Water Investigation Work Plan with Preferential Pathway Evaluation

- **October 30, 2008 -** Quarterly Monitoring Report (3rd Quarter 2008)

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.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

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) 777-2478 or send me an electronic mail message at paresh.khatri@acgov.org.

Sincerely,

Paresh C. Khatri
Hazardous Materials Specialist

Donna L. Drogos, PE
Supervising Hazardous Materials Specialist

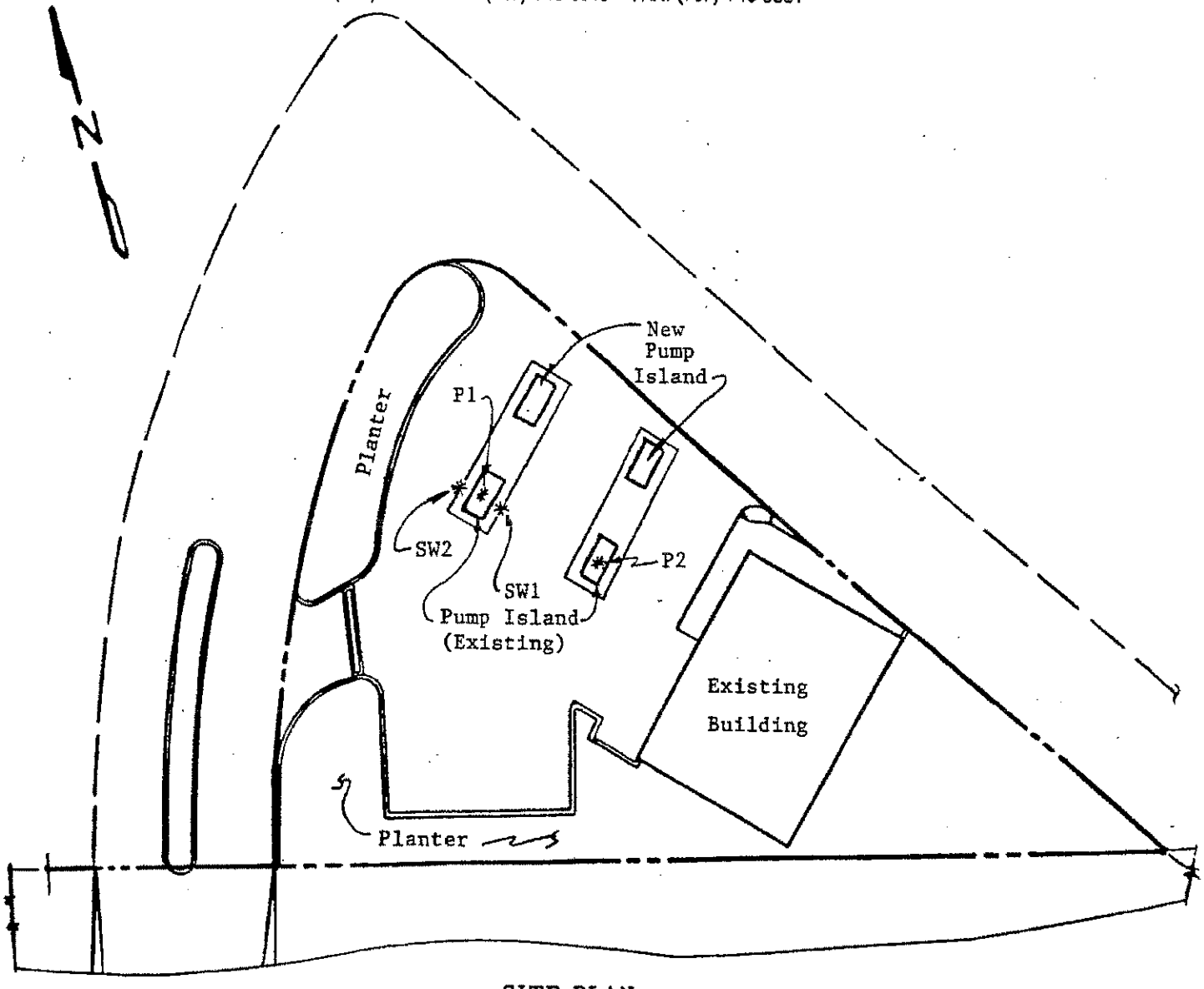
Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Tom Venus, Broadbent & Associates, Inc., 1324 Mangrove Ave., Ste 212, Chico, CA 95926
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032
Donna Drogos, ACEH
Paresh Khatri, ACEH
File

APPENDIX B.

HISTORICAL SAMPLE LOCATION FIGURES

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581



SITE PLAN
Figure 1

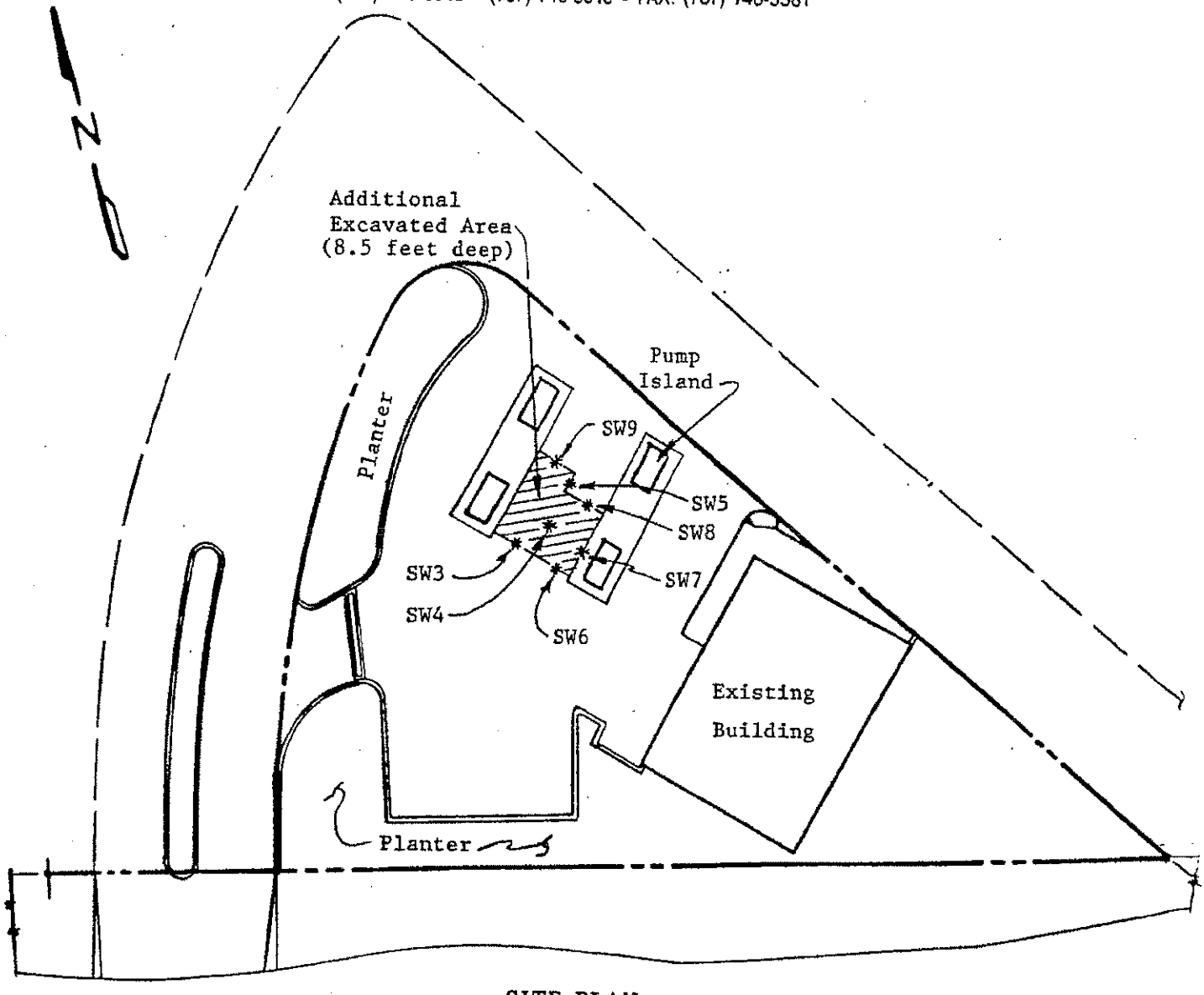
0 30 60
Approx. Scale feet

LEGEND

* Soil Sample Point Location

BP Service Station
3255 McCartney Road
Alameda, California

KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P.O. BOX 996 • BENICIA, CA 94510
(707) 746-6915 • (707) 746-6916 • FAX: (707) 746-5581



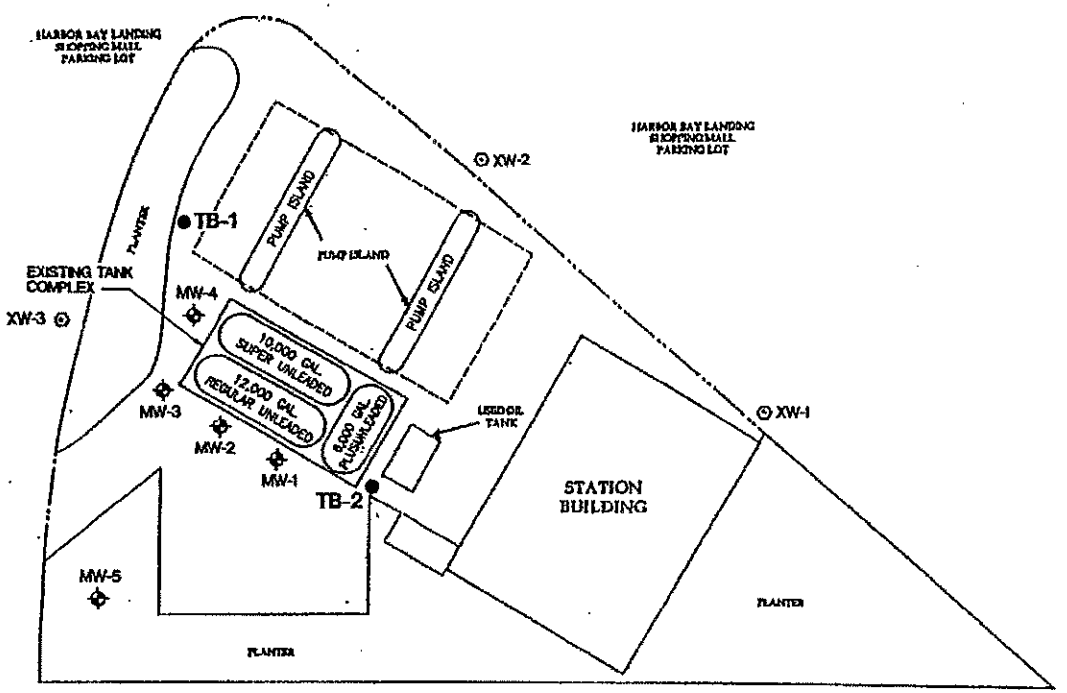
SITE PLAN
Figure 2

0 30 60
Approx. Scale feet

LEGEND

* Soil Sample Point Location

BP Service Station
3255 McCartney Road
Alameda, California



LEGEND:

MW-1 ⊕ MONITORING WELL

XW-1 ⊙ SHOPPING MALL MONITORING WELL

TB-1 ● TOSCO BORING LOCATION

0 20 40

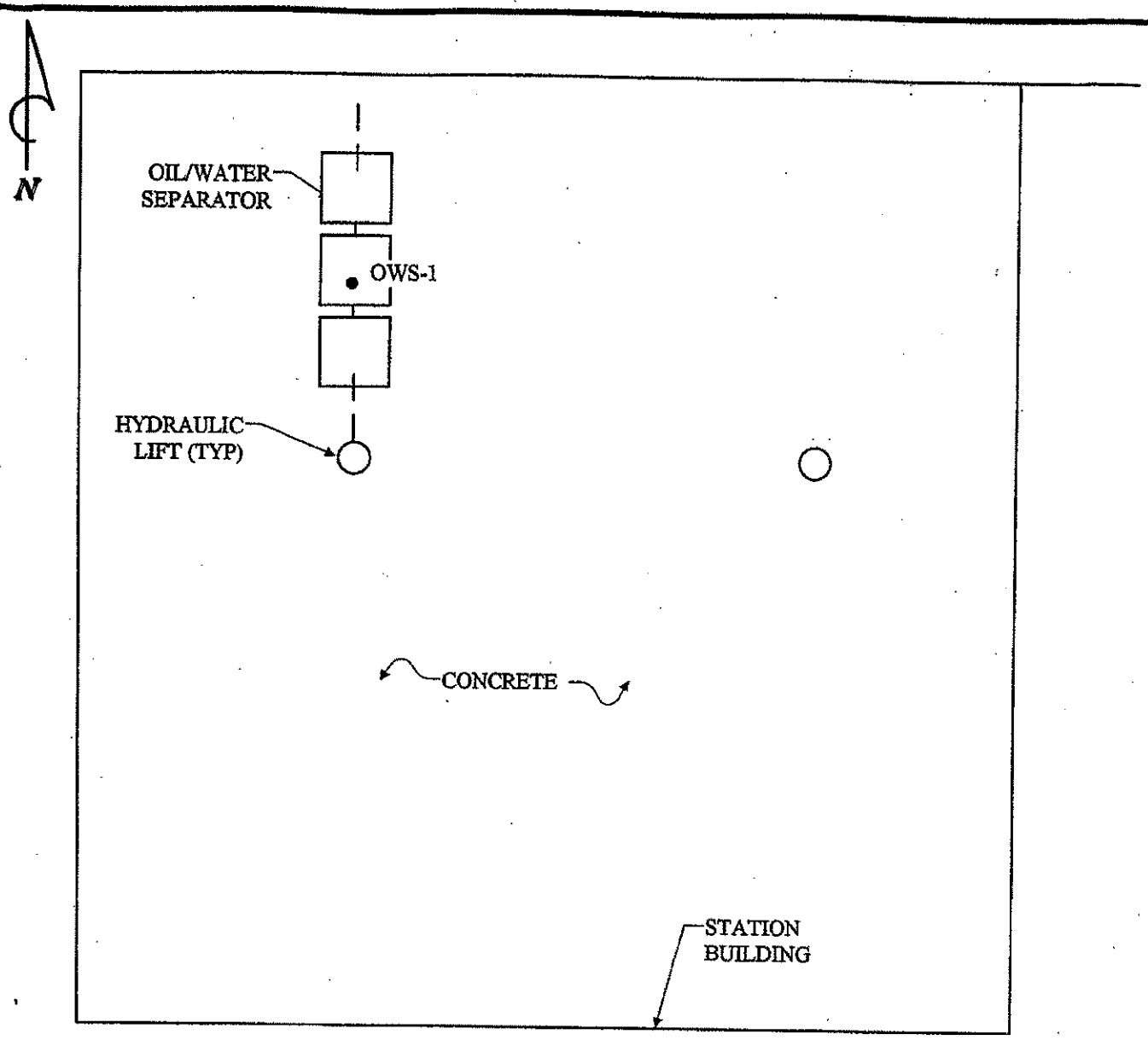
SCALE (ft)

SOURCE: HETI (APRIL 21, 1994)

EMCON Northwest, Inc.

DATE	12-12-94
DWN.	MLP
REV.	
APPR.	
PROJECT NO.	0952-140.03

Figure A-1
TOSCO #11270
3255 MECARTNEY ROAD
ALAMEDA, CALIFORNIA
SITE PLAN



LEGEND

OWS-1 • SOIL SAMPLE LOCATION AND DESIGNATION

SCALE

0 5 10 FEET

PACIFIC ENVIRONMENTAL GROUP, INC.

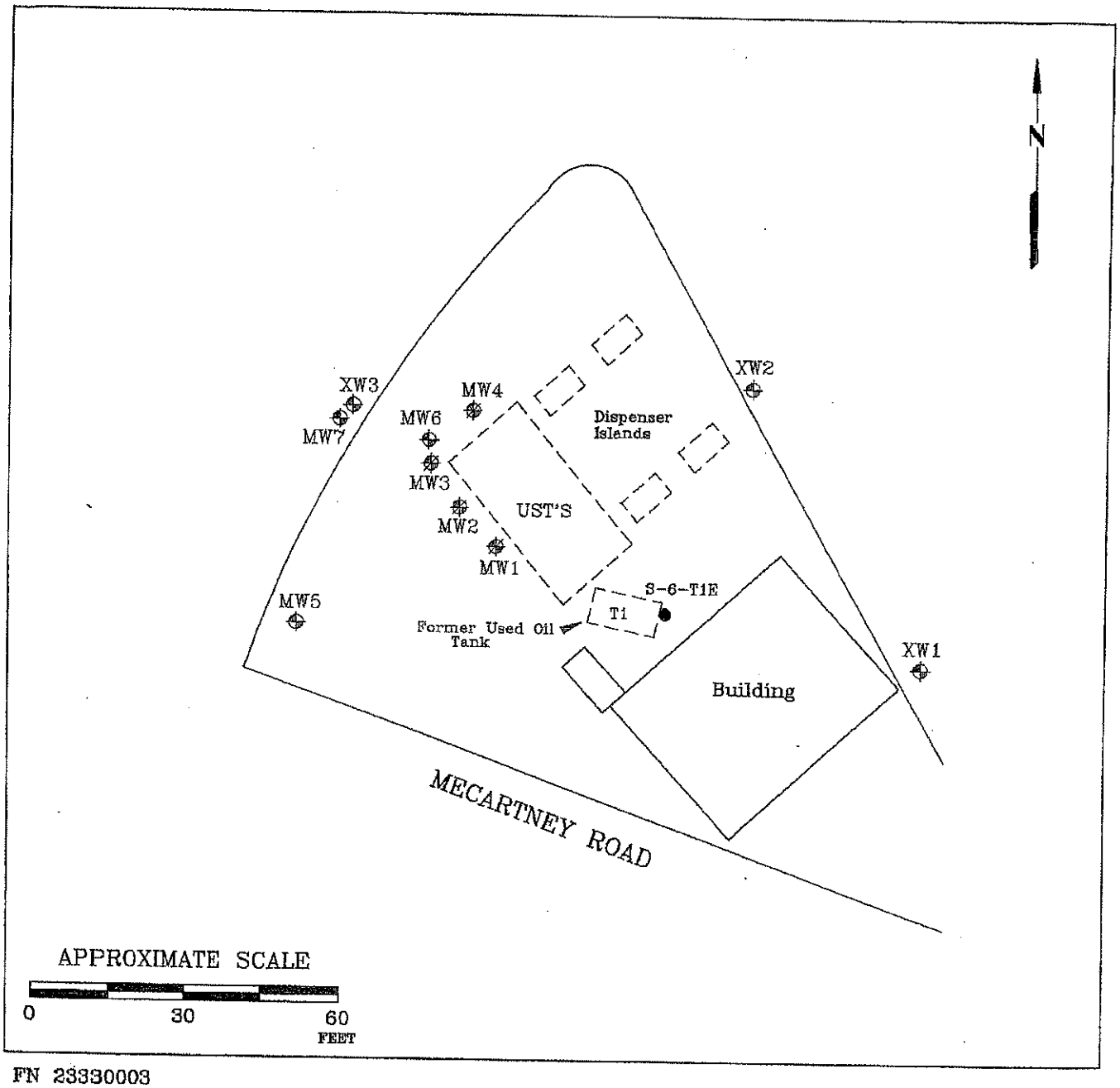
TOSCO SERVICE STATION 11270
3255 McCartney Road
Oakland, California

SITE MAP

FIGURE: 1

PROJECT: 304-012.1A

304/012/Sitemap5.vsd



FN 23330003

EXPLANATION

MW7 ⊕ Groundwater Monitoring Well

XW3 ⊕ Groundwater Monitoring Well

MW4 ⊕ Destroyed Groundwater Monitoring Well

● Soil Sample Location

S-6-T1E — Tank Number
Depth
Soil Sample

SOURCE:
Modified from a map provided by TOSCO

ERI ENVIRONMENTAL RESOLUTIONS, INC.

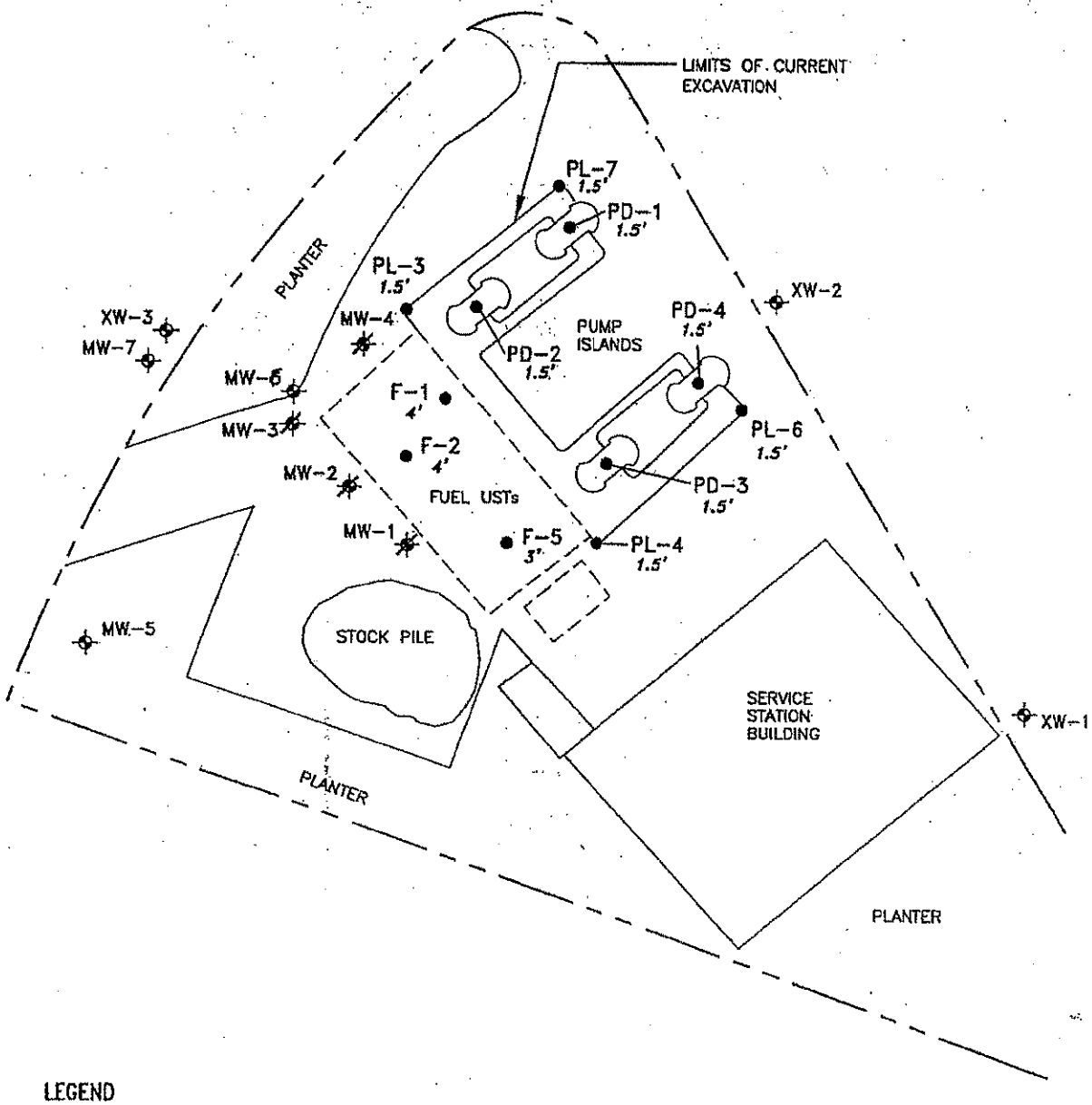
GENERALIZED SITE PLAN

TOSCO BP SERVICE STATION 11270
3255 McCartney Road
Alameda, California

PROJECT NO. 2333

PLATE 2

Oct. 27, 1998



LEGEND

- MW-6 — GROUNDWATER MONITORING WELL
- MW-2 — ABANDONED GROUNDWATER MONITORING WELL
- APPROXIMATE PROPERTY LINE
- F-2 4' — SOIL SAMPLING LOCATION AND DEPTH (FEET bgs)

NORTH

0 20 40

SCALE IN FEET

R:\OAKLAND\ACAD\11270-TOSCO.DWG 8/22/00

SECOR International Incorporated

DRAWN	JCO
APPR	RP
DATE	21 AUG 00
JOB NO.	006.03898.602

FIGURE 2
TOSCO (FORMER BP) SERVICE STATION #11270
3255 MECARTNEY ROAD
ALAMEDA, CALIFORNIA

SITE PLAN WITH SOIL SAMPLING LOCATIONS - AUGUST 7, 2000

APPENDIX C.

HISTORICAL SOIL ANALYTICAL DATA

KEI-J90-0514.R1
July 16, 1990

TABLE 1

SUMMARY OF LABORATORY ANALYSES
SOIL

(Samples collected on May 22 & 30, and June 4, 1990)

Sample	Depth (feet)	TPH as Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	Total Lead
SW1	4.5	2,000	18	56	270	39	6.5
SW2	4.5	8.0	0.31	0.084	1.2	0.26	1.7
SW3	8.0	860	5	2.8	13	7.5	5.7
SW4	4.5	1.0	0.0090	0.017	0.030	0.0099	0.71
SW5	4.5	15	0.035	0.26	0.49	0.14	2.1
SW6	4.5	1.5	0.0079	0.0052	0.069	0.023	2.9
SW7*	4.5	ND	0.034	0.0073	0.076	0.042	36
SW8	4.5	ND	0.010	0.0098	0.035	0.016	5.8
SW9	4.5	ND	0.024	ND	0.026	0.020	11
P1	4.5	6,900	70	260	700	120	0.91
P1(8)	8.0	7.0	1.0	0.025	0.47	0.19	1.7
P2	4.5	ND	0.0058	0.0050	0.023	0.010	1.6
Detection Limits		1.0	0.0050	0.0050	0.0050	0.0050	0.25

* Organic lead was non-detectable.

ND = Non-detectable.

Results are in parts per million (ppm), unless otherwise indicated.

Table A-1

Site Number 11270
3255 McCartney Road, Alameda, California

Soil Sample Results of Analyses (ppm)

Sample Number	Depth (feet)	Date Collected	California DHS LUFT Method TPH-G	California DHS LUFT Method Hydrocarbon Scan		BTEX EPA Method 5030/8020			
			TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes
TB1-S,2.5-3	2.5-3	10/26/94	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*
TB1-S,5.5-6	5.5-6	10/26/94	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*
TB2-S,2.5-3	2.5-3	10/26/94	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*
TB2-S,6.5-7	6.5-7	10/26/94	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*

Groundwater Sample Results of Analyses (ppb)

Sample Number	Depth to Water (feet)	Date Sampled	California DHS LUFT Method TPH-G	California DHS LUFT Method Hydrocarbon Scan		BTEX EPA Method 5030/8020			
			TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Totai Xylenes
TB1-W-11.5	11.5	10/26/94	1,500	*nd*	*nd*	*nd*	*nd*	*nd*	*nd*
TB2-W-11.5	11.5	10/26/94	310	*nd*	*nd*	*nd*	1	*nd*	1

NOTE:
- TPH-G = Total petroleum hydrocarbons as gasoline.
- TPH-D = Total petroleum hydrocarbons as diesel.
- TPH-O = Total petroleum hydrocarbons as oil.
- *nd* = Not detected at or above method reporting limit.
- *n/a* = Not applicable.
- — = Not analyzed.
- TW = Tosco well.
- TB = Tosco boring.
- TD = Tosco dispenser soil sample.
- THP = Tosco HydroPunch.
- SGP = Soil gas probe.
- * = Raised method reporting limits (see laboratory report in Attachment D).

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS

BP Service Station No. 11270
3255 Mecartney Road
Alameda, California

Sample No.	Date	TPHd (µg/kg)	TPHg (µg/kg)	B (µg/kg)	T (µg/kg)	E (µg/kg)	X (µg/kg)
MW-5-5'	6/17/93	11,000 (1)	ND<1000 (2)	ND<5.0 (3)	ND<5.0 (3)	ND<5.0 (3)	ND<5.0 (3)
MW-6-5'	1/19/95	480,000	89,000	ND<50	210	630	4,800
MW-7-5'	1/18/95	110,000	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.0

Notes:

Sample No. : Soil boring designation and sample collection depth.
Date : Sample collection date.
(1) TPHd : Total petroleum hydrocarbons as diesel by EPA Method 8015 (modified).
(2) TPHg : Total petroleum hydrocarbons as gasoline by EPA Method 8015 (modified).
(3) BTEX : Benzene, toluene, ethylbenzene and total xylenes by EPA Method 8020 (modified).
µg/kg : Micrograms per kilogram.
TPHd : Total petroleum hydrocarbons as diesel by California Leaking Underground Fuel Tank (CA LUFT) Manual protocols.
TPHg : Total petroleum hydrocarbons as gasoline by California Leaking Underground Fuel Tank (CA LUFT) Manual protocols.
BTEX : Benzene, toluene, ethylbenzene and total xylenes by California Leaking Underground Fuel Tank (CA LUFT) Manual protocols
ND : Not detected in concentrations exceeding the indicated laboratory method detection limit.

Table 1
Soil Analytical Data
Oil/Water Separator
Total Petroleum Hydrocarbons
(TPH as Gasoline, BTEX Compounds, TPH as Diesel, TRPH, and HVOCs)

Tosco Service Station 11270
3255 McCartney Road
Alameda, California

Sample ID	Sample Depth (feet)	Date Sampled	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Total Xylenes (ppm)	TPH as Diesel (ppm)	TRPH (ppm)	HVOCs (ppb)
OWS-1, 0.5'	0.5	12/12/96	ND	ND	ND	ND	ND	ND	49	ND
OWS-1, 2'	2	12/12/96	ND	ND	ND	ND	ND	ND	13	ND

TRPH = Total recoverable petroleum hydrocarbons
HVOCs = Halogenated volatile organic compounds
ppm = Parts per million
ND = Not detected at a concentration above the laboratory method reporting limit.

TABLE 1 - SUMMARY OF RESULTS OF DISPENSER SAMPLING
BP OIL COMPANY SERVICE STATION NO. 11270
3255 MECARTNEY ROAD, ALAMEDA, CALIFORNIA

ALISTO PROJECT NO. 10-206

SAMPLE ID	DATE OF SAMPLING	TPH-G (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	LAB
S-1	08/15/97	ND<0.1	ND<0.001	0.085	ND<0.002	0.0047	ND<0.1	SPL
S-2	08/15/97	ND<0.1	ND<0.001	0.047	ND<0.002	ND<0.002	ND<0.1	SPL
S-3	08/15/97	ND<0.1	ND<0.001	0.058	ND<0.002	ND<0.002	ND<0.1	SPL
S-4	08/15/97	ND<0.1	ND<0.001	0.049	ND<0.002	ND<0.002	ND<0.1	SPL

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
mg/kg	Milligrams per kilogram
ND	Not detected above reported detection limit
SPL	Southern Peroleum Laboratories

F:\02\10-206\206-5-S.WQ2

TABLE 1
SOIL SAMPLE ANALYSIS RESULTS
Tosco BP Service Station 11270
3255 Mecartney Road
Alameda, California

Sample #	Depth (ft bgs)	Date	TEPHd	TPPHg	B	T	E	X	TRPH	Total Lead	SVOC's	HVOC's
S-6-T1E	6.0	7/9/98	ND*	ND	ND	ND	ND	ND	ND	ND**	ND	ND

Notes:
Depths are in feet below ground surface (ft bgs)
Soil results (S) in parts per million (ppm)

TEPHd	=	Total extractable petroleum hydrocarbons as diesel analyzed using modified EPA method 8015.
TPPHg	=	Total purgeable petroleum hydrocarbons as gasoline analyzed using modified EPA method 8015.
BTEX	=	Benzene, Toluene, Ethylbenzene, and total Xylenes analyzed using EPA method 8020.
TRPH	=	Total recoverable petroleum hydrocarbons analyzed using EPA method 5520 E&F.
Total Lead	=	Total threshold limit concentration of lead analyzed using EPA method 6010.
SVOC's	=	Semi-volatile organic compounds analyzed using EPA method 8270.
HVOC's	=	Halogenated volatile organic compounds analyzed using EPA method 8010
ND	=	Not detected
*	=	TEPHd analyses completed after 14 - day hold time.
**	=	Additional Analyses: Cadmium ND; Chomium 22 ppm; Nickel 8.9 ppm; Zinc 16 ppm analyzed using EPA method 6010.

Table 1
Soil Analytical Data
Product Lines and Dispensers

Tosco (Former BP) Service Station # 11270
3255 McCartney Road
Alameda, California

Sample Name	Sample Depth (feet bgs)	Date Sampled	TPH as Gasoline (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethly-benzene (mg/kg)	Xylenes (mg/kg)	MTBE 8020/8260 (mg/kg)	Total Lead (mg/kg)
PD-1-2'	2	08/07/00	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05/NA	ND<10
PD-2-1.5'	1.5	08/07/00	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05/NA	ND<10
PD-3-1.5'	1.5	08/07/00	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05/NA	ND<10
PD-4-1.5'	1.5	08/07/00	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	0.0582/ND<0.05	ND<10
PL-3-1.5'	1.5	08/07/00	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05/NA	ND<10
PL-6-1.5'	1.5	08/07/00	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05/NA	ND<10
PL-7-1.5'	1.5	08/07/00	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05/NA	ND<10
F-1-4'	4	08/07/00	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05/NA	ND<10
F-2-4'	4	08/07/00	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05/NA	ND<10
F-5-3'	3	08/07/00	ND<1	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05/NA	ND<10

TPH = Total petroleum hydrocarbons
Sample depth in feet below ground surface
MTBE = Methyl tertiary butyl ether
ND = Not detected above specified laboratory reporting limits
NA = Not analyzed
mg/kg = milligrams per kilogram

APPENDIX D.

HISTORICAL GROUND-WATER ANALYTICAL DATA

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (ug/l)	DO (ppm)	LAB
MW-1 (c)	10/29/92	7.49	7.28	—	0.21	—	—	—	—	—	—	—	—	—	—
MW-1 (c)	06/21/93	7.49	5.40	—	2.09	—	—	—	—	—	—	—	—	—	—
MW-1	04/05/94	7.49	5.64	—	1.85	1700	—	20	1.1	3.9	7.6	—	—	—	PACE
MW-1	07/28/94	7.49	6.22	—	1.27	—	—	—	—	—	—	—	—	—	—
MW-1	10/26/94	7.49	6.40	—	1.09	—	—	—	—	—	—	—	—	—	—
MW-1 (d)	02/05/95	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-2	10/29/92	7.07	6.84	—	0.23	2500	3900	140	ND<10	65	22	—	—	—	—
MW-2	06/21/93	7.07	5.49	—	1.58	720	770	12	1.5	11	12	—	—	—	—
MW-2	04/05/94	7.07	5.40	—	1.67	420	1300	ND<0.5	ND<0.5	ND<0.5	4	4500 (e)	—	1.8	PACE
MW-2	07/28/94	7.07	5.97	—	1.10	—	—	—	—	—	—	—	—	—	—
MW-2	10/26/94	7.07	6.10	—	0.97	—	—	—	—	—	—	—	—	—	—
MW-2 (d)	02/05/95	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-3 (c)	10/29/92	7.08	7.14	—	-0.06	—	—	—	—	—	—	—	—	—	—
MW-3 (c)	06/21/93	7.08	5.84	—	1.24	—	—	—	—	—	—	—	—	—	—
MW-3	04/05/94	7.08	5.83	—	1.25	990	4300	3.2	ND<0.5	ND<0.5	1.3	790 (e)	—	—	PACE
MW-3	07/28/94	7.08	6.32	—	0.76	—	—	—	—	—	—	—	—	—	—
MW-3	10/26/94	7.08	6.42	—	0.66	—	—	—	—	—	—	—	—	—	—
MW-3 (d)	02/05/95	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-4	10/29/92	7.13	6.90	—	0.23	2600	—	250	2.5	74	6.6	—	—	—	—
MW-4	06/21/93	7.13	5.54	—	1.59	1400	1100	24	2.9	2.6	7.9	—	—	—	—
MW-4	04/05/94	7.13	5.46	—	1.67	930	940	33	0.8	ND<0.5	2.8	8700 (e)	—	2.7	PACE
MW-4	07/28/94	7.13	6.02	—	1.11	2400	1400	19	1.8	0.5	8	—	—	6.7	PACE
QC-1 (f)	07/28/94	—	—	—	—	2300	—	19	1.7	0.5	7.4	—	—	—	PACE
MW-4	10/26/94	7.13	6.13	—	1.00	—	—	—	—	—	—	—	—	—	—
MW-4 (d)	02/05/95	—	—	—	—	—	—	—	—	—	—	—	—	—	—

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (ug/l)	DO (ppm)	LAB
MW-5	06/21/93	8.36	7.44	—	0.92	ND<50	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	—
MW-5	04/05/94	8.36	7.42	—	0.94	ND<50	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	2.5	PACE
QC-1 (f)	04/05/94	—	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	PACE
MW-5	07/28/94	8.36	7.88	—	0.48	ND<50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	7.4	PACE
MW-5	10/26/94	8.36	7.92	—	0.44	ND<50	160	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	5.5	PACE
QC-1 (f)	10/26/94	—	—	—	—	ND<50	—	ND<0.5	0.5	ND<0.5	ND<0.5	—	—	—	PACE
MW-5	02/05/95	8.36	7.83	—	0.53	ND<50	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	—	—	—	ATI
QC-1 (f)	02/05/95	—	—	—	—	ND<50	—	ND<0.25	ND<0.25	ND<0.25	ND<0.50	—	—	—	ATI
MW-5	05/05/95	8.36	9.00	—	-0.64	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	—	3.1	ATI
MW-5	07/19/95	8.36	9.03	—	-0.67	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	14700	4.6	ATI
MW-5	10/12/95	8.36	9.15	—	-0.79	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	8490	4.3	ATI
MW-5	01/08/96	8.36	9.04	—	-0.68	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	10000	4.9	ATI
MW-5	09/11/97	8.36	8.90	—	-0.54	ND<50	—	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	4	SPL
MW-5	01/27/98	8.36	8.27	—	0.09	—	—	—	—	—	—	—	—	—	—
MW-5	04/19/98	8.36	8.60	—	-0.24	—	—	—	—	—	—	—	—	—	—
MW-5	09/27/00	8.36	8.68	—	-0.32	—	—	—	—	—	—	—	—	—	—
MW-5	03/21/01	8.36	8.13	—	0.23	—	—	—	—	—	—	—	—	—	—
MW-5 (k)	09/18/01	8.36	—	—	—	—	—	—	—	—	—	—	—	—	—
MW-6	02/05/95	6.88	6.39	—	0.49	1000	1000	7.6	19	9.1	96	— (g)	—	5	ATI
MW-6	05/05/95	6.88	6.85	—	0.03	2300	—	49	9	130	46	—	—	3.3	ATI
QC-1 (f)	05/05/95	—	—	—	—	2400	—	49	9.2	140	48	—	—	—	ATI
MW-6	07/19/95	6.88	7.13	—	-0.25	1500	—	84	3.3	28	24	— (g)	818	3.7	ATI
QC-1 (f)	07/19/95	—	—	—	—	1500	—	89	3.8	30	26	— (g)	—	—	ATI
MW-6	10/12/95	6.88	7.35	—	-0.47	1800	—	38	13	38	86	2500	868	4.1	ATI
QC-1 (f)	10/12/95	—	—	—	—	1100	—	33	7	18	44	2200	—	—	ATI
MW-6	01/08/96	6.88	7.04	—	-0.16	1300	—	31	4.7	60	53	170	474	4.2	ATI
QC-1 (f)	01/08/96	—	—	—	—	1000	—	27	4	49	44	150	—	—	ATI
MW-6	09/11/97	6.88	7.29	—	-0.41	ND<250	—	8.5	ND<5.0	11	6	1400	—	3.5	SPL
QC-1 (f)	09/11/97	—	—	—	—	210	—	8.7	ND<5.0	14	8	1400	—	—	SPL
MW-6	01/27/98	6.88	6.20	—	0.68	47000	—	350	150	360	690	38000	—	4.6	SPL
QC-1 (f)	01/27/98	—	—	—	—	51000	—	290	120	300	580	35000	—	—	SPL
MW-6	04/19/98	6.88	6.64	—	0.24	36000	—	40	510	140	10500	660	—	4	SPL
QC-1 (f)	04/19/98	—	—	—	—	24000	—	20	360	81	7100	480	—	—	SPL
MW-6	09/27/00	6.88	6.99	—	-0.11	1400	—	6.9	19	110	53	33/32 (i)	—	—	PACE
MW-6	03/21/01	6.88	6.36	—	0.52	330	—	2.2	1.42	50.4	10.2	56.3	—	—	PACE
MW-6	09/18/01	6.88	7.11	—	-0.23	290	—	0.957	ND<5.0	11.2	6.83	50.7	—	—	PACE

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (ug/l)	DO (ppm)	LAB
MW-7	02/05/95	6.62	7.62	—	-1.00	280	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	— (g)	—	5.1	ATI
MW-7	05/05/95	6.62	7.64	—	-1.02	290	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	—	3.6	ATI
MW-7	07/19/95	6.62	7.70	—	-1.08	150	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	— (g)	12100	4.6	ATI
MW-7	10/12/95	6.62	7.88	—	-1.26	110	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	390	14000	4.7	ATI
MW-7	01/08/96	6.62	7.66	—	-1.04	90	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	300	12060	4.9	ATI
MW-7	09/11/97	6.62	7.78	—	-1.16	ND<50	—	ND<2.5	ND<5.0	ND<5.0	ND<5.0	63	—	3.8	SPL
MW-7	01/27/98	6.62	7.30	—	-0.68	1400	—	7.7	ND<1.0	ND<1.0	ND<1.0	920	—	4.4	SPL
MW-7	04/19/98	6.62	7.52	—	-0.90	3500	—	15	7.7	11	19.3	3600	—	4.7	SPL
MW-7	09/27/00	6.62	7.71	—	-1.09	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	71/70 (i)	—	—	PACE
MW-7 (j)	03/21/01	6.62	7.62	—	-1.00	—	—	—	—	—	—	—	—	—	—
MW-7	03/29/01	6.62	7.57	—	-0.95	80	—	ND<0.5	ND<0.5	ND<0.5	ND<1.5	88.2	—	—	PACE
MW-7	09/18/01	6.62	7.74	—	-1.12	ND<250	—	ND<2.5	ND<2.5	ND<2.5	ND<7.5	36.6	—	—	PACE
XW-1	06/21/93	—	—	—	—	—	—	—	—	—	—	—	—	—	—
XW-1	04/05/94	—	5.36	—	—	ND<50	70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	3	PACE
XW-1	07/28/94	—	5.92	—	—	—	—	—	—	—	—	—	—	—	PACE
XW-1	10/26/94	—	6.05	—	—	—	—	—	—	—	—	—	—	—	—
XW-1	02/05/95	7.49	5.82	—	1.67	ND<50	ND<500	ND<0.25	ND<0.25	ND<0.25	ND<0.50	—	—	4.9	ATI
XW-1	05/05/95	7.49	5.57	—	1.92	—	—	—	—	—	—	—	—	—	—
XW-1	07/19/95	7.49	6.12	—	1.37	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	1680	4.3	ATI
XW-1	10/12/95	7.49	6.82	—	0.67	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	1150	3.8	ATI
XW-1	01/08/96	7.49	6.11	—	1.38	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	1300	4.7	ATI
XW-1	09/11/97	7.49	6.57	—	0.92	ND<50	—	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	3.3	SPL
XW-1	01/27/98	7.49	5.27	—	2.22	—	—	—	—	—	—	—	—	—	—
XW-1	04/19/98	7.49	5.24	—	2.25	—	—	—	—	—	—	—	—	—	—
XW-1	09/27/00	7.49	6.13	—	1.36	—	—	—	—	—	—	—	—	—	—
XW-1	03/21/01	7.49	5.97	—	1.52	—	—	—	—	—	—	—	—	—	—
XW-1	09/18/01	7.49	6.59	—	0.90	—	—	—	—	—	—	—	—	—	—

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	PRODUCT THICKNESS (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/l)	TPH-D (ug/l)	B (ug/l)	T (ug/l)	E (ug/l)	X (ug/l)	MTBE (ug/l)	TDS (ug/l)	DO (ppm)	LAB
XW-2	06/21/93	7.48	5.89	—	1.59	—	—	—	—	—	—	—	—	—	—
XW-2	04/05/94	7.48	5.77	—	1.71	ND<50	160	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	3	PACE
XW-2	07/28/94	7.48	6.25	—	1.23	—	—	—	—	—	—	—	—	—	PACE
XW-2	10/26/94	7.48	6.39	—	1.09	—	—	—	—	—	—	—	—	—	—
XW-2	02/05/95	7.48	5.62	—	1.86	ND<50	ND<500	ND<0.25	0.38	ND<0.25	ND<0.50	—	—	5.2	ATI
XW-2	05/05/95	7.48	5.66	—	1.82	—	—	—	—	—	—	—	—	—	—
XW-2	07/19/95	7.48	6.8	—	0.68	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	4750	3.9	ATI
XW-2	10/12/95	7.48	7.21	—	0.27	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	3630	4.3	ATI
XW-2	01/08/96	7.48	6.79	—	0.69	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	3440	4.2	ATI
XW-2	09/11/97	7.48	6.86	—	0.62	ND<50	—	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	—	3.6	SPL
XW-2	01/27/98	7.48	5.88	—	1.60	—	—	—	—	—	—	—	—	—	—
XW-2	04/19/98	7.48	5.42	—	2.06	—	—	—	—	—	—	—	—	—	—
XW-2	09/27/00	7.48	6.86	—	0.62	—	—	—	—	—	—	—	—	—	—
XW-2	03/21/01	7.48	6.60	—	0.88	—	—	—	—	—	—	—	—	—	—
XW-2	09/18/01	7.48	7.15	—	0.33	—	—	—	—	—	—	—	—	—	—
XW-3	06/21/93	6.84	5.85	—	0.99	—	—	—	—	—	—	—	—	—	—
XW-3	04/05/94	6.84	5.85	—	0.99	ND<50	150	ND<0.5	0.7	ND<0.5	ND<0.5	—	—	3.1	PACE
XW-3	07/28/94	6.84	6.28	—	0.56	—	—	—	—	—	—	—	—	—	PACE
XW-3	10/26/94	6.84	6.4	—	0.44	—	—	—	—	—	—	—	—	—	—
XW-3	02/05/95	6.84	7.23	—	-0.39	280	ND<500	ND<0.50	ND<0.50	0.63	ND<1.0	— (g)	—	4.9	ATI
XW-3	05/05/95	6.84	7.43	—	-0.59	—	—	—	—	—	—	—	—	—	—
XW-3	07/19/95	6.84	7.6	—	-0.76	400	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	10400	4.3	ATI
XW-3	10/12/95	6.84	7.74	—	-0.90	130	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	480 (e)	8430	4.7	ATI
XW-3	01/08/96	6.84	7.58	—	-0.74	320	—	ND<2.5	ND<2.5	ND<2.5	ND<5.0	1100	10000	4.4	ATI
XW-3	01/27/98	6.84	7.01	—	-0.17	1200	—	2.8	ND<1.0	ND<1.0	ND<1.0	990	—	4.3	SPL
XW-3	04/19/98	6.84	7.28	—	-0.44	4500	—	ND<2.5	ND<5.0	ND<5.0	ND<5.0	4800	—	4.3	SPL
XW-3	09/27/00	6.84	7.59	—	-0.75	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	35/38 (i)	—	—	PACE
XW-3	03/21/01	6.84	7.35	—	-0.51	ND<250	—	ND<2.5	ND<2.5	ND<2.5	ND<7.5	61.7	—	—	PACE
XW-3	09/18/01	6.84	7.70	—	-0.86	ND<250	—	ND<2.5	ND<2.5	ND<2.5	ND<7.5	23.4	—	—	PACE
QC-2 (h)	04/05/94	—	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	PACE
QC-2 (h)	07/28/94	—	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	PACE
QC-2 (h)	10/26/94	—	—	—	—	ND<50	—	ND<0.5	ND<0.5	ND<0.5	ND<0.5	—	—	—	PACE
QC-2 (h)	02/05/95	—	—	—	—	ND<50	—	ND<0.25	ND<0.25	ND<0.25	ND<0.50	—	—	—	ATI
QC-2 (h)	05/05/95	—	—	—	—	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	—	—	ATI
QC-2 (h)	07/19/95	—	—	—	—	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	—	—	—	ATI
QC-2 (h)	10/12/95	—	—	—	—	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	—	—	ATI
QC-2 (h)	01/08/96	—	—	—	—	ND<50	—	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	—	—	ATI

TABLE 1 - SUMMARY OF RESULTS OF GROUNDWATER MONITORING

ADDITIONAL ANALYSES

Well ID	DATE OF SAMPLING/ MONITORING	TBA (ug/l)	DIPE (ug/l)	ETBE (ug/l)	TAME (ug/l)	LAB
MW-6	09/27/00	ND<10	ND<1.0	ND<1.0	6.2	PACE
MW-7	09/27/00	20	ND<1.0	ND<1.0	9.4	PACE
XW-3	09/27/00	ND<10	ND<1.0	ND<1.0	6.2	PACE

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
TPH-D	Total petroleum hydrocarbons as diesel
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
TDS	Total dissolved solids
DO	Dissolved oxygen
ug/l	Micrograms per liter
mg/l	Milligrams per liter
ppm	Parts per million
—	Not analyzed/measured/applicable
ND	Not detected above reported detection limit
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories
DIPE	Di-Isopropyl Ether
ETBE	Ethyl t-Butyl Ether
TAME	t-Amyl Methyl Ether

NOTES:

Blaine Tech Services, Inc. began routine monitoring of this facility on September 27, 2000. All previous data provided by Alisto Engineering.

(a) Casing elevations surveyed to nearest 0.01 foot relative to an arbitrary datum.

(b) Groundwater elevations in feet above an arbritary datum.

(c) Not sampled due to inadequate recharge.

(d) Wells destroyed by HETI on January 18 and 19, 1995.

(e) A copy of the documentation for this data is included in Appendix C of Alisto report 10-206-04-001.

(f) Blind duplicate.

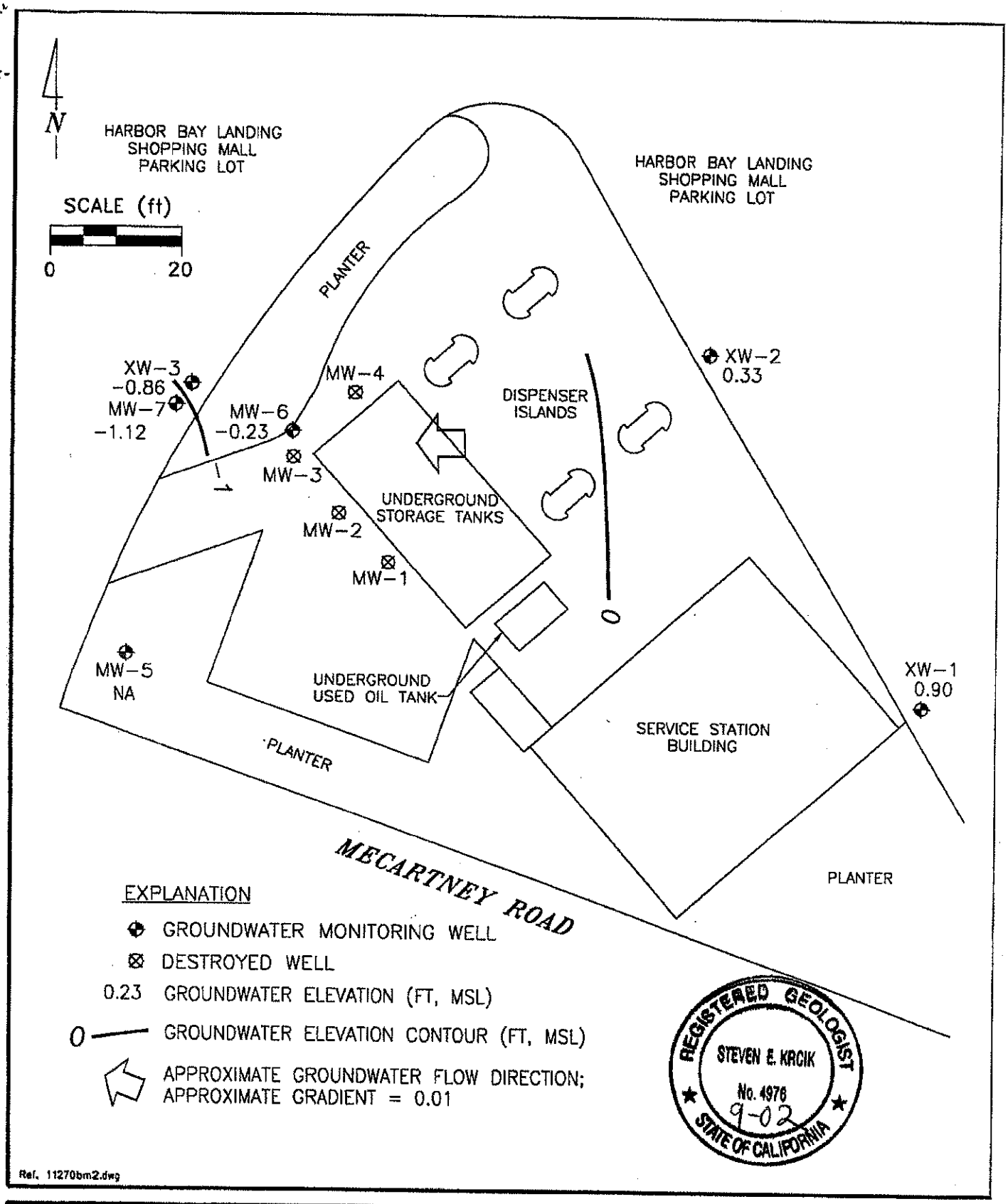
(g) MTBE peak present. See documentation for this data included in Appendix C of Alisto report 10-206-04-001.

(h) Travel blank.

(i) MTBE by 8020/8260.

(j) Samples lost, resampled 3/29/01.

(k) Unable to locate well.



Ref. 11270bm2.dwg

PREPARED BY

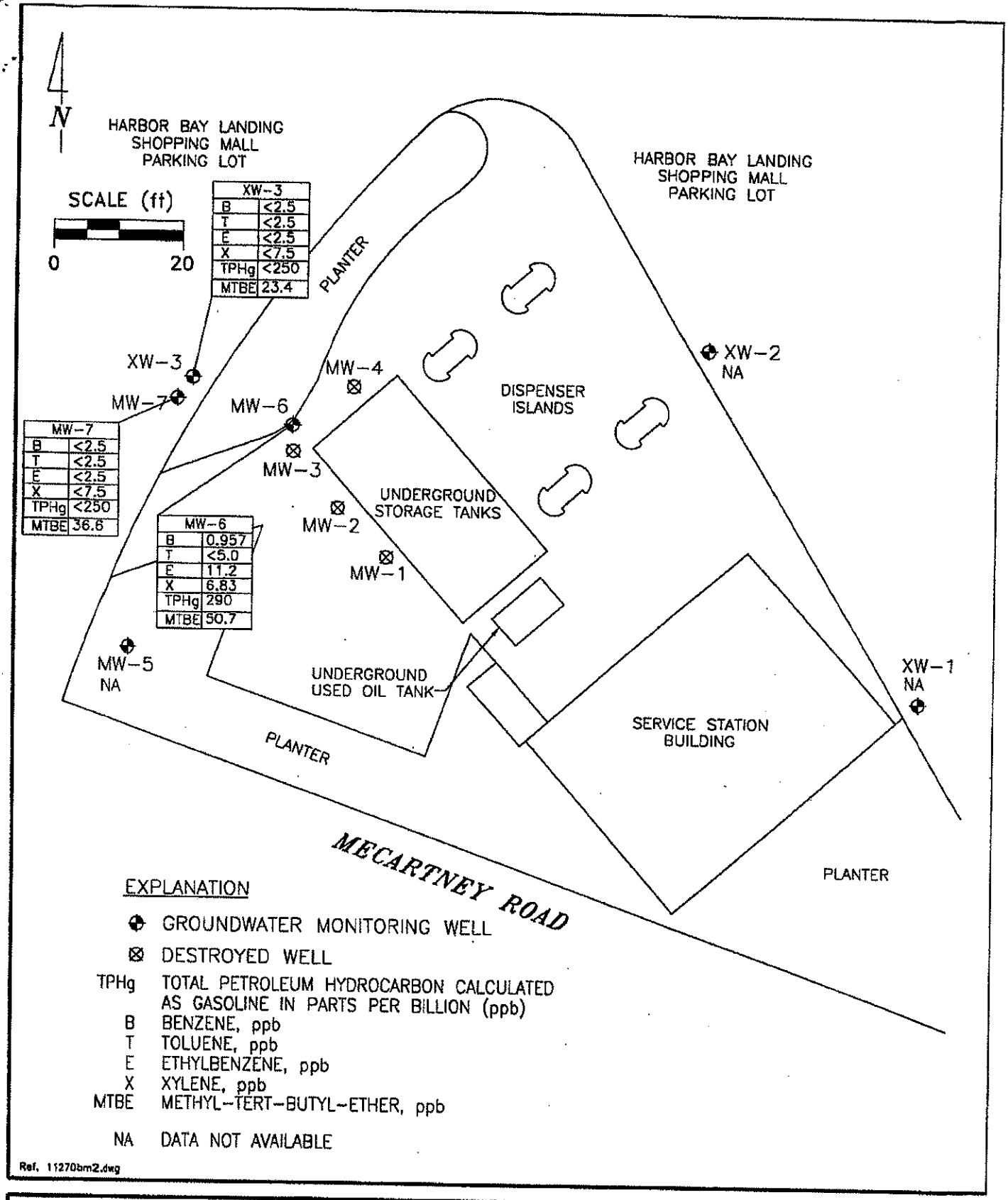
RRM
engineering contracting firm

GROUNDWATER ELEVATION CONTOUR MAP, SEPTEMBER 18, 2001

BP Oil Service Station No. 11270
3255 Mecartney Road
Alameda, California

FIGURE: 1

PROJECT: DAC04



EXPLANATION

- ⊕ GROUNDWATER MONITORING WELL
- ⊠ DESTROYED WELL

TPHg TOTAL PETROLEUM HYDROCARBON CALCULATED AS GASOLINE IN PARTS PER BILLION (ppb)
B BENZENE, ppb
T TOLUENE, ppb
E ETHYLBENZENE, ppb
X XYLENE, ppb
MTBE METHYL-TERT-BUTYL-ETHER, ppb

NA DATA NOT AVAILABLE

Ref. 11270bm2.dwg

PREPARED BY
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engineering contracting firm

HYDROCARBON CONCENTRATION MAP, SEPTEMBER 18, 2001

BP Oil Service Station No. 11270
3255 Mecartney Road
Alameda, California

FIGURE: **2**
PROJECT: DAC04

APPENDIX E.

BORING LOGS

SITE/LOCATION 3255 Mecartney Road, Alameda, CA	BEGUN 6/17/93	BORING DIAMETER 10 Inches	ANGLE/BEARING 90 Degrees	BORING NO MW-5
DRILLING CONTRACTOR Bayland Drilling	COMPLETED 6/17/93	FIRST ENCOUNTERED WATER DEPTH 7.5 Feet		BOTTOM OF BORING 15 Feet
OPERATOR Adam Higuaro	LOGGED BY Tony Ramirez	STATIC WATER DEPTH/DATE 7.0 Feet		WELL NO. MW-5
DRILL MAKE & MODEL CME 75	SAMPLING METHOD California modified split spoon			BOTTOM OF WELL 15 Feet
WELL MATERIAL 4" SCH 40 PVC	SLOT SIZE 0.010"	FILTER PACK #2/16	WELL SEAL Neat cement over hydrated bentonite pellets	PLANNED USE Monitoring

BLOWS/FOOT	PID FIELD HEADSPACE (ppm)	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
		1					PEAT(Pt); dark brown; covered with tanbark; moist.
		2					Poorly graded SAND with Gravel (SP); tan; fine angular to sub-rounded sand; 35% fine to coarse, sub-angular to sub-rounded gravel; trace fines; damp.
		3					
		4					Poorly graded SAND with Gravel (SP); medium brown; fine angular to sub-rounded sand; 25% fine, sub-angular to sub-rounded gravel; trace fines; damp.
	14.0						
12		5					
		6					Silty SAND (SM); grey- brown; fine to coarse sub-angular to sub-rounded sand; 20% silt; moist.
		7		▼			
		8		▽			
		9					Same as above, but wet.
		10					
		11					
		12					Poorly graded GRAVEL with Sand (GP); grey-brown; fine to coarse sub-angular to sub-rounded gravel; 35% fine to coarse, angular to sub-rounded sand; wet.
		13					
		14					Lean CLAY with Sand; grey-brown; fine sub-angular to sub-rounded sand; 40% clay; wet.
		15					

HYDR-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE: June 18, 1993

APPROVED BY: Owen C. Ratchye, P.E.

SOIL BORING LOG AND WELL CONSTRUCTION DIAGRAM MW-5

BP Service Station No. 11270
3255 Mecartney Road
Alameda, CA

PLATE B-2

SHEET 1 OF 1

JOB NO. 9-042.1

SITE/LOCATION 3255 Mecartney Road, Alameda, CA		BEGUN 1/19/95	BORING DIAMETER 10 Inches	ANGLE/BEARING 90 Degrees	BORING NO MW-6
DRILLING CONTRACTOR PC Exploration, Inc.		COMPLETED 1/19/95	FIRST ENCOUNTERED WATER DEPTH 5.0 Feet		BOTTOM OF BORING 15.0 Feet
DRILL MAKE & MODEL CME 75	OPERATOR Frank Bartolovi	LOGGED BY Frances Maroni	STATIC WATER DEPTH/DATE 5.76 Feet (1/28/95)		WELL NO. MW-6
WELL MATERIAL PVC SCH 40	SLOT SIZE 0.010"	SAMPLING METHOD California modified split spoon			BOTTOM OF WELL 15.0 Feet
FILTER PACK #2/12 SAND	WELL SEAL Neat cement over hydrated bentonite pellets				PLANNED USE Monitoring

BLOWS/FOOT	PID FIELD HEADSPACE (ppm)	DEPTH	SAMPLE	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
		1					Asphalt, Baserock
		2					SAND (SW); Brown with yellow mottling and iron oxide mottling, well graded, fine grained, subrounded to rounded, moist.
		3					
		4					
5	2.6	5		▽			
		6		▼			As above; Dark gray, wet.
		7					
		8					
		9					
29		10					Silty SAND (SM); Dark gray with black mottling,well graded, fine-grained, subrounded to rounded, some silt, wet.
		11					
		12					
		13					
		14					
		15					As above; Greenish-gray-blue, wet.
		16					
		17					
		18					
		19					
		20					

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE: February 10, 1995

APPROVED BY: Gary Pischke C.E.G.

SOIL BORING LOG AND WELL CONSTRUCTION DIAGRAM
MW-6

BP Service Station No. 11270
3255 Mecartney Road
Alameda, CA

PLATE
B-3

SHEET 1 OF 1

JOB NO.
9-042.2

SITE/LOCATION 3255 Mecartney Road, Alameda, CA		BEGUN 1/18/95	BORING DIAMETER 10 Inches	ANGLE/BEARING 90 Degrees	BORING NO MW-7
DRILLING CONTRACTOR PC Exploration, Inc.		COMPLETED 1/19/95	FIRST ENCOUNTERED WATER DEPTH 5.0 Feet		BOTTOM OF BORING 16.5 Feet
DRILL MAKE & MODEL CME 75	OPERATOR Frank Bartolovi	LOGGED BY Frances Maroni	STATIC WATER DEPTH/DATE 7.54 Feet		WELL NO. MW-7
WELL MATERIAL PVC SCH 40	SLOT SIZE 0.010"	SAMPLING METHOD California modified split spoon			BOTTOM OF WELL 15.0 Feet
FILTER PACK #2/12 SAND	WELL SEAL Neat cement over hydrated bentonite pellets				PLANNED USE Monitoring

BLOWS/FOOT	PID FIELD HEADSPACE (ppm)	DEPTH	SAMPLES	WATER LEVEL	WELL CONSTR.	GRAPHIC LOG	MATERIAL CLASSIFICATION & PHYSICAL DESCRIPTION
		1					Asphalt, Baserock
		2					SAND (SP); Gray brown, poorly-graded, fine grained, rounded, medium dense, dry.
		3					
		4					
5	2.6	5		▼			Gravely Clay (CH); Dark reddish brown, high plasticity, some coarse to fine grained angular to subangular gravel, medium stiff, moist.
		6					
		7		▽			Silty SAND (SM); Dark brown with black organic mottling, well-graded, fine grained, occasional coarse to fine grained, angular to subangular gravel, some silt, moist to wet.
		8					
		9					
32		10					As above; Dark gray, some gravel, wet.
		11					Silty SAND (SM); Dark gray with yellow green mottling, well graded, fine-grained, subrounded to rounded, some silt, occasional subangular cobble, wet.
		12					
		13					
		14					
46		15					
		16					SAND (SW); Yellowish orange, well-graded fine-grained, subrounded, wet.
		17					Heaving sands 14.5-16.5 feet bgs.
		18					
		19					
		20					

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

DATE: February 10, 1995

APPROVED BY: Gary Pischke C.E.G.

SOIL BORING LOG AND WELL CONSTRUCTION DIAGRAM
MW-7

BP Service Station No. 11270
3255 Mecartney Road
Alameda, CA

PLATE
B-4

SHEET 1 OF 1

JOB NO.
9-042.2

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

APPENDIX F.

HISTORICAL AERIAL PHOTOGRAPHS


SITE
1950-04-14
©Pacific Aerial Surveys-Oakland, CA


SITE
1959-07-03
©Pacific Aerial Surveys-Oakland, CA


SITE
1968-07-02
©Pacific Aerial Surveys-Oakland, CA


SITE
1975-05-29
©Pacific Aerial Surveys-Oakland, CA


SITE
1985-10-04
©Pacific Aerial Surveys-Oakland, CA


SITE
1994-11-29
©Pacific Aerial Surveys-Oakland, CA


SITE
2002-06-17
©Pacific Aerial Surveys-Oakland, CA

APPENDIX G.

HISTORICAL SANBORN MAP

Former BP Sta#11270
3255 Mecartney Rd
Alameda, CA 94502

Inquiry Number: 2305516.1s
August 29, 2008

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

8/29/08

Site Name:
Former BP Sta#11270
3255 Mecartney Rd
Alameda, CA 94502

Client Name:
Broadbent & Associates, Inc.
1324 Mangrove Avenue
Chico, CA 95926

EDR Inquiry # 2305516.1s

Contact: Tom Venus

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by Broadbent & Associates, Inc. were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name: Former BP Sta#11270
Address: 3255 Mecartney Rd
City, State, Zip: Alameda, CA 94502
Cross Street:
P.O. # NA
Project: 06-08-614-01
Certification # 33C1-4A01-A6E6

Maps Identified - Number of maps indicated within "( )"

1987 (2)

Total Maps: 2

Sanborn® Library search results
Certification # 33C1-4A01-A6E6

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

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Certification # 33C1-4A01-A6E6

(8531)

Site Name:	Former BP Sta#11270
Address:	3255 Mecartney Rd
City, ST, ZIP:	Alameda CA 94502
Client:	Broadbent & Associates, Inc.
EDR Inquiry:	2305516.1s
Order Date:	8/29/2008 7:55:25 AM
Certification #	33C1-4A01-A6E6

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Site Name: Former BP Sta#11270
Address: 3255 Mecartney Rd

City, ST, ZIP: Alameda CA 94502

Client: Broadbent & Associates, Inc.
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Copyright: 1987

(8531)

Certification # 33C1-4A01-A6E6