AEI CONSULTANTS
ENVIRONMENTAL & CIVIL ENGINEERING

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March 27, 2007

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

Subject: **Confirmation Investigation Workplan**
796 66th Avenue
Oakland, California
AEI Project # 110566
ACHCSA Fuel Leak No. RO0002449

Dear Mr. Hwang:

The following work plan has been prepared on behalf of Cruise America, Inc. for the property located at 796 66th Avenue, City of Oakland, Alameda County, California. AEI Consultants (AEI) has been retained to provide environmental engineering and consulting services associated with the release of gasoline from a former underground storage tank (UST) on the property. Since 2002, the release has been investigated under the regulatory oversight of Alameda County Environmental Health Services (ACEHS) under Toxics case # RO0002449.

This plan has been prepared to address the technical comments presented in a letter dated January 28, 2007 from ACEHS which was in response to the *Site Summary Report*, prepared by AEI dated September 26, 2006. This letter requested a scope of work for additional sampling to further confirm the effectiveness of remediation activities and to provide additional site specific information on potential preferential migration conduits. For reference, a copy of the January 28, 2007 letter is provided as Attachment A and a copy of the *Site Summary Report* as Attachment B. The reader of this workplan is referred to this attached report for a detailed site history, site plans, and historical analytical data.

ABBREVIATED SITE DESCRIPTION AND BACKGROUND

The site is currently occupied by Cruise America, a recreational vehicle (RV) rental facility. The property is approximately five acres in size. Currently, two buildings exist on the site, surrounded by paved vehicle storage areas. The buildings consist of an office building located on the eastern side of the property and a service building located centrally on the property (Figure 2). Cruise America acquired the property from McGuire Hester, a construction company, in August 1988.

Following site assessment activities in September 2001, which identified evidence of a release from the 10,000 gallon gasoline UST, the UST and dispenser system was removed in November 2001. Under regulatory oversight from ACEHS, additional site investigation was performed and five (5) groundwater monitoring wells installed in September 2002. Following a request by

ACEHS, an interim corrective action plan was submitted in 2004 and implementation of in situ chemical oxidation by ozone sparging began in July 2004. Operation of the sparging system and groundwater monitoring continued through July 2006 following which the *Site Summary Report* was prepared. Please refer to this report (Attachment B) for a more detailed site history, analytical results, remedial activities, and site plans.

TECHNICAL COMMENTS

In the January 28, 2007 letter, the ACEHS presented a number of technical comments and requests for additional information. Those comments are paraphrased below followed by a discussion of the proposed scope of investigation and additional information requested. The original comments are included in the letter in Attachment A.

1. Confirmation soil sampling is requested to verify that remedial actions have treated impacted soils where previously identified, specifically adjacent to the former UST hold at the capillary fringe. Soil sample collection and analyses is proposed in this area.
2. Confirmation groundwater sample collection is requested to verify groundwater has been adequately treated. The request referenced boring SB-13, just to the north of the release area. One of the borings performed to address Comment 1 (above) will be performed to collect a groundwater sample from this area. Groundwater monitoring data will be utilized to evaluate success of remediation outside of this area.
3. An evaluation for possible rebound in contaminant concentrations in groundwater is requested. An additional monitoring event of the five onsite wells in and around the source area is proposed to provide results that will be comparable against historic data.
4. A preferential pathway analyses is requested, considering possible vertical and lateral migration pathways. The *Site Summary Report* contains information on possible wells in the area that could act as vertical migration pathways; ACEHS staff is referred to Section 3.3 and to Figure 1 of this report (Attachment B) for this information. Based on the information reviewed by AEI and discussed in the report, there was no evidence of vertical conduits present in or around the plume area.

   The Oakland Building Department did not have any site records showing utility construction details. A utility locating contractor was retained to identify the location and depths of underground utilities around the release area. Electrical, natural gas, telecommunications, sanitary sewer, and storm drain lines were identified. Depths of sewer lines were measured by the surveyor using a radio transmitter run through portions on the line. The depths of storm drain inverts were directly measured. Onsite underground utility locations are included on Figure 1. No underground utilities were identified around the release area except the electrical line to the sparge unit, the trench for which was dug to 2.5 feet, well above the water table. Based on the survey results, the electrical, gas, telecommunications, and water lines appear to be at a depth of approximately 3 feet, above the water table which has

generally been 4 to 6 feet bgs. Based on the depth of the lines, their trenches are not expected to be below the water table and do not likely represent preferential flow pathways.

The invert of the storm drain at the southeast corner of the repair building was measured at a depth of 5 feet, indicating that the discharge pipe running west of this invert may intersect the water table. A boring is proposed along the line, west of the invert. The storm drain invert to the southeast of the release area was measured at 3 feet and is beyond well MW-2, which has been free of significant contaminants, therefore sampling is not proposed in the area. The sanitary sewer line was measured at a depth of 3 feet near the RV station and at the west of the office building. The sewer trench is expected to be above the water table in this area and deepen slightly moving north toward the tie-in at 66th Avenue. A soil boring is proposed at the northern boundary of the property where this line leaves the property. No other utility trenches or other lateral or vertical conduits were identified that have a high probability of preferentially spreading contamination.

5. Rose diagrams requested (comment not numbered). Diagrams of cumulative groundwater flow directions were presented on figures and tabulated in the *Site Summary Report* (Attachment B); ACEHS staff is referred to Figures 3 and 4 and Table 4 of the report for this information.

PROPOSED CONFIRMATION SAMPLING

In order to gather the additional site specific data requested and discussed above, soil and groundwater sample collection and analyses is proposed. Soil and groundwater samples will be collected from five (5) additional soil borings and monitoring of the existing five (5) wells will be performed. A summary of the soil borings, their rationale, and proposed sample analyses is presented in the following exhibit. Refer to Figure 1 of this workplan for locations of the proposed borings.

Exhibit 1: Proposed Soil Borings

ID	*Location / Purpose*	*Depth*	*Sample Analyses**
SB-18	Adjacent to SB-13, just north of former UST, to verify treatment of previous hotspot (per comment 1 and 2)	8-10	Soil from CF & Groundwater: TPH-g, BTEX, MTBE & TBA
SB-19	South of former UST, near sidewall sample, to verify treatment of previous hotspot (per comment 1)	4-6	Soil from CF: TPH-g, BTEX, MTBE & TBA
SB-20	East end of former UST, near sidewall sample, to verify treatment of previous hotspot (per comment 1)	4-6	Soil from CF: TPH-g, BTEX, MTBE & TBA
SB-21	West of former tank hold, along storm drain line running to the west, past the invert, to assess preferential plume migration	8-10	Groundwater: TPH-g, BTEX, MTBE & TBA
SB-22	At the northern edge of the boundary of the property, east of the previous boring SB-8 to assess whether the plume has intersected the sanitary sewer line trench as it deepens northward	8-10	Groundwater: TPH-g, BTEX, MTBE & TBA

CF = capillary fringe, approximately 4 to 6 feet bgs. *Refer to discussion below for analytical methods

Detailed field procedures for the soil borings, sampling, and groundwater monitoring activities are presented in the following sections.

SOIL BORING ACTIVITIES

Permits and Clearances
A drilling permit from Alameda County Public Works will be obtained for the drilling work. Prior to mobilization, Underground Service Alert will be notified to identify public underground utilities in the area. All borings in the vicinity of onsite underground utilities will be hand cleared with a hand auger to a depth of 5 feet prior to drilling with direct push equipment. Field work will be coordinated with permit and regulatory inspectors, drilling contractor, and onsite staff and adequate notifications given of the field work schedule.

Drilling
Borings will be advanced with a truck-mounted Geoprobe™ direct-push drilling rig to the depths proposed above. The selected drilling contractor will hold a valid California C57 driller's license. Push rods and sampling equipment will be decontaminated between samples and between boreholes as appropriate to minimize the occurrence of cross-contamination.

Soil Sample Collection
Soil will be continuously collected to the target depth in 1¾ inch diameter acrylic liners within the sampling barrel and logged by the onsite geologist. A 6 inch sample will be taken at appropriate depths. Samples will be selected and cut from the liners. The sample will be sealed with Teflon tape and plastic end caps. A photo-ionization device (PID) will be used to screen soil samples in the field, and PID readings for each sample will be included on boring logs. Soil samples will be collected at approximately 3 to 5 foot intervals and at changes in soil types, depths of suspected impact, and within the capillary fringe.

Groundwater Sample Collection
For borings where groundwater sample collection is proposed, borings will be tentatively drilled to a depth of approximately 8 to 10 feet, such that the borehole is several feet into the water table. Temporary ¾" diameter slotted PVC casing will be temporarily inserted into the borehole to facilitate groundwater collection. Given the depth to water consistently measured in groundwater monitoring wells, this depth is expected to be sufficient for sample collection, although depths may be adjusted slightly based on field observations.

The temporary wells will be purged with a peristaltic pump until water is reasonable clear prior to sample collection. Groundwater samples will be collected into 40 ml volatile organic analysis (VOA) vials. The containers will be sealed so that no head-space or air bubbles are visible within the containers.

Sample Storage
All samples will be sealed and labeled immediately upon collection. Samples will be placed in a cooler with water ice. Chain of custody documentation will be initiated prior to leaving the site. All samples will be delivered to a state certified laboratory on the day of collection.

Sample Analyses
The samples will be delivered to a California DHS certified laboratory under chain of custody. The selected soil and groundwater samples will be analyzed for the following:

- TPH-g by EPA Method 8015
- BTEX and MTBE by EPA Method 8021B
- MTBE and TBA by EPA method 8260

GROUNDWATER MONITORING

Monitoring Activities
Monitoring and sampling of the five onsite monitoring wells (MW-1 through MW-5) will occur on or around the date of soil boring activities. During the monitoring event, the wells will be first opened and water levels allowed to equilibrate. Water levels will be measured in each well. Wells will be purged of at least 3 well volumes of water prior to sample collection. During purging the following water quality measurements will be collected: temperature, pH, specific conductivity, dissolved oxygen (DO) and oxidation-reduction potential (ORP).

Groundwater samples will be collected with new, unused disposable bailers into 40 ml volatile organic analysis (VOA) vials. The groundwater samples will be sealed, labeled, and stored in a cooler with water ice. Chain of custody documentation will be initiated prior to leaving the site. All samples will be delivered to a state certified laboratory on the day of collection.

Sample Analyses
The samples will be delivered to a California DHS certified laboratory under chain of custody. The groundwater samples will be analyzed for the following:

- TPH-g by EPA Method 8015
- BTEX and MTBE by EPA Method 8021B
- MTBE and TBA by EPA method 8260

Waste Storage
Drill cuttings and other investigation-derived waste (IDW) generated during the soil boring and monitoring activities will be stored onsite in sealed 55-gallon drums, pending the results of sample analyses. Equipment rinse water and well purge water will be stored in 55-gallon drums. Upon receipt of necessary analytical results, the waste will be profiled for disposal and transported from the site under appropriate manifest to approved disposal or recycling facility(s).

REPORTING

Upon receipt of soil and groundwater sample analytical data, a report will be prepared. The newly obtained data will be incorporated into the existing dataset and an evaluation of the effectiveness of remedial activities and potential preferential plume migration made. The report will include boring logs, field sampling forms, figures of sample locations and analytical results,

tabulated data, and copies of analytical reports. If warranted by the data, case closure may be recommended. Following review of the report by Cruise America, the final report will be issued to the ACEHS by upload to their FTP site and posting of the reports and data to the State of California's Geotracker database. The project will be performed and the report presented under direction of California licensed professional geologist and/or engineer.

SITE SAFETY

A site specific health and safety plan will be prepared for field activities conducted at the site. Prior to commencement of field activities, a site safety meeting will be held at a designated command post near the working area. The health and safety plan will be reviewed by all personnel and emergency procedures will be outlined at this meeting, including an explanation of the hazards of the known or suspected chemicals of interest. All site personnel will be in Level D personal protection equipment, which is the anticipated maximum amount of protection needed. A working area will be established with barricades and warning tape to delineate the zone where hard hats and steel-toed shoes must be worn, and where unauthorized personnel will not be allowed. A site safety plan conforming to Part 1910.120 (i) (2) of 29 CFR will be on site at all times during the project.

ESTIMATED SCHEDULE

The permitting process will begin upon review and concurrence with the scope of work by the ACEHS and involved parties. Monitoring will occur and results reviewed prior to date of drilling field work to evaluate whether rebound has occurred. It is expected the soil borings and sample collection will be completed within approximately 1 month. The report will be prepared within approximately 1 month of receipt and review of analytical data. Once approvals are received, a more detailed timeline will be established.

LIMITATIONS AND SIGNATURES

This report has been prepared by AEI on behalf of Cruise America relating to the release of petroleum hydrocarbons on the property located at 796 66th Avenue in the City of Oakland, Alameda County, California. The discussion rendered in this report was based on field investigations, laboratory testing of material samples, and other information. This report does not reflect subsurface variations that may exist between sampling points. These variations cannot be anticipated, nor could they be entirely accounted for, in spite of exhaustive additional testing. This report should not be regarded as a guarantee that no further contamination, beyond that which could have been detected within the scope of past investigations is present beneath the property or that all contamination present at the site will be identified, treated, or removed. Undocumented, unauthorized releases of hazardous material(s), the remains of which are not readily identifiable by visual inspection and/or are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation and may or may not become apparent at

a later time. AEI is not responsible for the accuracy or quality of work performed by others, information not available or provided to AEI, other data or information gaps, and other inherent limitations associated with any assessment and evaluation of such conditions. All specified work will be performed in accordance with generally accepted practices in environmental engineering, geology, and hydrogeology and will be performed under the direction of appropriate registered professional(s).

We look forward to comment and concurrence with the scope of work outlined herein. Should you have any questions or need additional information, please contact us at 925/944-2899.

Sincerely,
AEI Consultants

Adrian M. Angel
Project Geologist

Peter McIntyre, PG, REA
Senior Project Manager

REGISTERED GEOLOGIST
PETER J McINTYRE
Exp 5/31/08
STATE OF CALIFORNIA

FIGURES
Figure 1 – Utility Locations and Proposed Borings

ATTACHMENTS
Atttachment A – Letter from ACEHS January 28, 2007 to Cruise America, Inc.
Attachment B – *Site Summary Report*, September 26, 2006, prepared by AEI

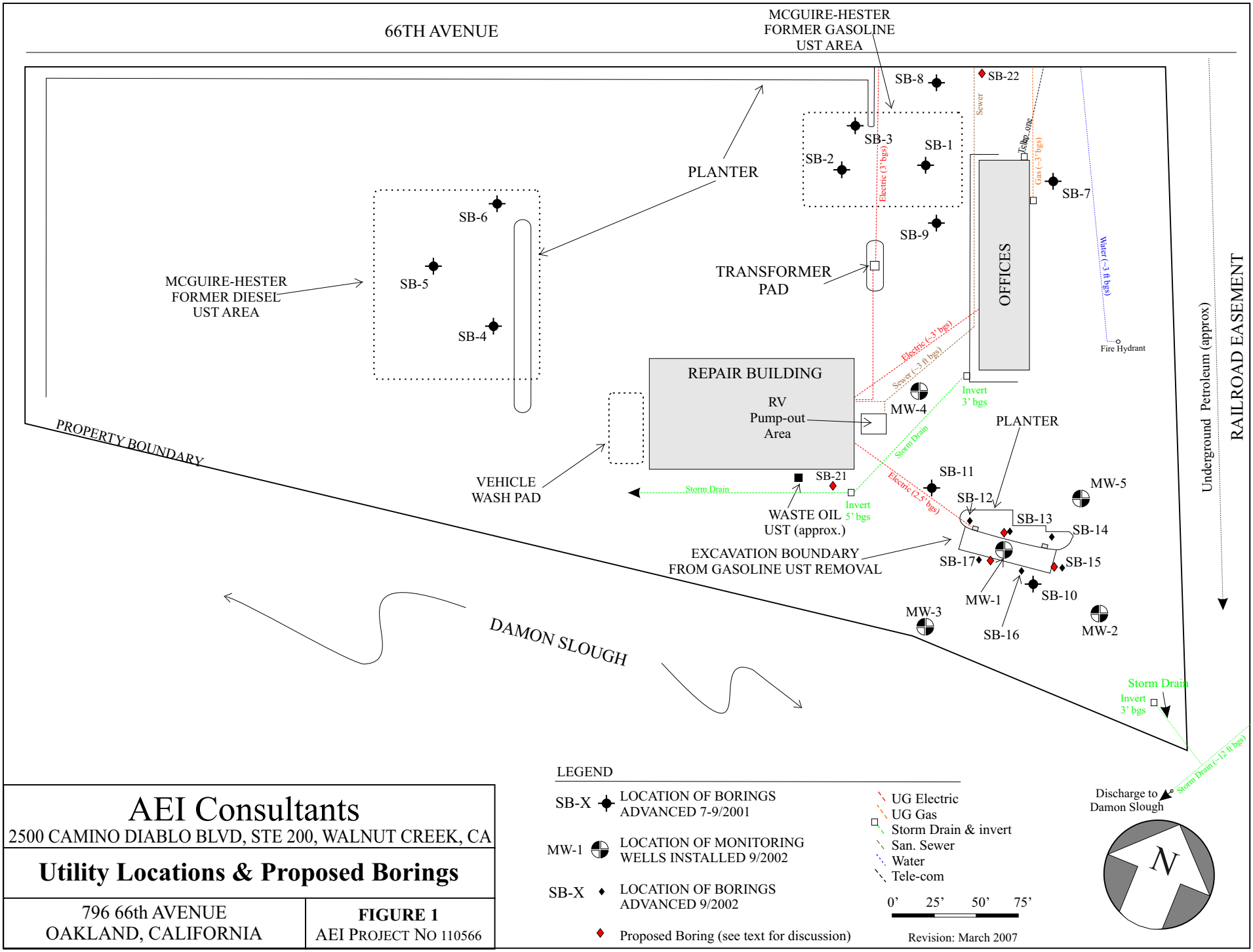
Distribution:

Mr. Cory Kauffman
Cruise America, Inc.
11 West Hampton Avenue
Mesa, AZ 85210

Alameda County Environmental Health Services (ACEHS) (FTP electronic upload)
Attn: Mr. Don Hwang
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

GeoTracker database upload

FIGURES



AEI Consultants

2500 CAMINO DIABLO BLVD, STE 200, WALNUT CREEK, CA

Utility Locations & Proposed Borings

796 66th AVENUE
OAKLAND, CALIFORNIA

FIGURE 1
AEI PROJECT NO 110566

ATTACHMENT A

Letter from ACEHS, January 28, 2007

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

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

January 28, 2007

Cory Kauffman
Cruise America, Inc.
11 West Hampton Avenue
Mesa, AZ 85210

Dear Mr. Kauffman:

Subject: Fuel Leak Case No. RO0002449; Cruise America, Inc., 796 66th Avenue Oakland, CA 94546

Alameda County Environmental Health staff has reviewed "Site Summary Report" dated September 26, 2006 by AEI Consultants. Soil borings have been advanced prior to and after the removal of a 10,000-gallon gasoline UST in November of 2001. Five (5) groundwater monitoring wells, MW-I through MW –5, were installed on September 19, 2002 and have been monitored quarterly. An ozone sparging system operated May/July 2004 through July 2006. We request that you address the following comments and send us the technical reports requested below.

TECHNICAL COMMENTS

1) Source characterization - Up to 15,000 mg/kg TPH-G and 21 mg/kg benzene were detected in soil borings, SB-13 on September 6, 2002. Since then, ozone sparging was implemented. Please propose verification sampling to determine its effectiveness in the Work Plan requested below.

2) Site characterization - Up to 13,000 ug/l TPH-G, 49,000 ug/l MTBE, and 300 ug/l benzene were detected in soil borings. Since then, ozone sparging was implemented. Please propose verification sampling to determine its effectiveness in the Work Plan requested below.

3) Ozone sparging possible rebound - Please propose how the possibility of rebound will be evaluated in the Work Plan requested below.

4) Preferential Pathway Survey – We request that you perform a preferential pathway study that details the potential migration pathways and potential conduits (wells, utilities, pipelines, etc.) for horizontal and vertical migration that may be present in the vicinity of the site.

a) Utility Survey - Please submit map(s) and cross-sections showing the location and depth of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s). Evaluate the probability of the contaminant plumes encountering preferential pathways and conduits that could spread the contamination, particularly in the vertical direction to deeper water aquifers. Please submit with the Work Plan requested below.

Historical Hydraulic Gradients – Please show using a rose diagram with magnitude and direction; include cumulative groundwater gradients in all future reports submitted for this site. Please submit with the Work Plan requested below.

TECHNICAL REPORT REQUEST

Please submit the following technical reports to Alameda County Environmental Health, according to the following schedule:

March 28, 2007 - Work Plan

Sincerely,

Don Hwang
Hazardous Materials Specialist
Local Oversight Program

C: AEI Consultants, 2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597
Donna Drogos
Files

ATTACHMENT B

Site Summary Report, September 16, 2006

September 26, 2006

SITE SUMMARY REPORT

Cruise America, Inc.
796 66th Avenue
Oakland, California

Project No. 110566
ACEHS Toxics Case # RO0002449

Prepared On Behalf Of

Mr. Cory Kauffman
Cruise America, Inc.
11 West Hampton Avenue
Mesa, AZ 85210

Prepared By

AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597
(925) 283-6000

AEI

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APPENDICES

1.0 INTRODUCTION

AEI Consultants (AEI) has prepared this report on behalf of Cruise America Inc. (Cruise America), located at 796 66th Avenue, Oakland, California (Figure 1: Site Location Map). AEI has been retained by Cruise America to provide environmental engineering and consulting services associated with the release of gasoline from a former UST on the property. Since 2002, the release has been investigated under the regulatory oversight of Alameda County Environmental Health Services (ACEHS) under Toxics case # RO0002449.

This report has been prepared to present a summary of the investigation and remediation efforts relating to the release. As remedial efforts have significantly reduced the primary contaminant identified at the site, methyl tert butyl ether (MTBE), regulatory review of current site conditions is requested to evaluate this site for case closure.

2.0 SITE HISTORY

The site is currently occupied by Cruise America, a recreational vehicle (RV) rental facility. The property is approximately five acres in size. Currently, two buildings exist on the site, surrounded by paved vehicle storage areas. The buildings consist of an office building located on the eastern side of the property and a service building located centrally on the property. Cruise America acquired the property from McGuire Hester, a construction company, in August 1988.

2.1 Initial Investigation

In July 2001, AEI performed a Phase II investigation on the site that included advancing six (6) soil borings (SB-1 through SB-6). The investigation was performed to assess whether the soil or groundwater beneath the site was impacted in the areas of two former UST holds that were utilized by McGuire Hester. These USTS were apparently removed prior to occupancy of the site by Cruise America. The former location of these USTs holds are shown on Figure 2. Although low concentrations of Total Petroleum Hydrocarbons as gasoline (TPH-g) and diesel (TPH-d) were reported in the groundwater, high levels of Methyl tertiary-Butyl Ether (MTBE) were detected in boring SB-1.

In September of 2001, AEI advanced five (5) additional soil borings (SB-7 through SB-11) in order to determine the source of the high levels of MTBE found in SB-1. Samples collected from SB-7 and SB-8 did not contain MTBE above laboratory reporting limits. MTBE concentrations ranged from 630 micrograms per liter (µg/L) in SB-9 to 13,000 µg/L in SB-10. These data indicated a leak in the remaining 10,000-gallon gasoline UST on the southern portion of the property as the most likely source of the MTBE.

Soil and groundwater sample analytical data from the 2001 work is presented in Tables 5 and 6, respectively.

2.2 Tank Removal

AEI removed the 10,000-gallon gasoline UST in November of 2001. Concentrations of TPH-g in four of the five soil samples ranged from 4.1 milligrams per kilogram (mg/kg) to 280 mg/kg. Concentrations of MTBE and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) were also detected in the five soil samples. The highest concentrations of MTBE and Benzene detected in the soil during the tank removal were 53 mg/kg and 13 mg/kg, respectively, detected along the southern and eastern sidewalls of the excavation at approximately 6.5 feet below ground surface (bgs). Elevated concentrations of TPH-g and MTBE were present in the groundwater sample at concentrations of 44,000 µg/L and 42,000 µg/L, respectively.

Soil and groundwater sample analytical data from the tank removal is presented in Tables 5 and 6, respectively.

2.3 Groundwater Investigation

Following removal of the tank, the Alameda County Health Care Services Agency (ACHCSA) requested further investigation of the release from the 10,000 gallon UST. On September 6, 2002, six (6) soil borings (SB-12 through SB-17) were advanced. The data from these soil borings was used to determine the placement of five (5) groundwater monitoring wells, which were installed on September 19, 2002. These five wells (MW-1 through MW-5) have been monitored on a quarterly basis since installation.

The locations of these borings and wells are shown on Figures 2 and 3. Soil and groundwater data from the September 2002 work is presented in Tables 5 and 6, respectively. Groundwater monitoring data is presented in Table 3 and 4.

2.4 Groundwater Treatment Activities

Based on the findings of the investigation and monitoring activities, the ACHCSA required that corrective action be undertaken. AEI prepared and submitted an *Interim Corrective Action Plan*, dated April 5, 2004, outlining an evaluation and scope of work to implement ozone sparging technology to begin corrective action. The approach was selected to reduce contaminant concentrations, particularly MTBE and other gasoline contaminants, in the groundwater and capillary fringe soils. A KVA twelve-point ozone sparging system was installed around the release area during May - July 2004, the locations of which are shown on Figure 4. Implementation of the system was documented in the *Interim Corrective Action Progress Report*, dated February 11, 2005, to which the reader is referred for more detailed information.

The sparge wells were placed in and around the former tank hold, between the release area and the nearby Damon Slough, and in the areas of the most highly impacted groundwater. Selected monitoring wells were sampled on a monthly basis in additional to the regular quarterly monitoring, during the first several months of operation. Additional soil sample

analytical data obtained during the well installation work is presented in Table 5 and cumulative monitoring data is presented in Tables 3 and 4.

The sparging system operated through July 2006 at which time an electrical switch overheated. Based on the significant reduction in contaminant concentrations, it was elected that several months of downtime be allowed to monitor for possible rebound. The switch has been replaced and the system operational should it be needed. Current contaminant concentrations and reductions are discussed below in Section 3.4.

3.0 SITE CONCEPTUAL MODEL

3.1 Release Occurrence

The release of gasoline apparently occurred from the former 10,000-gallon gasoline UST system that removed in November 2001. The system consisted of a 10,000-gallon double walled (steel inner tank with fiberglass outer tank) with two dispensers located at the edge of the UST on its northern side. Based on the visual inspection at the time of the removal, the UST was in good condition, with no obvious holes or other structural failures. Based on this, it could be assumed that the release occurred for a failure in the piping or dispensers. The time and duration of the release is not known, nor is the quantity of product released.

Based on the shallow depth to groundwater (4 to 6 feet), the release migrated downward and impacted shallow groundwater. Impacted soil has been limited to directly around the UST and within the capillary fringe just above the water table. No free phase product has been observed. Although gasoline range hydrocarbons and BTEX have been detected immediately surrounding the former UST system, their overall low concentrations compared to MTBE suggests that rapid natural attenuation of TPH-g and BTEX had occurred, leaving residual high MTBE concentrations. The dissolved phase MTBE plume spread generally in a northerly direction from the UST hold.

3.2 Geology and Hydrogeology

The site is located at an elevation approximately 10 feet above mean sea level (msl). The Damon Slough is located approximately 150 feet south of the former UST location. The site is level, and the local topography slopes very gently to the southwest. The surface sediments at the site are mapped as Holocene natural levee and basin deposits (Qhl and Qhb, OF 97-97, E.J. Helley and R.W. Graymer). The Natural Levee Deposits (Holocene) are described as “Loose, moderately to well-sorted sandy or clayey silt grading to sandy or silty clay. The Basin Deposits (Holocene) are described as “Very fine silty clay to clay deposits occupying flat-floored basins at the distal edge of alluvial fans adjacent to the bay mud (Qhbm)”.

The top 3 to 6 feet of soils appears to consist of imported fill of varying gravels, sand, and clay with brick and wood debris encountered locally. Beneath this fill, apparently native sediments encountered consisted of sandy and gravely clays to approximately 7 to 10 feet below ground surface (bgs), underlain by black clay with thin sand beds. Gravel content varies, but generally decreased with depth. Groundwater has been observed at the time of drilling soil borings at between approximately 5 and 13 feet bgs. Soil boring SB-17 was advanced to a depth of 50 feet bgs, and revealed an apparent aquitard, consisting of stiff sandy clay from 29 to 45 feet bgs. Below this clay, saturated well-graded gravely sand was encountered to boring termination (50 feet bgs).

Water level measurements collected since monitoring began have revealed that the water table exists at between 4 and 6 feet below ground surface. Based on these measurements, it appears that groundwater beneath the site generally flows in a southeasterly direction, with a hydraulic gradient of 10^{-2} to 10^{-3} feet/feet. This flow direction is consistent with information AEI reviewed for a site on the north side of 66th Avenue. Despite these flow direction measurements, the MTBE plume appears to have migrated primarily in a northerly direction from the former UST location. MW-2 and MW-3, located south and southeast of the UST hold (apparently down-gradient) have been relatively free of MTBE. Groundwater in these wells has been measured to have significantly higher conductivity, indicative of salt water, which may be acting to retard the spread of MTBE or inhibiting the flow of groundwater in the expected flow direction.

3.3 Well Survey

The Department of Water Resources (DWR) performed a well survey of all production wells within 2,000 feet of the site in August 2002. The survey was requested to identify whether there are wells that represent possible vertical conduits for downward migration of site contaminants from shallow groundwater into deeper aquifer(s) and to identify whether active groundwater use is occurring which could be impacted by this release. This survey located 12 well drillers' reports. From these reports, eight wells were located. The remaining three reports are from unknown locations including nine test holes at the Continental Can Company, an analysis of incrustation solids, and a 1,025 foot deep well for the Santa Cruz Fruit Packing Company. In addition to the information gathered from the DWR survey, Norfleet's report *Groundwater Study and Water Supply History of the East Bay Plain, Alameda and Contra Costa Counties, CA*, dated June 15, 1998, provided information on the Damon and Fitchburg well groups, which were historically used as a municipal water supply. Their exact locations are unknown but the Damon field was located approximately 1000 feet east of the site and the Fitchburg field in the area of the Oakland Coliseum, to the south of the site on the other side of Damon Slough. Figure 1 shows the locations of all wells identified in relation to the study site. The well data is summarized in the table below.

Exhibit 1: Nearby Wells

Location	Map ID #	Distance (feet)	Direction	Depth (feet)	Screen Interval	Use
Fitchburg well group (20 wells?)	1	~ 1,000	Southeast	NA	NA	Municipal
Damon well group	2	~ 1,000	East	NA	NA	Municipal
American Brass & Iron Foundry	3	3,325	Southeast	495	450-495	Industrial
EBMUD	4	3,040	Northwest	30	5-30	Test Well
PG&E	5	3,325	North	120	NA	NA
PG&E	6	2,280	North	120	NA	NA
Coliseum OW-2	7	2,280	Southeast	82.5	62-82	Observation
Coliseum OW-03A	8	1,710	Southeast	82.5	62-82	Observation
Coliseum OW-5B	9	1,140	Southeast	102	92-102	Observation
Coliseum OW-06A	10	1,330	South	98	77.5-97.5	Observation
Coliseum OW-7	11	1,140	South	72.4	52-72	Observation

NA – Information not available Distances and direction from the site are approximate

The two municipal well groups are the Damon and Fitchburg well groups which have been inactive for many decades. The exact locations and screen intervals of wells in both areas remain unknown. Based on the suspected location and distance of release at the site in relation to these well fields, they are not expected to represent preferential vertical conduits for contaminants at the site.

The only other production well (#3) at the American Brass & Iron Foundry is located over 3000 feet from the site and the EBMUD and PG&E wells are 2000 to over 3000 feet away. Based on these distances from the site, they are not expected to be threatened by this release or act as preferential vertical conduits. The remaining wells are located south of the site at the Coliseum, at least 1000 feet away. Based on the results from monitoring wells MW-2 and MW-3 and the presence of Damon Slough, which is a hydraulic barrier for shallow groundwater movement between the site and the Coliseum, these observation wells are not expected to be impacted by this release and would not likely act as a vertical conduit for shallow impacted groundwater at the site.

In summary, based on the well survey, none of the identified wells appear to risk acting as preferential vertical conduits for migration of site contaminants nor does there appear to be active use of groundwater in the area that would be threatened by this release.

3.4 Recent Contaminant Concentrations

The sparging of ozone has been very effective at reducing contaminant concentrations. MTBE concentrations have decreased substantially since startup in wells MW-1, MW-4, and MW-5. Overall, TPH-g and BTEX concentrations have been reduced to very low to non-detect levels in all wells. MTBE and TBA decreased significantly in MW-1, MW-4, and MW-5. Based on the most recent monitoring event (using EPA 8260), MTBE has been

reduced in well MW-1 to 5.3 µg/L from a high of 20,000 µg/L; to 4.1 µg/L from a high of 20 µg/L in well MW-2; to 0.67 µg/L from a high of 14 µg/L in well MW-3; to 66 µg/L from a high of 2,100 µg/L in MW-4; and to 24 µg/L from a high of 19,000 µg/L in well MW-5. In addition, TPH-g and Benzene have been reduced to non-detect levels in all five of the wells.

MTBE concentrations have decreased in wells MW-1, MW-4 and MW-5 by approximately 99%, 97%, and 99%, respectively, between July 7, 2004 and July 11, 2006, using EPA method 8260B data. The decrease of MTBE in these wells is illustrated in Figure 7. The appearance of TBA, which is an intermediate degradation product of MTBE oxidation, in MW-1, MW-4, and MW-5, is an added indicator of MTBE degradation.

4.0 COMPARATIVE RISK EVALUATION

The following comparative risk evaluation has been made in an effort to help determine the potential risk posed by remaining contaminants in the groundwater. The most recent site specific analytical data is compared with environmental screening level (ESL) values presented in the RWQCB document *Screening for Environmental Concerns at Site with Contaminated Soil and Groundwater*, February 2005. The ESLs are risk-based values that have been prepared to evaluate whether a particular contaminant presents possible threat to human health or the environment.

The highest detected concentrations of contaminants of concern (COCs) in groundwater are compared against the screening levels for the following exposure routes: gross contamination ceiling values where groundwater is a current source of drinking water and not a drinking water source, aquatic toxicity, drinking water toxicity, and vapor intrusion from groundwater. A summary of the screening levels and site concentrations are presented below.

5.1 Contaminants of Concern

The primary remaining contaminants of concern detected in groundwater are MTBE and TBA. Maximum concentrations of MTBE and TBA, as well as TPH-g and BTEX (benzene, toluene, ethylbenzene, and total xylenes), detected during the most recent monitoring event (07/11/2006) are summarized in the following table.

Contaminant	Well	Maximum Detected (7/11/06) (µg/L)
TPH-g	All	<50
Benzene	All	<0.5
Toluene	MW-1	2.8
Ethylbenzene	All	<0.5
Xyelenes (Total)	MW-3	1.1
MTBE (by 8260B)	MW-4	66
TBA	MW-5	1,200

5.2 ESL Comparison

The recent maximum concentrations of the detected contaminants are presented in the following table along with the five ESL values for the exposure pathways outlined above.

Contaminant	Maximum Detected	Volatilization ESL *	Ceiling Value (NDW) ***	Aquatic Toxicity **	Ceiling Value (DW) **	Drinking Water Toxicity **
MTBE	66	80,000	**1,800**	8,000	~~5.0~~	~~13~~
Toluene	2.8	530,000	400	**130**	~~40~~	~~150~~
Xylenes	1.1	160,000	5,300	**100**	~~20~~	~~1,800~~
TBA	1,200	-	50,000	**18,000**	~~50,000~~	~~12~~

All values in micrograms per liter (µg/l)
All ESL from RWQCB (Feb 2005)
* From Table E-1a (high-permeability soil selected for higher degree of protection)
** From Tables F-1a *** From Table F-1b
NDW = non-drinking water, DW = drinking water
ESL values shown in strikethrough (~~strikethrough)~~ are from incomplete pathways.
ESL values shown in bold (**bold**) are the lowest for each contaminant, considering all potentially complete exposure pathways.

The groundwater in the area of the site is considered of beneficial use in accordance with the RWQCB Basin Plan and although not formally de-designated, the shallow impacted groundwater around the fuel release area is of low quality (brackish to saline) due to the proximity to the tidal slough and is not present in a high yielding formation. Based on this, the Drinking Water Toxicity and Drinking Water Ceiling Value ESLs are considered overly conservative for this site. Due to the proximity of the release to the Damon Slough, the aquatic toxicity ESL value would be protective of aquatic receptors. In addition, as is currently required, the volatilization ESL is considered potentially complete. The non-drinking water ceiling value will also be considered relevant as representative of nuisance conditions. The lowest ESL for each contaminant is shown in bold in the table above.

The residual contaminant concentrations do not exceed the lowest of the ESL values of the potentially complete exposure pathways. All site concentrations are over one to several orders of magnitude lower that these ESL values. Based on this, no indication of a potential for vapor intrusion from groundwater, of groundwater discharge to nearby aquatic habitat, or of exceeding gross contaminant levels for groundwater are present around the former release area.

5.0 SUMMARY AND CONCLUSIONS

This report has been prepared to summarize the environmental conditions relating to the release from the former gasoline UST system, including the following:

- A discussion of previous environmental investigations and remediation activities
- Complete set of data collected, including sampling locations, monitoring, and analytical data
- Site geology and environmental setting
- A discussion of the release occurrence
- Comparison of current groundwater conditions to relevant screening levels (ESLs)

Groundwater treatment activities consisting of approximately 2 years of ozone sparging have significantly reduced dissolved phase contaminants. Recent groundwater monitoring results revealed concentrations of contaminants below relevant ESLs for vapor intrusion, aquatic toxicity, and gross contaminant levels. No nearby wells were identified that are considered at risk for either being impacted by the release or that could act as vertical conduits for contaminant migration.

Review of this case by the ACEHD is requested so that the formal case closure process for this site can begin.

6.0 REFERENCES

AEI *Phase II Subsurface Investigation Report*, August, 2001

AEI *Monitoring Well Installation Report*, November 11, 2002

AEI *Interim Corrective Action Plan*, dated April 5, 2004

AEI *Interim Corrective Action Progress Report*, February 11, 2005

Alameda County Environmental Health Services, File # RO0002449, Letter dated May 29, 2002

SF Bay California Regional Water Quality Control Board, *Screening For Environmental Concerns At Sites With Contaminated Soil And Groundwater*, February 2005

Norfleet Consultants, *Groundwater Study and Water Supply History of the East Bay Plain, Alameda and Contra Costa Counties, CA*, June 15, 1998

7.0 SIGNATURES

This report has been prepared by AEI on behalf of Cruise America relating to the release of petroleum hydrocarbons on the property located at 796 66th Avenue in the City of Oakland, Alameda County, California. The discussion rendered in this report was based on field investigations and laboratory testing of material samples. This report does not reflect subsurface variations that may exist between sampling points. These variations cannot be anticipated, nor could they be entirely accounted for, in spite of exhaustive additional testing. This report should

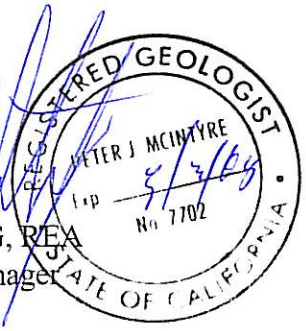
not be regarded as a guarantee that no further contamination, beyond that which could have been detected within the scope of past investigations is present beneath the property or that all contamination present at the site will be identified, treated, or removed. Undocumented, unauthorized releases of hazardous material(s), the remains of which are not readily identifiable by visual inspection and/or are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation and may or may not become apparent at a later time. All specified work was performed in accordance with generally accepted practices in environmental engineering, geology, and hydrogeology and were performed under the direction of appropriate registered professional(s).

Please contact either of the undersigned with any questions or comments at (925) 283-6000.

Sincerely,
AEI Consultants

Adrian M. Angel
Project Geologist

Peter McIntyre, PG, REA
Senior Project Manager



Distribution:

Mr. Cory Kauffman
Cruise America, Inc.
11 West Hampton Avenue
Mesa, AZ 85210

Alameda County Environmental Health Services (ACEHS) (electronic)
Attn: Mr. Don Hwang
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

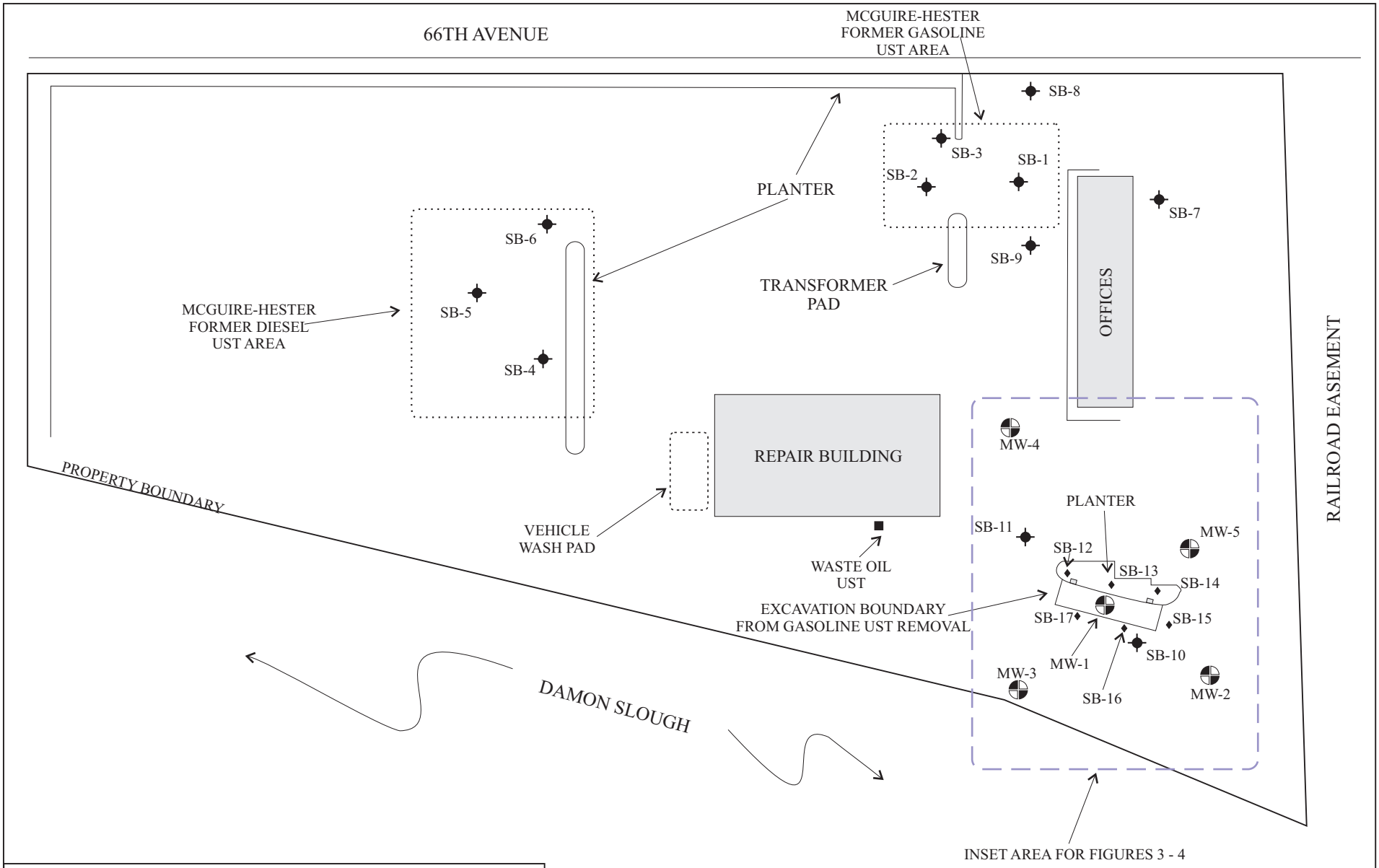
FIGURES

AEI CONSULTANTS
2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597

Site Location Map Showing Nearby Wells

796 66th Avenue
Oakland, CA

FIGURE 1
Job No: 110566



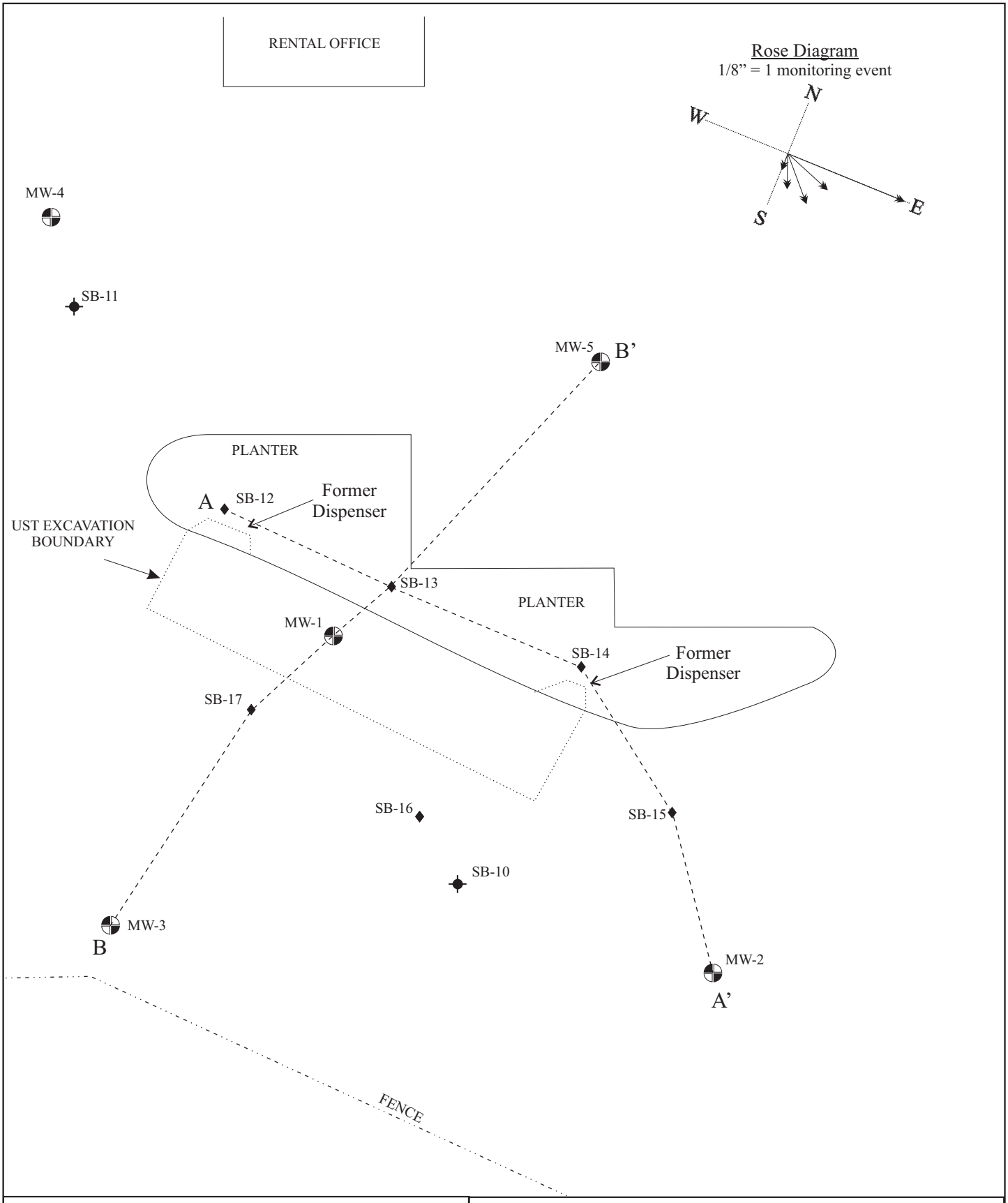
AEI Consultants

2500 CAMINO DIABLO BLVD, STE 200, WALNUT CREEK, CA

Property Map

796 66th AVENUE
OAKLAND, CALIFORNIA

FIGURE 2
AEI PROJECT NO 110566



LEGEND

- Soil Boring: July & Sept. 2001
- Soil Boring: Sept. 2002
- Monitoring Wells
- Fence Line

N

0' 10' 20'

SCALE: 1 in = 20 ft

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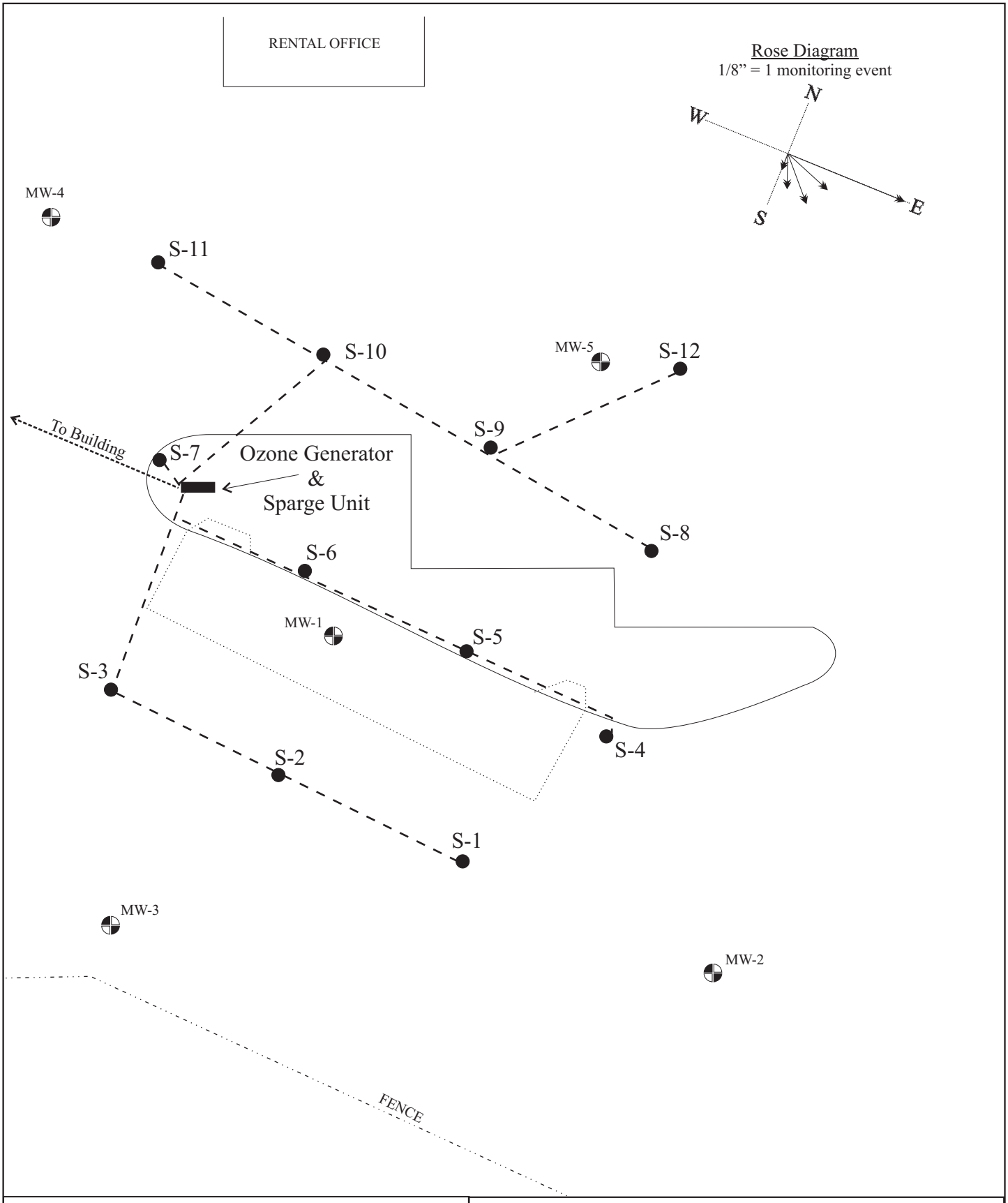
2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA

SITE PLAN

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 3
AEI PROJECT NO 110566



LEGEND

- Monitoring Wells
- Sparge Well Points
- Sparge Lines and Conduit
- Electrical Conduit

N

0' 10' 20'

SCALE: 1 in = 20 ft

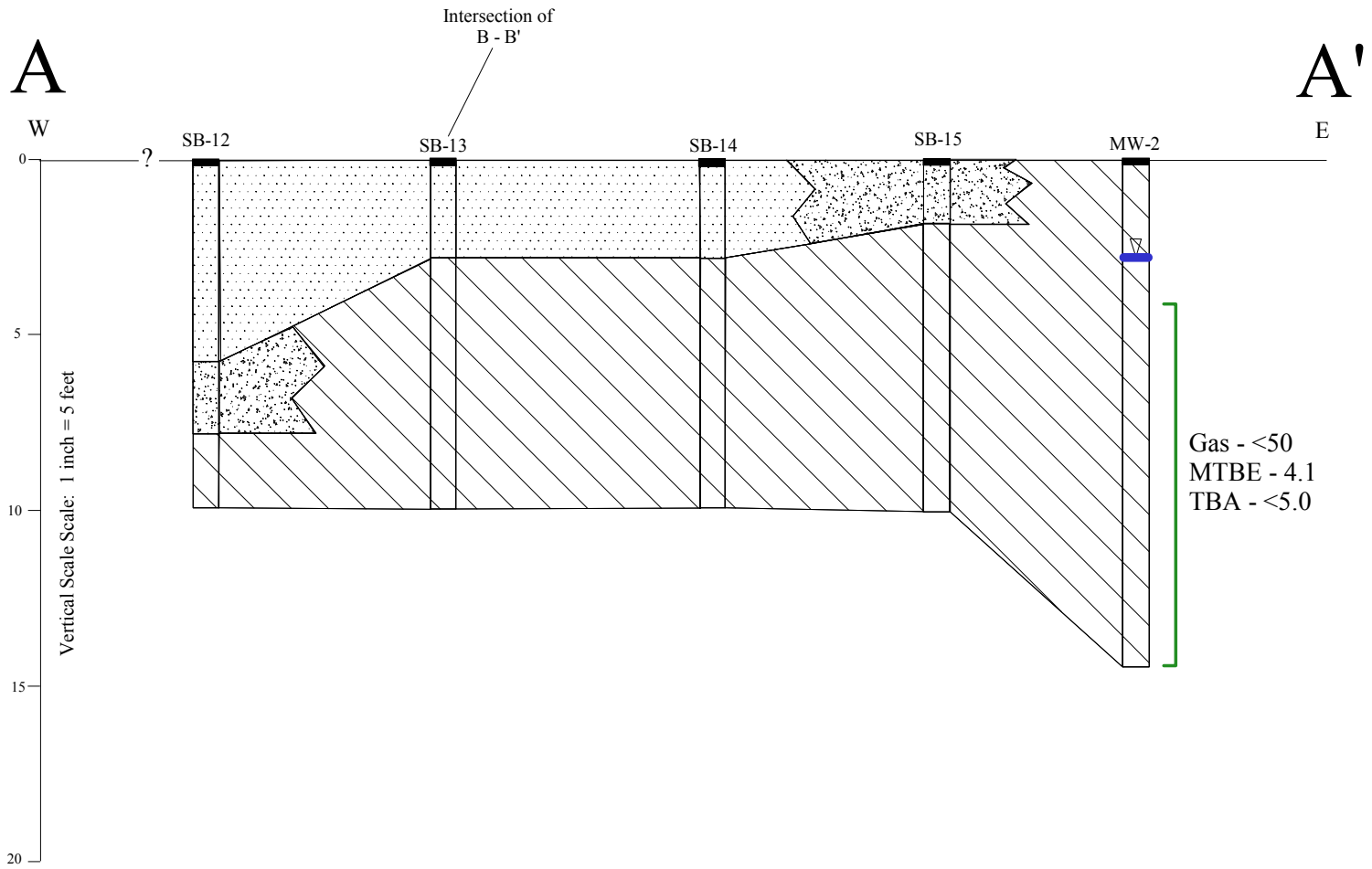
AEI Consultants

2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK, CA

SPARGE WELL LOCATIONS

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 4
AEI PROJECT NO 110566



Approximate Horizontal Scale: 1" = 20'

Silty - Sandy Clay

Clayey - Sandy Gravel

Sand

Groundwater elevation as of 7/11/06

Well Screen Interval

*Values represent groundwater concentrations in ug/L as of 7/11/06
MTBE - methyl tertiary butyl ether
TBA - tertiary butyl alcohol

0 40 80

Scale 1" = 20'

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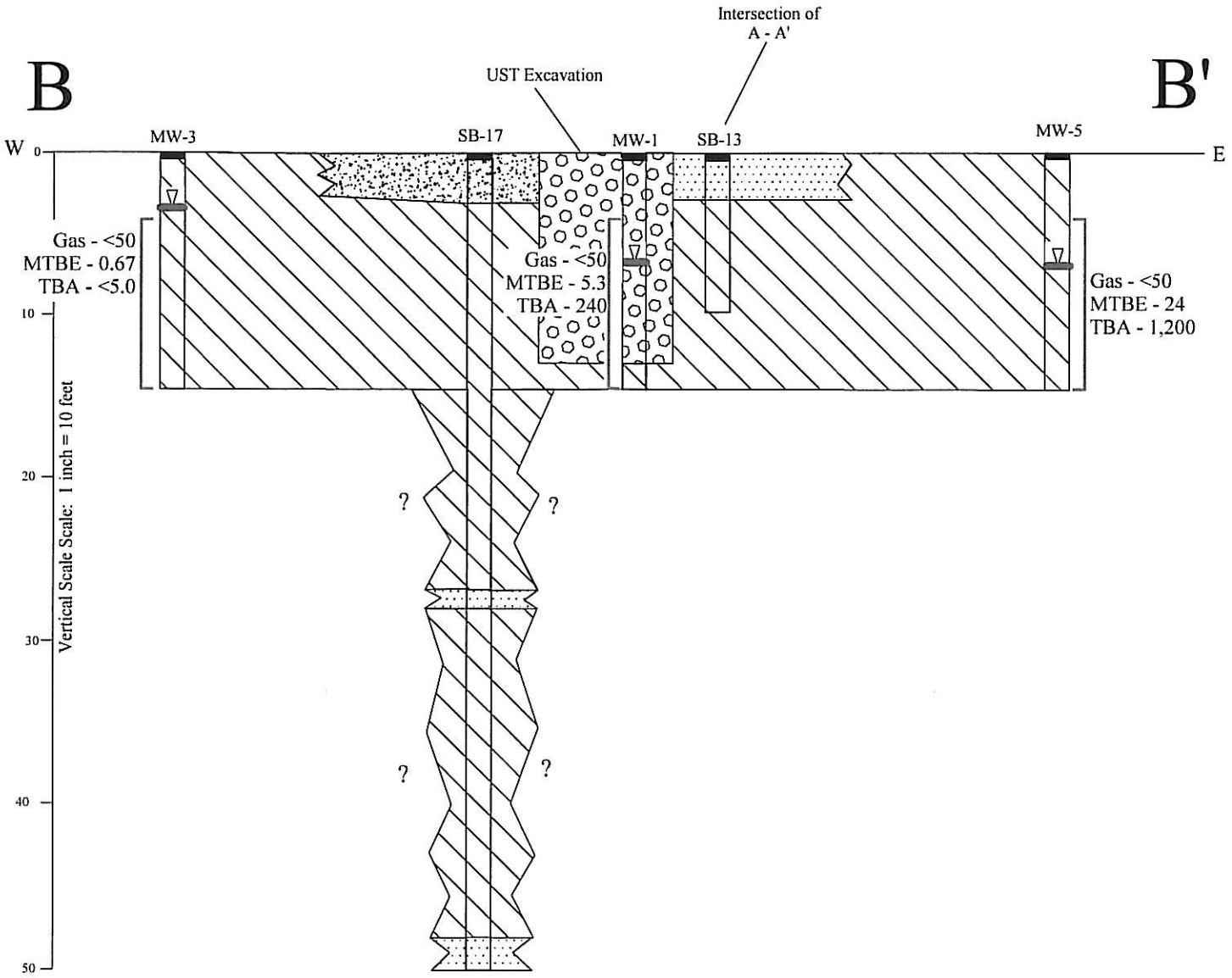
2500 CAMINO DIABLO, STE. 100, WALNUT CREEK, CA

A - A' Fence Diagram

796 66th Avenue
Oakland, CA

Figure 5
PROJECT NO. 110566



Approximate Horizontal Scale: 1" = 20'

- Sandy - Silty Clay
- Clayey Gravel
- Sand / Gravelly Sand
- Backfill
- Groundwater elevation as of 7/11/06
- Well Screen Interval

0 40 80

Scale 1" = 20'

*Values represent groundwater concentrations in ug/L as of 7/11/06
MTBE - methyl tertiary butyl ether
TBA - tertiary butyl alcohol

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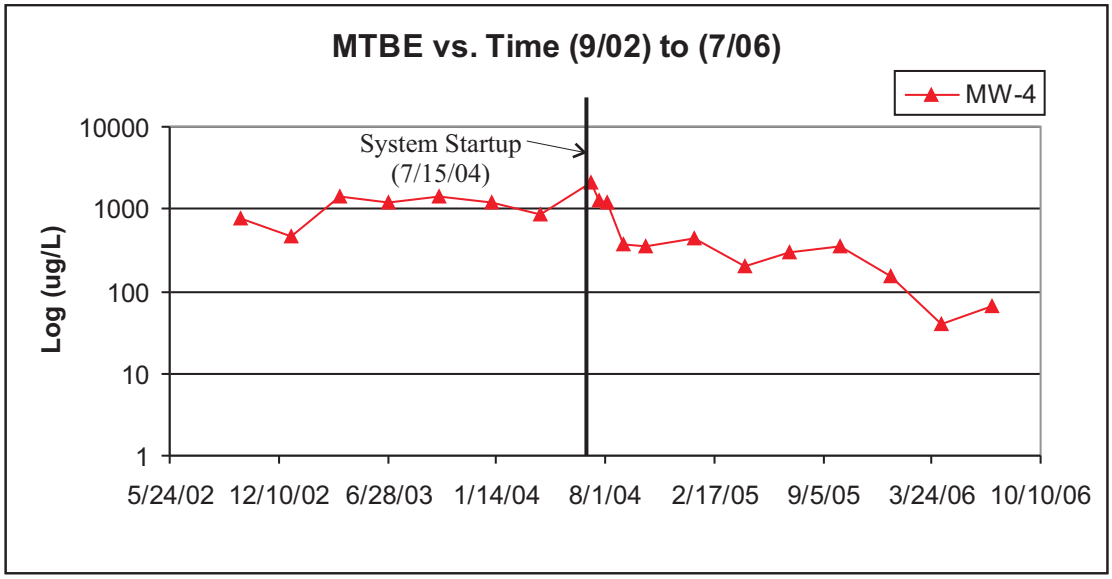
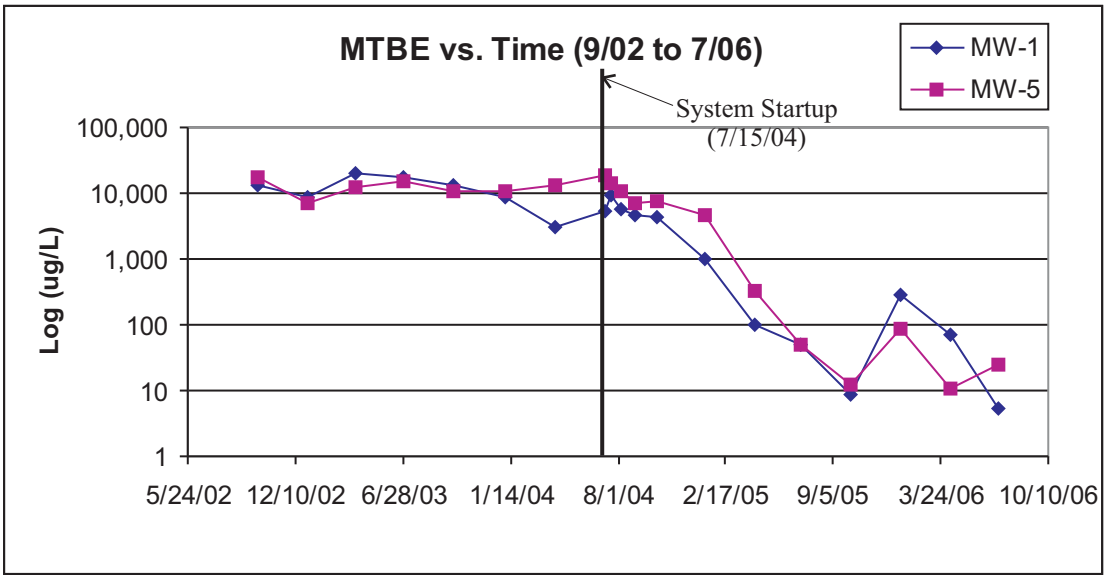
2500 CAMINO DIABLO, STE. 100, WALNUT CREEK, CA

B - B' Fence Diagram

796 66th Avenue
Oakland, CA

Figure 6
PROJECT NO. 110566





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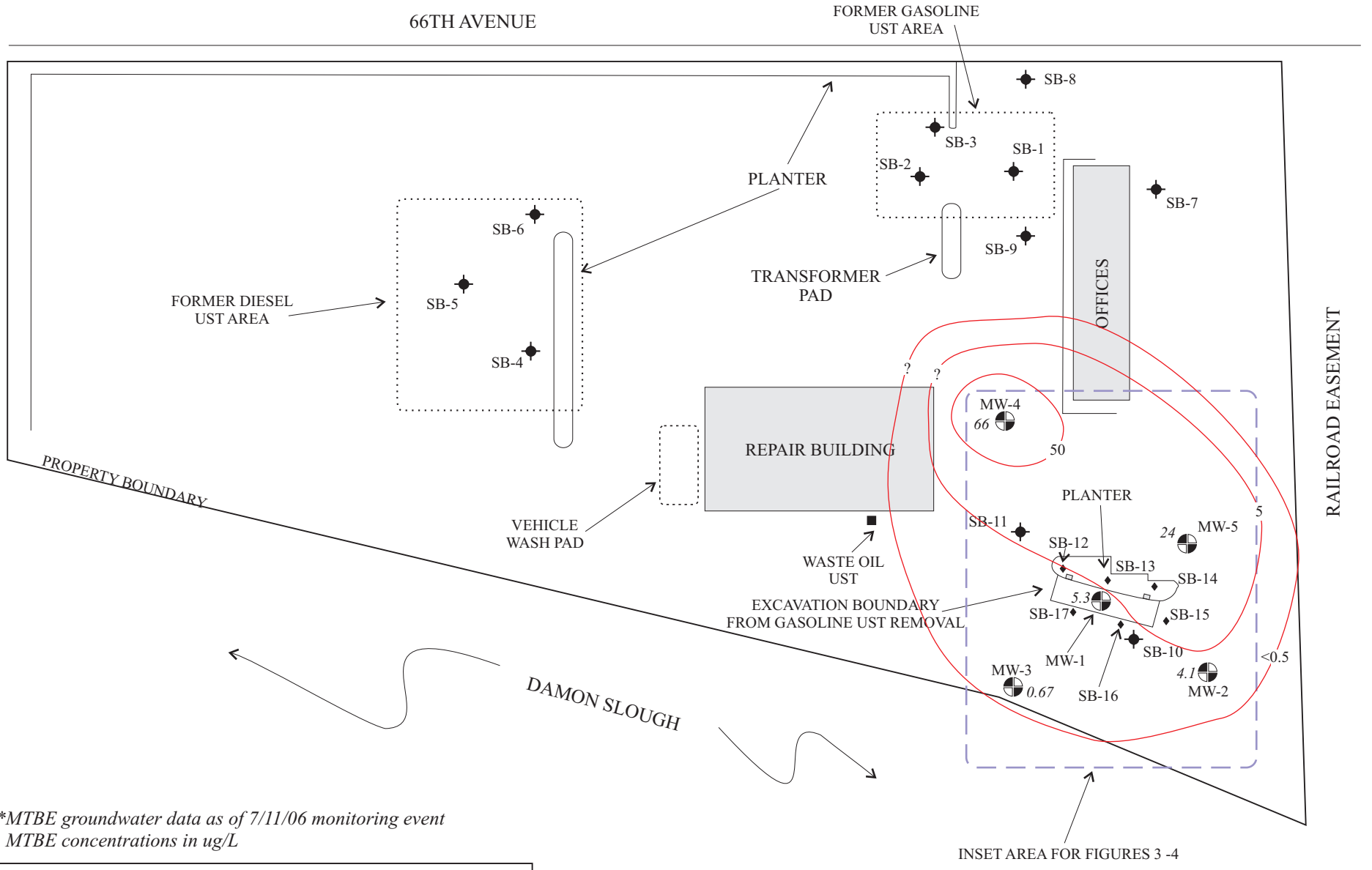
2500 CAMINO DIABLO, STE 200, WALNUT CREEK, CA

MTBE vs. TIME: MW-1, MW-4 & MW-5

796 66TH AVENUE
OAKLAND, CALIFORNIA

FIGURE 7
AEI PROJECT NO 110566



*MTBE groundwater data as of 7/11/06 monitoring event
MTBE concentrations in ug/L

AEI Consultants

2500 CAMINO DIABLO BLVD, STE 200, WALNUT CREEK, CA

MTBE Isopleth

796 66th AVENUE
OAKLAND, CALIFORNIA

FIGURE 8
AEI PROJECT NO 110566

TABLES

Table 1 Well Construction Details, Cruise America, 796 66th Ave., Oakland, California

Date Installed	Top of Casing (feet)	Casing Material	Well Depth (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Slot Size (inches)	Filter Pack Interval (feet)	Filter Pack Material
MW-1	10.88	PVC	14.0	8 1/4	2.0	4.0-14.0	0.020	3.0-14.0	#2/16 sand
MW-2	10.77	PVC	14.0	8 1/4	2.0	4.0-14.0	0.020	3.0-14.0	#2/16 sand
MW-3	10.20	PVC	14.0	8 1/4	2.0	4.0-14.0	0.020	3.0-14.0	#2/16 sand
MW-4	11.07	PVC	14.0	8 1/4	2.0	4.0-14.0	0.020	3.0-14.0	#2/16 sand
MW-5	11.18	PVC	14.0	8 1/4	2.0	4.0-14.0	0.020	3.0-14.0	#2/16 sand

Table 2 Sparge Well Construction Details, Cruise America, 796 66th Ave., Oakland, California

Date Installed	Casing Material	Well Depth (feet)	Borehole Diameter (inches)	Casing Diameter (inches)	Screened Interval (feet)	Filter Pack Interval (feet)	Filter Pack Material
S-1	PVC	18.0	8 1/2	3/4	15.5-18.0	14.0-18.0	#2/16 sand
S-2	PVC	18.0	8 1/2	3/4	15.5-18.0	14.0-18.0	#2/16 sand
S-3	PVC	18.5	8 1/2	3/4	16.0-18.5	14.5-18.5	#2/16 sand
S-4	PVC	18.0	8 1/2	3/4	15.5-18.0	14.0-18.0	#2/16 sand
S-5	PVC	18.0	8 1/2	3/4	15.5-18.0	13.0-18.0	#2/16 sand
S-6	PVC	18.0	8 1/2	3/4	15.5-18.0	12.5-17.0	#2/16 sand
S-7	PVC	16.5	8 1/2	3/4	14.0-16.5	10.5-16.5	#2/16 sand
S-8	PVC	15.0	8 1/2	3/4	11.5-14.0	9.5-14.0	#2/16 sand
S-9	PVC	16.5	8 1/2	3/4	14.0-16.5	11.5-16.5	#2/16 sand
S-10	PVC	18.0	8 1/2	3/4	12.5-15.0	10.5-15.0	#2/16 sand
S-11	PVC	17.0	8 1/2	3/4	14.5-17.0	13.0-17.0	#2/16 sand
S-12	PVC	15.0	8 1/2	3/4	11.0-13.5	9.0-13.5	#2/16 sand

Table 3
Groundwater Monitoring Data

Well ID (screen interval in ft bgs)	Date Sampled	Well Elevation (ft amsl)	Depth to Water (ft from TOC)	Water Table Elevation (ft amsl)	TPH-g *(8015Cm)* µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE *(8021B)* µg/L	MTBE *(8260B)* µg/L	TBA *(8260B)* µg/L
						(EPA method 8021B)						
MW-1	9/30/2002	10.88	5.41	5.47	1,800	50	15	16	18	19,000	13,000	<5,000
(4-14)	1/2/2003	10.88	4.77	6.11	660	24	6.4	<2.5	<2.5	7,800	8,900	-
	3/31/2003	10.88	4.95	5.93	660	11	6.4	<5.0	<5.0	16,000	20,000	-
	6/30/2003	10.88	4.54	6.34	830	<5.0	6.8	<5.0	<5.0	16,000	17,000	-
	10/1/2003	10.88	4.66	6.22	720	<5.0	<5.0	<5.0	<5.0	14,000	13,000	-
	1/5/2004	10.88	4.07	6.81	<300	7.8	2.9	<3.0	<3.0	-	8,700	-
	4/5/2004	10.88	4.33	6.55	100	2.8	3.0	<1.0	<1.0	2,300	3,000	<500
	7/7/2004	10.88	4.97	5.91	190	<1.7	2.0	<1.7	<1.7	4,900	5,500	<1,000
	7/19/2004	10.88	5.12	5.76	340	<2.5	4.0	<2.5	<2.5	8,000	9,200	<1,700
	8/6/2004	10.88	5.13	5.75	280	<0.5	5.6	<0.5	<0.5	7,200	5,900	<1,000
	8/20/2004	10.88	5.31	5.57	<250	<2.5	<2.5	<2.5	<2.5	4,600	-	-
	9/3/2004	10.88	5.22	5.66	<250	<2.5	<2.5	<2.5	<2.5	5,700	4,700	<1,000
	10/13/2004	10.88	5.23	5.65	170	<0.5	4.8	<0.5	<0.5	3,700	4,400	-
	1/11/2005	10.88	4.69	6.19	110	8.8	4.2	<0.5	<0.5	880	990	910
	4/13/2005	10.88	5.02	5.86	230	<0.5	9.0	<0.5	<0.5	140	100	2,600
	7/6/2005	10.88	5.06	5.82	200	<0.5	8.3	<0.5	<0.5	<75	50	1,600
	10/6/2005	10.88	4.92	5.96	110	<0.5	6.8	<0.5	<0.5	<20	8.4	640
	1/9/2006	10.88	3.90	6.98	<50	<0.5	1.8	<0.5	<0.5	260	280	560
	4/10/2006	10.88	3.97	6.91	80	<0.5	3.1	<0.5	<0.5	100	70	160
	7/11/2006	**10.88**	**4.63**	**6.25**	**<50**	**<0.5**	**2.8**	**<0.5**	**<0.5**	**<5.0**	**5.3**	**240**
MW-2	9/30/2002	10.77	8.00	2.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.84	<5.0
(4-14)	1/2/2003	10.77	5.91	4.86	<50	<0.5	<0.5	<0.5	<0.5	19	20	-
	3/31/2003	10.77	5.15	5.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.9	-
	6/30/2003	10.77	5.91	4.86	<50	<0.5	<0.5	<0.5	<0.5	7.0	9.6	-
	10/1/2003	10.77	6.69	4.08	<50	<0.5	<0.5	<0.5	<0.5	7.7	6.7	-
	1/5/2004	10.77	6.18	4.59	71	4.7	13	2.7	12	-	7.8	-
	4/5/2004	10.77	7.22	3.55	210	14	39	6.6	27	16	13	<5.0
	7/7/2004	10.77	6.83	3.94	<50	<0.5	<0.5	<0.5	<0.5	5.7	5.6	<5.0
	10/13/2004	10.77	7.18	3.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.6	-
	1/11/2005	10.77	7.27	3.50	74	2.6	11	2.1	10	<5.0	4.4	<5.0
	4/13/2005	10.77	6.66	4.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0

Table 3
Groundwater Monitoring Data

Well ID (screen interval in ft bgs)	Date Sampled	Well Elevation (ft amsl)	Depth to Water (ft from TOC)	Water Table Elevation (ft amsl)	TPH-g *(8015Cm)* µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE *(8021B)* µg/L	MTBE *(8260B)* µg/L	TBA *(8260B)* µg/L
						(EPA method 8021B)						
MW-2 cont.	7/6/2005	10.77	6.83	3.94	<50	<0.5	0.77	<0.5	<0.5	<5.0	2.9	<5.0
	10/6/2005	10.77	7.05	3.72	<50	<0.5	0.81	<0.5	0.54	<5.0	2.1	<5.0
	1/9/2006	10.77	6.18	4.59	<50	<0.5	<0.5	<0.5	<0.5	6.1	7.6	<5.0
	4/10/2006	10.77	6.27	4.50	50	<0.5	8.0	1.5	6.1	<5.0	1.1	<5.0
	7/11/2006	**10.77**	**6.97**	**3.80**	**<50**	**<0.5**	**0.72**	**<0.5**	**<0.5**	**<5.0**	**4.1**	**<5.0**
MW-3	9/30/2002	10.20	5.21	4.99	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
(4-14)	1/2/2003	10.20	5.31	4.89	<50	0.89	0.50	<0.5	0.72	15	14	-
	3/31/2003	10.20	4.58	5.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.62	-
	6/30/2003	10.20	3.83	6.37	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.6	-
	10/1/2003	10.20	4.02	6.18	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	-
	1/5/2004	10.20	6.18	4.02	71	4.7	13	2.7	12	-	7.8	-
	4/5/2004	10.20	3.79	6.41	120	8.8	22	3.2	13	<5.0	<0.5	<5.0
	7/7/2004	10.20	3.76	6.44	<50	<0.5	<0.5	<0.5	<0.5	<5.0	4.0	<5.0
	10/13/2004	10.20	4.45	5.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	-
	1/11/2005	10.20	5.21	4.99	68	2.2	9.0	1.7	8.5	<5.0	<0.5	<5.0
	4/13/2005	10.20	4.44	5.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
	7/6/2005	10.20	3.91	6.29	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
	10/6/2005	10.20	4.16	6.04	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
	1/9/2006	10.20	4.44	5.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
	4/10/2006	10.20	4.02	6.18	<50	<0.5	4.0	0.78	3.3	<5.0	<0.5	<5.0
	7/11/2006	**10.20**	**6.67**	**3.53**	**<50**	**<0.5**	**0.51**	**<0.5**	**1.1**	**<5.0**	**0.67**	**<5.0**
MW-4	9/30/2002	11.07	5.50	5.57	<100	<0.5	<0.5	<0.5	<0.5	790	750	<100
(4-14)	1/2/2003	11.07	4.90	6.17	<50	<0.5	<0.5	<0.5	<0.5	420	460	-
	3/31/2003	11.07	4.81	6.26	<50	<0.5	<0.5	<0.5	<0.5	1,500	1,400	-
	6/30/2003	11.07	4.61	6.46	<50	<0.5	<0.5	<0.5	<0.5	1,600	1,200	-
	10/1/2003	11.07	4.76	6.31	<50	<0.5	<0.5	<0.5	<0.5	1,800	1,400	-
	1/5/2004	11.07	4.32	6.75	<50	3.0	6.7	1.4	6.1	-	1,200	-
	4/5/2004	11.07	4.43	6.64	<50	0.79	2.0	<0.5	2.2	800	840	<250
	7/7/2004	11.07	5.08	5.99	<50	<0.5	<0.5	<0.5	<0.5	1,400	2,100	<250
	7/19/2004	11.07	5.19	5.88	<50	<0.5	<0.5	<0.5	<0.5	1,200	1,300	<500

Table 3
Groundwater Monitoring Data

Well ID (screen interval in ft bgs)	Date Sampled	Well Elevation (ft amsl)	Depth to Water (ft from TOC)	Water Table Elevation (ft amsl)	TPH-g *(8015Cm)* µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE *(8021B)* µg/L	MTBE *(8260B)* µg/L	TBA *(8260B)* µg/L
						(EPA method 8021B)						
MW-4 cont.	8/6/2004	11.07	5.20	5.87	<50	0.76	<0.5	<0.5	<0.5	1,300	1,200	<500
	8/20/2004	11.07	5.37	5.70	<50	<0.5	<0.5	<0.5	<0.5	460	-	-
	9/3/2004	11.07	5.35	5.72	<50	<0.5	<0.5	<0.5	<0.5	440	370	<50
	10/13/2004	11.07	5.35	5.72	<50	<0.5	<0.5	<0.5	<0.5	330	360	-
	1/11/2005	11.07	4.99	6.08	<50	1.0	2.1	<0.5	1.8	450	430	<100
	4/13/2005	11.07	5.17	5.90	<50	<0.5	<0.5	<0.5	<0.5	340	200	<50
	7/6/2005	11.07	5.18	5.89	<50	<0.5	<0.5	<0.5	<0.5	300	290	330
	10/6/2005	11.07	5.03	6.04	<50	<0.5	<0.5	<0.5	<0.5	380	350	430
	1/9/2006	11.07	4.11	6.96	<50	<0.5	<0.5	<0.5	<0.5	140	150	200
	4/10/2006	11.07	4.13	6.94	<50	<0.5	1.0	<0.5	1.1	52	39	120
	7/11/2006	**11.07**	**4.72**	**6.35**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**56**	**66**	**120**
MW-5	9/30/2002	11.18	5.62	5.56	<2,000	<5.0	<5.0	<5.0	<5.0	19,000	18000	<2,500
(4-14)	1/2/2003	11.18	5.12	6.06	<50	<0.5	<0.5	<0.5	<0.5	7,000	7,000	-
	3/31/2003	11.18	4.93	6.25	<500	<5.0	<5.0	<5.0	<5.0	14,000	12,000	-
	6/30/2003	11.18	4.75	6.43	<500	<5.0	<5.0	<5.0	<5.0	13,000	15,000	-
	10/1/2003	11.18	4.88	6.30	<500	<5.0	<5.0	<5.0	<5.0	12,000	11,000	-
	1/5/2004	11.18	4.19	6.99	<1,000	<10	<10	<10	<10	-	11,000	-
	4/5/2004	11.18	4.57	6.61	<250	<2.5	<2.5	<2.5	<2.5	9,400	13,000	<2,500
	7/7/2004	11.18	5.19	5.99	<500	<5.0	<5.0	<5.0	<5.0	15,000	19,000	<2,000
	7/19/2004	11.18	5.32	5.86	<500	<5.0	<5.0	<5.0	<5.0	16,000	14,000	<2,500
	8/6/2004	11.18	5.33	5.85	110	<0.5	<0.5	<0.5	<0.5	12,000	11,000	<2,500
	8/20/2004	11.18	5.49	5.69	<500	<5.0	<5.0	<5.0	<5.0	7,200	-	-
	9/3/2004	11.18	5.48	5.70	<500	<2.5	<2.5	<2.5	<2.5	8,500	7,200	<1,700
	10/13/2004	11.18	5.49	5.69	<250	<2.5	<2.5	<2.5	<2.5	6,700	7,700	-
	1/11/2005	11.18	5.08	6.10	<100	1.5	3.3	<1.0	2.3	3,000	4,800	1,200
	4/13/2005	11.18	5.24	5.94	<50	<0.5	<0.5	<0.5	<0.5	510	320	2,600
	7/6/2005	11.18	5.27	5.91	<50	<0.5	<0.5	<0.5	<0.5	43	51	4,900
	10/6/2005	11.18	5.14	6.04	<50	<0.5	<0.5	<0.5	<0.5	25	<25	1,900
	1/9/2006	11.18	4.23	6.95	<50	<0.5	<0.5	<0.5	<0.5	70	84	2,000

Table 3
Groundwater Monitoring Data

Well ID (screen interval in ft bgs)	Date Sampled	Well Elevation (ft amsl)	Depth to Water (ft from TOC)	Water Table Elevation (ft amsl)	TPH-g *(8015Cm)* µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE *(8021B)* µg/L	MTBE *(8260B)* µg/L	TBA *(8260B)* µg/L
						(EPA method 8021B)						
MW-5 cont.	4/10/2006	11.18	4.24	6.94	<50	<0.5	0.59	<0.5	<0.5	13	11	860
	7/11/2006	**11.18**	**4.85**	**6.33**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**20**	**24**	**1,200**

Notes:

bgs = below ground surface

ft amsl = feet above mean sea level

TOC = Top of Casing; all well elevations and depths to water are measured from TOC

TPH-g = Total Petroleum Hydrocarbons as gasoline

µg/L = micrograms per liter

MTBE = Methyl tertiary-Butyl Ether

TBA = tertiary-Butyl Alcohol

- = Sample not analyzed by this method

Table 4
Water Table Data Summary

Episode	Date Sampled	Average Water Table Elevation*	Change From Previous Episode	Gradient (direction)
1	9/30/2002	4.87	-	0.005 (S)
2	1/2/2003	5.62	0.75	0.022 (SSE)
3	3/31/2003	5.94	0.32	0.006 (SSE)
4	6/30/2003	6.09	0.16	0.020 (SE)
5	10/1/2003	5.82	-0.27	0.029-0.001 (SE)
6	1/5/2004	6.06	0.24	0.03 (SE)
7	4/5/2004	5.95	-0.11	0.02 (E)
8	7/7/2004	5.65	-0.30	0.02 (E)
9	7/19/2004	5.83	0.18	nc
10	8/6/2004	5.82	-0.01	nc
11	8/20/2004	5.65	-0.17	nc
12	9/3/2004	5.69	0.04	nc
13	10/13/2004	5.28	-0.41	0.02 (E)
14	1/11/2005	5.37	0.09	0.02 (E)
15	4/13/2005	5.51	0.14	0.02 (E)
16	7/6/2005	5.57	0.06	0.024 (E)
17	10/6/2005	5.56	-0.01	0.03 (E)
18	1/9/2006	6.25	0.69	0.04 (ESE)
19	4/10/2006	6.29	0.05	0.03 (ESE)
20	**7/11/2006**	**5.25**	**-1.04**	**0.03 (ESE)**

Notes:

*Average Water Table Elevation value calculated in Microsoft Excel

nc = not calculated

Table 5
Soil Sample Analytical Data

Sample ID	Date	TPH-g mg/kg	TPH-d mg/kg	MTBE mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	Lead TTLC mg/kg	Lead STLC mg/l
SB-1 7'	7/17/2001	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	-	
SB-2 6'	7/17/2001	<1.0	26	<0.05	<0.005	<0.005	<0.005	<0.005	-	
SB-2 10'	7/17/2001	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	-	
SB-3 4'	7/17/2001	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	-	
SB-4 6'	7/17/2001	<1.0	2.8	<0.05	<0.005	<0.005	<0.005	<0.005	-	
SB-5 4'	7/17/2001	5.0	13	<0.05	0.1600	0.058	0.11	0.21	-	
SB-5 7'	7/17/2001	9.7	37	<0.05	0.059	0.012	0.007	0.056	-	-
SB-6 7'	7/17/2001	1.5	11	<0.05	0.008	0.018	<0.005	<0.005	-	-
SB-6 15'	7/17/2001	<1.0	<1.0	<0.05	<0.005	<0.005	<0.005	<0.005	-	-
SB-8 4'	9/28/2001	16	-	<0.05	0.053	0.11	0.031	0.14	-	-
SB-8 11'	9/28/2001	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	-	-
Disp-East 3'	11/30/2001	110	-	<0.20	0.07	1.2	0.16	5.2	-	-
Disp-West 3'	11/30/2001	280	-	6	0.25	7.5	4.1	26	-	-
South 6 1/2	11/30/2001	4.1	-	53	0.038	0.16	0.034	0.19	-	-
West 6 1/2	11/30/2001	<50	-	0.99	<0.005	0.014	0.011	0.046	-	-
East 6 1/2	11/30/2001	140	-	50	13	3.9	7.9	18	-	-
SB-12 5'	9/6/2002	<50	-	<0.05	<0.005	<0.005	<0.005	<0.005	1200	23
SB-13 4'	9/6/2002	15,000	-	<50	21	840	300	1700	830	7.5
SB-14 4'	9/6/2002	<50	-	<0.05	<0.005	<0.005	<0.005	<0.005	110	2.7
SB-15 4'	9/6/2002	<50	-	<0.05	<0.005	<0.005	<0.005	<0.005	5	-
SB-16 4'	9/6/2002	73	-	1.5	<0.05	0.18	<0.05	<0.05	20	-
SB-17 4'	9/6/2002	1.2	-	2.1	0.0073	0.007	<0.005	0.011	3.2	-
SB-17 39'	9/6/2002	<50	-	<0.05	<0.005	<0.005	<0.005	<0.005	3.3	-
MW-1 4'	9/19/2002	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	5.9	-
MW-2 4'	9/19/2002	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	25	-
MW-3 4'	9/19/2002	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	25	-
MW-4 4'	9/19/2002	6.2	-	<0.05	<0.005	0.0080	0.0078	0.021	160	-
MW-5 4'	9/19/2002	<1.0	-	2.0	0.0053	0.0088	<0.005	0.010	190	-
S-1 6'	5/17/2004	<1.0	-	<0.05	<0.005	<0.005	<0.005	<0.005	-	-
S-2 6'	5/17/2004	31	-	2.7	0.035	0.32	0.082	0.27	-	-
S-5 6'	5/17/2004	1.2	-	2.1	<0.005	0.014	<0.005	0.020	-	-
S-6 6'	5/17/2004	360	-	<3.5	0.61	1.8	5.0	5.2	-	-
S-7 6'	5/18/2004	3.8	-	2.0	<0.005	0.016	<0.005	<0.005	-	-
S-12 11'	5/18/2004	<1.0	-	1.1	<0.005	<0.005	<0.005	<0.005	-	-
MDL		1.0	1.0	0.05	0.005	0.005	0.005	0.005	3	0.200

MDL = Method Detection Limit
- = Sample not analyzed by this method

mg/kg = milligrams per kilogram
mg/l = milligrams per liter

Table 6
Groundwater Sample Analytical Data: Soil Borings

Sample ID	Date	TPH-g µg/L	TPH-d µg/L	MTBE(µg/L) (EPA 8020)	MTBE(µg/L) (EPA 8260)	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	Lead mg/L
SB-1 W	7/17/2001	<50	-	650	-	0.63	<0.5	<0.5	<0.5	-
SB-2 W	7/17/2001	<50	-	<5.0	-	<0.5	<0.5	<0.5	<0.5	-
SB-3 W	7/17/2001	120	-	<5.0	-	<0.5	4.6	<0.5	<0.5	-
SB-4 W	7/17/2001	<50	990	<5.0	-	<0.5	<0.5	<0.5	<0.5	-
SB-5 W	7/17/2001	68	410	<5.0	-	<0.5	0.66	<0.5	<0.5	-
SB-6 W	7/17/2001	240	590	<5.0	-	<0.5	2.9	<0.5	<0.5	-
SB-7 W	9/28/2001	<50	-	<5.0	<0.5	<0.5	0.74	<0.5	<0.5	-
SB-9 W	9/28/2001	<50	-	670	630	<0.5	1.0	<0.5	<0.5	-
SB-10 W	9/28/2001	<500	-	15,000	13,000	<2.0	<2.0	2.5	<2.0	-
SB-11 W	9/28/2001	58	-	1,900	1,700	2.4	1.8	<0.5	0.79	-
GW*	11/30/2001	44,000	-	42,000	-	590	5100	640	3500	-
SB-12	9/6/2002	<1000	-	31,000	32,000	44	<10	<10	<10	<0.005
SB-13	9/6/2002	13,000	-	51,000	49,000	300	1700	320	1,800	<0.005
SB-14	9/6/2002	<500	-	11,000	9,500	<5.0	<5.0	<5.0	<5.0	<0.005
SB-15	9/6/2002	300	-	730	770	<0.5	3.2	0.71	3.5	0.039
SB-16	9/6/2002	<200	-	3,900	2,700	<1	2.1	<1	2.5	<0.005
SB-17	9/6/2002	<200	-	5,900	5,500	<1.7	3.8	<1.7	4.2	<0.005
SB-17-W 47'	9/6/2002	90	-	150	120	1.7	3.5	1.9	3.5	-
MDL		50	50	5.0		0.5	0.5	0.5	0.5	0.005

MDL = Method Detection Limit
µg/L = micrograms per liter (ppb)
mg/L = milligrams per liter (ppm)

- = Sample not analyzed by this method
* Sample GW was collected from standing water within the tank excavation

Table 7:
Groundwater Sample Fuel Oxygenate and Lead Scavenger Analytical Data

Sample ID	Date	Diisopropyl ether (DIPE) µg/L	Ethyl tert-butyl ether (ETBE) µg/L	Methyl-t-butyl ether (MTBE) µg/L	tert-Amyl methyl ether (TAME) µg/L	t-Butyl alcohol (TBA) µg/L	1,2-Dibromoethane (EDB) µg/L	1,2-Dichloroethane (1,2-DCA) µg/L
MW-1	9/30/2002	ND<500	ND<500	13,000	ND<500	ND<500	ND<500	ND<500
MW-2	9/30/2002	<0.5	<0.5	0.84	<0.5	<0.5	<0.5	<0.5
MW-3	9/30/2002	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-4	9/30/2002	ND<10	ND<10	750	ND<10	ND<100	ND<10	ND<10
MW-5	9/30/2002	ND<250	ND<250	18,000	ND<250	ND<2,500	ND<250	ND<250
MDL		0.5	0.5	0.5	0.5	5	0.5	0.5

MDL = Method Detection Limit

ND = Not detected above the Method Detection Limit (unless otherwise noted)

µg/L = micrograms per liter (ppb)

mg/L = milligrams per liter (ppm)

- = Sample not analyzed by this method

APPENDIX A

Soil Boring Logs

Project No: 5526

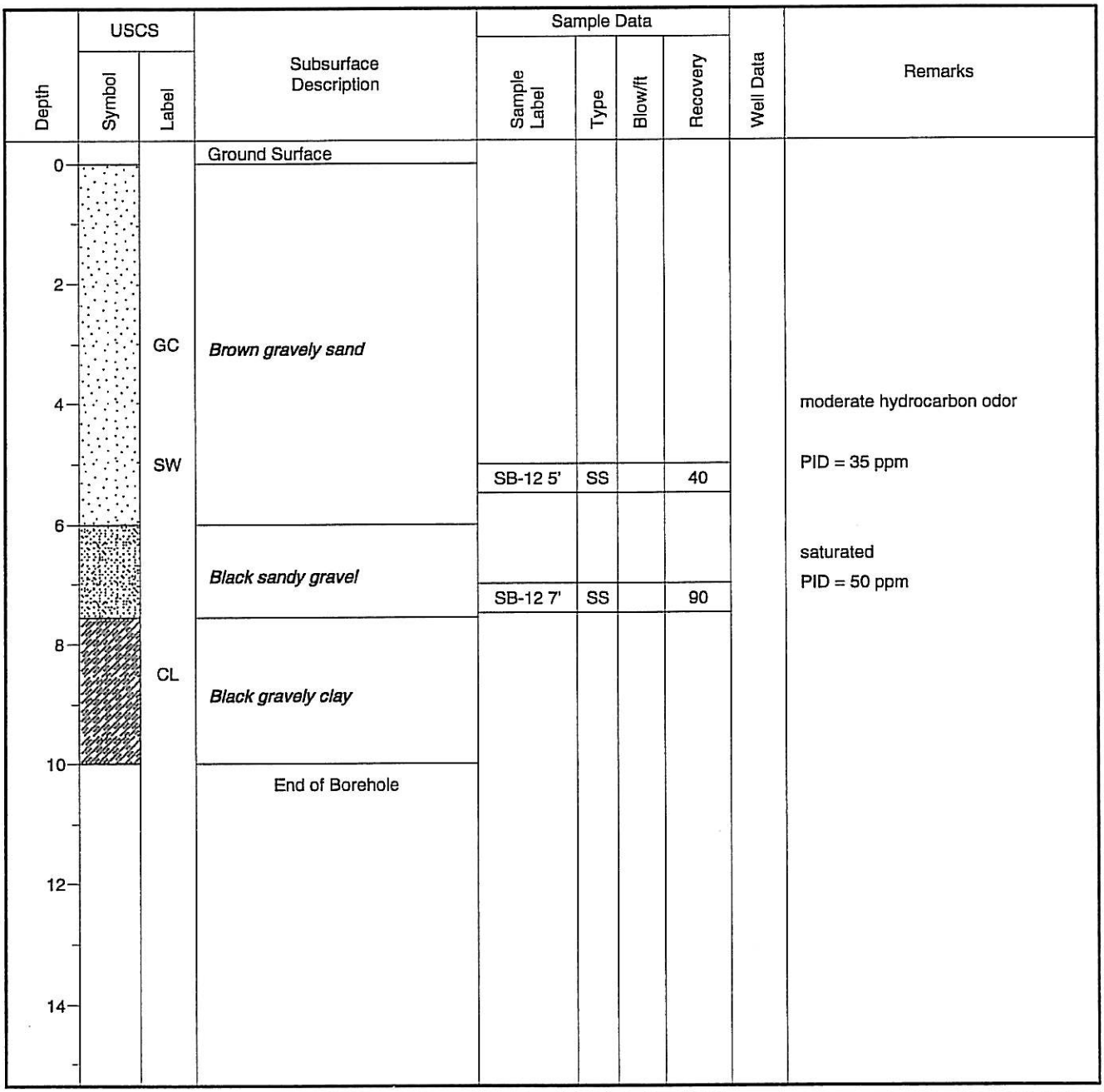
Sheet: 1 of 1

Project Name: Cruise America

Log of Borehole: SB-12

Client:

Location:



Depth	USCS Symbol	USCS Label	Subsurface Description	Sample Data: Sample Label	Sample Data: Type	Sample Data: Blow/ft	Sample Data: Recovery	Well Data	Remarks
0			Ground Surface						
		GC	*Brown gravely sand*						moderate hydrocarbon odor
4		SW		SB-12 5'	SS		40		PID = 35 ppm
6			*Black sandy gravel*						saturated
				SB-12 7'	SS		90		PID = 50 ppm
8		CL	*Black gravely clay*						
10			End of Borehole						
12									
14									

Drill Date 9/6/02

Drill Method: Direct Push

Total Depth: 10

Depth to Water: 6.40

Reviewed by: EW

Logged by: NG

AEI Consultants
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Lafayette, CA 94549
(925) 283-6000

Project No: 5526

Sheet: 1 of 1

Project Name: Cruise America

Log of Borehole: SB-13

Client:

Location:

Depth	USCS Symbol	USCS Label	Subsurface Description	Sample Data: Sample Label	Sample Data: Type	Sample Data: Blow/ft	Sample Data: Recovery	Well Data	Remarks
0			Ground Surface						
		SP	*Sand*						
2		GP	*Gravely sand*						
4									strong hydrocarbon odor
				SB-13 5'	SS		60		PID = 1500 ppm
6		CL	*Black gravely clay*						saturated
				SB-13 7'	SS				PID = 50 ppm
8									
10			End of Borehole						
12									
14									

Drill Date 9/6/02

Drill Method: Direct Push

Total Depth: 10

Depth to Water: 6.15

Reviewed by: EW

Logged by: NG

AEI Consultants
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(925) 283-6000

Project No: 5526

Sheet: 1 of 1

Project Name: Cruise America

Log of Borehole: SB-14

Client:

Location:

Depth	USCS Symbol	USCS Label	Subsurface Description	Sample Data: Sample Label	Sample Data: Type	Sample Data: Blow/ft	Sample Data: Recovery	Well Data	Remarks
0			Ground Surface						
		GC	*Gravely sand*						
2									
4									strong hydrocarbon odor
				SB-14 5'	SS		70		PID = 1500 ppm
6			*Black gravely clay*						saturated
		CL		SB-14 7'	SS		50		PID = 50 ppm
8									
10			End of Borehole						
12									
14									

Drill Date 9/6/02

Drill Method: Direct Push

Total Depth: 10

Depth to Water: 5.98

Reviewed by: EW

Logged by: NG

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Project No: 5526

Sheet: 1 of 1

Project Name: Cruise America

Log of Borehole: SB-15

Client:

Location:

Depth	USCS Symbol	USCS Label	Subsurface Description	Sample Data: Sample Label	Sample Data: Type	Sample Data: Blow/ft	Sample Data: Recovery	Well Data	Remarks
0			Ground Surface						
		GC	***Clayey gravel***						
2									
		CL	***Gravely clay*** clasts to 6 cm green staining						
4									
				SB-15 5'	SS		100		PID = 40 ppm
6									saturated
				SB-15 7'	SS		80		PID = 50 ppm
8		CL	***Black gravely silty clay*** gravels decreasing						
10			End of Borehole						
12									
14									

Drill Date 9/6/02

Drill Method: Direct Push

Total Depth: 10

Depth to Water: 5.45

Reviewed by: EW

Logged by: NG

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(925) 283-6000

Project No: 5526

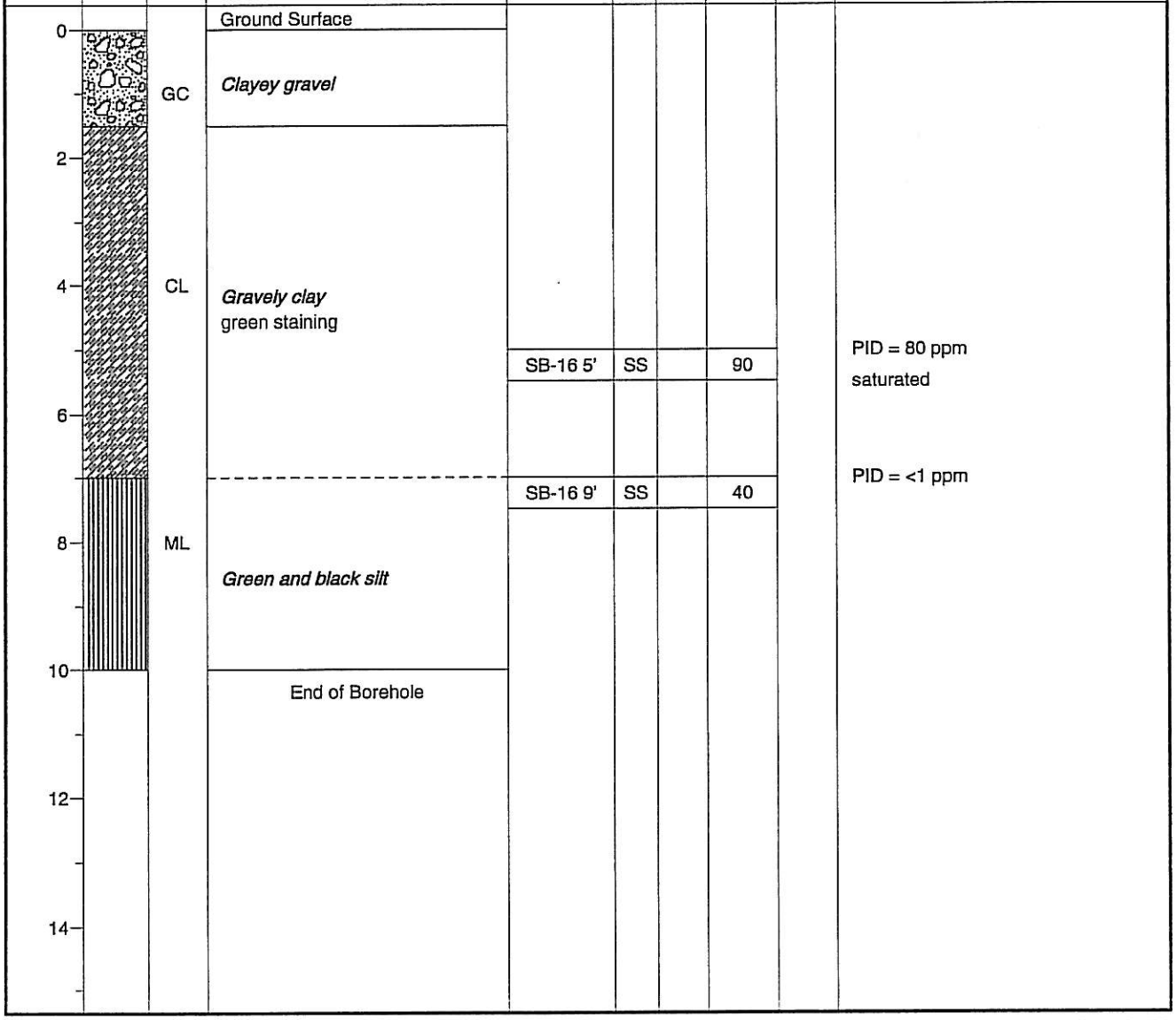
Sheet: 1 of 1

Project Name: Cruise America

Log of Borehole: SB-16

Client:

Location:



Drill Date 9/6/02

Drill Method: Direct Push

Total Depth: 10

Depth to Water: 5.35

Reviewed by: EW

Logged by: NG

AEI Consultants
3210 Old Tunnel Road, Suite B
Lafayette, CA 94549
(925) 283-6000

Project No: 5526

Sheet: 1 of 2

Project Name: Cruise America

Log of Borehole: SB-17

Client:

Location:

Depth	USCS Symbol	USCS Label	Subsurface Description	Sample Label	Sample Type	Sample Blow/ft	Sample Recovery	Well Data	Remarks
0			Ground Surface						
2		GC	*Clayey gravel*						
4				SB-17 5'	SS		80		PID = 10 ppm
6		CL	*Gravely clay* green staining						saturated moderate hydrocarbon odor
8				SB-17 9'	SS		70		PID = 50 ppm
10		OL	*Black silty clay* Organic and anthropogenic debris						
12		CL	*Soft Clay* Organic rich						
14									sulfide odor
16		SC	*Sandy Clay*						
18									
20		OH	*Stiff organic clay*	SB-17 20'	SS		100		
22		CL	*Brown gravely clay* Gravels increase with depth						
24									

Drill Date 9/6/02

Drill Method: Dual Cased Direct Push

Total Depth: 50

Depth to Water: 5.58, 45.5

Reviewed by: EW

Logged by: NG

AEI Consultants
3210 Old Tunnel Road, Suite B
Lafayette, CA 94549
(925) 283-6000

Project No: 5526

Sheet: 2 of 2

Project Name: Cruise America

Log of Borehole: SB-17

Client:

Location:

Depth	USCS Symbol	USCS Label	Subsurface Description	Sample Data: Sample Label	Sample Data: Type	Sample Data: Blow/ft	Sample Data: Recovery	Well Data	Remarks
27			***Brown gravely clay*** Gravels increase with depth						
		SW	***Well graded sand***						
29									
31			stiffens-less sand rounded clasts 2-3cm <5%						
33									
35									
37		CH	***Stiff sandy clay*** plastic						
39				SB-17 39'	SS		100		
41			softer, more fine sand and silt						
43									
45									wet
47		CL	***Sandy clay*** soft, cohesive						
49		SW	***Well-graded gravely sand***						

Drill Date 9/6/02

Drill Method: Dual Cased Direct Push

Total Depth: 50

Depth to Water: 5.58, 45.5

Reviewed by: EW

Logged by: NG

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Lafayette, CA 94549
(925) 283-6000

Project No: 5526

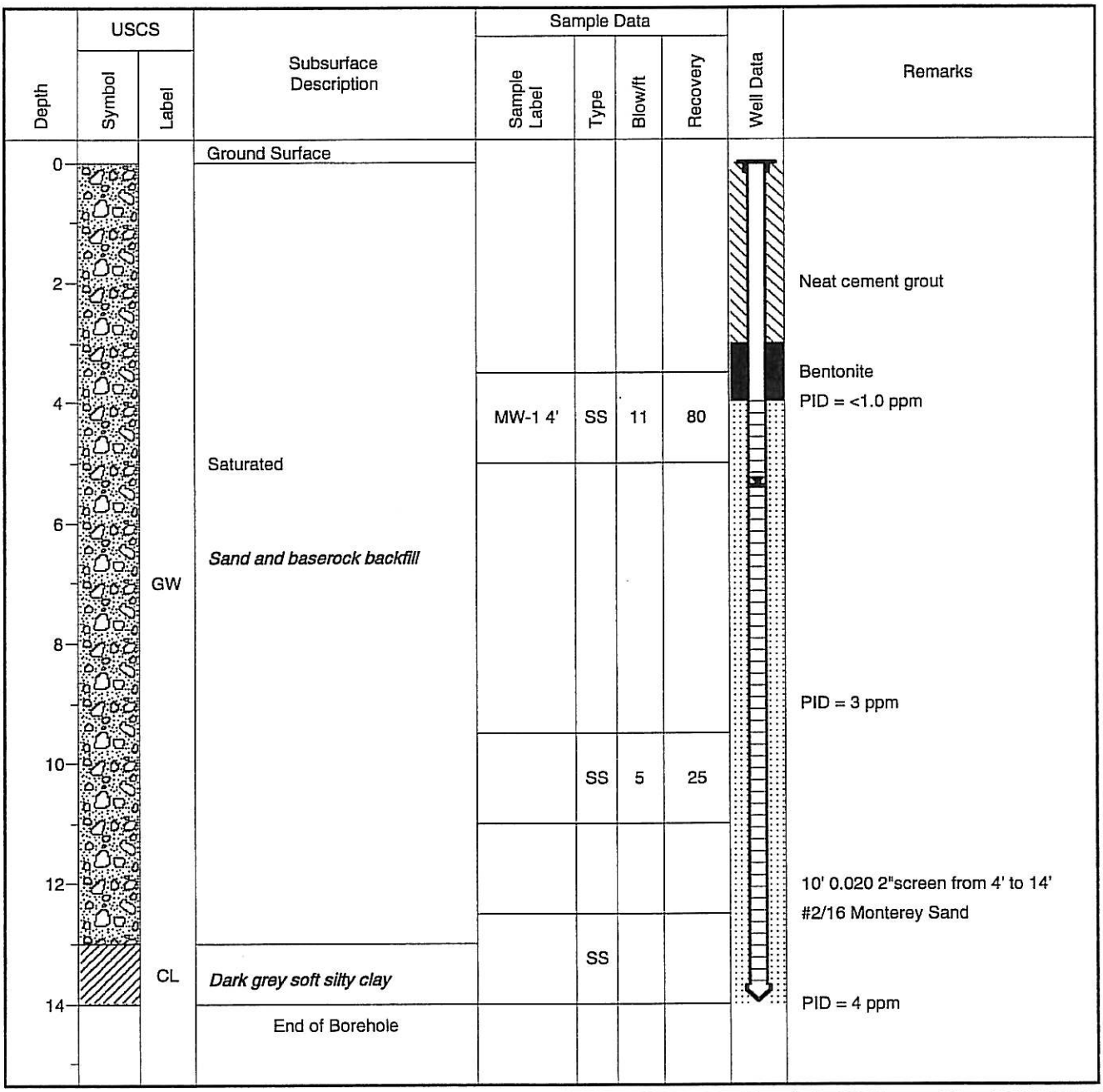
Sheet: 1 of 1

Project Name: Cruise America

Log of Borehole: MW-1

Client:

Location:



Drill Date 9/18/02

Drill Method: HSA

Total Depth: 14

Depth to Water: 5.4

Reviewed by: EW

Logged by: NG

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Project No: 5526

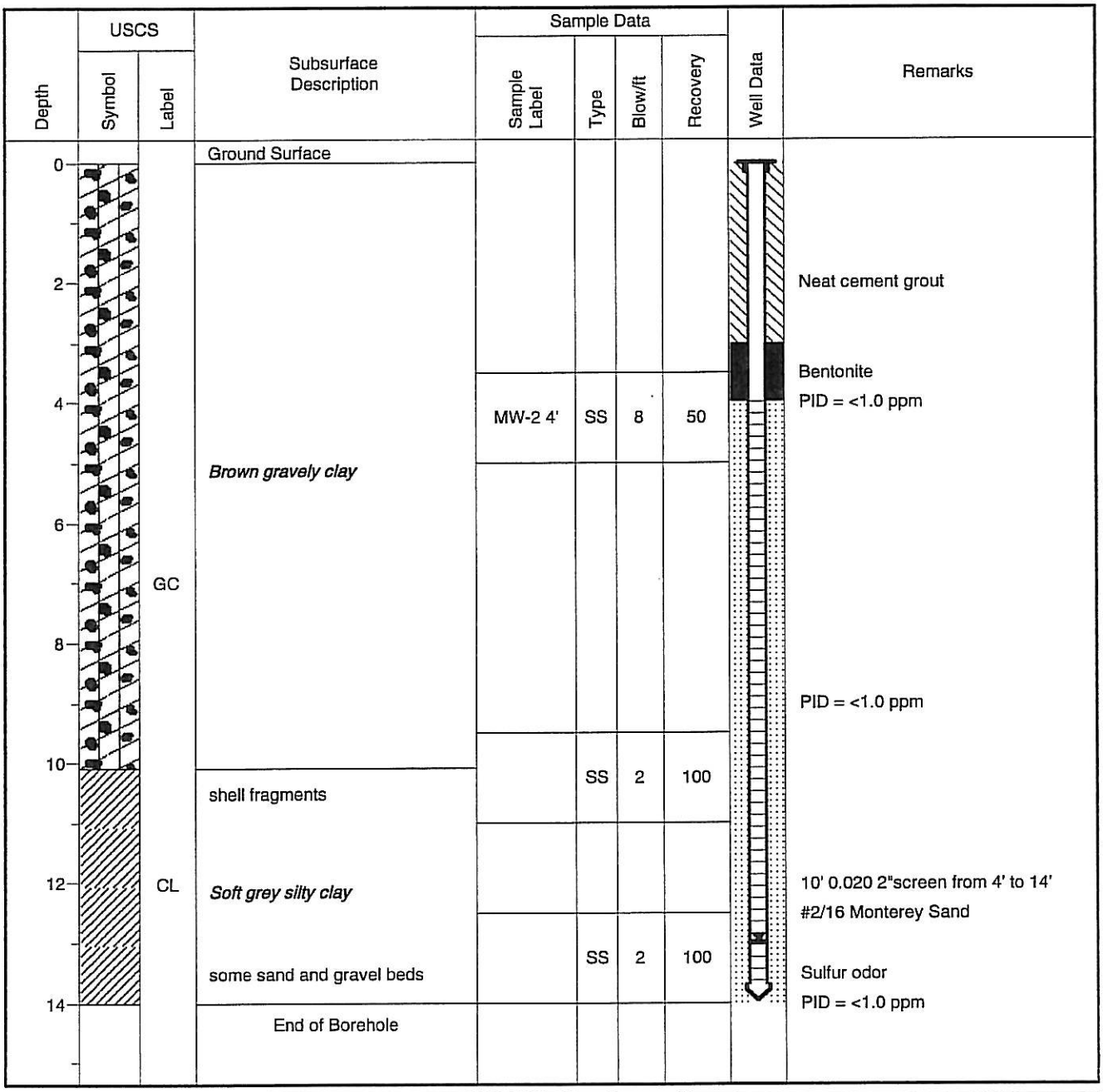
Sheet: 1 of 1

Project Name: Cruise America

Log of Borehole: MW-2

Client:

Location:



Drill Date 9/18/02

Drill Method: HSA

Total Depth: 14

Depth to Water: 13.0

Reviewed by: EW

Logged by: NG

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(925) 283-6000

Project No: 5526

Sheet: 1 of 1

Project Name: Cruise America

Log of Borehole: MW-3

Client:

Location:

Depth	USCS Symbol	USCS Label	Subsurface Description	Sample Label	Type	Blow/ft	Recovery	Well Data	Remarks
0			Ground Surface						
2									Neat cement grout
4			20 % gravel	MW-2 4'	SS	8	50		Bentonite PID = 43 ppm
6		CL	***Soft black silty clay*** cohesive some gravel beds						
8									PID = 89 ppm
10					SS	2	100		
12									10' 0.020 2"screen from 4' to 14' #2/16 Monterey Sand
14					SS	2	100		Sulfur odor PID = 103 ppm
			End of Borehole						

Drill Date 9/18/02

Drill Method: HSA

Total Depth: 14

Depth to Water: 13.05

Reviewed by: EW

Logged by: NG

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Project No: 5526

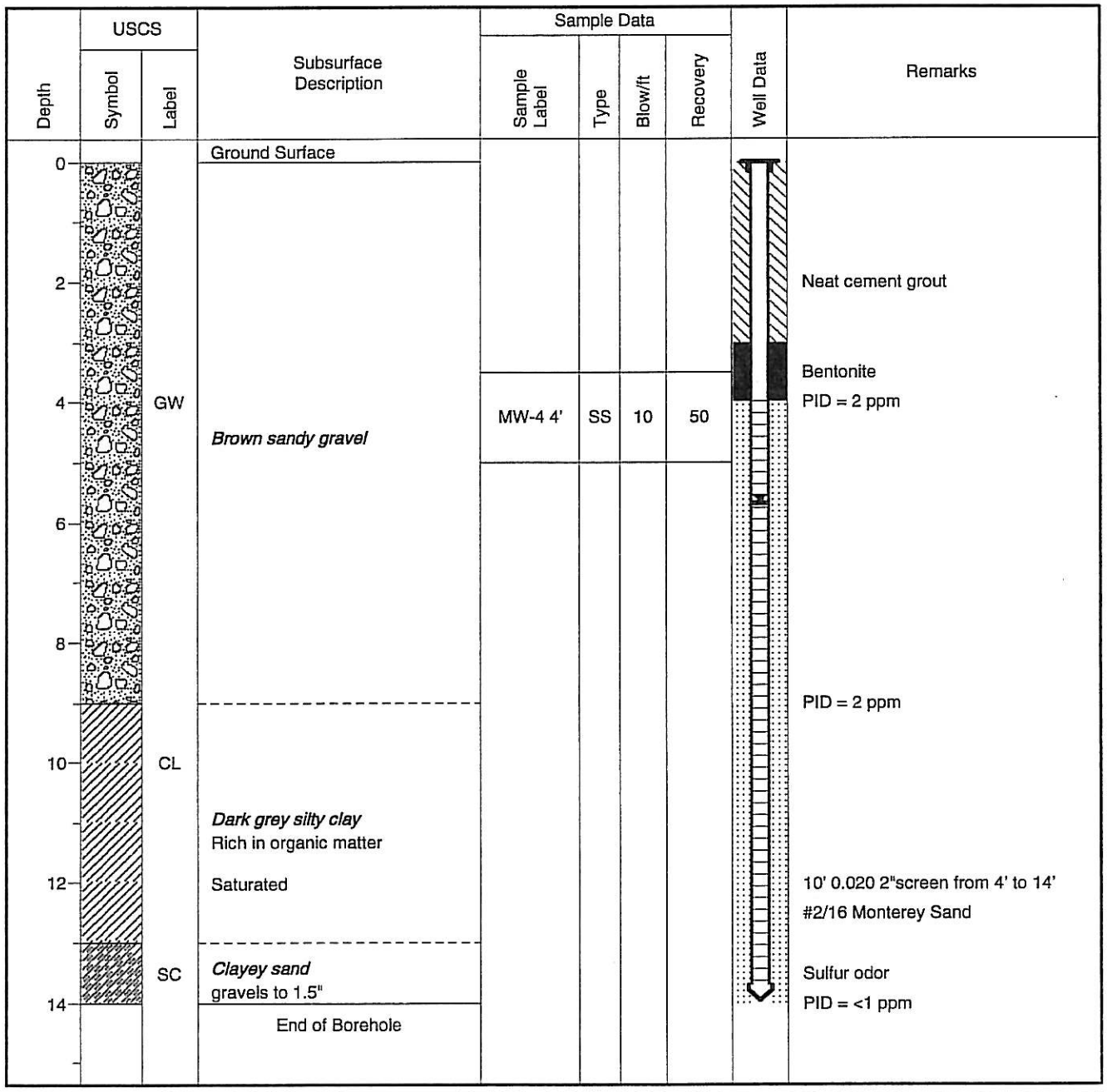
Sheet: 1 of 1

Project Name: Cruise America

Log of Borehole: MW-4

Client:

Location:



Drill Date 9/18/02

Drill Method: HSA

Total Depth: 14

Depth to Water: 5.7

Reviewed by: EW

Logged by: NG

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(925) 283-6000

Project No: 5526

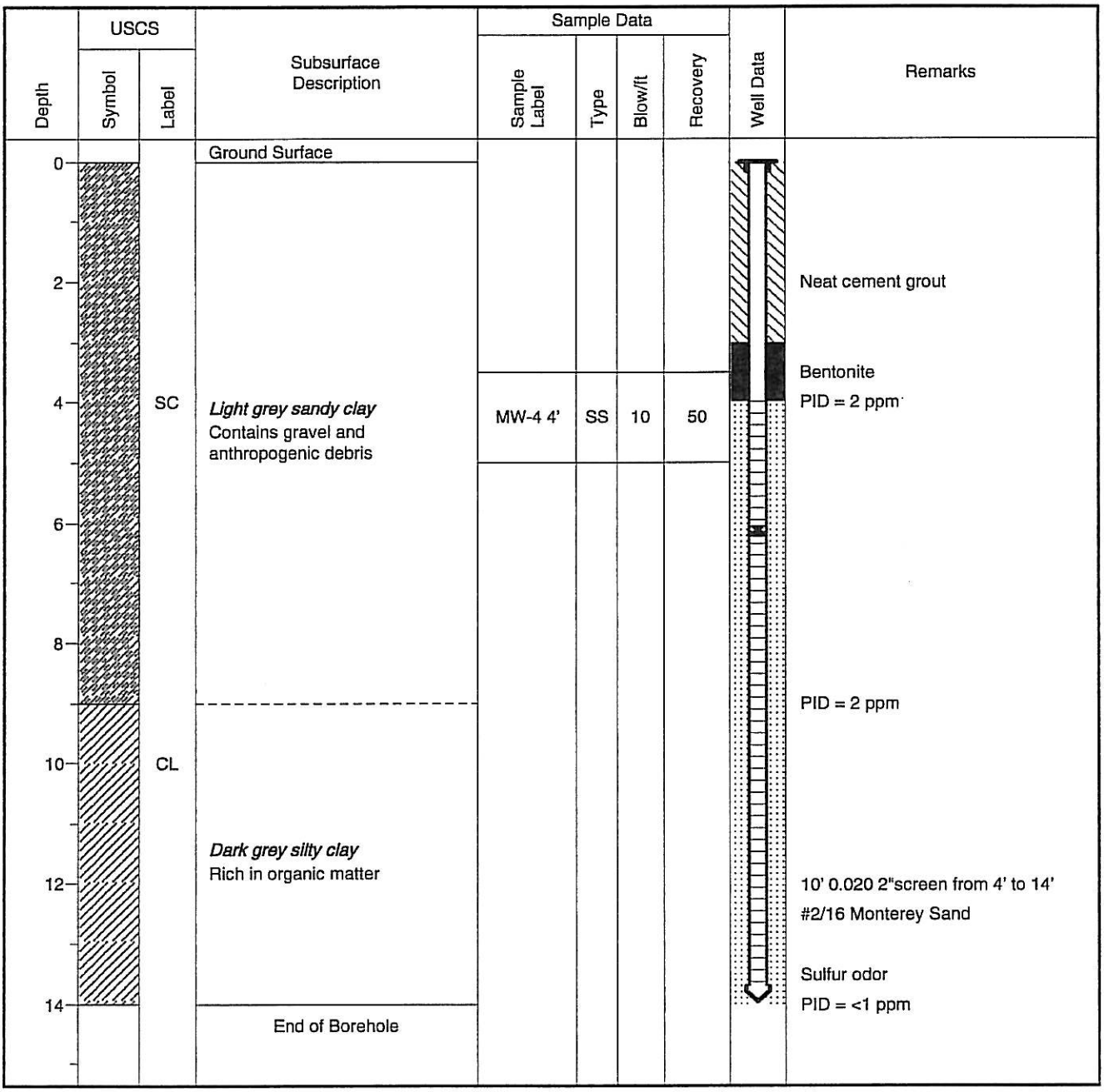
Sheet: 1 of 1

Project Name: Cruise America

Log of Borehole: MW-5

Client:

Location:



Drill Date 9/18/02

Drill Method: HSA

Total Depth: 14

Depth to Water: 6.2

Reviewed by: EW

Logged by: NG

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Lafayette, CA 94549
(925) 283-6000

Project: Cruise America
Project Location: 796 66th Avenue, Oakland
Project Number: 8262

Log of Boring S-1

Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **20 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0			SC		Clayey sand with gravel			
5	5		S-1 6'				<0.5		slight HC odor
				CL		Clay, very soft, saturated, dark grey-black, thin sand streaks in 10' and 15' samples, sand increasing with depth, very stiff below 19'5'			
0	10		x						
-5	15		x						slight sulfide odor
-10	20		x						

Figure

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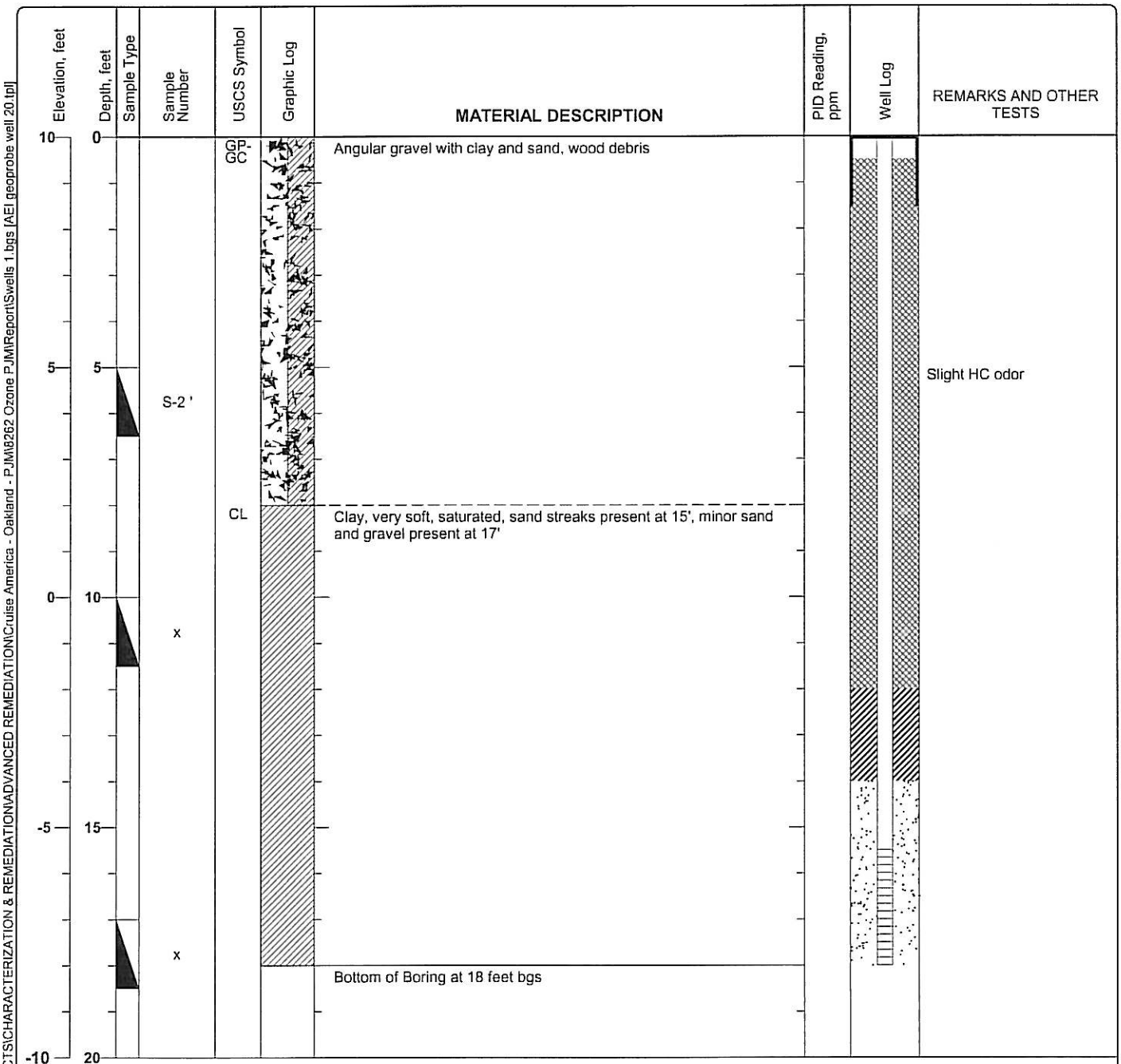
Project: Cruise America
Project Location: 796 66th Avenue, Oakland
Project Number: 8262

Log of Boring S-2

Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	



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Project: Cruise America
Project Location: 796 66th Avenue, Oakland
Project Number: 8262

Log of Boring S-3

Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18.5 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0			GP		Gravel and sand mix (likely fill)			
5	5		x	CL		Clay with very fine sand, dry, tan			Cardboard / wood (?)
				CL		Very soft clay with minor v. fine sand, grey			
0	10		x						
-5	15		x						
			x	SW		Well graded sand with small gravels, clean, saturated			
-10	20					Bottom of Boring at 18.5 feet bgs			

Figure

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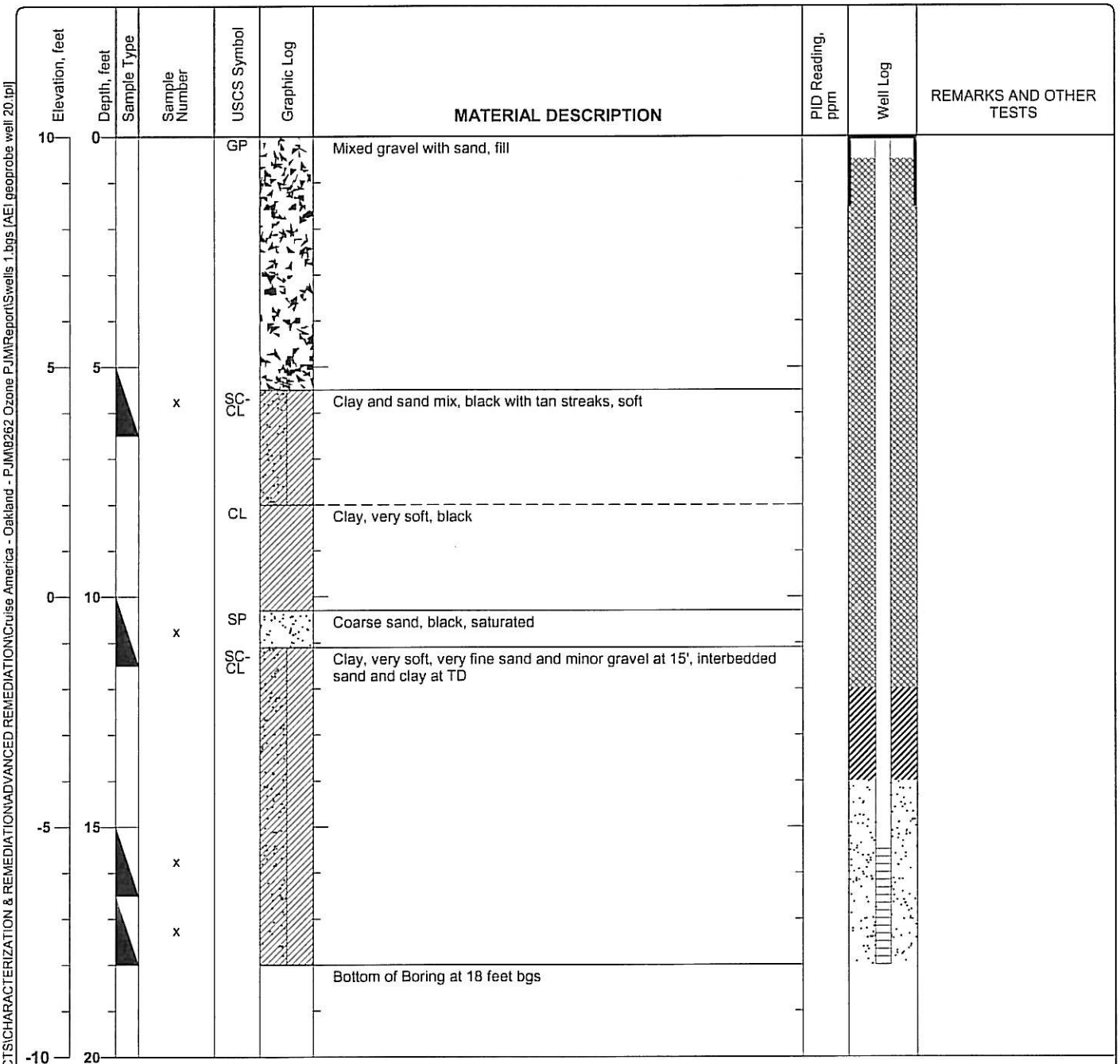
Project: Cruise America Project Location: 796 66th Avenue, Oakland Project Number: 8262	**Log of Boring S-4** Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	



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Project: Cruise America
Project Location: 796 66th Avenue, Oakland
Project Number: 8262

Log of Boring S-5

Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0			SP		Sand with gravel, fill			
5	5		x						
				CL		Clay, very soft, minor sand			
0	10		x						
-5	15		x	SP		Very fine to medium sand, saturated			
				CL		Soft clay			
-10	20					Bottom of Boring at 18 feet bgs			

Figure

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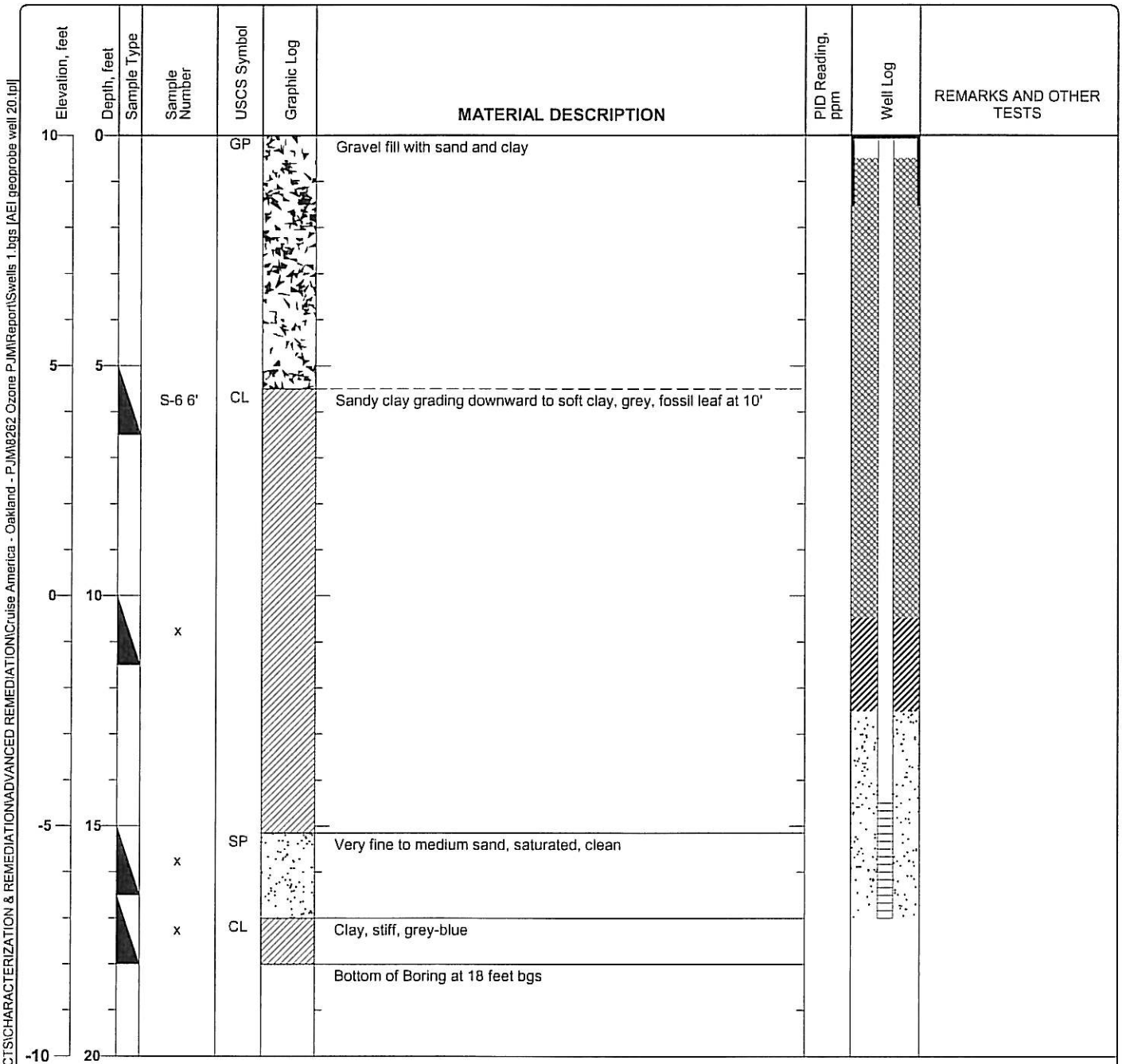
Project: Cruise America
Project Location: 796 66th Avenue, Oakland
Project Number: 8262

Log of Boring S-6

Sheet 1 of 1

Date(s) Drilled **May 17, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	



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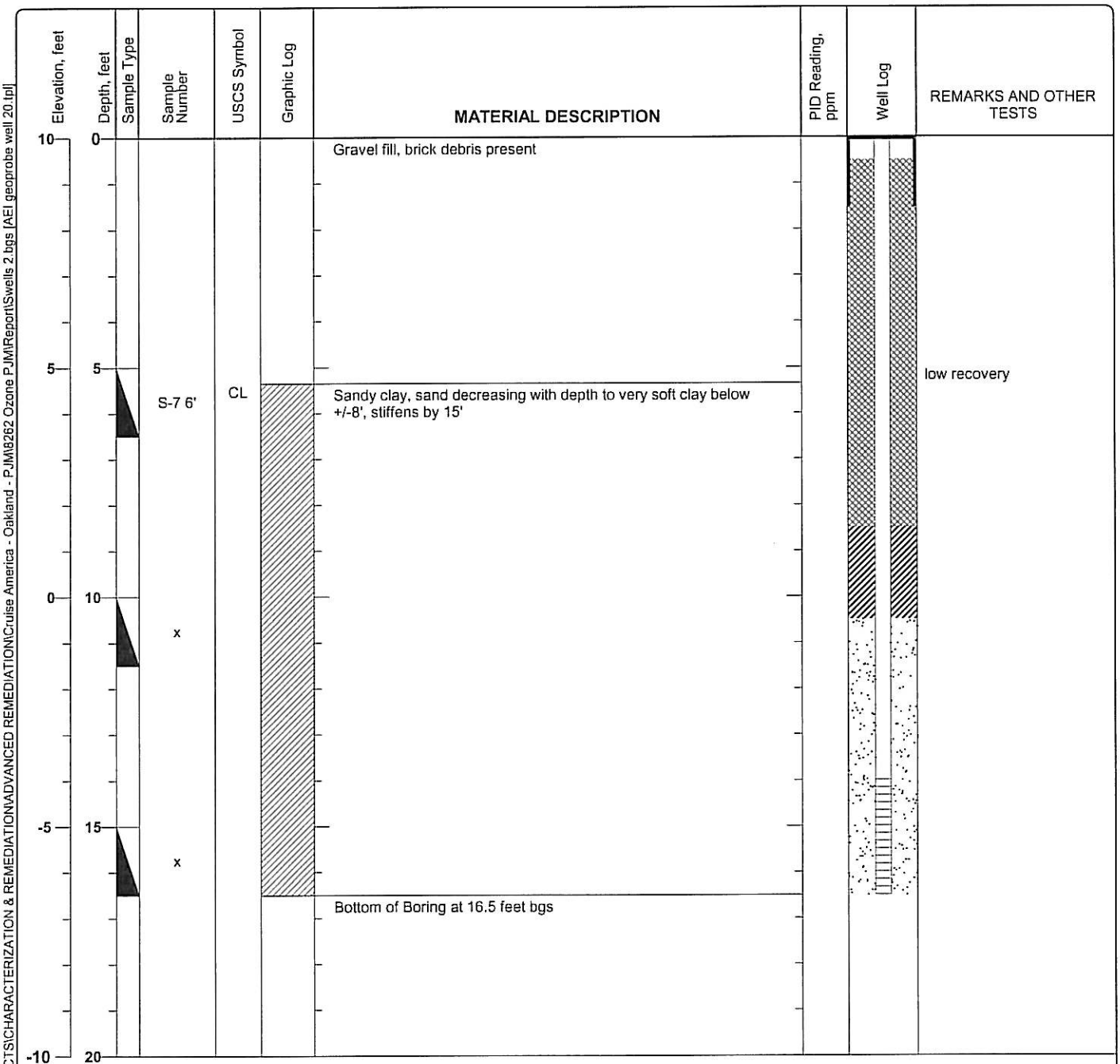
Project: Cruise America
Project Location: 796 66th Avenue
Project Number: 8262

Log of Boring S-7

Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **16.5 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	



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Project: Cruise America
Project Location: 796 66th Avenue
Project Number: 8262

Log of Boring S-8

Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **15 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0					Gravel with clay, fill			
5	5		x						no recovery
				CL		Clay, beige to grey, very soft, leaf and organic detritis			
0	10		x						
				CL		Firm clay			
-5	15		x			Bottom of Boring at 15 feet bgs			
-10	20								

Figure

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Project: Cruise America Project Location: 796 66th Avenue Project Number: 8262	**Log of Boring S-9** Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **16.5 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0					Gravley fill			
				SP		Sand, black, saturated			
5	5		x						No recovery
				CL		Clay, black, very soft, with gravel to 3cm, sand streak at 10.5			
0	10		x						
				CL		Clay, stiffens with depth			
-5	15		x						
						Bottom of Boring at 16.5 feet bgs			
-10	20								

Figure

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Project: Cruise America Project Location: 796 66th Avenue Project Number: 8262	**Log of Boring S-10** Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **18 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	Well Log	REMARKS AND OTHER TESTS
10	0			SP		Sand, poorly graded, medium, grey to orange-tan, silt increasing downward			
5	5		x						
				CL		very soft clay, grey, leaf detritis,			
0	10		x						
						increasing sand and minor gravel to .25 cm			
-5	15		x	CL		Stiff brown clay, with minor sand			no recovery
			x						
						Bottom of Boring at 18 feet bgs			
-10	20								

Figure

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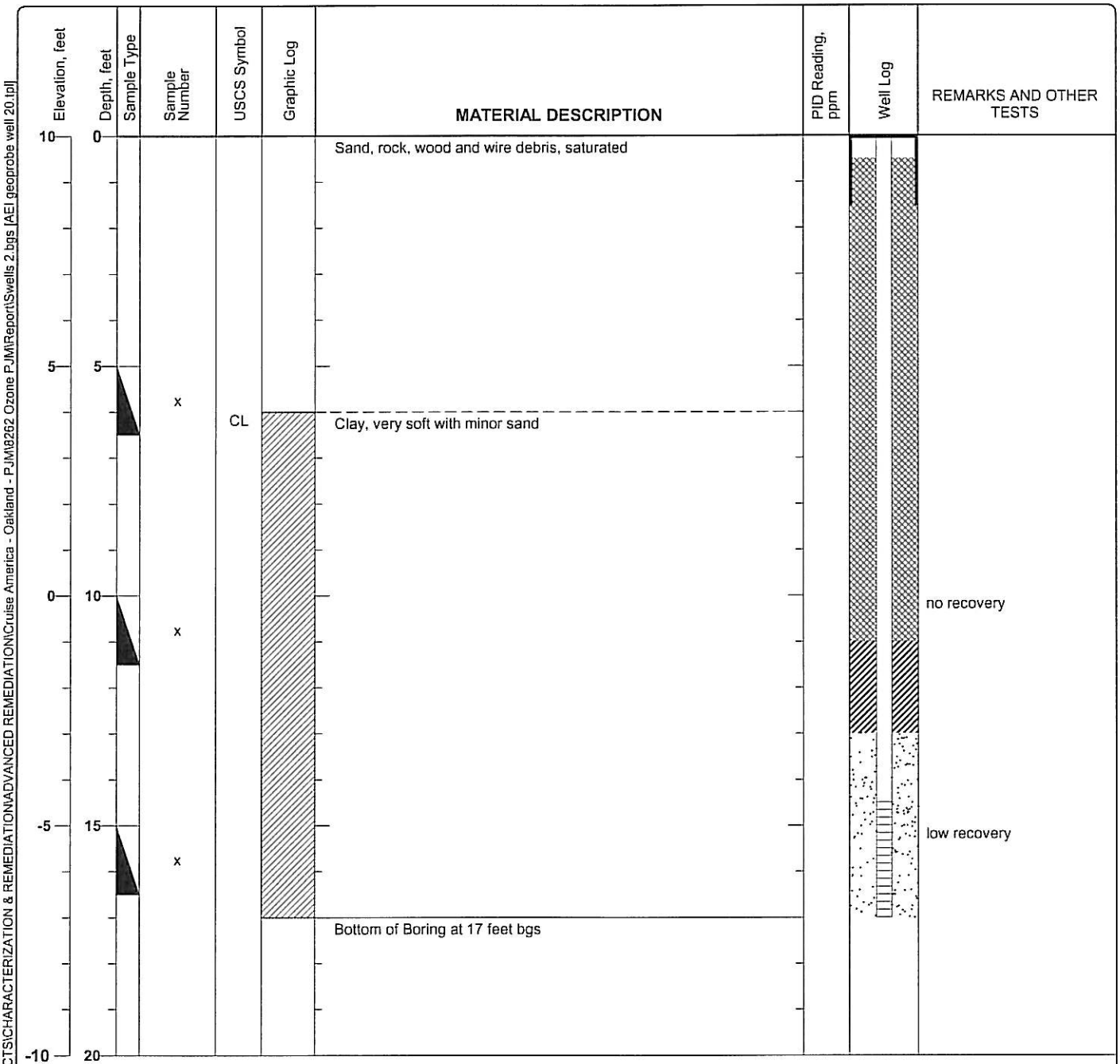
Project: Cruise America
Project Location: 796 66th Avenue
Project Number: 8262

Log of Boring S-11

Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **17 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	



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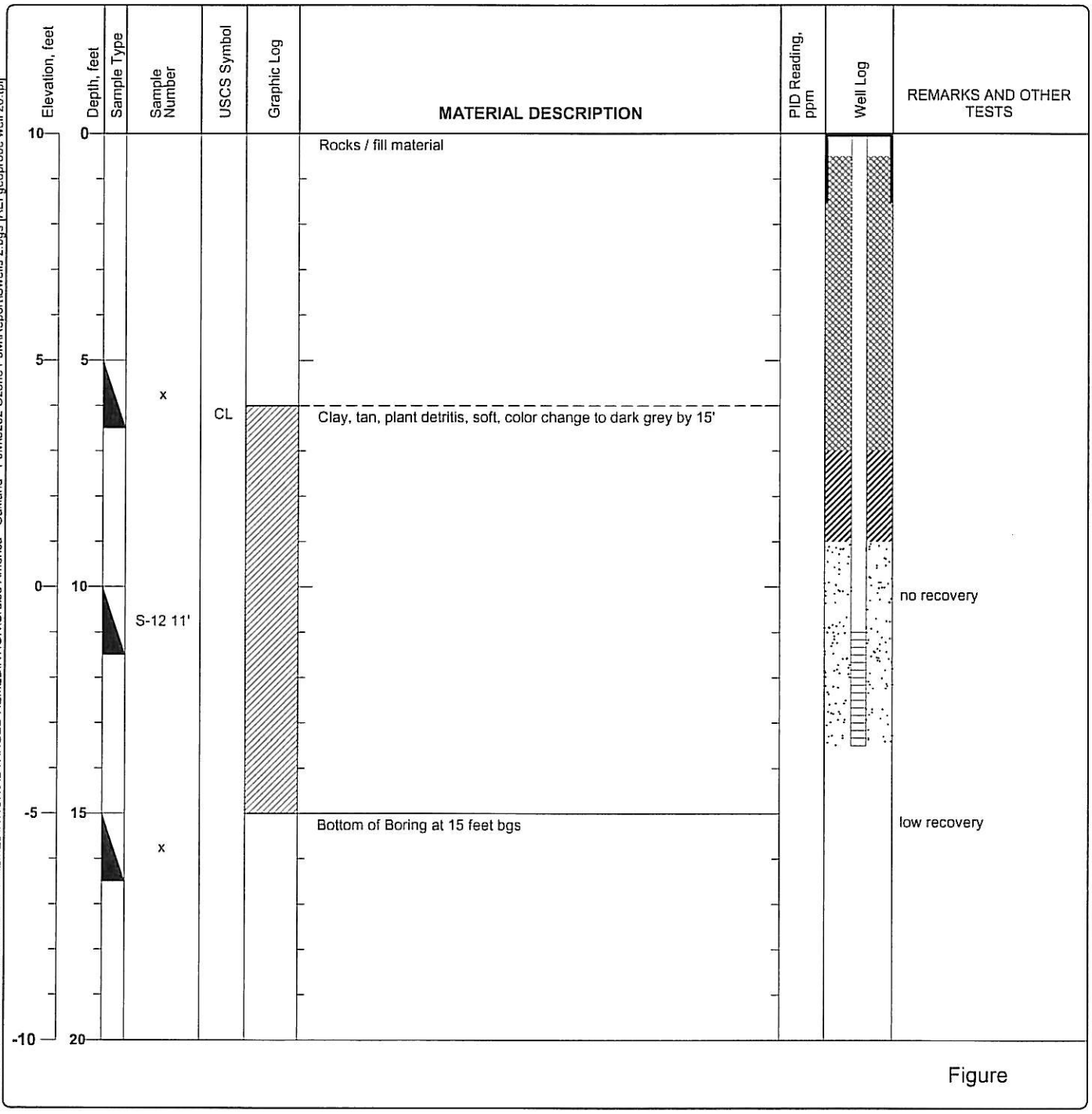
Project: Cruise America Project Location: 796 66th Avenue Project Number: 8262	**Log of Boring S-12** Sheet 1 of 1

Date(s) Drilled **May 18, 2004**	Logged By **Peter McIntyre**	Checked By **Robert Flory**
Drilling Method **Hollow Stem Auger**	Drill Bit Size/Type	Total Depth of Borehole **15 feet bgs**
Drill Rig Type **CME 75**	Drilling Contractor **HEW**	Approximate Surface Elevation **10 feet MSL**
Groundwater Level and Date Measured	Sampling Method(s) **California**	Hammer Data
Borehole Backfill	Location	



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