

ALAMEDA GATEWAY, LTD.

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By dehloptoxic at 1:11 pm, Sep 15, 2006

September 14, 2006

Steve Plunkett
ACEH Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

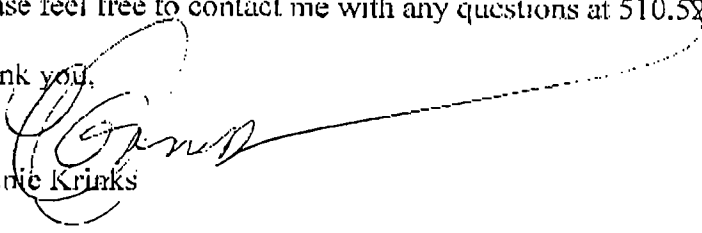
Re: Alameda Gateway Work Plan

Dear Steve,

Please find enclosed a copy of the work plan for Alameda Gateway Ltd. 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.

Please feel free to contact me with any questions at 510.521.2727.

Thank you,


Connie Krinks

**Environmental
Resources
Management**

1777 Botelho Drive
Suite 260
Walnut Creek, CA 94596
(925) 946-0455
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13 September 2006

Mr. Steven Plunkett
Alameda County Environmental Health Department
1131 Harbor Bay Parkway
Alameda, CA 94502-6577



Attention: Mr. Steven Plunkett

Subject: Workplan for Limited Site Investigation and
Well Installation Activities
2900 Main Street
Alameda, California 94501

Dear Mr. Plunkett:

On behalf of Alameda Gateway Limited (Alameda Gateway), ERM-West, Inc. (ERM) has prepared this *Workplan for Limited Site Investigation and Well Installation Activities* (workplan) for the site located at 2900 Main Street, Alameda, California (site). As requested in a 3 May 2006 letter from the Alameda County Environmental Health Department (ACEH) to Alameda Gateway, and per the 6 September 2006 proposal from ERM to Mr. John Beery, this workplan has been prepared to address data gaps identified by ACEH.

This workplan presents the following information:

- Project background, including a site description and history and a brief summary of previous investigations;
- Objectives of the proposed investigation;
- Proposed scope of work to address investigation objectives;
- The scope of the summary report to be prepared upon completion of investigation activities; and
- A schedule for implementing the proposed scope of work and preparing the associated summary report.

BACKGROUND

This section presents a site description, site history, and a summary of previous investigations at the site.

Site Location and Description

The site is located at 2900 Main Street, Alameda California (Figure 1), in a primarily industrial part of Alameda. The site is approximately 50 acres in size and is comprised of three piers and several structures owned and leased by Alameda Gateway (Figure 2). The site is triangular in shape and is bordered to the north by the Oakland Harbor. To the west is Main Street and the northwest portion of the site abuts the Alameda Ferry Terminal. To the east is a spur railroad track beyond which is the Naval Supply Center. The main entrance to the site is approximately 0.5 miles east of the main gate of the former U.S. Naval Air Station Alameda (NAS Alameda), which dominates the surrounding area.

The investigation proposed herein focuses on the locations of three former underground storage tanks (USTs). These USTs (#85a/85b, #133, #137) are shown relative to site features on Figure 2.

Site History

Until the early 1900's the site and the surrounding area was undeveloped marshlands and tidal flats along the San Francisco Bay. In 1912, Southern Pacific Railroad Company (SP) began development of the site, including the construction of a large warehouse (currently Building 61, Figure 2) for the repair, maintenance and painting of railcars. The site was the principal west coast service base for SP for many years. At some time near the start of World War II, the property was taken over and operated in turn by Matson Steamship Lines, United Engineering Co., Ltd., and Todd Shipyard Corporation (Todd). Todd operated the property until 1983 when they sold the property to Alameda Gateway, the current owner.

Previous Investigations

Various consultants at the site have conducted subsurface environmental investigations beginning in the mid-1980's. Four USTs were removed from the property in 1990 by Mittelhauser Corp. Limited soil over-excavation and soil sampling occurred at this time.

In November 1992, three groundwater monitoring wells were installed to characterize the possible groundwater contamination associated with the former USTs. Soil and groundwater samples collected during this effort confirmed the presence of petroleum hydrocarbons in the vicinity of the former USTs.

In 2001, Greensfelder & Associates conducted a limited soil and groundwater investigation, which included advancing a total of 12 borings in the vicinity of former USTs #137 and #85a/85b. Analytical data generated during this investigation indicate the presence of petroleum hydrocarbons in soil and groundwater in the area of both former USTs.

PROJECT OBJECTIVE

The objective of this proposed investigation is to determine what, if any, lingering impacts to site soil and groundwater exist as a result of the former USTs.

PROPOSED SCOPE OF WORK

To meet the stated project objective, the following scope of work has been developed:

- Install a replacement well for lost Well MW-3 (UST #85a/85b);
- Conduct a limited soil investigation and install a new well in the former area of MW-2 (UST #133);
- Perform quarterly groundwater monitoring of 3 wells for one year; and
- Conduct research and mapping of utilities in the area of UST #137, including on-site sewer lines and the EBMUD corridor.

The following subsections detail the methods and procedures associated with the scope of work.

Permitting and Utility Clearance

Prior to implementing the field investigation activities, ERM will secure all appropriate permits to complete the scope of work, including drilling permits from the Alameda County Public Works Agency.

Prior to conducting field activities, all proposed drilling locations will be marked. Underground Services Alert (USA), a notification service for marking underground utilities on public rights of way, will be notified 48 hours prior to initiating the proposed work. In addition to notifying USA, all proposed drilling locations will be cleared by a private utility locating service to minimize the chance of encountering underground utilities during the investigation activities.

Replacement Well MW-3A (UST #85a/85b)

In their 3 May 2006 letter, ACEH requested that existing monitoring wells MW-1 and MW-3 be either located and restored or replaced. MW-1 has recently been successfully re-located and is in serviceable condition. MW-3, however, has not been located and as a result replacement well MW-3A will be installed in the vicinity of former UST #85a/85b (Figure 3).

The monitoring well will be installed using a conventional drill rig equipped with 8-inch-diameter hollow stem augers (HSA). Soil samples will be collected continuously with 18-inch, California-modified split-spoon samplers. As part of the soil characterization activities, the soil samples will be (1) visually examined to characterize the subsurface geology according to the Unified Soil Classification System, (2) evaluated for visible evidence of contamination, and (3) field-screened with a photoionization detector (PID) for the presence of organic vapors. Soil descriptions and results of the PID screenings will be documented on an associated boring log. Soils samples will be collected for chemical analysis at the capillary fringe, immediately above first groundwater, and any additional interval where there is evidence of impacts. Soil samples will be collected in 6-inch brass sleeves, capped with Teflon tape and plastic end caps and stored in an iced cooler. Samples will be sent under proper chain-of-custody procedure to a California-certified laboratory for the following analyses:

- Total Petroleum Hydrocarbons as diesel and motor oil (TPH-d, TPH-mo) by United States Environmental Protection Agency (USEPA) Method 8015M; and
- Total Petroleum Hydrocarbons as gasoline (TPH-g), benzene, ethyl benzene, toluene and xylenes (BTEX) and methyl-tert-butyl-ether (MTBE) by USEPA Method 8015M/8021.

The monitoring well will be constructed of 2-inch-diameter, polyvinyl chloride (PVC) with 5 feet of 0.010-inch slotted PVC screen from approximately 10 to 15 feet bgs and blank riser to surface. The exact screen interval will be based upon observations made in the field. An appropriate filter pack will be emplaced in the annular space to approximately 2 foot above the top of the screen interval. The transition seal will consist of approximately 2 feet of bentonite chips hydrated for approximately 30 minutes before the remainder of the annular space is backfilled with neat cement. The grout will be emplaced via tremmie, according to Alameda County Public Works Agency guidelines. The well will be fitted with an expandable locking cap and will be completed at the surface with a flush-mounted, steel, protective road box.

Following installation, the new monitoring well will be developed no sooner than 72 hours following placement of the grout seal. The wells will be developed by pumping or bailing a minimum of 10 casing volumes of water from the well. The wells will also be surged during development to remove any sediment that may have entered during installation. Stabilization parameters (pH, specific conductance, turbidity, and temperature) will be monitored during development.

Limited Soil Investigation and replacement Well MW-2A (UST #133)

Army Corp. of Engineers, on behalf of the Port of Oakland recently widened the channel adjacent to the project site in an effort to produce a turning basin for vessels. As a part of these widening activities, a portion of the site bordering the Oakland Inner Harbor was removed, including Building 133 and MW-2. In addition, a bulkhead was constructed in this area and transects the former location of Building 133 and MW-2 (Figure 3). A majority of the soil impacts associated with UST #133, located on the seaward side of the bulkhead, were removed during this effort and the contaminated soil was disposed of. Details of the construction of the

bulkhead, and a review of the analytical data and soil disposal procedures will be documented in the summary report discussed below.

In an effort to determine if impacts to soil remain in this area, five soil borings will be advanced on the landward side of the new bulkhead. The locations of the proposed borings are shown on Figure 3. Three additional "contingency borings" are also shown on Figure 3 and will only be completed if visual signs of impacts are seen in the field. The soil borings will be advanced with a direct push drill rig. Soil samples will be collected continuously for physical characterization and chemical analysis. As part of the soil characterization activities, the soil samples will be (1) visually examined to characterize the subsurface geology according to the Unified Soil Classification System, (2) evaluated for visible evidence of contamination, and (3) field-screened with a photoionization detector (PID) for the presence of organic vapors. Soil descriptions and results of the PID screenings will be documented on an associated boring log. Soils samples will be collected for chemical analysis at the capillary fringe, immediately above first groundwater, and any additional interval where there is evidence of impacts. Soil samples will be collected in 6-inch acetate sleeves, capped with Teflon tape and plastic end caps and stored in an iced cooler.

Upon reaching first groundwater, a temporary well constructed of 1-inch-diameter PVC will be installed in the boring and a grab groundwater sample will be collected. Groundwater samples will be collected into laboratory-provided containers and stored in an iced cooler. Soil and groundwater samples will be submitted under proper chain-of-custody procedures to a California-certified laboratory for the analysis listed above.

Upon completion of the soil and groundwater sampling, the borings will be abandoned using a neat-cement via tremmie, according to Alameda County Public Works Agency guidelines.

Based upon the results of the grab groundwater samples, one monitoring well (MW-2A) will be installed. The monitoring well will be installed using a conventional drill rig equipped with 8-inch-diameter HSAs. The well will be constructed of 2-inch-diameter PVC with 5 feet of screen from approximately 4 to 9 feet bgs with blank riser to the surface. The exact screen interval will be based upon field observations. An appropriate filter pack will be emplaced in the annular space to

approximately 2 foot above the top of the screen interval. The transition seal will consist of approximately 2 feet of bentonite chips hydrated for approximately 30 minutes before the remainder of the annular space is backfilled with neat cement. The grout will be emplaced via tremmie, according to Alameda County Public Works Agency guidelines. The well will be fitted with an expandable locking cap and will be completed at the surface with a flush-mounted, steel, protective road box.

Following installation, the new monitoring well will developed, as described above.

Investigation-derived wastes (IDW) generated during the well installation and sampling activities will include soil cuttings, development water, and purge water. IDW will be contained on site in 55-gallon steel drums pending waste characterization. The IDW will then be properly disposed off site in accordance with local, state, and federal regulations at a licensed disposal facility.

A California-registered land surveyor will survey the horizontal coordinates, ground surface elevation, and top of casing elevation for the new monitoring wells. Northing and easting coordinates will be surveyed relative to the 1983 North American Datum (NAD 83) with an accuracy of ± 1.0 foot horizontal. Elevations will be surveyed relative to the 1988 National Geodetic Vertical Datum (NGVD 88) with an accuracy of ± 0.01 foot vertical.

Quarterly Groundwater Monitoring

Following installation of new monitoring wells MW-2A and MW-3A, quarterly groundwater monitoring of three wells (MW-1, MW-2A and MW-3A) will commence for one year. During each quarterly groundwater monitoring event, depth to water measurements will be taken at each well prior to collection of groundwater samples.

Each well will be sampled using traditional purge-and-sample techniques. A minimum of three well casing volumes will be removed using a pump or a disposable bailer and stabilization parameters (pH, specific conductance, turbidity, and temperature) will be monitored. Once the parameters have stabilized, groundwater samples will be collected into laboratory-provided containers and stored in an iced

cooler. Samples will be sent under proper chain-of-custody procedures to a California-certified laboratory for the following analyses:

- TPH-d, TPH-mo by USEPA Method 8015M;
- TPH-g by USEPA Method 8015M; and
- Volatile Organic Compounds (VOCs) by USEPA Method 8260B.

Following each sampling event, a quarterly groundwater monitoring report summarizing the groundwater flow direction and gradient, as well as the analytical results will be submitted to ACEH.

Utility Survey

A utility survey will be completed in the vicinity of UST #137 to evaluate the possibility that a preferential pathway for the migration of contaminants exists along adjacent utility corridors.

The utility survey will include review of facility maps, field reconnaissance, discussions with facility staff, and communication with East Bay Municipal Utility District (EBMUD) regarding the location of their utilities, including the sanitary sewer line. In addition, a private utility locator may be retained to survey the area for additional subsurface utilities.

REPORTING

Following completion of the site investigation and well installation activities, ERM will evaluate the data generated during the investigation and will prepare a summary report. The report will present a description of the work performed, an evaluation of the soil and ground water analytical results, a data quality review, conclusions, and recommendations. The report will include graphical and tabular presentations of the data as well as the original, raw data in appendices.

The appropriate ERM professionals (e.g., Registered Geologist, Professional Engineer) will certify the report prior to its submittal to the ACEH.

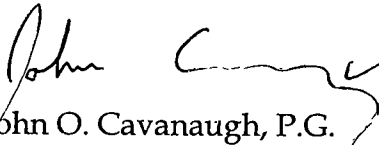
SCHEDULE

The scope of work described herein will be completed six weeks following approval of the workplan by ACEH.

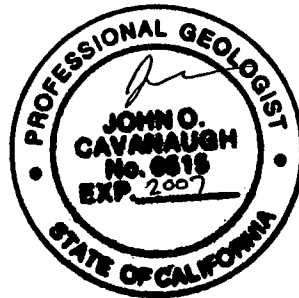
CLOSING

On behalf of Alameda Gateway, ERM is pleased to submit this workplan to the ACEH, and appreciates your prompt review. If you have any questions or comments regarding this submittal, please direct them to either of the undersigned at 925-946-0455.

Sincerely,



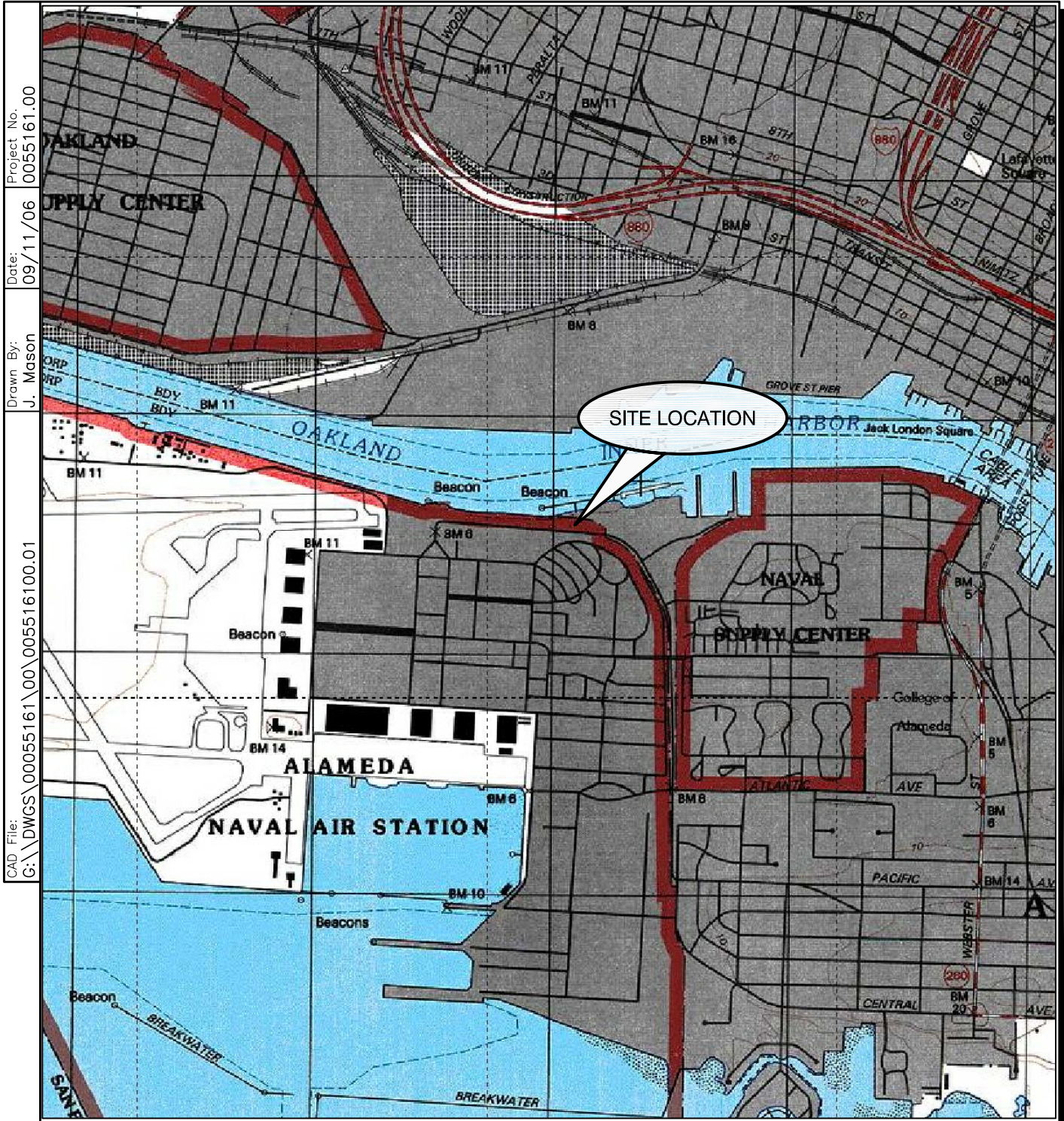
John O. Cavanaugh, P.G.
Principal-in-Charge



JOC/rls/0055161.00

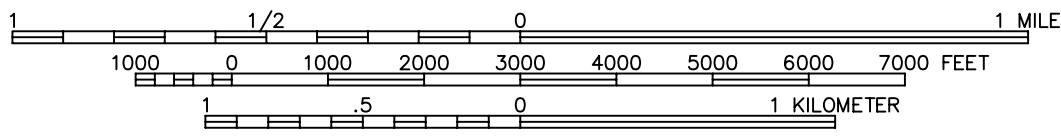
Enclosures - Figures 1 through 3

Figures



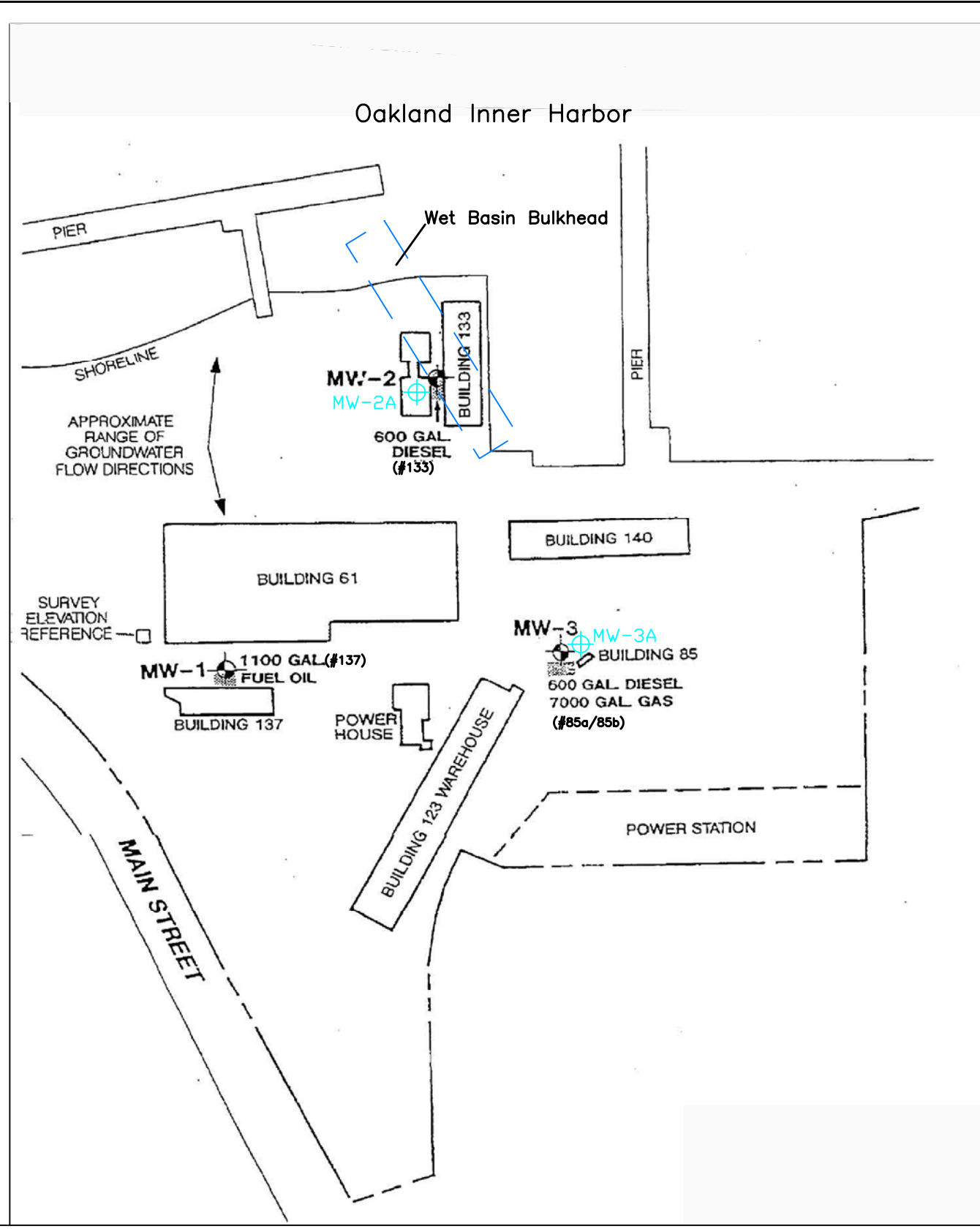
Project No. 0055161.00
 Date: 09/11/06
 Drawn By: J. Mason
 CAD File: G:\DWGS\0055161\00\005516100.01

SCALE 1:24,000



References:
 TOPO!® Software
 U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,
 Alameda, California
 Dated: 1993

Figure 1
 Site Location Map
 2900 Main Street
 Alameda, California



LEGEND

Original Well Locations

Proposed Monitoring Well Boring Locations

Note:
Taken from Mittel Hauser Corporation Report

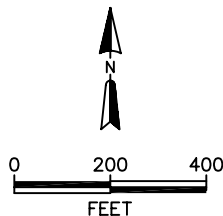


Figure 2
Monitoring Well Locations
2900 Main Street
Alameda, California

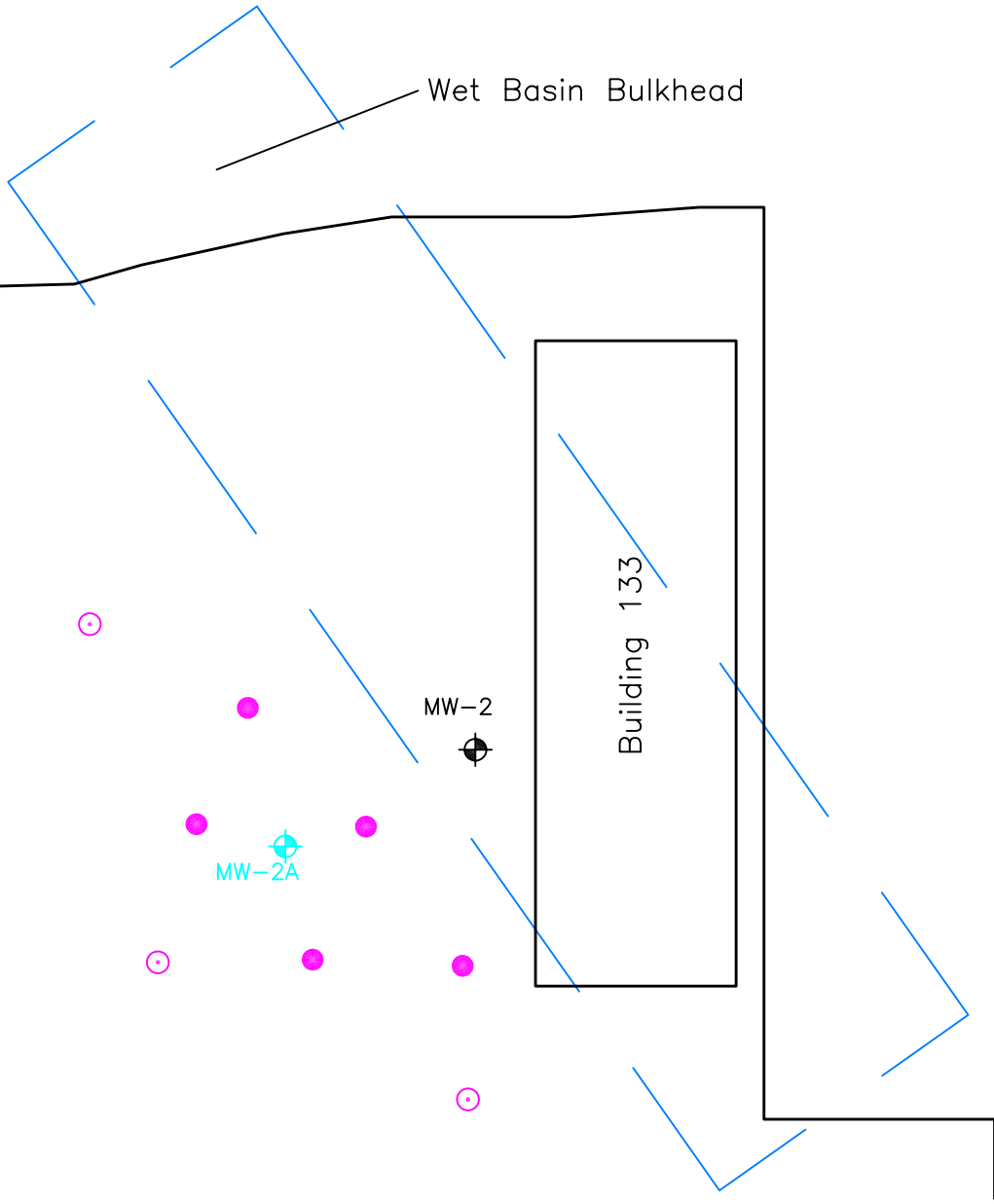
Oakland Inner Harbor

Project No.
0055161.00





Date:
09/11/06

Drawn By:
J. Mason

CAD File:
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LEGEND

-  Proposed Monitoring Well Location
-  Proposed Boring Locations
-  Proposed Contingency Borings
-  Original Well Location

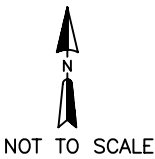


Figure 3
Former UST #133 Detail
2900 Main Street
Alameda, California