



PORT OF OAKLAND

RECEIVED

7:34 am, May 30, 2007

Alameda County
Environmental Health

May 25, 2007

Mr. Barney Chan
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Groundwater Sampling Work Plan,
APL Terminal Yard and Gate Development Project,
1395 Middle Harbor Road, Oakland, CA
RO#0000470**

Dear Mr. Chan:

On the behalf of the Port of Oakland (Port), ETIC Engineering, Inc. (ETIC) prepared a "*Groundwater Sampling Work Plan, American President Lines, Berths 60 to 63 Yard and Gate Redevelopment Project, 1395 Middle Harbor Road, Port of Oakland, Oakland, California 94607,*" dated September 20, 2006, and this plan is herein submitted to Alameda County ("County") for your review and concurrence, see Attachment A below. The basis for the preparation of this work plan was the condition imposed by the County for decommissioning of shallow monitoring wells within the APL Redevelopment Project that the Port satisfy a Regional Water Quality Control Board recommendation for collection of a solitary groundwater sample at a location in the southwest corner of the APL Terminal, see Attachment B. The water sample is to "fill in" a data gap.

The ETIC workplan was originally prepared and submitted to the Port in September 2006; ETIC's involvement in the redevelopment project ceased soon thereafter. MSE Group is now on site and will implement this workplan. The Port anticipates there may be other limited deviations from the implementation outlined in the workplan, including using a different drilling company and a different environmental laboratory than those stated in the workplan; however, the Port will use comparable replacement entities, and we will notify you of the changes (by e-mail) before field work begins.

A change that has occurred recently that does not affect the groundwater sampling but nonetheless is a change to the overall project is a redefined project boundary, see Attachment C below. This figure was previously submitted to the County on May 21, 2007 with the

Mr. Barney Chan
May 25, 2007
Page 2

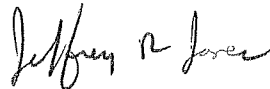
“Amendment to Revised Soil Management and Contingency Plan, APL Terminal Yard and Gate Redevelopment Project, Oakland, California, R00000470.”

The groundwater sampling event will be tied to well decommissioning; both tasks are in anticipation of Phase II construction work now slated to start on June 15th. The Port intends to start work as soon as possible, pending receipt of concurrence from the County on the groundwater sampling plan (the well destruction plan was previously approved on June 29, 2006).

The Port would appreciate your review of the attached sampling plan at your earliest convenience. If you have any questions or need additional information, please do not hesitate to contact me at (510) 627-1176 or the Port Project Manager, Mr. John Prall at (510) 6271373 or by email at jprall@portoakland.com.

I declare under penalty of perjury, that the information contained in this letter and attachment is true and correct to the best of my knowledge.

Sincerely,



Roberta Reinstein
Manager, Port Environmental Programs and
Safety Department

cc: Michele Heffes, Port of Oakland
Jeff Jones, Port of Oakland
John Prall, Port of Oakland
Tyrone Evans, MSE Group
Chris Noma, Wendel Rosen Black & Dean
Deborah Ballati, Farella Braun + Martel
Phil King, Zurich

ATTACHMENT A



September 20, 2006

MEMORANDUM

To: John Prall
Environmental Health and Safety Compliance
Port of Oakland

From: Alan Anselmo, P.E. and Maura Dougherty, P.E.
ETIC Engineering, Inc.

Re: **Groundwater Sampling Work Plan**
American President Lines
Berths 60 to 63 Yard and Gate Redevelopment Project
1395 Middle Harbor Road, Port of Oakland
Oakland, California 94607

INTRODUCTION AND OBJECTIVES

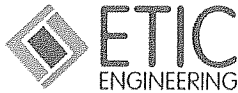
On behalf of the Port of Oakland (Port) and in response to the request by the Alameda County Health Care Services Agency (ACHCS), ETIC Engineering, Inc. (ETIC) has prepared this *Groundwater Sampling Work Plan* (Work Plan) for the above-referenced site (see Figure 1). To facilitate the planned redevelopment activities at the American President Lines (APL) terminal (Berths 60 to 63 Yard and Gate Redevelopment Area), a 1 March 2006 *Well Destruction Work Plan* was prepared by ETIC to describe the decommissioning of 12 wells (MW-1 through MW-3, MW-6 through MW-8, DSMW-1 through DSMW-3, APLUP-W1, APLUP-W2, and EW-5) (see Figure 2).

In a 29 June 2006 letter, the ACHCS approved the *Well Destruction Work Plan* under the condition that the request by the San Francisco Bay Regional Water Quality Control Board (RWQCB) for installation of a temporary well or boring for collection of one groundwater sample between boring B-60 and well APLUP-W2 was satisfied.

The following presents background information, a planned scope of work, and a schedule for the installation of a temporary boring, B-97, which will be located midway between boring B-60 and well APLUP-W2 in the southwestern corner of the APL terminal (see Figure 2).

BACKGROUND

Groundwater monitoring wells, MW-8, APLUP-W1, and APLUP-W2, which will be destroyed, have historically been used to define the downgradient extent of petroleum hydrocarbons in groundwater originating from the Union Pacific Motor Freight area, located upgradient of the southwestern corner of the APL terminal.



Total petroleum hydrocarbons as gasoline, diesel, and motor oil (TPH-g, TPH-d, and TPH-mo), and volatile organic compounds (VOCs) were not detected above their respective surface water quality criteria in groundwater samples collected from these wells over the last several years. In addition, these compounds and TPH as Bunker C (TPH-bc) were not detected above the surface water quality criteria in the groundwater sample collected from a temporary soil boring, B-60, located between MW-8 and APLUP-W2. As requested by the ACHCS and the RWQCB, one groundwater sample will be collected from the temporary soil boring B-97 to confirm the absence of these compounds above the surface water quality criteria in this area of the APL terminal.

PLANNED SCOPE OF WORK

Prefield Activities

Permit: A drilling permit will be acquired from the Alameda County Department of Public Works (ACDPW) prior to field activities.

Site Health and Safety Plan: A site health and safety plan will be prepared. The plan will be kept onsite during field activities and signed by each site worker. In addition to following health and safety measures, the protocol for working in active marine terminals will be followed by site workers. The access to the job location will be coordinated through the Port Wharfing department (see Appendix A for Port of Oakland Contractor Safety protocols for Working in Active Marine Terminals).

Field Activities

The field work will be performed by Gregg Drilling of Martinez, California, a California licensed well drilling contractor. An ETIC field representative will be present onsite during the drilling of the soil boring and the collection of the groundwater sample. ETIC anticipates that the field activities will be completed in one to two days. A brief description is presented below.

Drilling of Soil Boring B-97: The proposed soil boring will be advanced using a direct-push drill rig. This soil boring will be continuously logged as the push rods are advanced (see Appendix B for standard protocols). Based on the depths of soil boring B-60 (16 feet below ground surface [bgs]) and well APLUP-W2 (approximately 17 feet bgs), the maximum depth of the proposed soil boring is anticipated to be 17 feet bgs. The location of the soil boring relative to wells, MW-8, APLUP-W1, and APLUP-W2 will be determined using a measuring tape.

Groundwater Sampling: A groundwater sample will be collected from this boring using the hydropunch sampler (3-foot screen interval) below the groundwater table (see Appendix B). In the event that sufficient groundwater for sampling does not recharge into the hydropunch screen, a 0.75-inch diameter temporary well screen will be inserted into the completed soil boring and groundwater will be allowed to recharge overnight. A groundwater sample will be collected from the soil boring on the following day. During sampling, field parameters of pH, temperature, color, electrical conductance, oxidation reduction potential, and turbidity will be measured and recorded by the ETIC field representative.

Grouting of Soil Boring and Handling of Excess Soil and Groundwater: Following completion of sampling, the boring will be sealed with bentonite cement grout in accordance with ACDPW requirements. Excess soil and groundwater generated during the drilling will be stored in appropriately labeled 55-gallon Department of Transportation drums. These drums will be stored in a secure location identified by the Port Wharfing department, pending evaluation of disposal options.



Proposed Chemical Analyses: Consistent with the historical groundwater analyses conducted in this area of the site, the collected groundwater sample from the proposed soil boring will be analyzed for the following:

- TPH-g using modified Environmental Protection Agency (EPA) Method 8015;
- TPH-d, TPH-mo, and TPH-bc with silica gel cleanup by EPA Method 3630C and analyzed using modified EPA Method 8015; and
- VOCs (including methyl tertiary butyl ether) by EPA Method 8260B.

The analyses will be conducted by STL Chromalab, a California-certified hazardous materials testing laboratory.

Report Preparation

A technical report documenting the field activities and the findings will be prepared once field activities have been completed.

SCHEDULE

ETIC anticipates that field activities will be scheduled within two weeks of ACHCS approval of this Work Plan. The technical report will be prepared within two weeks after the laboratory results are available.

CLOSING

ETIC is pleased to provide the Port with environmental consulting services. Should you have any questions regarding this Work Plan, please do not hesitate to contact Alan Anselmo at (510) 208-1600 Ext. 14, or Maura Dougherty at (925) 602-4710 Ext. 41.

ATTACHMENTS

Figure 1 – Site Vicinity Map

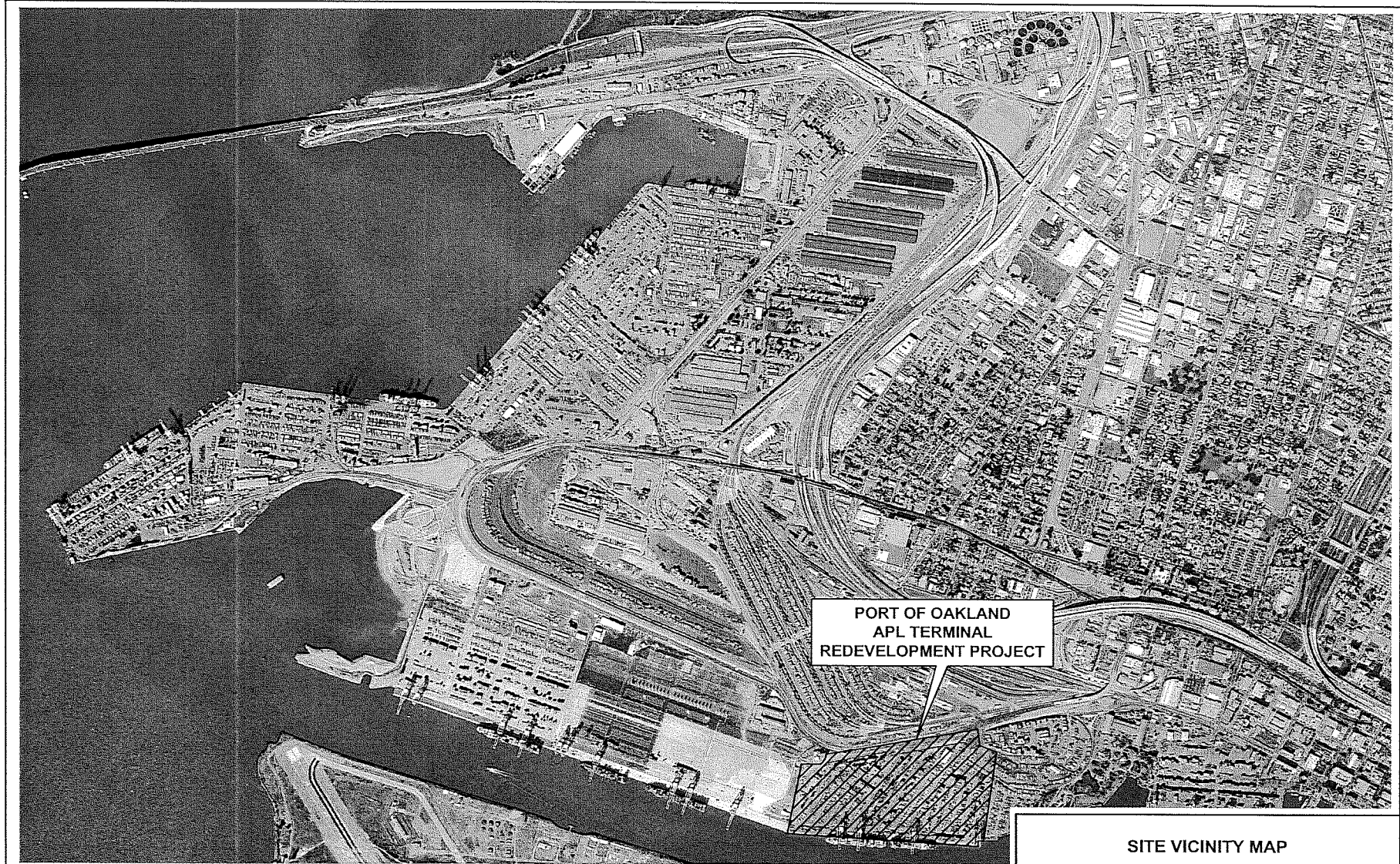
Figure 2 – Site Plan with Hydropunch Sampling Location

Appendix A – Port of Oakland Contractor Safety Protocol, Working in Active Marine Terminals

Appendix B – Protocols for Grab Groundwater Sampling



FIGURES



 SITE LOCATION



0 1,000 2,000
Approx. Scale (feet)

SITE VICINITY MAP

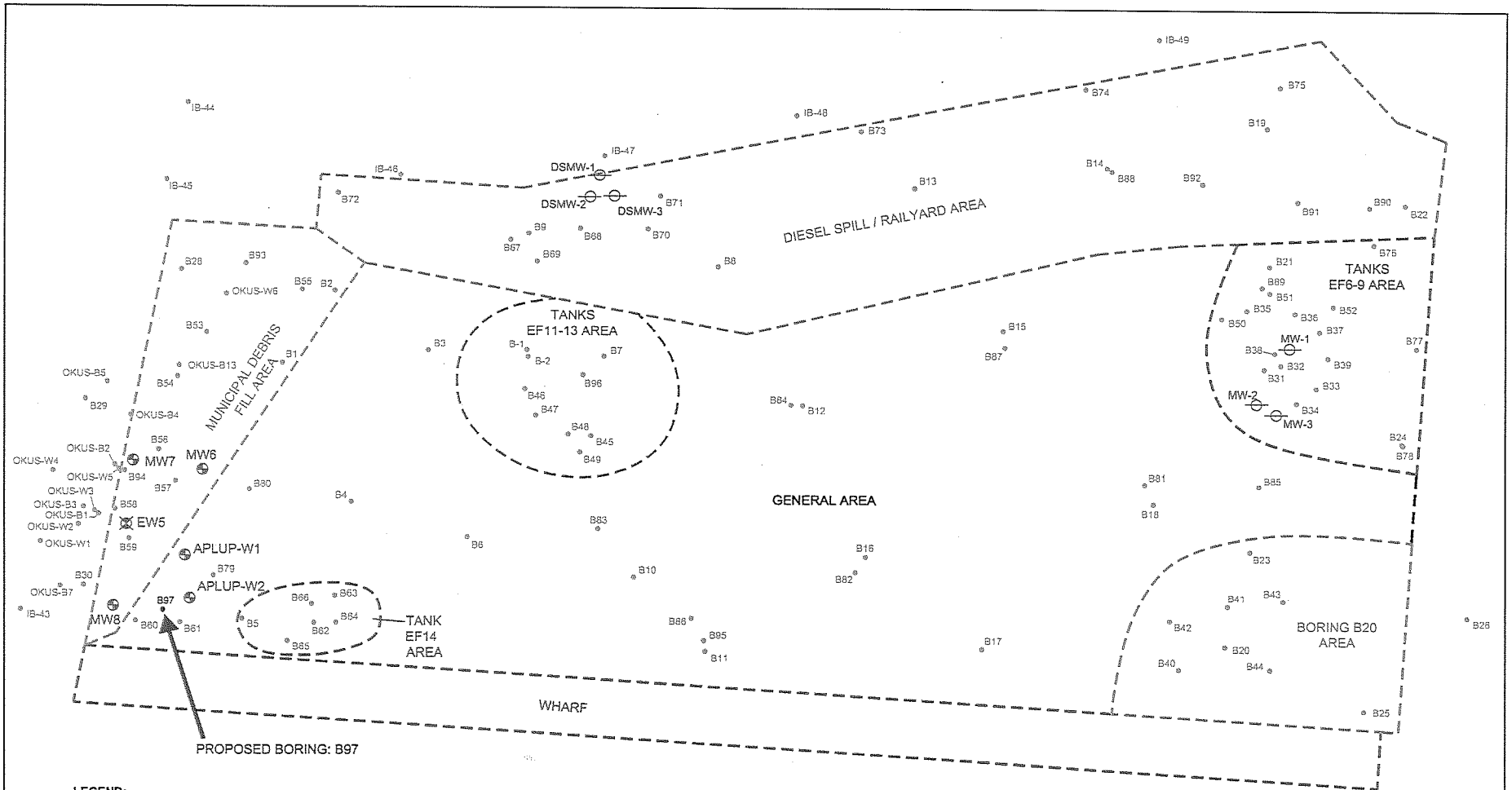
PORT OF OAKLAND
APL TERMINAL REDEVELOPMENT PROJECT
OAKLAND, CALIFORNIA



Date:
7/31/2006

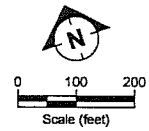
Figure:
1

TOPO0106.DWG



LEGEND:

- ⊖ Destroyed monitoring well (July 14, 2006)
- ⊕ Monitoring well proposed for destruction in the 1 March 2006 ETIC Well Destruction Workplan (Yet to be Destroyed)
- ⊗ Extraction well proposed for destruction in the 1 March 2006 ETIC Well Destruction Work Plan (Yet to be Destroyed)
- ⊙ Soil boring
- ⊙ Proposed Hydropunch sampling location (B97)



SITE PLAN WITH HYDOPUNCH SAMPLING LOCATION	
PORT OF OAKLAND APL TERMINAL REDEVELOPMENT PROJECT OAKLAND, CALIFORNIA	
Date: 8/8/2006	Figure: 2
File: siteplan0106.dwg	

APPENDIX A

**PORT OF OAKLAND CONTRACTOR SAFETY PROTOCOL
WORKING IN ACTIVE MARINE TERMINALS**

PORT OF OAKLAND CONTRACTOR SAFETY

WORKING IN ACTIVE MARINE TERMINALS

The Port Wharfinger Department coordinates Port-sponsored access to the marine terminals. Before entering terminals, contact the appropriate Wharfinger. Any deviation from established procedures or work schedules should be cleared at least 24 hours in advance (or as soon as feasible).

The primary issues when working in marine terminals are:

- The safety of contractor, terminal, trucking, terminal employees, and Port employees.
- Minimizing interference with terminal and vessel operations.
- Security: Vehicle inspection & personnel identification (valid California Driver's license or equal).

VEHICLES

Vehicles brought into the terminal must be equipped with identifying signs on each side. Vehicles not so equipped will not be admitted.

Limit on-terminal vehicles to those necessary to perform the work. Park others outside.

Minimize the need to drive around the terminal. Stage operations and remain there. Enter and exit the terminal only via company vehicle.

Obey terminal driving rules, including speed limits. Terminal equipment has the right-of-way.

SITE OF OPERATIONS

The area of operations shall encumber no more space than is required to perform the work safely.

Delineate the area of operation using traffic cones, K-rail, caution tape, or other high-visibility method. Park vehicles to form a protective barrier.

Workers must wear hard hats, hard-toed shoes, and high visibility clothing (with reflective elements at night).

Individuals must remain in the area of operations.

Use a "spotter" where workers are exposed to traffic.

APPENDIX B

**PROTOCOLS FOR GRAB
GROUNDWATER SAMPLING**

APPENDIX B

PROTOCOLS FOR GRAB GROUNDWATER SAMPLING

SUBSURFACE CLEARANCE PROCEDURES

Prior to drilling, proposed boring locations are marked with white paint. Underground Service Alert (USA) is contacted two weeks prior to drilling activities and a "ticket" is issued for the particular investigation. USA members mark underground utilities in the delineated areas using standard color code identifiers.

The proposed boring locations are also investigated by a geophysical surveying contractor using electromagnetic induction and magnetic surveys, among other methods. The choice of methods depends on shallow soil types and potential interference from surrounding cultural features.

The borings are cleared by hand auger, shovel, or posthole digger to the full diameter of downhole equipment to at least 4 feet below ground surface. An air knife may also be used in conjunction with the above hand clearing tools.

Downhole equipment, including drive casing, sample barrels, surge blocks and tools, are detergent-washed using Alconox or equivalent, or steam-cleaned prior to and following drilling activities at each boring.

SOIL LOGGING PROCEDURES

Although no soil sampling for laboratory analysis is planned during the proposed investigation, the soil boring, B-97, will be logged in accordance with the following standard protocol.

During direct-push sampling, soil samples are collected using a Geoprobe rig equipped with a macrocore sampler or a dual-wall sampler.

During soil sampling, a 4-foot long sampler, equipped with a plastic liner, is typically driven into the subsurface. Upon completion of the sample run, the sampler is extracted from the boring, the sample liner is removed, and a new liner is placed in the sampler.

During dual-wall sampling using a Geoprobe rig, a hydraulic hammer simultaneously drives smaller diameter inner rods, which are used to obtain and retrieve the 5-foot long soil core barrel, and larger diameter outer rods, which serve as temporary drive casing. As the rods are advanced, soil is driven into the core barrel, which is equipped with sample liners. The outer rods prevent sloughing of the formation and reduce cross-communication.

Soil samples are visually described by a trained geologist or engineer in accordance with the Unified Soil Classification System. The soil properties that are typically noted on boring logs include grain size category, color, density/firmness, plasticity and moisture content. The soil samples will be collected only for lithologic logging purposes. Field measurements for volatile organic compound

concentrations will be measured with a photoionization detector and recorded by the trained geologist or engineer.

GRAB GROUNDWATER SAMPLING

During direct-push sampling, grab groundwater samples are typically collected using a Hydropunch or an open-hole piezometer. The Hydropunch sampler consists of an expendable drive point, a drive head, a protective sheath, a 3 or 4-foot long inner stainless steel screen (or polyvinyl chloride [PVC]) and an O-ring seal. Once the desired depth is achieved, the rods will be retracted to expose the Hydropunch screen to groundwater. Grab sampling with the open-hole piezometer consists of installing a small-diameter PVC well casing with 5 feet of 0.010-inch slotted well screen in the open boring. This method was typically used for shallow grab water samples. Groundwater samples may then be collected with a bailer, peristaltic pump, or bladder pump.

WATER SAMPLE HANDLING

The samples are decanted into laboratory-provided containers with appropriate preservatives. Samples that will be analyzed for VOCs are collected in 40-milliliter glass volatile organic analysis (VOA) vials with Teflon-lined septum caps. VOA vials are filled so that there are no air bubbles. The sample containers are labeled with the well number, date, location, sampler's initials, and preservative used. The sample containers are placed in a cooler with ice for delivery to the laboratory. Standard chain-of-custody procedures are followed.

BOREHOLE GROUTING

Following completion of sampling, borings are sealed with bentonite-cement grout. The grout is allowed to free-fall in the boring or pumped through a tremie pipe positioned at the bottom of the boring depending on the subsurface conditions and/or the requirements of the local oversight agency. Borings are resurfaced to match the surrounding surface conditions.

INTEGRATED WASTE MANAGEMENT HANDLING

Excess groundwater and soil generated during the soil drilling activities is stored in appropriately labeled 55 gallon Department of Transportation (DOT) drums. These drums are typically stored at a secured location, pending evaluation of disposal options.

ATTACHMENT B

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director

June 29, 2006



Mr. John Prall
Port of Oakland
530 Water St.
P.O. Box 2064
Oakland, CA 94604

RECEIVED

JUL 03 2006

ETIC ENGINEERING

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

Dear Mr. Prall:

Subject: RO0000470, Berths 60-63 Redevelopment Project, 1395 Middle Harbor Rd.,
Oakland, CA 94607

Alameda County Environmental Health (ACEH) has reviewed the file for the subject site including the March 1, 2006 Well Destruction Work Plan by ETIC Engineering. As you are aware, the decommissioning of these wells is required to facilitate the redevelopment of the site. Since the development overlaps two Water Board sites as well as one overseen by the County, you have received written concurrence for Alameda County's temporary oversight of these overlapping areas. The wells proposed for decommissioning are wells MW6, MW7, MW8 and extraction well EW-5 at Berth 59, wells APL/UP-W1 and APL/UP-W2 at Berth 60, wells DSMW1-DSMW3, installed as a result of a diesel spill from a railroad car derailment and wells MW-1 through MW-3, located near former underground tanks EF6-9. It appears unclear whether all wells currently exist, however, part of your proposal should include the confirmation of any previously closed well from those listed above. The County approves the decommissioning of these wells. However, we require that you satisfy the Water Board recommendations for Berth 57-59 ie additional temporary well or boring between former boring B60 and AL/UP-W2 for groundwater sampling and confirmation of the inertness of the landfill backfill. In addition, post development groundwater sampling in the areas of these well must be considered.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Handwritten signature of Barney M. Chan in cursive.

Barney M. Chan
Hazardous Materials Specialist

cc: files, D. Drogos, A. Levi

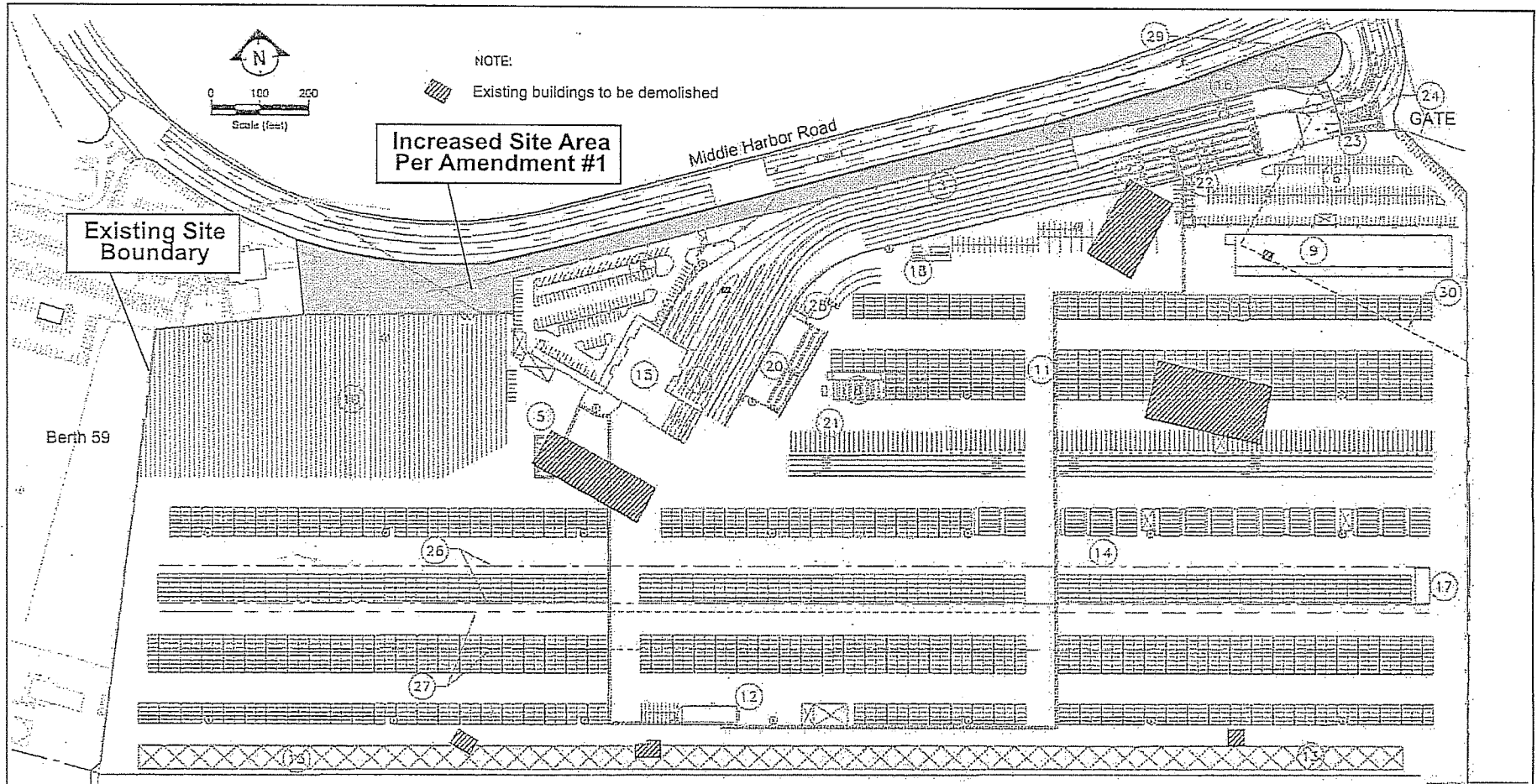
Ms Roberta Reinstein, Port of Oakland, 530 Water St., P.O. Box 2064, Oakland,
CA 94607-2064

Messrs. Max Shahbazian and Roger Papler, SFRWQCB

Mr Alan Anselmo, ETIC Engineering, 1333 Broadway, Ste. 1015, Oakland, 94612

6_29_06 1395 Middle Harbor Rd

ATTACHMENT C



KEY NOTES: (Sheets and Tables Refer to Drawings and Data in 100% Design Package)

WHARF (Berths 60 to 63)

- | | | | |
|--|---|--|--|
| ① RECEIVING GATE AND TRUCK SCALES, SEE SHEET 056. | ⑨ MAINTENANCE & REPAIR BUILDING (BY OTHERS) | ⑲ RIG REPAIR PAD, SEE SHEET 544. | ⑳ SIGN UNITS (ADD. ALT.), SEE SHEET 051. |
| ② DELIVERY GATE, SEE SHEET 056. | ⑩ CRANES PARKING | ⑳ FUELING AREA, SEE SHEET 545. | ㉑ RIG RUNWAYS (BASE BID), SEE SHEET 544. |
| ③ RECEIVING CRUISE | ⑪ EMPTY CONTAINER STACKING AREA | ㉒ WHEELED WELTERS | ㉒ RIG RUNWAYS (ADD. ALT.), SEE SHEET 544. |
| ④ GUARD HOUSE, SEE SHEET A1. | ⑫ MARINE OPERATIONS BUILDING (BY OTHERS) | ㉓ REN-SET REPAIR, SEE SHEET 542. | ㉓ REN-SET MODULAR BUILDING |
| ⑤ TROUBLE TRUCK PARKING | ⑬ MATCH COVER AREA | ㉔ PRE-INSULTS | ㉔ TERMINAL ENTRANCE SIGN, SEE SHEET 161. |
| ⑥ AUTO PARKING | ⑭ HELPER YARDS, SEE SHEET 511. | ㉕ PRIMARY RADIATION PORTAL MONITOR (RPM), SEE SHEET 041. | ㉕ UNITS OF PARCEL B, SEE SHEET 02 FOR LOCATION |
| ⑦ UTR AND YARD VEHICLE PARKING | ⑮ ADMINISTRATION BUILDING (EXISTING) | ㉖ SECONDARY RPM, SEE SHEET 041. | |
| ⑧ 8 STALL REEFER WASH FACILITY (8 STALLS, ADD. ALT.) SEE SHEET 035 | ⑯ SPECIAL CHARACTER WOODWORK (SCW) PORTAL (BID IN CONTRACT) | ㉗ CUSTOMS INSPECTION AREA, SEE SHEET 041. | |

GENERAL REDEVELOPMENT PLAN	
PORT OF OAKLAND APL TERMINAL REDEVELOPMENT PROJECT OAKLAND, CALIFORNIA	
	Date: 5/23/2006 Page: 2