## **FUGRO WEST, INC.**





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May 2, 2006 06.041

Alameda County Health Agency Department of Environmental Health 1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor Alameda, California 94502

Attention: Mr. Steven Plunkett

Subject: Work Plan

Well Installation, MW - 2
Bay Ship and Yacht Company

Alameda, California

Alameda County

MAX 0 4 2006

EMVIronmental Health

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Dear Mr. Plunkett:

Fugro West, Inc. (Fugro) is pleased to present this work plan to install a groundwater monitoring well near the former underground storage tank location 133 (Tank 133). Monitoring Well MW-2 was previously installed and monitored near Tank 133 but has since been destroyed. Bay Ship and Yacht Company (Bay Ship) currently leases their Alameda property from Alameda Gateway Limited (AGL) and has requested that Fugro install a replacement well to meet a requirement of the Alameda County Health Care Services (the Agency). Bay Ship wishes to install the replacement well before they commence construction of the ship-lift facility that will begin in June 2006 so that the well does not interfere with future construction.

Tank 133 was a 600-gallon tank that contained diesel fuel used by the adjacent buildings that have since been removed. Tank 133 was removed in 1990, and diesel contamination was observed upon its removal. The Agency required the installation of MW-2 to evaluate the release of diesel. MW-2 was monitored on several occasions since 1990, and on June 14, 2001, a free phase of diesel was observed in MW-2. MW-2 has since been removed.

Between 1992 and November 2001, the Agency wrote numerous letters to AGL and requested additional groundwater monitoring. AGL has not performed the work that the Agency requested. Fugro understands that Bay Ship needs to confirm that their on-going operations and activities will not interfere with the monitoring effort that the Agency requires.

The long industrial history of the Site has lead to the presence of contaminants to the soil and groundwater at the Site, such as the Marsh Crust that underlies the fill materials placed to create portions of the City of Alameda and the release from Tank 133. The purpose of this work plan is to provide Bay Ship with a replacement monitoring well. Fugro understands that Bay Ship has the authority to install this well on AGL's property.





## SCOPE OF SERVICES

Fugro will construct the replacement MW-2R as follows:

Fugro will use existing information such as aerial photographs and reports available in the public domain to re-establish the past locations of Tank 133 and MW-2. The warehouse structures that surrounded Tank 133 and MW-2 have been demolished; however, Fugro will scale distances from maps that show locations of Tank 133 and MW-2, and we will use tape measurements to locate their approximate positions in the field. We will use our engineering judgment to re-establish the location of MW-2.

Fugro will mobilize a direct push rig to the site to install the replacement well to a depth of about 10 feet below ground surface; the existing subsurface information indicates that groundwater is at a depth of approximately five feet below grade. Because diesel weighs less than water, contaminated soil, groundwater or free product are expected to be encountered in the upper five feet. We expect that the boring will not encounter the Marsh Crust because available information from the City of Alameda indicates that the Marsh Crust is deeper than 10 feet in the vicinity of the Site.

We will construct a two-inch PVC well using standard hazardous materials practices: Schedule 40 PVC casing with 0.020 slot size for the section that straddles the groundwater surface by at least 2.5 feet. We will place clean Monterey Sand around the screen section and with a one-feet thickness of bentonite pellets. We will fill the annulus to the ground surface with a neat cement grout. The well will be labeled MW-2R.

Bay Ship's civil engineer will provide an electronic file of the Site that will show MW-2R and any neighboring structures. We will spread the soil cuttings around MW-2R. Fugro will document the construction of the replacement well in a letter. We will prepare a boring log and well completion log for MW-2R.

## **CLOSURE**

Fugro requests that you review this work plan and set aside time on May 3, 2006 to meet with Mr. Cris Kraft of Bay Ship and myself. We would appreciate your cooperation so that Bay Ship can have MW-2R reconstructed in May 2006. Please call me at (510) 267-4411 to tell me at what time we can meet on May 3, 2006 or select another time more convenient to you.

Sincerely,

FUGRO WEST, INC.

tepnen J. Osborne, P.E., G.E.

Principal Engineer

Copies Submitted:

(1) Mr. Steven Plunkett, Alameda Health Care Agency

(1) Mr. Cris Kraft, Bay Ship

