BASELINE
ENVIRONMENTAL CONSULTING

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Mr. Barney Chan
Hazardous Materials Specialist
Division of Environmental Protection
Department of Environmental Health
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda California 94506

Subject: Request for Reduction in Groundwater Monitoring Frequency, 2225 and 2277 Seventh Street, Port of Oakland, LOP Case Numbers RO0000185 and RO0000010

Dear Mr. Chan

This letter presents a request on behalf of the Port of Oakland ("Port") for approval to reduce the frequency of groundwater monitoring at two adjacent Port properties: 2277 and 2225 Seventh Street in Oakland, California (Figure 1). Releases of petroleum hydrocarbons in the past from underground storage tanks ("USTs") at these two sites have resulted in impacts to the groundwater. Regulatory oversight of the two sites is being provided by the Alameda County Health Care Services Agency ("County") under the Local Oversight Program ("LOP").

The USTs at 2277 and 2225 Seventh Street were used to store diesel, gasoline, waste oil, and motor oil and were removed between 1990 and 1993. In the early 1990s, groundwater monitoring wells were installed to monitor groundwater quality. Eight wells were installed at 2277 Seventh Street (MW-1 through MW-8; MW-8 was replaced by MW-8A in 2001) and three wells were installed at 2225 Seventh Street (MW-1 through MW-3). The petroleum hydrocarbon plume is co-mingled and consists of dissolved- and free-phase hydrocarbons in the diesel range. One well (MW-4) on the 2277 Seventh Street property has historically contained dissolved hydrocarbons in the gasoline range. A product skimming system was installed in 1996 to recover the free-phase product. The system consisted of two "passive" free-product simmers and one "active" free-product skimmer. The passive skimmers collected product in reservoirs within each well, which were periodically emptied. The active skimmer pumped product using compressed air from the subsurface into an aboveground storage tank. In addition to the tank, the system included a 7.5-horse power air compressor and a pump controller.

The two properties are currently undergoing redevelopment. Groundwater monitoring wells MW-6 and MW-7 at 2277 Seventh Street and MW-1, MW-2, and MW-3 at 2225 Seventh Street were abandoned in 2002 to facilitate this redevelopment. The buildings that were located on the properties have been demolished and a new Port facility, the Harbor Facilities Center, was completed on the western portion of the properties in late 2004. The remaining eastern portions of the two properties are being prepared for development for transportation related facilities.

In 2003, the original remediation system was removed and ultimately replaced in December 2004 with an improved new product recovery system, consisting of nine recovery wells. The new system consists of nine product recovery wells (RW-1 through RW-9, Figure 2) in subsurface vaults and equipped with

active skimmer pumps. These pumps are also air actuated and the new system consists of an aboveground 500-gallon storage tank, a 7.5 horsepower compressor and a programmable pump controller. In addition, the well vaults are equipped with conveyance piping to allow the application of a low vacuum on the wellhead. The final site remedial action plan prepared in May 2002 by Innovative Technical Solutions, Inc. proposed up to eight new monitoring wells to replace the wells removed during redevelopment of the properties. The Port is evaluating data from past investigations to determine the optimal number and location of new groundwater monitoring wells. The Port anticipates completing the construction of the eastern portion of the properties as container storage and shipping facility by the end of this year, at which time the replacement wells would be installed.

Groundwater monitoring has been performed at 2277 Seventh Street since 1994 and at 2225 Seventh Street since 1993. As shown on the attached graphs, the total petroleum hydrocarbons ("TPH") as diesel, TPH as gasoline, and benzene results indicate that the petroleum hydrocarbon plume is stable, since the concentration of chemical constituents has remained within the historical ranges. Free-phase product is confined to the wells that had previously contained free product. The low levels of TPH as gasoline and benzene concentrations are primarily confined to the area of MW-4. The low concentrations of TPH as diesel reported in the groundwater samples from MW-5 and MW-8A appear to be aged and weathered, as the laboratory has consistently reported that the chromatograms do not match the diesel standard.

Based on the fact that the concentrations of dissolved-phase petroleum hydrocarbons in the groundwater are not increasing and the plume is not migrating, it is recommended that the frequency of groundwater monitoring for the existing wells be reduced to semi-annual. Contingent on approval from the County, the groundwater sampling would be performed on the following schedule:

First Semi-Annual Event	June/July 2006
Second Semi-Annual Event	November/December 2006

The sampling schedule for new wells would be based on the County's approval of a groundwater well construction and sampling plan prior to installation of the new wells. The Port will also explore the use of low vacuum to enhance product recovery. A short duration pilot study will be performed within the next two months to evaluate the benefit of modifying the system to include vacuum enhanced product recovery. In addition, to address the TPH as gasoline and benzene reported in the groundwater at MW-4, the Port will place a sock containing Oxygen Releasing Compound™ ("ORC"), a product developed by Regenesis, to promote in-situ biodegradation of the TPH as gasoline. The sock will be removed two weeks prior to sampling the well. Further use of ORC as a remediation methodology will be evaluated in the first semi-annual report.
We will look forward to any comments you may have on this request. Please contact us at your convenience with any questions.

Sincerely,

Yane Nordhav, P.G.
Principal

James McCarty, P.E.
Project Engineer

YN:JM:cr

Attachments

cc: Jeffrey Rubin, Port of Oakland
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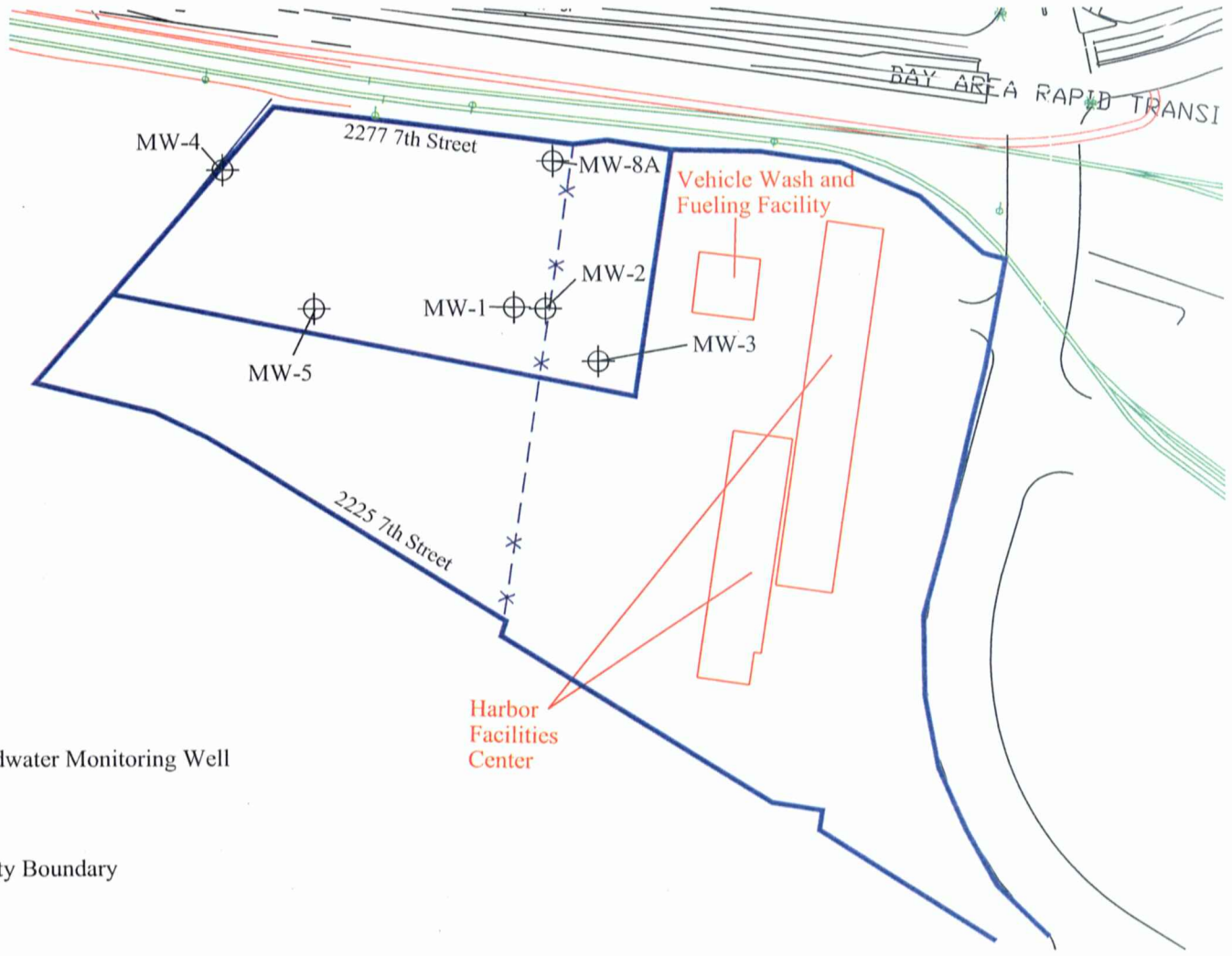
SITE PLAN

Figure 1



2277 and 2225 Seventh Street
Port of Oakland
Oakland, California

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BASELINE

Historical Groundwater Data
2277 Seventh Street, Oakland
Port of Oakland