Weiss Associates Environmental and Geologic Services

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ENVIRONMENTAL PROTECTION

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September 1, 1999

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Barney M. Chan
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

RE: **Proposed Ground Water Investigation and Well Installation**
Simpson Property
489 43rd Street
Oakland, California
WA Job No. 138-1231-02

Dear Mr. Chan:

On behalf of Ronn Simpson, the owner of the property at 489 43rd Street, in Oakland, California, Weiss Associates (WA) is submitting this subsurface investigation workplan for the above referenced site as requested by the Alameda County Health Care Services Agency (ACHCSA). The investigation objective is to determine if petroleum hydrocarbons are present in soil or ground water downgradient from the former underground storage tanks (USTs) at the subject site and a nearby site (490 43rd Street). This workplan is divided into the following sections: Background, Objective, Investigation Strategy, Scope of Work, and Schedule.

Background

The subject property is located at 489 43rd Street in Oakland, California (Figure 1). The subject site consists of a commercial building occupying a corner lot (Figure 2). The building is adjacent to the sidewalk on 43rd Street and has a frontage on Telegraph Avenue. The presumed direction of ground water flow is to the south-southwest. WA understands that a former UST was located under the north sidewalk of 489 43rd Street, about 90 feet east of the intersection of 43rd Street and Telegraph Avenue in Oakland. The UST was reportedly installed prior to 1975 to fuel delivery vehicles for the Liberty French Baking Company, a prior occupant of the subject site. The UST was removed by Accutite Environmental Engineering in September 1995. Laboratory analysis of soil samples collected from beneath the UST detected maximum concentrations of 1,900 parts per million (ppm) Total Petroleum Hydrocarbons as Gasoline (TPH-G), 1,300 ppm Total Petroleum

Hydrocarbons as Diesel (TPH-D), 0.2 ppm benzene, 0.46 ppm toluene, 17 ppm ethyl benzene, 48 ppm total xylenes, and 1,300 ppm methyl tertiary-butyl ether (MTBE).

There is also a reported release from the former USTs located at 490 43rd Street, across the street and upgradient of the subject site. The 490 43rd Street USTs reportedly contained gasoline and paint thinner. Three ground water monitoring wells were installed at the 490 43rd Street site in 1993. TPH-G, Total Petroleum Hydrocarbons as Paint Thinner (TPH-PT), and BTEX have been detected in ground water samples from all three wells. Figure 2 shows the arrangement of the subject site and the one across the street.

On May 29, 1998, WA drilled one borehole (SB-01) on the down-gradient side of the subject site's former UST location and advanced the borehole to a total depth of 12 feet below ground surface (bgs), using a limited access direct-push sampling device (Figure 2). Soil samples were collected at 5.0 and 10.0 ft bgs. Ground water was encountered at 11.2 feet bgs, and a bailed grab ground water sample was collected. Soil sample SB-01-5.0 collected at 5-ft bgs was placed on hold and not analyzed. The 10-ft bgs soil sample, ID number SB-01-10.0, and ground water sample, ID number WS-01-11.2, were analyzed for the following constituents of concern (COCs): TPH-G, TPH-PT, benzene, toluene, ethylbenzene and xylenes (BTEX), and MTBE by modified EPA Method 8015 and EPA Method 8020. The soil sample was reported to have no concentrations of COCs above the laboratory-reporting limit. The ground water sample was reported to have a TPH-G concentration of 18,000 parts per billion (ppb), a benzene concentration of 2,400 ppb, and a TPH-PT concentration of 8,800 ppb. The laboratory indicated that the TPH-G and TPH-PT results included a large fraction of an unmodified or weakly modified gasoline. Due to the interference from the TPH-G concentration, the laboratory had to raise the MTBE reporting limit to 350 ppb.

Following this investigation, the ACHCSA requested a follow-up ground water investigation workplan to install a permanent monitoring well.[1]

Objective

The objective of WA's proposed investigation is to assess the extent of dissolved hydrocarbons and other COCs in ground water down-gradient of the former USTs located at 489 and 490 43rd Street. WA's proposed investigation strategy and scope-of-work are presented below.

Investigation Strategy

WA's proposed plan is to further delineate the extent of any dissolved COCs in ground water down-gradient from the former USTs by installing a ground water monitoring well. WA proposes using a hollow-stem auger drill rig to advance the soil boring below ground water to about 20 ft bgs.

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[1] ACHCSA Letters to Mr. Ronn Simpson from ACHCSA Hazardous Materials Specialist Barney Chan, October 9 and November 19, 1998, and July 15, 1999.

and install a ground water monitoring well. Depth to ground water is estimated to be about 11.2 ft bgs. The well will be located southwest of former boring SB-01, in the anticipated down-gradient direction. Figure 2 depicts the approximate location of the proposed monitoring well (MW-1). The proposed well location is in the courtyard of the subject site. If this is not possible due to space limitations, the well will be located around the corner on Telegraph Avenue in the downgradient direction.

WA will collect soil samples from the boring at a minimum of five-foot intervals for lithologic characterization and possible chemical analysis, using a split-spoon sampler lined with brass tubes. WA will screen soil samples every five feet with a photo ionization detector (PID). WA will select, if any, the sample with the highest PID reading for laboratory analysis. All drilling and sampling equipment will be decontaminated by steam cleaning before and after drilling activities.

The monitoring well screen, casing, filter pack, and bentonite and grout seals will be installed through the augers per Alameda County Zone 7 Water Agency guidelines. The well screen and casing will consist of 2-inch diameter schedule 40 PVC and will be screened from about 10 to 20 feet bgs. The well will be thoroughly developed following installation. A ground water sample will be collected following development. Soil cuttings and purged water will be contained on-site in 55-gallon drums pending disposal WA will analyze the ground water sample and at least one soil sample for TPH-G, TPH-D, TPH-PT, BTEX, MTBE, and soluble lead.[2]

Scope of Work

To conduct the investigation, WA will complete the following scope of work:

- Prepare a site-specific health and safety plan for workers conducting the investigation, and contract a line-locating company to identify underground utility lines in the work area;
- Secure boring and well installation permits from the Alameda County Zone 7 Water Agency, secure an encroachment permit from the City of Oakland Department of Public Works and notify the ACHCSA at least 48 hours prior to beginning the field work;
- Advance a soil boring to 20 ft bgs using a hollow-stem auger drill rig and collect soil samples at 5-foot intervals;
- Install a 2-inch diameter schedule 40 PVC monitoring well with a screened interval of about 10 to 20 ft bgs to specifications required by the Alameda County Zone 7 Water Agency and the City of Oakland Department of Public Works.

[2] Per letter to Ronn Simpson from ACHCSA Hazardous Materials Specialist Barney Chan October 9 1998

- Develop the monitoring well using surging, bailing, and/or pumping methods as required by the Alameda County Zone 7 Water Agency, and collect a ground water sample from the developed well;

- Contract a state-certified analytical laboratory to analyze the water sample and at least one soil sample for TPH-G, TPH-D, TPH-PT, BTEX, MTBE, and soluble lead;

- Contain soil cuttings and purged ground water on-site in 55-gallon drums pending profiling for disposal; and,

- Compile the results of the site investigation and prepare an investigation summary report. The report will include a site location map, map of boring and monitoring well(s) locations, descriptions of field procedures, tabulated analytic data, the laboratory certified analytical reports and sample chain-of-custody forms, and recommendations by a registered engineer or geologist.

Add D.O. Redo, P.E.

Attempt to co-ordinate monitoring w/ Blumest Site.

Schedule

This investigation will be conducted after receiving your written approval of this workplan. A report will be submitted after all fieldwork is completed and the analytic data is compiled.

Please call us at (510) 450-6000 if you have any questions or comments regarding this workplan.

Sincerely,
Weiss Associates

Melissa Chamberlain, EIT
Senior Staff Engineer

Mike Zimmerman, P.E.
Project Manager

Figures

cc: Mr. Ron Simpson, P.O. Box 3090, Berkeley, California 94703

MJZ.pv

Figure 1 Site Location - 489 43rd Street, Oakland, California

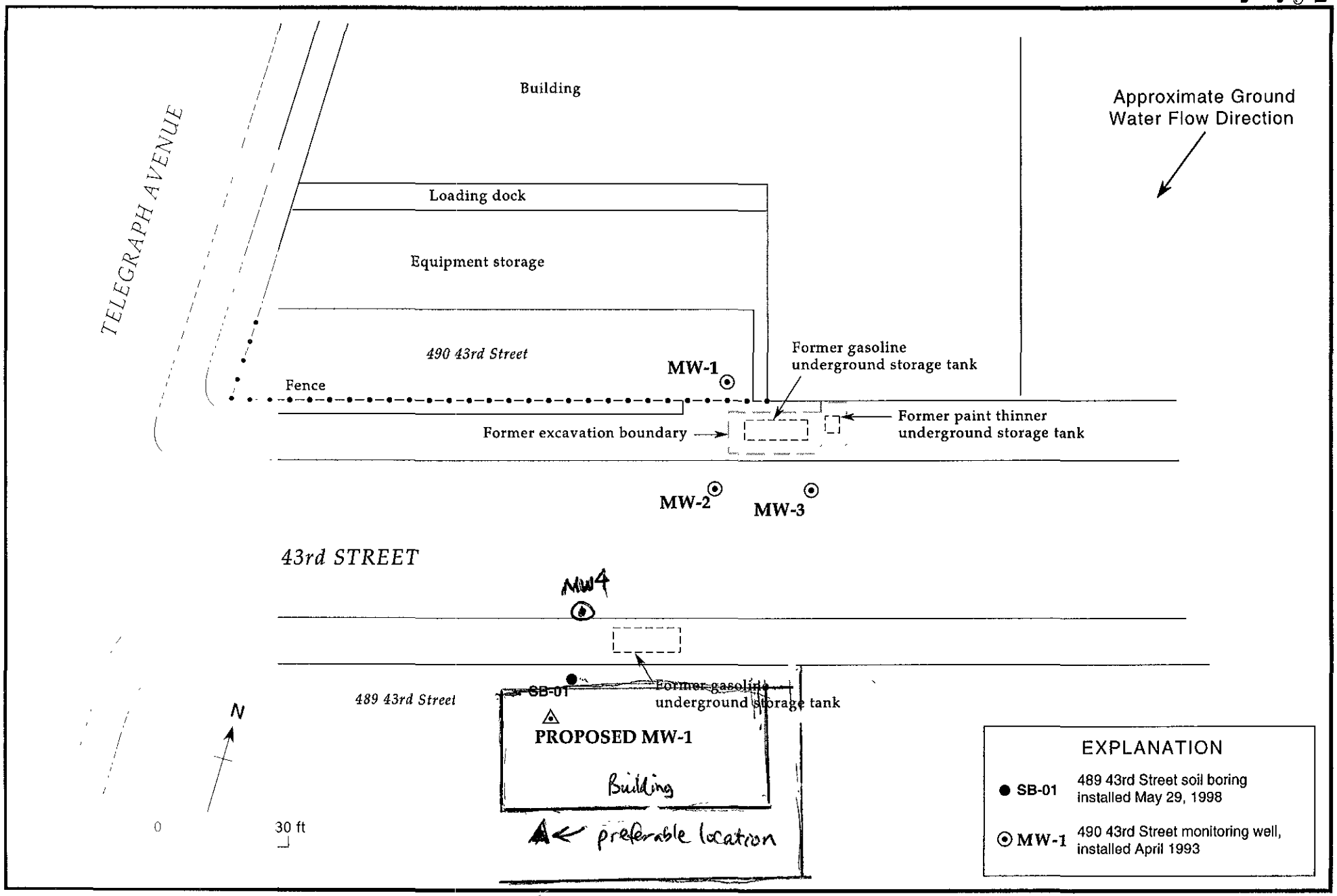

Figure 2 Soil Boring Location - 489 43rd Street, Oakland, California