Weiss Associates *Environmental and Geologic Services*

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October 1, 1999

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 Overexcavation and ORC Addition**
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 workplan for the above referenced site as requested by the Alameda County Health Care Services Agency (ACHCSA). The objective is remove remaining contaminated material from the site and enhance natural biodegradation processes. 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 underground storage tank (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. A fourth well was requested by ACHCSA, so MW-4 was installed on July 23, 1999. 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, a TPH-PT concentration of 8,800 ppb, and an MTBE concentration of <350 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] at the subject site in the rear driveway behind the building (see Figure 2) per the ACHCSA letter dated September 14, 1999. The investigation workplan was submitted to ACHCSA on September 1, 1999. This workplan serves as a follow-up to the investigation workplan.

Objective

The objective of WA's proposed workplan is to remove the contaminated material remaining on-site and enhance natural biodegradation with the addition of an oxygen releasing compound (ORC) into the excavation area before backfilling. WA's proposed investigation strategy and scope-of-work are presented below.

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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.

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Strategy

WA proposes excavating approximately 100 cubic yards of material from the area of the former UST. WA proposes excavating an area 10 feet wide, 20 feet long and 11 feet deep in the area of the former UST. The former UST is estimated to have been approximately 4 feet in diameter and 10 feet long. Depth to ground water is estimated to be about 11.2 ft bgs. Sidewall confirmation samples will be collected at the final excavation depth.

WA proposes the addition of approximately 200 pounds of ORC in a three foot interval from one foot below the ground water level to two feet above. The ORC will be mixed with existing soil (below ground water) and backfill material (above ground water).

Scope of Work

To complete the workplan, WA (or our subcontractor) will complete the following scope of work:

- Prepare a site-specific health and safety plan for the project, and contract a line-locating company to identify underground utility lines in the work area;
- Secure necessary permits from the City of Oakland Department of Public Works and notify the ACHCSA at least 48 hours prior to beginning the field work;
- Excavate an area 10 feet wide by 20 feet long by 11 feet deep (or to ground water);
- Sample excavated soil to determine proper disposal location;
- Collect confirmation sidewall samples at depth; TPHg, TPHms, BTEX + MTBE
- Stockpile soil while analyses are pending;
- Off-haul excavated soil to disposal facility;
- Add ORC to the excavation area;
- Backfill the excavation area;
- Restore sidewalk and site to original conditions, and.
- Prepare a summary report. The report will include a site location map, map of excavation area, descriptions of field procedures, and recommendations by a registered engineer or geologist.

Schedule for start & finish work

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

Michael Zimmerman, P.E., R.E.A.
Project Manager

Figures 1 and 2

CC: Mr. Ronn Simpson, P.O. Box 3090, Berkeley, California, 94703

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

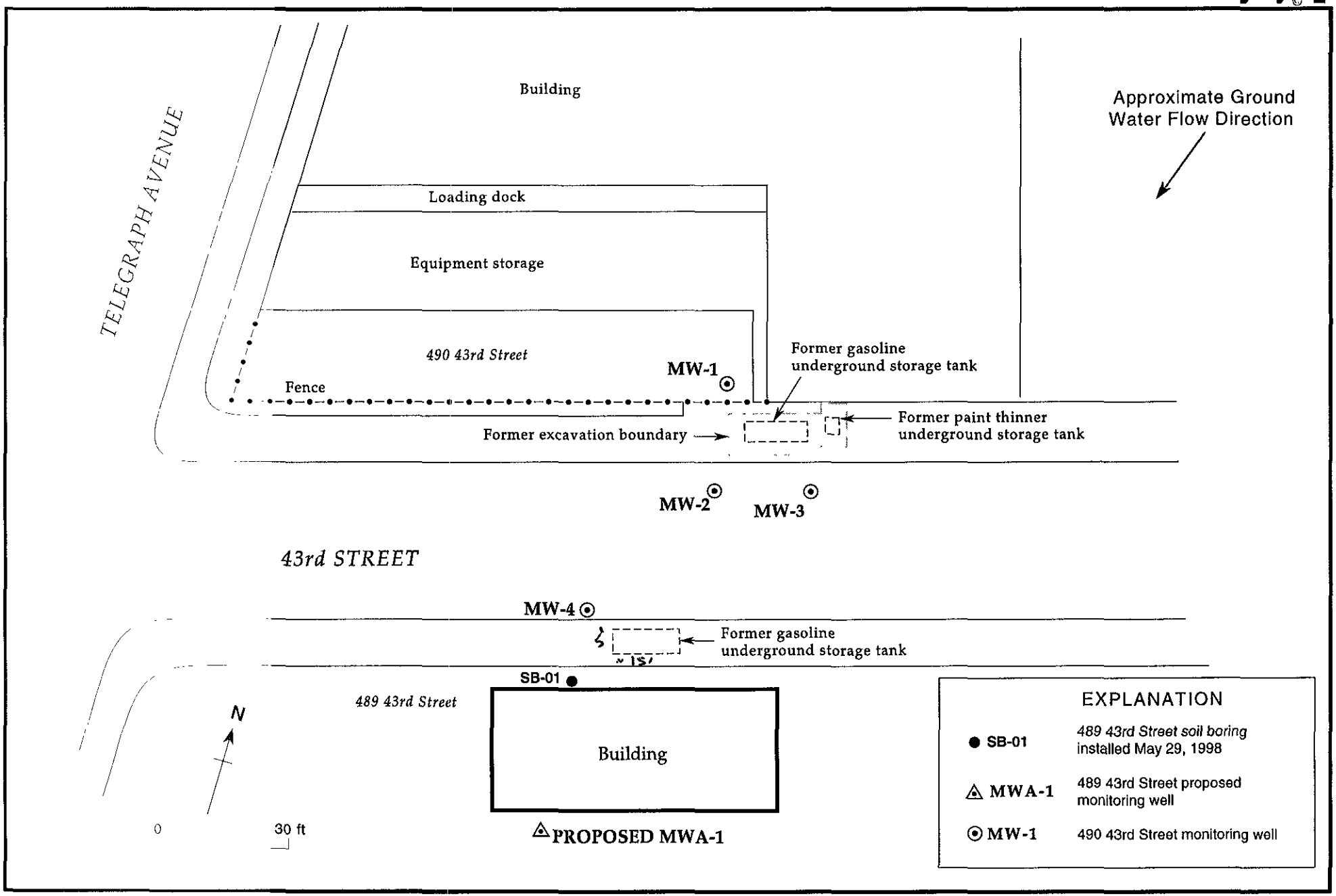

Figure 2 Proposed Well Location - 489 43rd Street, Oakland, California