

ENVIRONMENTAL
PROTECTION

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WORK PLAN
Surface Investigation
Beck Roofing Company
Hayward, CA
August 23, 1999

Prepared for:
Beck Roofing Inc.
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1.0 INTRODUCTION AND PURPOSE

Beck Roofing Company (Beck Roofing) is submitting this Work Plan at the request of the Alameda County Environmental Health Services department, pursuant to a July 27, 1999 letter from Mr. Amir Gholami. The Work Plan describes a proposed environmental subsurface investigation at the Beck Roofing, 21123 Meekland Avenue, Hayward site shown on Figure 1, the site location map. The Beck Roofing is a former underground fuel tank site. Beck Roofing wishes to close the environmental case for this site. Monitoring results and a RBCA analysis have been submitted are under revision and review. The presence of residual contamination and lack of recent soil data promoted the request for this investigation.

This work plan describes the proposed investigation to evaluate the current status of soil and groundwater contamination related to the former underground gasoline storage tank. Figure 2 shows the former underground tank location and proposed boring locations.

2.0 SITE DESCRIPTION

Beck Roofing is a commercial roofing business. The property is located on the south side of Meekland Avenue, 21123 Meekland Avenue. Site usage includes equipment and materials storage, shop and office facilities. Site specific information was obtained from the owners, Mr. Charles and Mrs. Mary Beck, or from existing environmental reports.

3.0 SITE ENVIRONMENTAL HISTORY

Beck Roofing installed an underground 1000-gallon steel tank during the 1970's following the gasoline crisis. The tank stored gasoline for refueling company roofing trucks and serviced a single dispensing pump.

The tank was installed with a concrete slab cap over the backfill material. The original tank pit was probably filled with pea gravel available on-site. The tank was located in the driving area of the Beck Roofing yard, next to a previously existing shed. Beck Roofing personnel periodically cover the yard with additional gravel as part of ongoing yard maintenance activities. Gasoline usage was variable depending on number of active jobs and distance to job sites. Beck Roofing provided a rough estimated usage rate of 300 to 400 gallons per month.

Beck Roofing contracted with Blaine Tech Services (Blaine) via R.L. Stevens to remove the underground gasoline tank. Blaine removed the tank on May 20, 1991. Field observations reported by Blaine included "two small holes in the bottom of the tank at each end."

Several investigations followed between 1991 and 1994. These investigations resulted in an over excavation of the tank pit, installation of numerous soil borings and four groundwater monitoring wells. Soil contamination was detected at depths greater than 15 feet below ground subsurface (bgs). Soil gasoline levels and Total petroleum Hydrocarbons-gasoline (TPHg) and gasoline constituent (benzene, toluene, ethylbenzene and xylenes [BTEX]) levels range from non detected (ND), i.e., below the laboratory reporting limit, to hundreds of parts per million (ppm) or milligrams of constituent per kilogram of soil (mg/kg).

Four groundwater monitoring wells were installed to determine groundwater quality and the extent of groundwater contamination. These wells have been sampled regularly since installation in 1991 and 1994. Previous data indicate the presence of TPHg and BTEX compounds at low ppm, low part per billion (ppb), or nondetectable levels in each well. 1997 and later data show ND contaminant levels in three wells (MW-1, MW-2, MW-4). These three wells will be destroyed in conjunction with the proposed work.

4.0 PROPOSED WORK PLAN

The proposed work plan includes soil and grab groundwater sample collection at four locations lateral and down gradient from the former underground fuel tank location. HE2 will use the analytical results to evaluate the current extent of contamination in soil and groundwater beneath the Beck Roofing site. Figure 2 shows proposed boring locations

HE2 proposes to collect and analyze three soil samples and one groundwater sample from each boring. Soil samples will be collected at 25, 30 and 35 feet bgs in each boring. Use of a geoprobe will minimize cuttings generation. A grab groundwater sample will be collected from each hole if sufficient water enters the boring and the hole does not collapse. The soil and groundwater samples will be analyzed for TPH-gasoline, benzene, ethylbenzene, toluene, xylenes, and MTBE. HE2 will evaluate the level and extent of existing gasoline contamination in soil and groundwater based on the analytical data.

A summary of the proposed work follows:

- Advance four boreholes to 35 feet below ground surface (bgs) using a geoprobe
- Collect three soil samples and one water sample from each borehole
- Backfill the boreholes with neat cement
- Analyze the samples for gasoline constituents including benzene and MTBE

The above description assumes that:

- Cobbles, dense soil or bedrock will not be encountered.
- No more than twelve soil samples and four water samples will be collected.
- Samples will be analyzed for gasoline (as TPHg), benzene, toluene, ethylbenzene and xylenes (BTEX) and MTBE
- One Alameda County Permit is required

4.1 Soil Sampling Procedures

The soil borings will be installed using a geoprobe. Soil samples will be collected for analysis from the four borings at 25, 30 and 35 feet bgs. Soils will be logged from observations of soil samples. Soil samples will be collected in sample liners (rings). Rings will be capped with Teflon sheeting, plastic caps, sealed with clear tape and labeled. Labels will include the project identification, sample location, date and time of collection, sampler's initials, and the analyses requested.

Each boring will be sealed with ..cement grout following sampling. Boreholes will be grouted at the end of the day. It is anticipated that work will be completed in one day.

4.2 Groundwater Sampling Procedures

Groundwater samples will be collected from the borings whenever possible. That is, when the hole does not cave and there is enough water in the hole to fill the required sample containers. The assumed water table depth is about 25 feet bgs. The grab samples will be collected using clean bailers. Bailed groundwater will be slowly poured into 40 ml VOA (volatile organic analysis) vials with Teflon septa. The vials will be sealed so that no air bubbles are trapped in the vials (zero headspace).

4.3 Decontamination Procedures

Drilling and sampling equipment will be clean upon arrival at the site and will be cleaned prior to reuse at the site. Probes will be cleaned before reuse. Samplers will be cleaned with detergent, rinsed with tap water, then rinsed with distilled water before each use. Sample rings will be washed and rinsed as described above before each use.

4.4 Sample Handling Procedures

Soil and groundwater samples will be labeled with the project name, sample location, date, samplers initials, and analyses requested. Samples will be stored in a cooler with ice until delivered to the laboratory. HE2 plans to deliver the samples to the laboratory the day of, or day after collection, depending on the time fieldwork is completed.

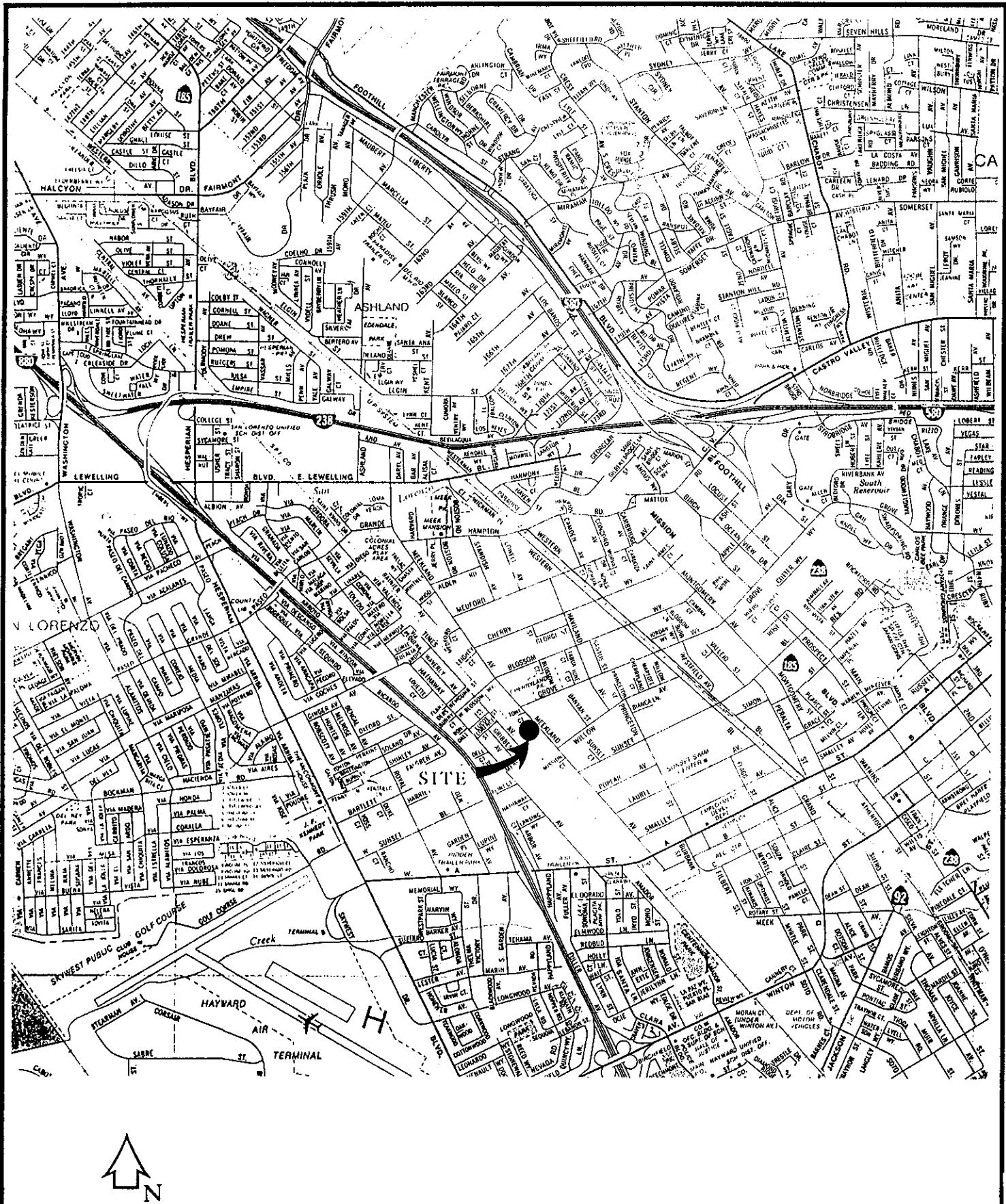
The soil and groundwater samples will be analyzed for TPHg, BTEX, and MTBE. McCampbell Analytical Laboratories in Pacheco, CA, or APCL in Chino, CA with a local office in El Sobrante, will perform the analyses; both are state certified laboratories. A chain of custody form will accompany all samples.

5.0 REPORTING

A report will be submitted to Alameda County approximately one month after receipt the analytical data or approximately 45 days after completion of the field work. The report will include the items listed below.

- Boring locations
- Soil and groundwater sample collection
- Soil and groundwater analytical results
- Proposed disposal of the soil cuttings if needed
- Recommendations for further action

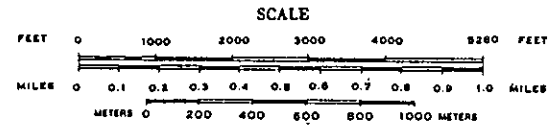
The report will include recommendations for further actions or remediation based on the data. The report appendices will include the chain of custody form and laboratory analytical report.



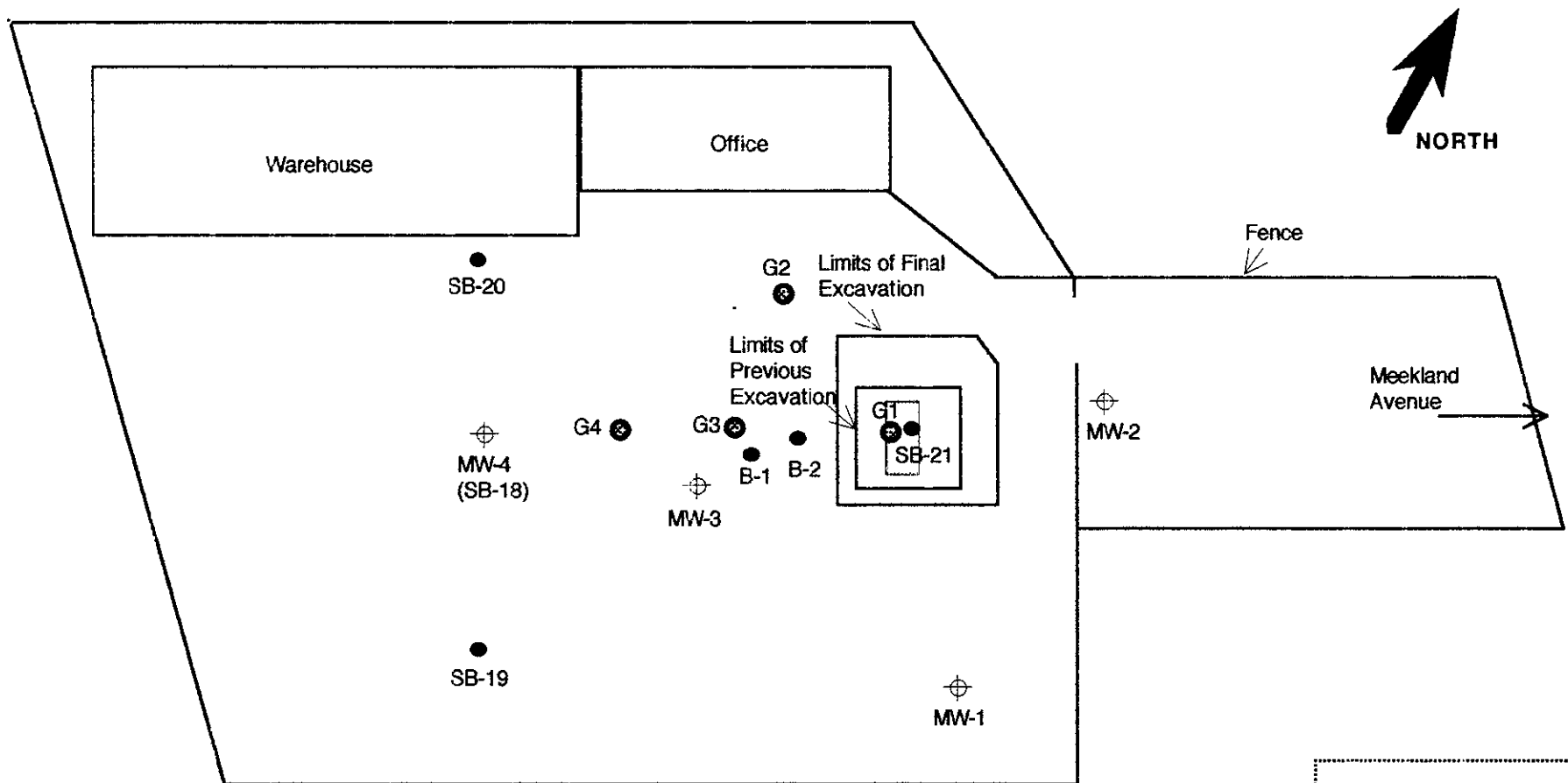
Beck Roofing, Hayward, CA Soil Sampling
FIGURE 1 Site Location



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Source: CSAA Map of Hayward, San Leandro, Union City, 3/92



LEGEND

- G4 ⊕ Proposed Geoprobe Borings
- Former Underground Tank Location
- ⊕ Monitoring Well
- Soil Borings

Beck Roofing, Hayward, CA
FIGURE 2 Site Plan and Proposed Geoprobe Boring Locations

Source: Adapted from Lush Geosciences, Inc.,
 Quarterly Monitoring Report, Figure 2, March 8, 1997



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