

May 18, 1992
517-19, MV051304

Ms. Jennifer Eberle
ALAMEDA COUNTY
DEPARTMENT OF ENVIRONMENTAL HEALTH
HAZARDOUS MATERIALS DIVISION
80 Swan Way, Room 200
Oakland, California 94621

RE: WORK PLAN FOR GROUND WATER
QUALITY RECONNAISSANCE AND
QUARTERLY SAMPLING, TULLOCH
CONSTRUCTION YARD,
OAKLAND, CALIFORNIA

STID
3699

94603

Dear Ms. Eberle:

3428
We are pleased to submit this work plan to perform a ground water quality reconnaissance and quarterly ground water sampling at the referenced site, located at ~~3225~~ 3225 Ettie Street in Oakland, California. This work plan addresses the comments of the Alameda County Department of Environmental Health (ACDEH) letter dated March 31, 1992.

Introduction

5-16-90
Two 500-gallon underground gasoline storage tanks were recently removed from the site. Laboratory analysis of soil samples collected during tank removal did not detect contamination. However, a small amount of contaminated soil was removed from near the fill pipes.

Project Description

→ SP had up to 1300 ppm TPH-g
14 ppm B
etc.

The purpose of this investigation is to evaluate the potential impact of fuel hydrocarbons on ground water, if any, in the vicinity of the former fuel tank location. In accordance with the March 31, 1992 letter from the ACDEH, we would install one ground water monitoring well within ten feet of the eastern edge of the former tank location, sample the monitoring well initially, and monitor the ground water for a period of three additional quarters.

Purpose

minimum

Our scope of work includes the following:

Detailed Scope of Work

GROUND WATER QUALITY RECONNAISSANCE

1. Our field engineer or geologist would direct a subsurface exploration program; supervise and log one exploratory borings to a depth of approximately 30 feet. Soil samples would be obtained at approximately 5-foot depth intervals and monitored with an organic vapor meter (OVM) for volatile hydrocarbons.

Subsurface Exploration

The boring would then be converted to a 2-inch diameter "permanent" ground water monitoring

well in accordance with the guidelines of the Alameda County Zone 7 Water Agency. A typical monitoring well construction detail is attached to this work plan.

Soil cuttings and purged ground water will be stored on-site in properly labeled, EPA approved drums.

2. Approximately 24 hours after completion, the well would be developed prior to sampling in order for the samples to be representative of the ground water and to flush fine-grained material from the well and surrounding soil. Development would be accomplished by pumping of several well volumes of ground water.

Approximately 24 hours after well development, static water level would be measured in the well; the well would then be purged of several well casing volumes of ground water using a submersible pump or teflon bailer. Field water quality tests would consist of measuring the pH, conductivity, and temperature of the ground water. A ground water sample would be collected once the above parameters have stabilized and after purging a minimum of three well volumes. The well would be sampled using State and EPA approved sampling techniques.

3. The ground water samples collected from the well would be analyzed for total petroleum hydrocarbons (TPH) as gasoline, with additional scans for benzene, toluene, ethylbenzene, and xylenes (BTEX) (EPA Test Method 8015/8020).

Laboratory analyses will be performed by Anametrix Incorporated, which is a Department of Health Services certified analytical laboratory.

SAMPLING PROTOCOL

4. All sampling and drilling equipment would be thoroughly cleaned with an aqueous solution of tri-sodium phosphate and distilled water or steam cleaned. All soil samples would be collected in brass liners, the ends covered with aluminum foil and plastic end caps, securely taped and stored on ice. Ground water samples would be collected in the appropriate bottles, labeled, and placed on

Well Development and Sampling

Laboratory Analysis

Protocol

San Jose

ice for transportation to a state certified laboratory with chain of custody documentation.

REPORTS

5. As part of the well installation and sampling program, a ground water quality report would be prepared presenting the results of the investigation, summarizing the field and laboratory data, and presenting our conclusions and recommendations.

**Conclusions,
Recommendations,
and Report**

The report would include boring logs with OVM results, a site plan showing well/boring locations, and copies of all analytical data.

QUARTERLY GROUND WATER SAMPLING

6. To evaluate ground water quality on an ongoing basis, ground water samples would be collected from the on-site monitoring well for three additional quarters. Sampling protocols and laboratory analyses would be the same as discussed above.

a minimum of

Following each of the three sampling rounds, a brief supplemental report presenting the most recent laboratory data would be prepared.

The monitoring well installation will be scheduled within two weeks of receiving approval of this work plan by the ACDEH.

Schedule

If you have any questions, please call.

Very truly yours,

LOWNEY ASSOCIATES

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Michael Tietze

Glenn A. Romig
Glenn A. Romig



GAR:MT:PML

Copies: Addressee (1)
Tulloch Construction (1)
Attn: Mr. Bill Wendland