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OF: ACEHS
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DATE: 5/7/97
PROJECT NUMBER: 963 7136

TOTAL NUMBER OF PAGES (INCLUDING) COVER: 10

AMY,
HERE IS A DRAFT COPY. PENDING LAB COMMENTS
ON MEIL + ACETONE RESULTS. I WILL DELIVER
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KEN KISIEL

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DRAFT

May 7, 1997

Amy Leech
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

SUBJECT: ADDITIONAL SAMPLING RESULTS FOR 2364 BAUMANN AVENUE, SAN LORENZO, CALIFORNIA

This letter report presents the results of additional soil and groundwater sampling conducted by Golder Associates Inc. (Golder) for the property located at 2364 Baumann Avenue, San Lorenzo, California (Figure 1). The property is owned by Sarah Abrams and is currently unoccupied.

INTRODUCTION

The sampling activities were performed in response to the letter from Amy Leech of Alameda County Environmental Health Services dated April 28, 1997 regarding the review of Golder's Preliminary Environmental Site Assessment Report dated March 4, 1997. The purpose of the additional sampling was to further characterize soil and groundwater in the vicinity of the oil-stained compressor area, grit tank/catch basin, and paint booth as requested by the Alameda County Environmental Health Services.

The Preliminary Environmental Site Assessment (ESA) identified oil in soils near the oil-stained compressor area and grit tank/catch basin. Soil samples were not analyzed for Polynuclear Aromatics (PNAs) nor were groundwater samples collected. Therefore Alameda County Environmental Health Services requested that soil samples from these areas be analyzed for PNAs and that a groundwater sample be collected from beneath the grit tank/catch basin and be analyze for volatile organic compounds (VOCs) by EPA method 8260 and for PNAs by EPA Method 8270. Additionally, since the grit tank/catch basin was historically used for the clean-up of painting operation the groundwater sample should be analyzed for CAM 17 metals (EPA Method 6010A and 7470A). No soil or groundwater samples were collected beneath the former paint booth during the preliminary ESA; therefore the Alameda County Environmental Health Services requested that soil and groundwater samples be collected in this area and analyzed for VOCs (EPA Method 8260).

FIELD INVESTIGATION

Golder performed additional soil and groundwater sampling on May 2, 1997. Three borings were advanced; boring B-7 in the oil-stained compressor area (adjacent to boring B-2), boring B-8 next to the grit tank/catch basin (adjacent to boring B-1), and boring B-9 in the center of the former paint booth. The locations of the additional and previous borings are shown in Figure 2.

The borings were drilled with a hydraulic push drill rig and continuously cored. Soil samples were logged using Unified Soil Classification System. Borehole logs are included in Appendix

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A. Boring B-7 was drilled to 13 feet below ground surface (bgs), and borings B-8 and B-9 were drilled to 19 feet bgs. Soil samples were collected at 3 feet bgs from boring B-7, at 5 feet bgs from boring B-8, and at 5.5 feet bgs from boring B-9. Soil samples were collected in clean stainless steel tubes and transported under chain-of-custody to a State of California certified laboratory. Soil samples were analyzed for total petroleum hydrocarbons as oil (TPH-o) (EPA Method 3550/8015 (modified)), VOCs (EPA Method 8260), and PNAs (EPA Method 8270).

Groundwater samples were collected from temporary PVC stand-pipes placed to the bottom of borings B-8 and B-9. Groundwater samples were collected with a stainless steel bailer decontaminated prior to sampling each boring. Groundwater samples were decanted into laboratory provided sample containers. Groundwater sample B-9 was filtered in the field with a 0.45 micron filter and preserved for CAM 17 metals analysis. All groundwater samples were transported under chain-of-custody to a State of California certified laboratory. Groundwater samples were analyzed for VOCs (EPA Method 8260) and PNAs (EPA Method 8270). The groundwater sample from boring B-9 was also analyzed for CAM 17 metals (EPA Method 6010A and 7470A) and total petroleum hydrocarbons as oil (TPH-o) (EPA Method 3550/8015 (modified)).

RESULTS

Soil sample analytical reports are included in Appendix B and summarized in Table 1. No PNAs were detected in any soil samples. TPH-o was detected in all soil samples at concentrations ranging from 13 mg/kg to 156 mg/kg. VOCs were detected in soil samples B-8 and B-9 at levels above reporting limits. Detected VOCs include acetone and 2-butanone (MEK). Acetone was detected in borings B-8 and B-9 at concentrations of 43 µg/kg and 100 µg/kg, respectively. MEK was detected in borings B-8 and B-9 at concentrations of 14 µg/kg and 28 µg/kg, respectively.

below PRGs!

Groundwater sample analytical reports are included in Appendix B and summarized in Table 2. No PNAs were detected in groundwater samples. TPH as diesel fuel was detected in groundwater sample B-8 at a concentration of 0.64 mg/L. No TPH-o was detected in groundwater samples. Acetone was detected in groundwater sample B-9 at a concentration of 24 µg/L. No other VOCs were detected in groundwater samples. Detected metals are summarized in Table 2.

*B-8
640ppb
TPH-d
B-9
24ppb acetone*

All laboratory quality assurance/quality control were within acceptable criteria. Laboratory quality assurance/quality control data are included in Appendix B.

SUMMARY AND CONCLUSIONS

Three borings were drilled to collect soil and groundwater samples as requested by Alameda County Environmental Health Services. Soil samples were collected in the vicinity of previous sample locations associated to the oil-stained area and grit tank/catch basin. TPH as oil was detected in soil samples at concentrations consistent with preliminary sampling results. Soil and groundwater sample results indicate that no PNAs are associated to the oil in soil at the site. TPH as diesel fuel was detected in groundwater sample B-9 at a concentration of 0.64 mg/L. TPH as diesel detected in the groundwater is likely due to oil adhered to suspended soil particles contained in the groundwater sample given the relatively low concentration detected, turbidity of the sample, and the low solubility of oil in water.

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Acetone and MEK was detected in soil samples B-8 and B-9 and acetone was detected in the groundwater sample B-9. No other VOCs were detected. Acetone is a common laboratory contaminant and concentrations were at or near detection limits. Additionally, acetone and MEK were not previously detected in soil samples at the site. Therefore these constituents are likely the result of laboratory contamination and are not present at the site.

Due to the turbidity of the groundwater sample analyzed for CAM 17 metals after field filtering metal concentrations are likely representative of a total concentration instead of the dissolved fraction. No metal concentrations of concern that could be associated to historic site activities were detected relative to regional background levels in soil. Additionally shallow groundwater at the site is not a drinking water supply.

If you have any questions or require any additional information concerning the data and the discussion above, please contact the undersigned.

Sincerely,

GOLDER ASSOCIATES INC.

Ken Kisiel
Staff Hydrologist

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Kent R. Reynolds
Senior Hydrogeologist

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TABLES

Table 1
Summary of Analytical Soil Sample Chemical Results
 2364 Baumann Avenue,
 San Lorenzo, California

Boring Location	B-7	B-8	B-9
Sample Depth Interval (feet bgs)	5.5 - 6.0	5.0 - 5.5	3.0 - 3.5
Date Sampled	5/2/97	5/2/97	5/2/97
Analyte			
Polynuclear Aromatics (PNAs) (EPA Method 8270B)	ND	ND	ND
TPH as oil (EPA Method 3550/GC-FID)	690	410	270
Volatile Organic Compounds (VOCs) (EPA Method 8260)			
Acetone	ND	0.043	0.100
2-Butanone	ND	0.014	0.028
All other VOCs	ND	ND	ND

Notes: All concentrations reported in milligrams per kilogram (mg/kg)
 ND - None detected at or above laboratory reporting limits

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Table 2
Summary of Analytical Groundwater Sample Chemical Results
2364 Baumann Avenue,
San Lorenzo, California

Boring Location Date Sampled	B-8 5/2/97	B-9 5/2/97
Analyte		
Polynuclear Aromatics (PNAs) (EPA Method 8270B)	ND	ND
TPH as oil	ND	NT
TPH as diesel fuel (EPA Method 3550/GC-FID)	ND	NT
Volatile Organic Compounds (VOCs) (EPA Method 8260)		
Acetone	ND	24
All other VOCs	ND	ND
CAM 17 Metals (EPA Method 6010A and 7470A)		
Antimony	5.4	NT
Arsenic	58	NT
Barium	768	NT
Beryllium	ND	NT
Cadmium	ND	NT
Chromium	198	NT
Cobalt	48.3	NT
Copper	150	NT
Lead	29.8	NT
Mercury	.1	NT
Molybdeum	121	NT
Nickel	214	NT
Selenium	ND	NT
Silver	ND	NT
Thallium	11.9	NT
Vanadium	205	NT
Zinc	260	NT

Handwritten notes in table:
 - Above CAM 17 Metals: ^{1st MCL}
 - Next to Antimony: 6
 - Next to Arsenic: 50
 - Next to Barium: 2,000
 - Next to Chromium: 50 ~~100~~ ←
 - Next to Cobalt: ←
 - Next to Copper: 1,300 ←
 - Next to Lead: 50 ←
 - Next to Mercury: 2 ←
 - Next to Molybdeum: ←
 - Next to Nickel: 100 ←
 - Next to Silver: 2 ←
 - Next to Thallium: ←
 - Next to Vanadium: ←
 - Next to Zinc: (2nd MCL) 5,000

Handwritten notes on right:
 - 180 ppb
 - Cr ~~NT~~

Notes: All concentrations reported in milligrams per liter (µg/L)
 ND - None detected at or above laboratory reporting limits
 NT - Not Tested

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FIGURES

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