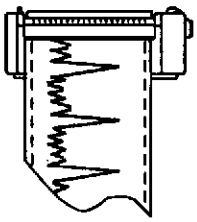
# FIRST QUARTER 1997
# QUARTERLY GROUNDWATER MONITORING PROGRAM REPORT

# GERMAN AUTOCRAFT
# 301 E. 14TH STREET, SAN LEANDRO, CALIFORNIA

Prepared by:



ENVIRONMENTAL TESTING & MGMT.
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Prepared For:

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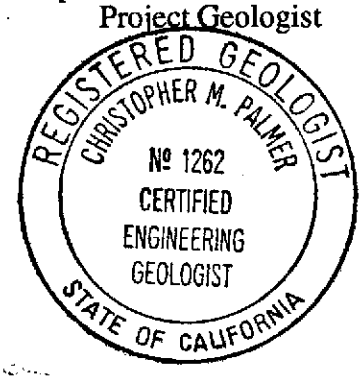



Report issued March 24, 1997

## I. INTRODUCTION

Following recommendations presented in the Soil and Groundwater Investigation (SWI) Workplan, dated June 7, 1995, Environmental Testing & Management (ETM) continued the Quarterly Monitoring Program (QMP) and related environmental activities completed during the calendar first quarter of 1997 at German Autocraft located at 301 East 14th Street in the City of San Leandro, Alameda County, California (**Figure 1**). This report is submitted to the Alameda County Department of Environmental Health (ACDEH) on behalf of Mr. Seung Lee, owner of German Autocraft.

The SWI involved an off-site soil and groundwater sampling program which defined the migration limit of the German Autocraft fuel release at approximately 240 feet northwest of the former tank pit in the shallow aquifer. The results of the SWI were presented in a technical report issued by ETM on July 12, 1996. To date, the ACDEH has not issued comment on the SWI report. The project is entering the corrective action phase. The QMP is continued to meet the requirements of the ACDEH.

The purpose of this QMP is to evaluate potential impacts from soil contamination on groundwater in the area of six former underground fuel storage tanks (USTs) that were removed in 1990. Data accumulated from the QMP will be used to assess seasonal groundwater level fluctuations, changing groundwater quality conditions, and provide data which will support the development of corrective action plans at the site.

The QMP presents a description of the groundwater monitoring activities, a compilation of groundwater quality and gradient data, maintenance of the passive skimmer system in the former tank pit area, and a brief description of the progress of the development of corrective actions at the site.

## II. BACKGROUND

German Autocraft is located at 301 E. 14th Street in San Leandro (see Location Map, **Figure 1**). The approximate locations of buildings, property boundaries, and adjacent streets are presented on the Site Map, **Figure 2.** For detailed descriptions of prior environmental activities at the subject site, please refer to the references section of this report for a listing of reports which have been submitted to the ACDEH.

## III. WORK PERFORMED DURING FIRST QUARTER, 1997

Work included groundwater level monitoring and sampling, maintenance of the passive skimmer system installed in MW-4, data analysis, and report preparation. Activity highlights during this period are as follows:

- **January 28, 1997** - ETM measured groundwater elevations and collected groundwater samples from monitoring wells MW-1, MW-2, and MW-3. ETM inspected each well including MW-4 for the presence of floating product or sheen. The samples from MW-1, MW-2, and MW-3 were submitted to a Department of Health Services (DHS)-certified laboratory for analysis of Total Petroleum Hydrocarbons as Gasoline (TPHg), and Benzene, Toluene, Ethyl Benzene, and Xylenes (BTEX). No floating product was recovered from the passive skimmer system in MW-4. The height of the skimmer system was adjusted to account for the changing groundwater potentiometric surface elevation.

## IV. GROUNDWATER ELEVATION AND GRADIENT

Static groundwater level elevation data collected from on-site groundwater wells on January 28, 1997, indicated that the elevation of the shallow groundwater surface beneath the site ranged from 32.71 to 33.02 feet above mean sea level. The estimated groundwater flow direction was to the

southwest (approximate gradient = 0.004 ft/ft) which is consistent with the flow direction in the preceding quarter.

**Table 1** presents the recent groundwater elevation data and **Figures 3,** shows estimated groundwater flow direction as interpreted from the groundwater potentiometric elevation data.

The potentiometric groundwater elevation at the site was observed to rise over four (4) feet in one month compared to the last gauging event of the fourth quarter 1996 on December 27, 1996. It is noted that the sharp rise in groundwater potentiometric surface elevation over this period coincided with heavy rainfall in the region during the month of January.

The observed hydraulic gradient at the subject site is very flat. The gradient may change due to groundwater recharge or extraction, seasonal changes and natural outflow.

## V. GROUNDWATER SAMPLING AND ANALYTICAL RESULTS

On January 28, 1997, groundwater samples were collected from MW-1, MW-2, and MW-3 following the groundwater sampling procedures presented in the SWI work plan. Well sampling procedures are presented in **Appendix A.** The groundwater samples were analyzed for TPHg, BTEX using EPA Methods 5030, modified 8015, and 8020, by Entech Analytical Labs, Inc. of Sunnyvale, California. The laboratory report and chain-of-custody documents are included in **Appendix B.** The field sampling data sheets are presented in **Appendix C.** The quality assurance/quality control description is included in **Appendix D.** Historic groundwater chemical test data is presented in **Table 4.**

Compared to the previous quarter, the results of the recent groundwater testing showed a general decrease in TPHg and BTEX concentrations in MW-1, MW-2, and MW-3. All of the constituents

continue to exceed their respective California Drinking Water Maximum Contaminant Levels (MCLs) or Federal Action Levels (AL) (**Table 3**).

The sample from MW-1, located upgradient of the former gasoline tank area, contained: TPHg at 120,000 micrograms per liter (µg/L) (blind duplicate: 130,000 µg/L); benzene at 5,600 µg/L (blind duplicate: 5,500 µg/L) which exceeds its MCL of 1 µg/L; toluene at 15,000 µg/L (blind duplicate: 15,000 µg/L) which exceeds its MCL of 150 µg/L; ethyl benzene at 2,100 µg/L of (blind duplicate: 2,300 µg/L)which exceeds its MCL of 700 µg/L, and ; total xylenes at 11,000 µg/L (blind duplicate: 12,000 µg/L)which exceeds its MCL of 1,750 µg/L.

The sample from MW-2, located down gradient of the former gasoline tank area, contained 46,000 µg/L of TPHg, 1,500 µg/L of benzene, 94 µg/L of toluene, 1,800 µg/L of ethyl benzene, and 2,000 µg/L of total xylenes.

Monitoring well MW-3, also located down gradient of the former gasoline tank area, contained 70,000 µg/L of TPHg, 5,500 µg/L of benzene, 2,600 µg/L of toluene, 2,200 µg/L of ethyl benzene, and 8,700 µg/L of total xylenes.

## VI. CONCLUSIONS

Available data, including data from the first quarter 1997 monitoring events, suggest that groundwater flow patterns beneath the site are consistent with previous monitoring events during 1995 and 1996. Groundwater flowed toward the southwest at the single gauging event of the first calendar quarter of 1997.

The recent groundwater sampling event showed a general decrease in concentrations of TPHg and BTEX in MW-1, MW-2, and MW-3 from those concentrations measured in the previous quarter.

The concentrations of the constituents of concern in all of the wells sampled remain above their respective MCL.

## VII. RECOMMENDATIONS

We recommend that the monitoring wells continue to be monitored and gauged on a quarterly basis to comply with the ACDEH requirements and to assess trends in constituent concentrations over time. The data will be used to support development of a corrective action plan at the site.

## VIII. LIMITATIONS

The data, information, interpretations and recommendations contained in this report are presented to meet current suggested regulatory requirements for determining groundwater quality on the site. Environmental Testing & Mgmt. is not responsible for laboratory errors or completeness of other consultants reports, and no warranty is made or implied therein.

The conclusions and professional opinions presented herein were developed by ETM in accordance with current regulatory guidance and the opinions expressed are subject to revisions in light of new information which may develop in the future.

## IX. REFERENCES


California Code of Regulations, Title 22, 66260.21, "Environmental Health Standards", 6/23/95.

Code of Federal Regulations, 40 CFR 260, "Hazardous Waste Management System: General, 7/1/94.

Chemist Enterprises, *Soil and Water Investigation at German Autocraft, 301 East 14th Street, San Leandro, California*, April 12, 1995

The Environmental Construction Company, *Preliminary Soil and Groundwater Contamination Assessment, German Autocraft, 301 East 14th Street, San Leandro, California,* February 1991.

The Environmental Construction Company, *Underground Storage Tank Removals, German Autocraft, 301 East 14th Street, San Leandro, California,* November 1990.

Environmental Testing and Management, *Fourth Quarter 1996 Quarterly Groundwater Monitoring Report, German Autocraft, 301 East 14th Street, San Leandro, California*, January 21, 1997.

Environmental Testing and Management, *Third Quarter 1996 Quarterly Groundwater Monitoring Report, German Autocraft, 301 East 14th Street, San Leandro, California*, November 18, 1996.

Environmental Testing and Management, *Second Quarter 1996 Environmental Activities Report, German Autocraft, 301 East 14th Street, San Leandro, California*, August 8, 1996.

Environmental Testing and Management, *Continued Soil and Water and Offsite Investigation at German Autocraft, 301 East 14th Street, San Leandro, California*, July 12, 1996.

Environmental Testing and Management, *First Quarter 1996 Environmental Activities Report, German Autocraft, 301 East 14th Street, San Leandro, California*, May 20, 1996.

Environmental Testing and Management, *Third Quarter 1995 Environmental Activities Report, German Autocraft, 301 East 14th Street, San Leandro, California*, October, 1995.

Environmental Testing and Management, *Fourth Quarter 1995 Environmental Activities Report, German Autocraft, 301 East 14th Street, San Leandro, California*, February, 1995.

Woodward-Clyde Consultants, *Hydrogeology of Central San Leandro and Remedial Investigation of Regional Groundwater Contamination, San Leandro Plume, San Leandro, California, Volume I*, December 23, 1993.

## TABLE 1. FIRST QUARTER 1997 GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION DATA

| | | January 28, 1997 | |
|---|---|---|---|
| WELL | CASING ELEVATION[1] | Depth to Groundwater | Groundwater Elevation |
| MW-1 | 49.61 | 16.59 | 33.02 |
| MW-2 | 50.14 | 17.43 | 32.71 |
| MW-3 | 49.44 | 16.66 | 32.78 |

[1]Elevations in feet above mean sea level.

## TABLE 2. HISTORIC GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION DATA

| | Groundwater Surface Elevation[2] | | |
|---|---|---|---|
| DATE | MW-1 | MW-2 | MW-3 |
| 12/31/90 | 19.15[3] | - | - |
| 2/10/95 | 29.59 | 29.62 | 29.57 |
| 7/7/95 | 26.63 | 26.47 | 26.50 |
| 8/10/95 | 25.58 | 25.40 | 25.44 |
| 9/11/95 | 24.68 | 24.49 | 24.54 |
| 10/2/95 | 24.12 | 23.94 | 24.00 |
| 11/7/95 | 23.36 | 23.13 | 23.21 |
| 12/8/95 | 22.77 | 22.55 | 22.62 |
| 1/12/96 | 24.35 | 24.20 | 24.25 |
| 2/12/96 | 29.04 | 29.03 | 29.00 |
| 3/12/96 | 31.75 | 31.60 | 31.67 |
| 4/13/96 | 29.43 | 29.25 | 29.26 |
| 5/14/96 | 27.89 | 27.68 | 27.71 |
| 6/20/96 | 27.19 | 26.97 | 27.00 |
| 7/26/96 | 25.95 | 25.74 | 25.76 |
| 8/19/96 | 25.16 | 24.97 | 25.01 |
| 9/17/96 | 24.44 | 24.22 | 24.27 |
| 10/21/96 | 23.63 | 23.43 | 23.48 |

[2]Elevations in feet above mean sea level.
[3]This elevation was determined by using the depth of 30.46' measured by The Environmental Construction Company shortly after installation of MW-1 on December 31, 1990 and the surveyed top of casing elevation of 49.61 at MW-1 on January 6, 1995.

| DATE | MW-1 | MW-2 | MW-3 |
|---|---|---|---|
| 11/27/96 | 24.28 | 24.09 | 24.13 |
| 12/27/96 | 28.23 | 28.03 | 28.11 |
| 1/28/97 | 33.02 | 32.71 | 32.78 |

## TABLE 3. GROUNDWATER CHEMICAL TEST RESULTS

Locations: MW-1, MW-2, MW-3

Date Sampled: January 28, 1997 Units: µg/L

| WELL | TPHg | BENZENE | TOLUENE | ETHYL-BENZENE | XYLENES | MtBE[4] |
|---|---|---|---|---|---|---|
| MW-1 | 120,000 | 5,600 | 15,000 | 2,100 | 11,000 | N/A |
| MW-1[5] | 130,000 | 5,500 | 15,000 | 2,300 | 12,000 | N/A |
| MW-2 | 46,000 | 1,500 | 94 | 1,800 | 2,000 | N/A |
| MW-3 | 70,000 | 5,500 | 2,600 | 2,200 | 8,700 | N/A |
| MCL/AL[6] | - | 1 | 150 | 700 | 1,750 | 35 |

[4]MtBE = methyl-tert-butyl-ether. The California Regional Water Quality Control Board initiated the requirement of quantitation of MtBE as an additional analyte for EPA Method 8020 as of January 12, 1996.
[5]This sample was labeled 'MW-4" and submitted to the lab as a blind duplicate.
[6]Maximum Contaminant Level or Action Level as established by the State of California, Division of Drinking Water and Environmental Management, Department of Health Services "Summary, Maximum Contaminant and Action Levels" November, 1994.

## TABLE 4. HISTORIC GROUNDWATER CHEMICAL TEST RESULTS

Locations: MW-1, MW-2, MW-3

Units: µg/L

| WELL | DATE | TPHg | BENZENE | TOLUENE | ETHYL-BENZENE | XYLENES | MtBE |
|---|---|---|---|---|---|---|---|
| MW-1 | 12/31/90 | 51,000 | 2,200 | 1,200 | <0.5 | 760 | N/A[7] |
| | 1/6/95 | 110,000 | 13,000 | 15,000 | 4,800 | 13,000 | N/A |
| | 1/6/95 | 580,000 | 29,000 | 41,000 | 17,000 | 43,000 | N/A |
| | 7/6/95 | 49,000 | 8,000 | 17,000 | 1,900 | 9,700 | N/A |
| | 7/6/95 | 47,000 | 4,800 | 9,500 | 930 | 5,000 | N/A |
| | 10/2/95 | 120,000 | 16,000 | 36,000 | 3,300 | 17,000 | N/A |
| | 10/2/95 | 160,000 | 20,000 | 47,000 | 5,000 | 23,000 | N/A |
| | 1/12/96 | 1,100,000 | 11,000 | 18,000 | 15,000 | 51,000 | *18,000*[8] |
| | 1/12/96 | 98,000 | 2,100 | 4,600 | 2,500 | 10,000 | <5,000 |
| | 4/13/96 | 53,000 | 1,300 | 2,900 | 2,100 | 10,000 | <5,000 |
| | 4/13/96 | 58,000 | 820 | 3,600 | 2,800 | 12,000 | <5,000 |
| | 7/26/96 | 91,000 | 2,900 | 7,200 | 2,900 | 14,000 | <5,000 |
| | 7/26/96 | 67,000 | 2,300 | 5,500 | 2,500 | 11,000 | <5,000 |
| | 10/21/96 | 210,000 | 4,800 | 17,000 | 2,300 | 15,000 | N/A |
| | 10/21/96 | 210,000 | 5,400 | 18,000 | 2,600 | 11,000 | N/A |
| | 1/28/97 | 120,000 | 5,600 | 15,000 | 2,100 | 11,000 | N/A |
| | 1/28/97 | 130,000 | 5,500 | 15,000 | 2,300 | 12,000 | N/A |

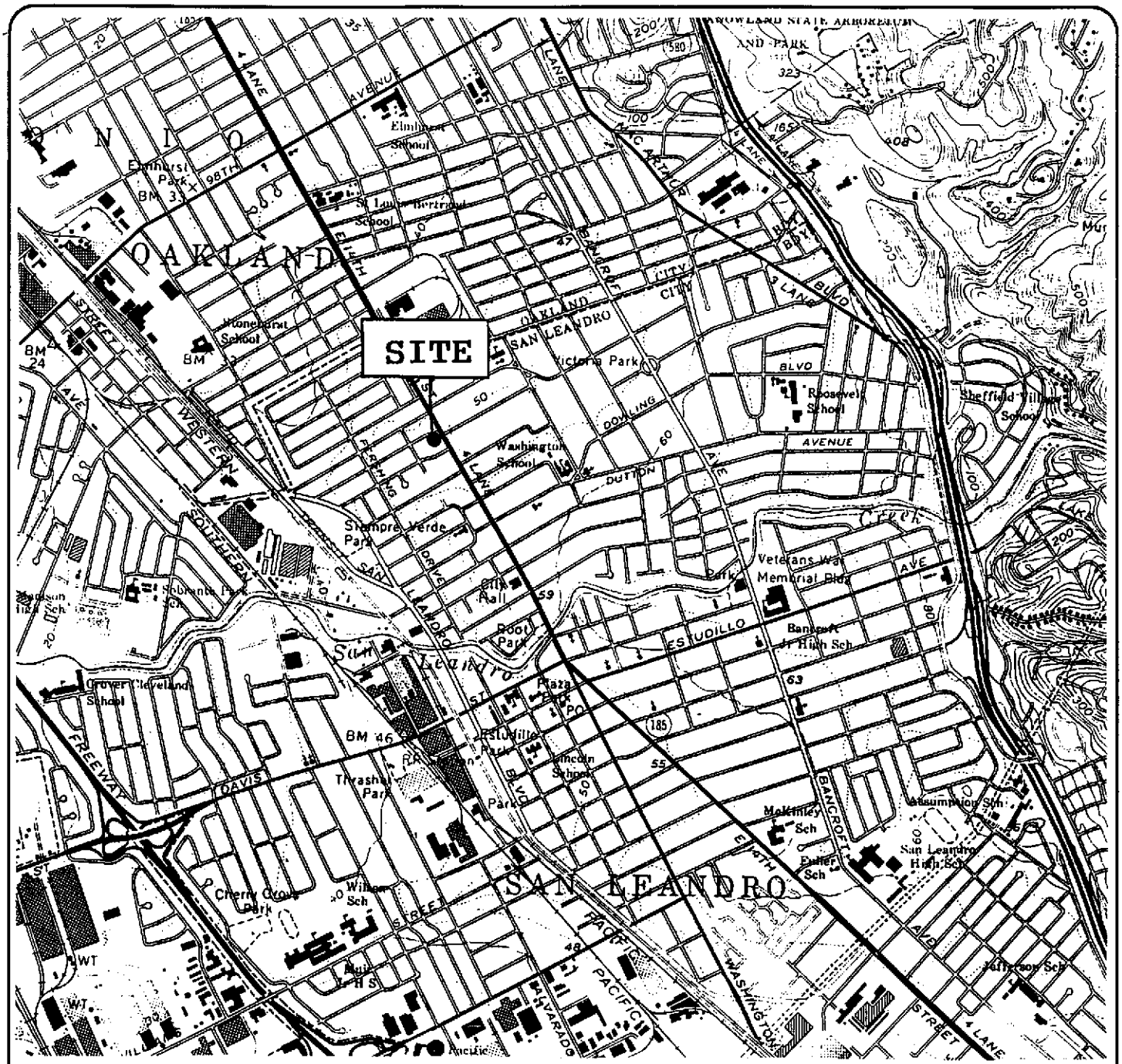
[7]N/A = Not Analyzed. The California Regional Water Quality Control Board initiated the requirement of quantitation of MtBE as an additional analyte for EPA Method 8020 as of January 12, 1996. The samples not analyzed for MtBE in this table pre-date the recent new requirement.

[8]This value may be inaccurate. Please refer to the second quarter 1996 report which includes an evaluation of MtBE which cast doubt on the validity of this laboratory test.

| WELL | DATE | TPHg | BENZENE | TOLUENE | ETHYL-BENZENE | XYLENES | MtBE |
|---|---|---|---|---|---|---|---|
| MW-2 | 1/6/95 | 980,000 | 9,400 | 5,600 | 19,000 | 42,000 | N/A |
| | 7/6/95 | 71,000 | 5,300 | 1,800 | 6,100 | 9,000 | N/A |
| | 10/2/95 | 40,000 | 2,900 | 200 | 2,800 | 3,600 | N/A |
| | 1/12/96 | 260,000 | 2,600 | 2,200 | 6,300 | 7,800 | <12,500 |
| | 4/13/96 | 30,000 | 1,900 | 370 | 2,300 | 2,400 | *520*[9] |
| | 7/26/96 | 180,000 | 1,400 | 640 | 2,100 | 5,000 | <5,000 |
| | 10/21/96 | 62,000 | 2,100 | <0.5 | 2,100 | 2,700 | N/A |
| | 1/28/97 | 46,000 | 1,500 | 94 | 1,800 | 2,000 | N/A |
| MW-3 | 1/6/95 | 740,000 | 11,000 | 2,300 | 8,300 | 28,000 | N/A |
| | 7/6/95 | 86,000 | 12,000 | 8,600 | 4,900 | 19,000 | N/A |
| | 10/2/95 | 100,000 | 15,000 | 11,000 | 6,000 | 20,000 | N/A |
| | 1/12/96 | 84,000 | 6,500 | 4,100 | 3,200 | 12,000 | <5,000 |
| | 4/13/96 | 48,000 | 7,600 | 3,600 | 2,800 | 9,400 | <2,500 |
| | 7/26/96 | 62,000 | 6,400 | 3,100 | 3,000 | 11,000 | <2,500 |
| | 10/21/96 | 110,000 | 5,400 | 2,400 | 2,500 | 9,800 | N/A |
| | 1/28/97 | 130,000 | 5,500 | 15,000 | 2,300 | 12,000 | N/A |

1/28/97

[9]This value may be inaccurate. Please refer to the second quarter 1996 report which includes an evaluation of MtBE which cast doubt on the validity of this laboratory test.




EXPLANATION:

Scale: 1"=2000'

0 1000' 2000'

Base Map Reference: U.S.G.S. San Leandro 7.5 Minute Topographic, Quadrangle.

N

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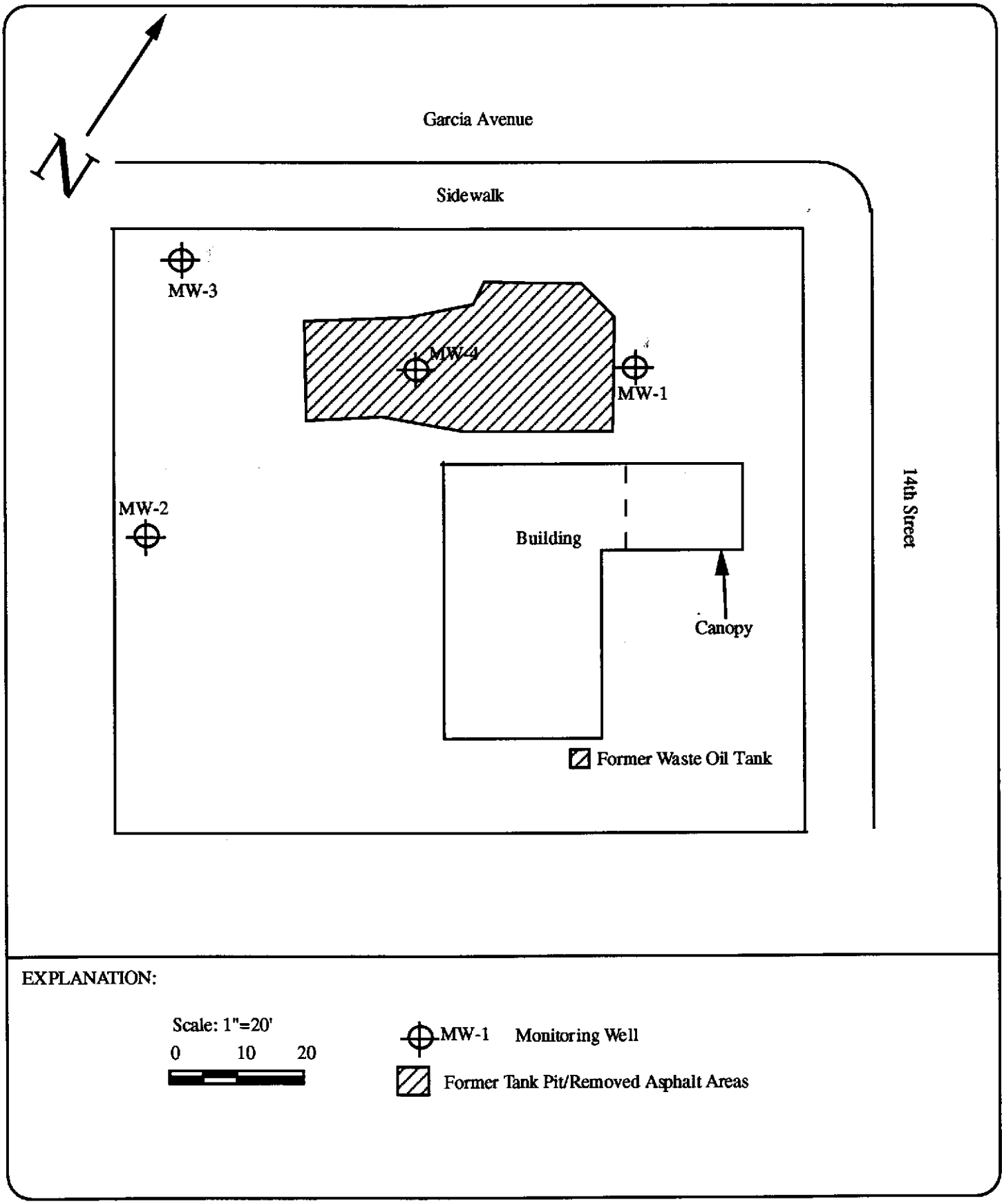
SAN JOSE, CALIFORNIA 95113

LOCATION MAP
German Autocraft
301 East 14th Street
San Leandro, California

Figure 1

Project No. 94-52
Date: 3/97




EXPLANATION:

Scale: 1"=20'

0 10 20

MW-1 Monitoring Well

Former Tank Pit/Removed Asphalt Areas

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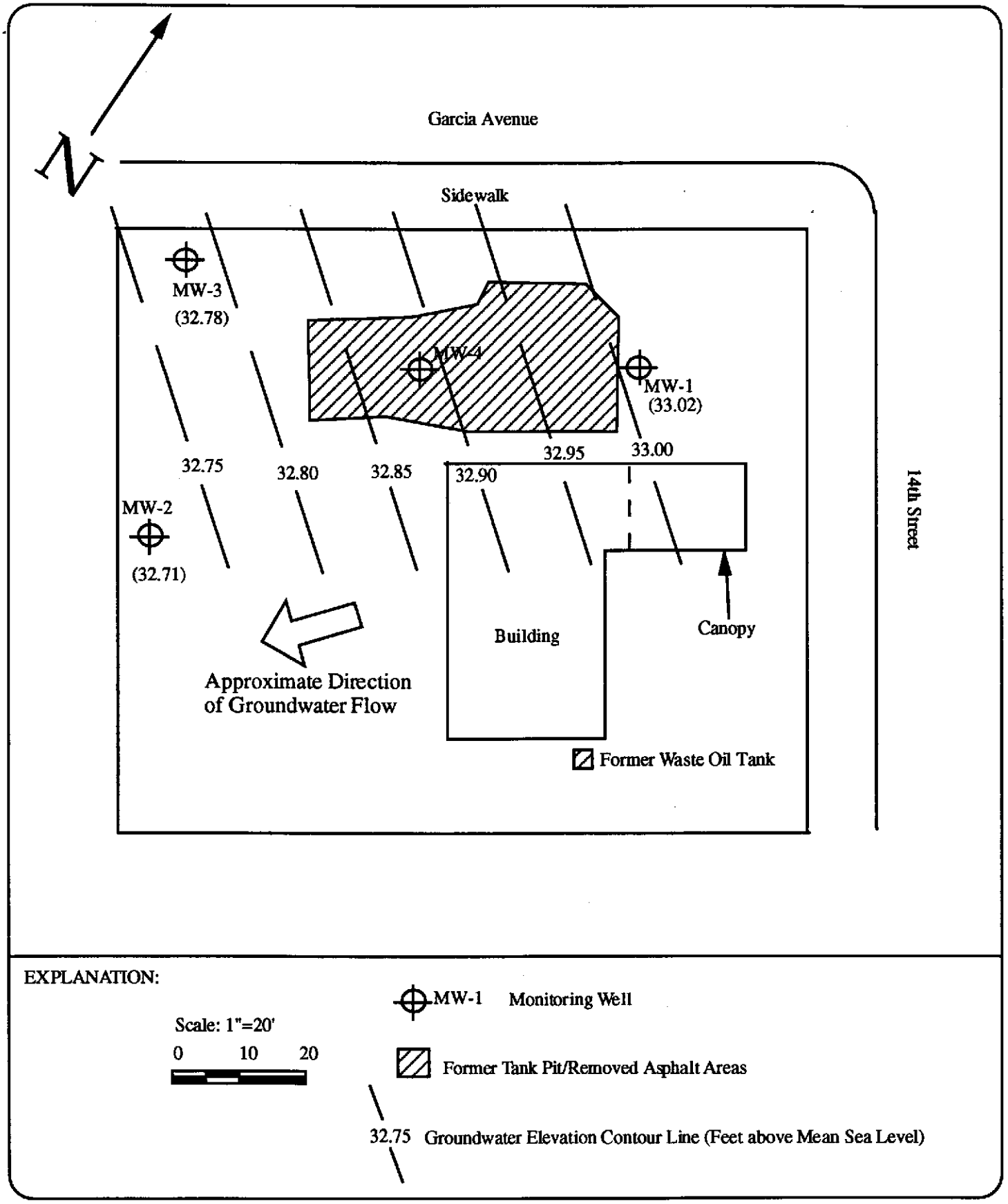
SITE MAP

German Autocraft
301 East 14th Street
San Leandro, California

Figure 2

Project No. 94-52
Date: 3/97




EXPLANATION:

MW-1 Monitoring Well

Scale: 1"=20'

0 10 20

Former Tank Pit/Removed Asphalt Areas

32.75 Groundwater Elevation Contour Line (Feet above Mean Sea Level)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GROUNDWATER POTENTIOMETRIC SURFACE
ELEVATION CONTOUR MAP 1/28/97
German Autocraft
301 East 14th Street
San Leandro, California

Figure 3

Project No.
94-52
Date: 3/97

## APPENDIX A: FIELD SAMPLING AND GAUGING PROCEDURES

### GROUNDWATER LEVEL MEASURING AND SAMPLING:

Sampling procedures commenced with measuring static water levels in monitoring wells using an electronic water level indicator accurate to 0.01 inch. Groundwater samples were collected using Teflon™ or stainless steel bailers. The bailers were cleaned prior to lowering into the groundwater by washing with Liquinox or laboratory grade detergent, rinsing with tap water, and followed by a distilled water rinse. Floating product thickness was measured by gently lowering a bailer or preferably an interface sampler into the well casing. The liquid level in the sampler was allowed to equilibrate with the liquid level in the well. After raising the sampler, the thickness of floating product, if present, was measured in the transparent sampler with a ruler or noting the presence of sheen and odor. The wells were then purged a minimum of four well volumes and/or until groundwater temperature, pH, and specific conductance stabilized. Groundwater sampling field data sheets are presented in **Appendix C.**

Groundwater samples were collected by gently pouring from the bailer into a 40-milliliter vial until a positive meniscus formed at the top of the vial, each vial was capped, and visually inspected to make sure no bubbles were present. Sample containers are labeled for sampling point reference and chilled on ice immediately after collection. Chain-of-custody documentation was maintained until the samples were received by the laboratory.

# Entech Analytical Labs, Inc.

CA ELAP# 1369

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**Attn: Tom Price**
**Environmental Testing & Management**
**2916 Magliocco Dr., Suite #2**
**San Jose, CA 95125**

| | |
|---|---|
| Date: | 2/3/97 |
| Date Received: | 1/28/97 |
| Date Analyzed: | 1/29-1/30/97 |
| Project: | German Autocraft |
| Sampled By: | Client |

## Certified Analytical Report

**Water Sample Analysis:**

| Sample ID | Sample Date | Sample Time | Lab# | DF | TPH-Gas | Benzene | Toluene | Ethyl Benzene | Xylene |
|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 1/28/97 | | D2299 | 800 | **120,000** | **5,600** | **15,000** | **2,100** | **11,000** |
| MW-2 | 1/28/97 | | D2300 | 40 | **46,000** | **1,500** | **94** | **1,800** | **2,000** |
| MW-3 | 1/28/97 | | D2301 | 160 | **70,000** | **5,500** | **2,600** | **2,200** | **8,700** |
| MW-4 | 1/28/97 | | D2302 | 200 | **130,000** | **5,500** | **15,000** | **2,300** | **12,000** |

1. DLR=DF x PQL
2. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #1369)

**Summary of Methods and Detection Limits:**

| | TPH-Gas | Benzene | Toluene | Ethylbenzene | Xylenes |
|---|---|---|---|---|---|
| EPA Method # | 8015M | 8020 | 8020 | 8020 | 8020 |
| Units | µg/liter | µg/liter | µg/liter | µg/liter | µg/liter |
| PQL | 50.0 µg/liter | 0.5 µg/liter | 0.5 µg/liter | 0.5 µg/liter | 0.5 µg/liter |

Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

PQL=Practical Quantitation Limit
ND=None Detected at or above DLR

**Entech Analytical Labs, Inc.**

**525 Del Rey Avenue, Suite E**
**Sunnyvale, CA 94086**

## QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG5970129
Matrix: Water
Units: µg/L

Date Analyzed: 01/29/97
Quality Control Sample: Blank Spike

| PARAMETER | Method # | MB µg/L | SA µg/L | SR µg/L | SP µg/L | **SP % R** | SPD µg/L | **SPD %R** | RPD | QC LIMITS (ADVISORY) RPD | QC LIMITS (ADVISORY) %R |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 8020 | <0.5 | 25 | 0.0 | 30.21 | **121** | 30.41 | **122** | 0.7 | 25 | 50-150 |
| Toluene | 8020 | <0.5 | 25 | 0.0 | 26.96 | **108** | 27.69 | **111** | 2.7 | 25 | 50-150 |
| Ethyl Benzene | 8020 | <0.5 | 25 | 0.0 | 28.46 | **114** | 29.47 | **118** | 3.5 | 25 | 50-150 |
| Xylenes | 8020 | <0.5 | 75 | 0.0 | 79.58 | **106** | 82.19 | **110** | 3.2 | 25 | 50-150 |
| Gasoline | 8015 | <50.0 | 625 | 0 | 584 | **93** | 584 | **93** | 0.0 | 25 | 50-150 |

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

**Entech Analytical Labs, Inc.**

**525 Del Rey Avenue, Suite E**
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## QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG5970130
Matrix: Water
Units: µg/L

Date Analyzed: 01/30/97
Quality Control Sample: Blank Spike

| PARAMETER | Method # | MB µg/L | SA µg/L | SR µg/L | SP µg/L | **SP % R** | SPD µg/L | **SPD %R** | RPD | QC LIMITS (ADVISORY) RPD | QC LIMITS (ADVISORY) %R |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 8020 | <0.5 | 25 | 0.0 | 29.42 | **118** | 30.27 | **121** | 2.8 | 25 | 50-150 |
| Toluene | 8020 | <0.5 | 25 | 0.0 | 26.36 | **105** | 28.01 | **112** | 6.1 | 25 | 50-150 |
| Ethyl Benzene | 8020 | <0.5 | 25 | 0.0 | 28.51 | **114** | 28.96 | **116** | 1.6 | 25 | 50-150 |
| Xylenes | 8020 | <0.5 | 75 | 0.0 | 80.47 | **107** | 84.09 | **112** | 4.4 | 25 | 50-150 |
| Gasoline | 8015 | <50.0 | 625 | 0 | 569 | **91** | 546 | **87** | 4.1 | 25 | 50-150 |

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- NC: Not Calculated

# Entech Analytical Labs, Inc.

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## Chain of Custody/Analysis Work Order

Client: German Aviocraft .
Address: 301 E 14th St .
San Leandro .
Contact: Mr. Lee .
Telephone #: 510 638 5473 .
Date Received:
Turn Around:

Project ID: German Autocraft
Purchase Order #:

Sampler/Company: Tom Price/Environmental Testing & Mgmt. Telephone #: 408-248 5892 .

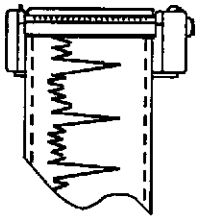
Special Instructions/Comments
Normal Turn Around Time .

**LAB USE ONLY**

Samples arrived chilled and intact:
(Yes) No
Notes:

| Sample Information | | | | | | | | Requested Analysis | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab # | Sample ID | Grab/ Composite | Matrix | Date Collected | Time Collected | Pres. | Sample Container | TPHg/ BTEX. | | | | | | | |
| mw-1 | D2299 | Grab | W | 1/28/97 | — | NO | 40ml VIAS. | ✓ | | | | | | | |
| mw-2 | D2300 | " | W | " | — | " | " | ✓ | | | | | | | |
| mw-3 | D2301 | " | W | " | — | " | " | ✓ | | | | | | | |
| mw-4 | D2302 | " | W | " | — | " | " | ✓ | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

| Relinq. By: | Received By: | Date | Time |
|---|---|---|---|
| Tom Price | Allen A | 1-28-97 | 3:42PM |
| Relinq. By: | Received By: | Date | Time |
| Relinq/ By: | Received By: | Date | Time |



ENVIRONMENTAL TESTING & MGMT.
2916 MAGLIOCCO DRIVE, SUITE #2
SAN JOSE, CALIFORNIA 95128
408.248.5892 FAX: 408.248.5899

Date: 1/28/97 Project Name: German Autocraft.

Project No.: _____ Well No./Description: MW-1

Depth of Well: _____ 1 Well Volume: 3.2

Depth to Water: 16.59 4 Well Volumes: 12.8

Casing Diameter: ✓ 2" __ 4" Actual Volume Purged: 13.

Calculations: .45 · 20 · 0.16 = 3.2

2" - * 0.1632
4" - * 0.653

i

Purge Method: ✓ Bailer ___ Displacement Pump ___ Impinger/Vacuum ___

Sample Method: ✓ Bailer ___ Other Specify: _____

Sheen: ___ No ✓ Yes, Describe heavy rainbow

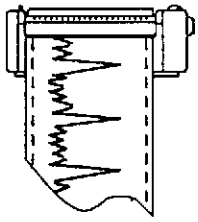
Odor: ___ No ✓ Yes, Describe strong HC

Field Measurements:

| Time | Volume | pH | Temp. | E.C. | Color |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Remarks: _____

Sampler: _____



ENVIRONMENTAL TESTING & MGMT.
2916 MAGLIOCCO DRIVE, SUITE #2
SAN JOSE, CALIFORNIA 95128
408.248.5892 FAX: 408.248.5899

Date: 1/28/97 Project Name: GA.

Project No.: _____ Well No./Description: MW-2

Depth of Well: 33.8 1 Well Volume: 2.5

Depth to Water: 17.43 4 Well Volumes: 10

Casing Diameter: ✓2" __4" Actual Volume Purged: 10

Calculations: 16.4' · 0.16 = 1.6 + 0.96 = 2.5

2" - * 0.1632
4" - * 0.653

Purge Method: ___Bailer ___Displacement Pump ___Impinger/Vacuum ___

Sample Method: ___Bailer ___ Other Specify: _____

Sheen: ___ No ✓Yes, Describe moderate

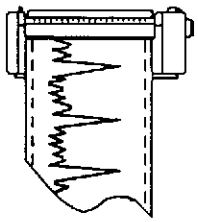
Odor: ___ No ✓Yes, Describe mild rainbow

Field Measurements:

| Time | Volume | pH | Temp. | E.C. | Color |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Remarks: 3 1 6 . 9 6

Sampler: _____



ENVIRONMENTAL TESTING & MGMT.
2916 MAGLIOCCO DRIVE, SUITE #2
SAN JOSE, CALIFORNIA 95128
408.248.5892 FAX: 408.248.5899

Date: 1/28/97 Project Name: GA.

Project No.: _____ Well No./Description: MW-3

Depth of Well: 35.30 1 Well Volume: ~~4g~~ 2.9

Depth to Water: 16.66 4 Well Volumes: ~~16g.~~ 11.6

Casing Diameter: __ 2" __ 4" Actual Volume Purged: 12

Calculations: ~~25 x 0.16 = 2.5 + 1.5 = 4g~~

2" - * 0.1632
4" - * 0.653

18.6 x 0.16 = 1.86 + 1.08 = 2.9

Purge Method: ✓ Bailer ___ Displacement Pump ___ Impinger/Vacuum ___

Sample Method: ✓ Bailer ___ Other Specify: _____

Sheen: ___ No ✓ Yes, Describe barely detectable rainbow sheen.

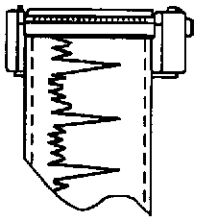
Odor: ___ No ✓ Yes, Describe faint HC

Field Measurements:

| Time | Volume | pH | Temp. | E.C. | Color |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Remarks: 4
18
6
to 8

Sampler: _____



ENVIRONMENTAL TESTING & MGMT.
2916 MAGLIOCCO DRIVE, SUITE #2
SAN JOSE, CALIFORNIA 95128
408.248.5892 FAX: 408.248.5899

Date: 1/08/97 Project Name: GA

Project No.: _____ Well No./Description: MW-4

Depth of Well: _____ 1 Well Volume: _____

Depth to Water: 16.86 4 Well Volumes: _____

Casing Diameter: ✓2" __4" Actual Volume Purged: _____

Calculations:

2" - * 0.1632
4" - * 0.653

Purge Method: ___Bailer ___Displacement Pump ___Impinger/Vacuum ___

Sample Method: ___Bailer ✓Other Specify: Interface Sampler.

Sheen: ___No ✓Yes, Describe very slight - barely visible.

Odor: ___No ✓Yes, Describe Slight hc.

Field Measurements:

| Time | Volume | pH | Temp. | E.C. | Color |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Remarks: Adjusted skimmer ht.

Sampler: _____

## APPENDIX D: QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

The quality assurance/quality control measures used for groundwater sampling conducted on January 28, 1997 included the following:

- Groundwater samples were collected in triplicate.
- One duplicate groundwater sample was collected from MW-1. This sample was labeled "MW-4" and submitted for testing as a blind duplicate along with the other samples.

## APPENDIX E: REPORT DISTRIBUTION LIST

Copies of this report have been mailed to the attention of the following parties:

Seung Lee
German Autocraft
301 E. 14th Street
San Leandro, California 94577

Scott O. Seery
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, #250
Alameda, California 94502-6577

Kevin Graves
Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, California 94612