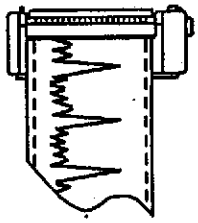
THIRD QUARTER 1996
QUARTERLY GROUNDWATER MONITORING PROGRAM REPORT

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

Prepared by:



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

Prepared For:

Mr. Seung Lee
301 E. 14th Street
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Project Manager

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No. 06648
Expires: 6/30/97
STATE OF CALIFORNIA

Christopher M. Palmer, RG, CEG, HG
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REGISTERED GEOLOGIST
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CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Report issued November 18, 1996

I. INTRODUCTION

In accordance with recommendations set forth 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 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 lateral 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 THIRD QUARTER, 1996

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:

- **July 26, 1996** - 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. A hydrocarbon sheen on the water was observed in wells MW-1, MW-2, and MW-4. MW-3 did not exhibit sheen, however, detectable hydrocarbon odors in the field were apparent. 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), and Methyl-tert-butyl-ether (MtBE).
- **August 19, 1996** - ETM measured groundwater elevations in monitoring wells MW-1, MW-2, and MW-3. ETM inspected each well for the presence of floating product or sheen. A hydrocarbon sheen on the water was observed for well MW-1. Wells MW-2 and MW-3, and MW-4 did not exhibit sheen, however, detectable hydrocarbon odors were apparent. No floating product was recovered from the passive skimmer system in MW-4. The skimmer elevation was adjusted to account for the changing groundwater elevation.

- **September 17, 1996** - ETM measured groundwater elevations in monitoring wells MW-1, MW-2, and MW-3. ETM inspected each well for the presence of floating product or sheen. A hydrocarbon odor was observed for wells MW-1, MW-2, MW-3, and MW-4 however, none of the wells exhibited sheen. No floating product was recovered from the passive skimmer system in MW-4. The passive skimmer elevation was adjusted again to account for the changing groundwater elevation.

IV. GROUNDWATER ELEVATION AND GRADIENT

The groundwater flow direction consistently flowed to the southwest as determined by the gauging on-site wells in July, August, and September 1996.

Static groundwater level elevation data collected from on-site groundwater wells on July 26, 1996, indicated that the elevation of the shallow groundwater surface beneath the site ranged from 25.74 to 25.95 feet above mean sea level. The estimated groundwater flow direction was to the southwest (approximate gradient = 0.003 ft/ft) which is consistent with the flow direction in the preceding quarter.

Static groundwater level elevation data collected from on-site groundwater wells on August 19, 1996, indicated that the elevation of the shallow groundwater surface beneath the site ranged from 24.97 to 25.16 feet above mean sea level. The estimated groundwater flow direction was to the southwest (approximate gradient = 0.002 ft/ft).

Static groundwater level elevation data collected from on-site groundwater wells on September 17, 1996, indicated that the elevation of the shallow groundwater surface beneath the site ranged from 24.22 to 24.44 feet above mean sea level. The estimated groundwater flow direction was to the southwest (approximate gradient = 0.003 ft/ft).

Table 1 presents the recent groundwater elevation data and **Figures 3a, 3b, and 3c** show estimated groundwater flow direction as interpreted from the elevation data.

The groundwater elevation at the site was observed to lower over two (2) feet over the third quarter 1996 monitoring period compared to the last gauging event of the second quarter 1996 on June 20, 1996.

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

V. GROUNDWATER SAMPLING AND ANALYTICAL RESULTS

On July 26, 1996, groundwater samples were collected from MW-1, MW-2, and MW-3 and generally followed 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, MtBE, and organic compounds using EPA Methods 5030, modified 8015, and 8020, by Inchcape Testing Services of San Jose, 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 quality data is presented in **Table 4.**

Compared to the previous quarter, the results of the recent groundwater sampling effort showed a general increase 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 91,000 micrograms per liter (µg/L) (blind duplicate: 67,000 µg/L); benzene at 2,900 µg/L (blind duplicate: 2,300 µg/L) which exceeds its MCL of 1 µg/L; toluene at 7,200 µg/L (blind duplicate: 5,500 µg/L) which exceeds its MCL of 150 µg/L; ethyl benzene at 2,900 µg/L of (blind duplicate: 2,500 µg/L)which exceeds its MCL of 700 µg/L, and ; total xylenes at 14,000 µg/L (blind duplicate: 11,000 µg/L)which exceeds its MCL of 1,750 µg/L. MtBE was not detected at above the reporting limit of 5,000 µg/L (blind duplicate: not detected above its reporting limit of 5,000 µg/L). However, these values exceed the current 35 µg/L AL and MCL (elevated AL)

The sample from MW-2, located down gradient of the former gasoline tank area, contained 180,000 µg/L of TPHg, 1,400 µg/L of benzene, 640 µg/L of toluene, 2,100 µg/L of ethyl benzene, and 5,000 µg/L of total xylenes. MtBE was not detected above its reporting limit concentration of 5,000 µg/L.

Monitoring well MW-3, also located down gradient of the former gasoline tank area, contained 62,000 µg/L of TPHg, 6,400 µg/L of benzene, 3,100 µg/L of toluene, 3,000 µg/L of ethyl benzene, and 11,000 µg/L of total xylenes. MtBE was not detected above its reporting limit of 2,500 µg/L.

VI. CONCLUSIONS

Available data, including data from the third quarter 1996 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 throughout the third quarter of 1996.

The recent groundwater sampling event showed a increase in concentrations of TPHg and BTEX in MW-1 and MW-2 and decrease in 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

ETM recommends that groundwater levels continue to be monitored on a monthly basis and water quality in the monitoring wells continue to be monitored 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 corrective action plans at the site.

VIII. LIMITATIONS

The data, information, interpretations and recommendations contained in technical work or report are presented solely as beneficial in meeting minimum requirements for determining groundwater quality on the site and does not take into account omissions or errors on behalf of parties identified in this report.

The conclusions and professional opinions presented herein were developed by ETM in accordance with generally accepted environmental principles and practices. As with all work performed by ETM, the opinions expressed are subject to revisions in light of new information which may develop in the future; no warranties are expressed or implied.

This report has not been prepared for use by parties other than ACDEH and Mr. Seung Lee. It may not contain sufficient information for the purposes of other parties or other uses. If changes are made or new information is discovered, the conclusions and recommendations contained herein should not be considered valid, unless the changes are reviewed by ETM and the recommendations are modified in writing.

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, *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. THIRD QUARTER 1996 GROUNDWATER ELEVATION DATA

		July 26, 1996		August 19, 1996		September 17, 1996	
WELL	CASING ELEVATION[1]	Depth to Groundwater	Groundwater Elevation	Depth to Groundwater	Groundwater Elevation	Depth to Groundwater	Groundwater Elevation
MW-1	49.61	23.66	25.95	24.45	25.16	25.17	24.44
MW-2	50.14	24.40	25.74	25.17	24.97	25.92	24.22
MW-3	49.44	23.68	25.76	24.43	25.01	25.17	24.27

[1]Elevations in feet above mean sea level.

TABLE 2. HISTORIC GROUNDWATER ELEVATION DATA

	Groundwater Surface Elevation[1]		
DATE	MW-1	MW-2	MW-3
12/31/90	19.15[2]	-	-
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

[1]Elevations in feet above mean sea level.
[2]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.

TABLE 3. GROUNDWATER CHEMICAL TEST RESULTS

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

Date Sampled: July 26, 1996 Units: µg/L

WELL	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MtBE[3]
MW-1	91,000	2,900	7,200	2,900	14,000	<5,000
MW-1[4]	67,000	2,300	5,500	2,500	11,000	<5,000
MW-2	180,000	1,400	640	2,100	5,000	<5,000
MW-3	62,000	6,400	3,100	3,000	11,000	<2,500
MCL/AL[5]	-	1	150	700	1,750	35

[3]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.
[4]This sample was labeled 'MW-5" and submitted to the lab as a blind duplicate.
[5]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 QUALITY TEST RESULTS

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

Units: µg/L

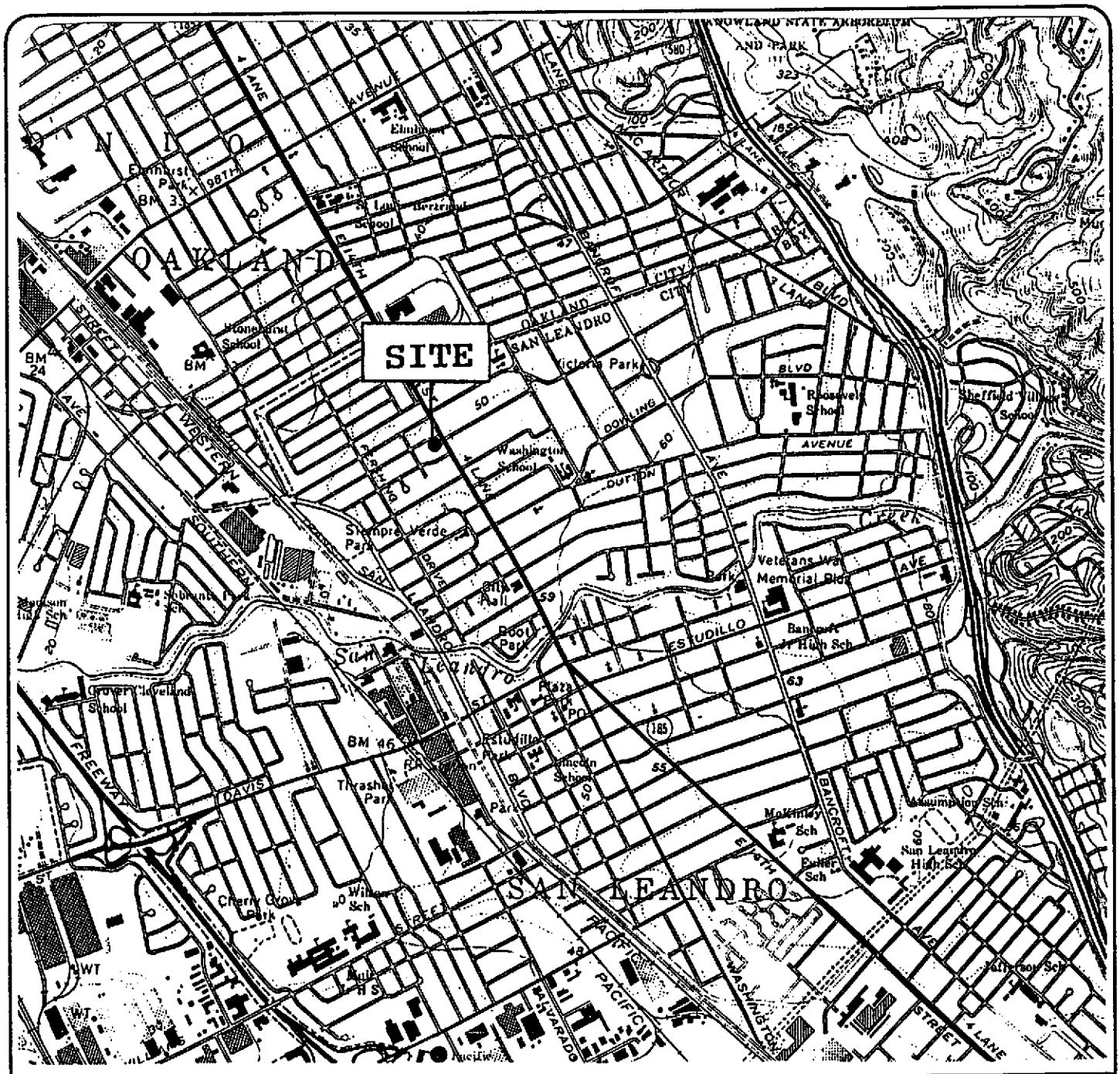
WELL	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MtBE
MW-1	12/31/90	51,000	2,200	1,200	<0.5	760	N/A[6]
	1/6/95	110,000	13,000	15,000	4,800	13,000	N/A
	1/6/95	580,000	29,000	41,000	17,000	43,000	N/A
	7/6/95	49,000	8,000	17,000	1,900	9,700	N/A
	7/6/95	47,000	4,800	9,500	930	5,000	N/A
	10/2/95	120,000	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*[7]
	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
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

[6]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.

[7]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	4/13/96	30,000	1,900	370	2,300	2,400	*520*[8]
	7/26/96	180,000	1,400	640	2,100	5,000	<5,000
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

[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.

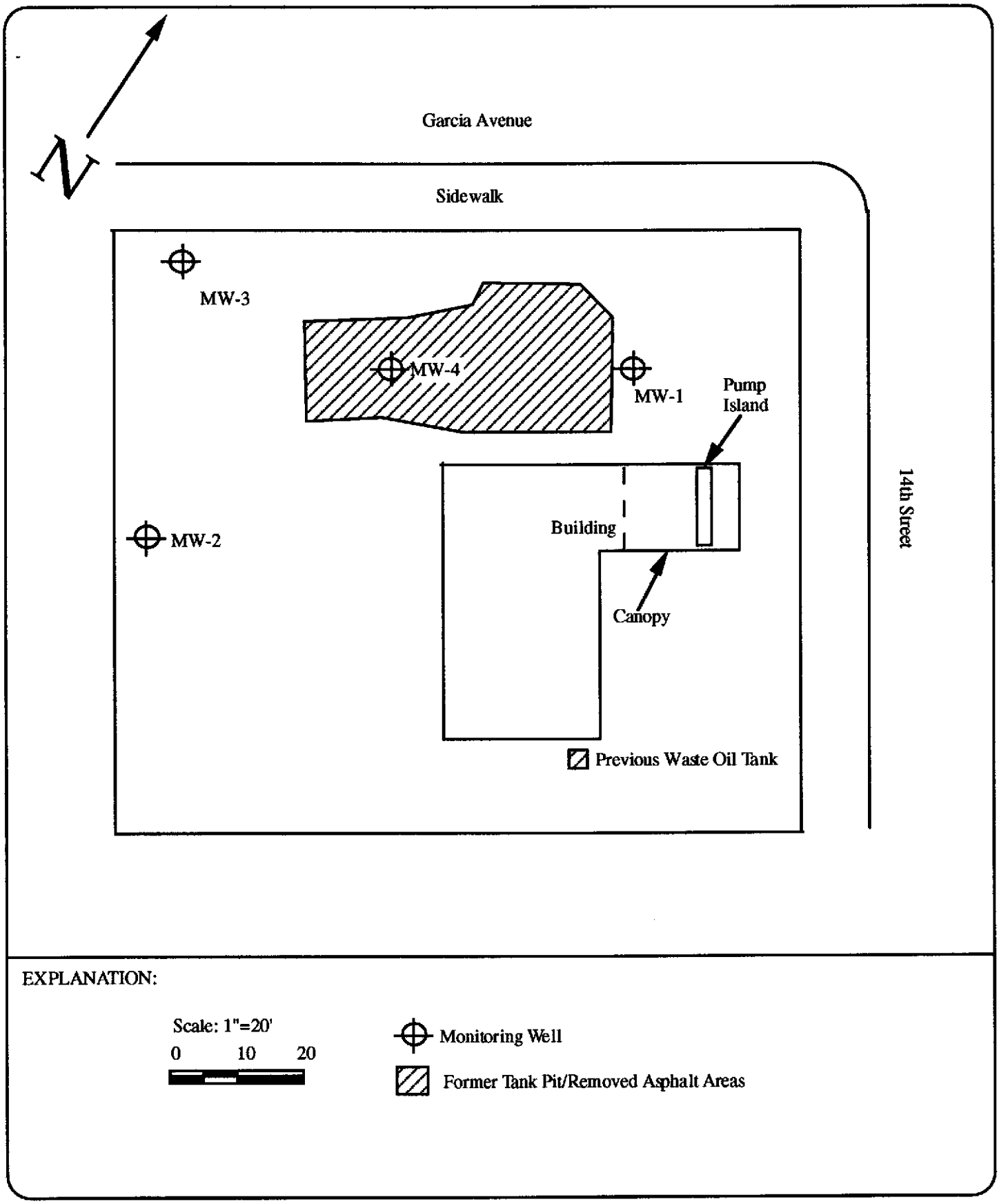


ENVIRONMENTAL TESTING AND MANAGEMENT
2916 MAGLIOCCO DRIVE #2
SAN JOSE, CALIFORNIA 95128

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

Figure 1

Project No. 94-52
Date: 8/95



EXPLANATION:

Scale: 1"=20'

0 10 20

Monitoring Well

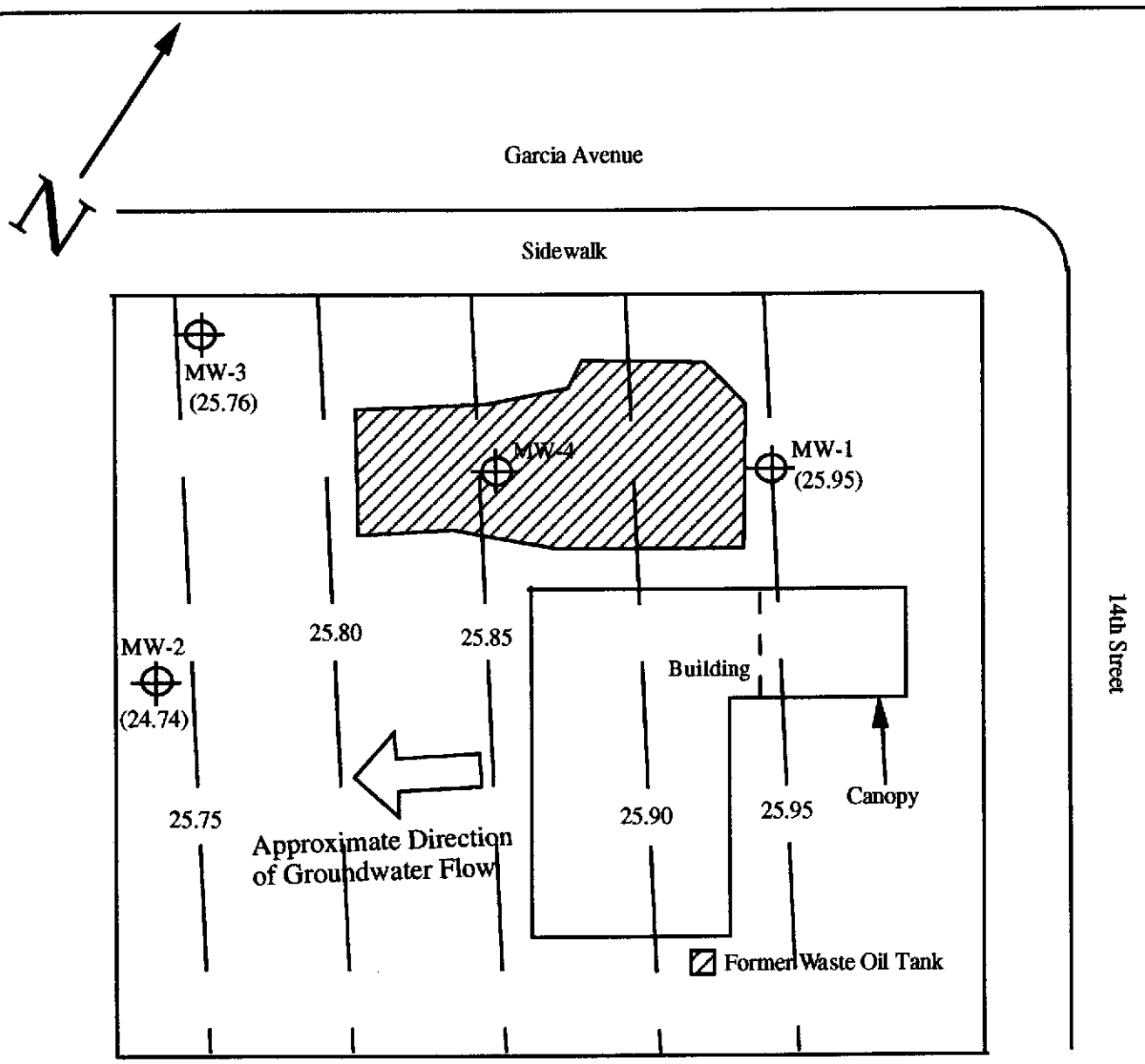
Former Tank Pit/Removed Asphalt Areas

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

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

Figure 2

Project No. 94-52
Date: 9/95



EXPLANATION:

Scale: 1"=20'

0 10 20

MW-1 Monitoring Well

Former Tank Pit/Removed Asphalt Areas

25.95 Groundwater Elevation Contour Line (Feet above Mean Sea Level)

ENVIRONMENTAL TESTING & MGMT.
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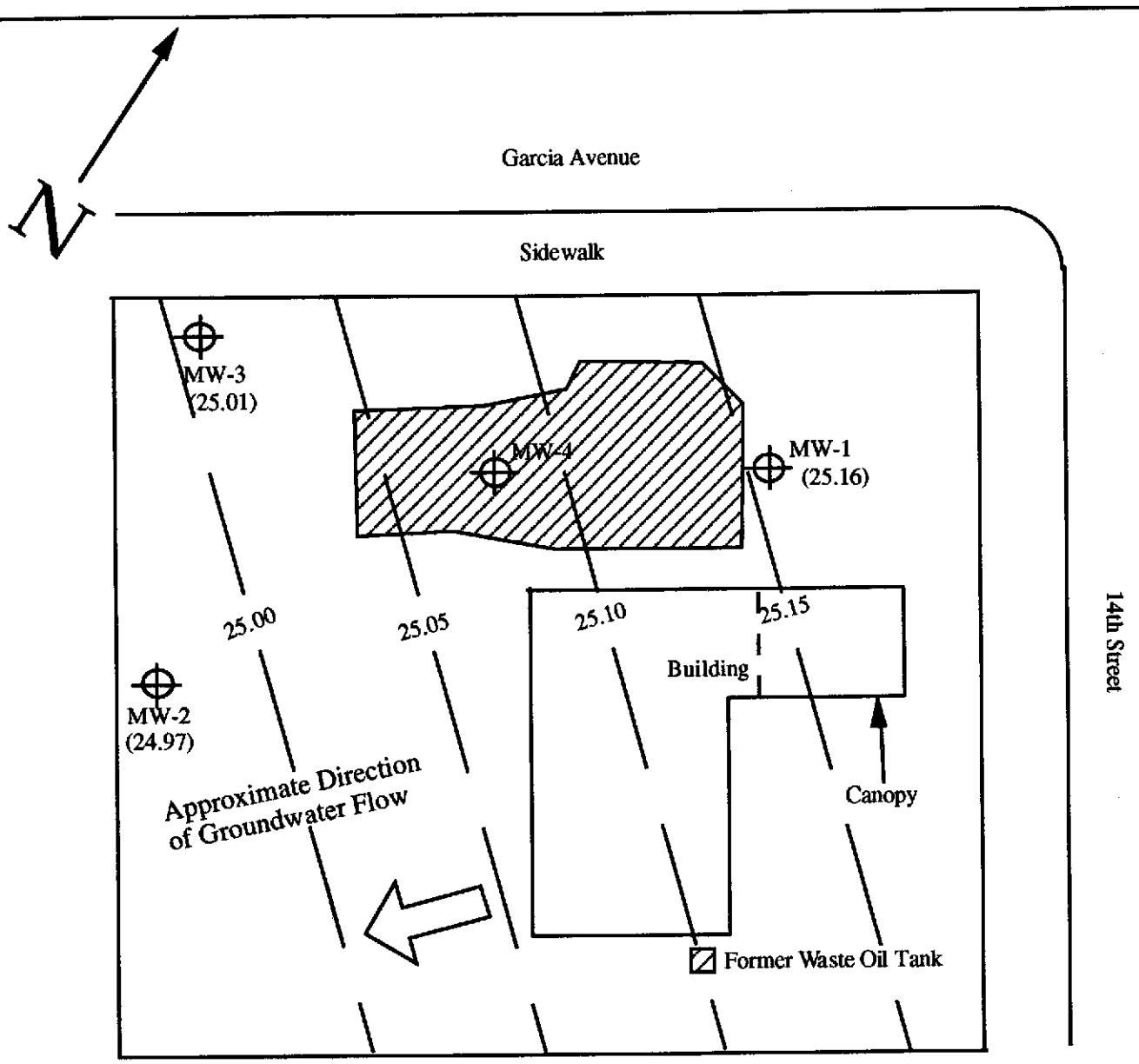
SAN JOSE, CALIFORNIA 95128
408.248.5892

GROUNDWATER ELEVATION CONTOUR MAP 7/26/96
German Autocraft
301 East 14th Street
San Leandro, California

Figure 3a

Project No. 94-52
Date: 10/96



EXPLANATION:

Scale: 1"=20'

0 10 20

MW-1 Monitoring Well

Former Tank Pit/Removed Asphalt Areas

25.95 Groundwater Elevation Contour Line (Feet above Mean Sea Level)

ENVIRONMENTAL TESTING & MGMT.
2916 MAGLIOCCO DRIVE #2
SAN JOSE, CALIFORNIA 95128
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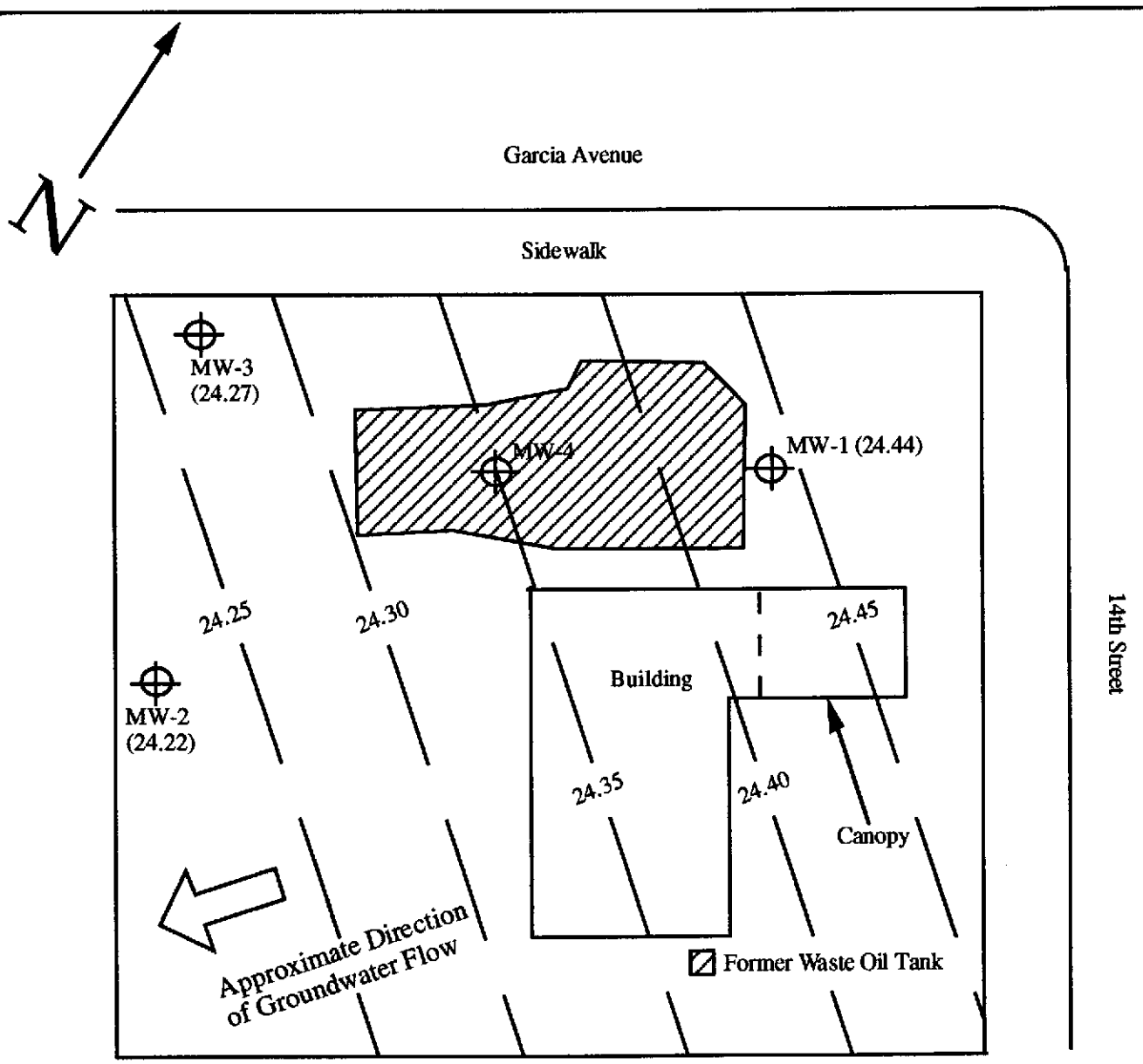
GROUNDWATER ELEVATION CONTOUR MAP 8/19/96
German Autocraft
301 East 14th Street
San Leandro, California

Figure 3b

Project No. 94-52
Date: 10/96



EXPLANATION:

Scale: 1"=20'

0 10 20

MW-1 Monitoring Well

Former Tank Pit/Removed Asphalt Areas

24.35 Groundwater Elevation Contour Line (Feet above Mean Sea Level)

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

GROUNDWATER ELEVATION CONTOUR MAP 9/17/96
German Autocraft
301 East 14th Street
San Leandro, California

Figure 3c

Project No. 94-52
Date: 10/96

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.

Inchcape Testing Services
Environmental Laboratories

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MR. TOM PRICE
ENVIRONMENTAL TESTING & MGMT.
2916 MAGLIOCCO DR. SUITE 2
SAN JOSE, CA 95128

Workorder # : 9607261
Date Received : 07/29/96
Project ID : GERMAN AUTOCRAFT
Purchase Order: N/A

The following samples were received at Inchcape for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9607261- 1	MW-1
9607261- 2	MW-2
9607261- 3	MW-3
9607261- 4	MW-4

This report is organized in sections according to the specific Inchcape laboratory group which performed the analysis(es) and generated the data.

The results contained within this report relate to only the sample(s) tested. Additionally, these data should be considered in their entirety and Inchcape cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Inchcape is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234.

If you have any further questions or comments on this report, please call your project manager as soon as possible. Thank you for using Inchcape Testing Services.

Project Manager

8/9/96
Date

This report consists of 12 pages.

REPORT SUMMARY
INCHCAPE, INC. (408)432-8192

MR. TOM PRICE
ENVIRONMENTAL TESTING & MGMT.
2916 MAGLIOCCO DR. SUITE 2
SAN JOSE, CA 95128

Workorder # : 9607261
Date Received : 07/29/96
Project ID : GERMAN AUTOCRAFT
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

INCHCAPE SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9607261- 1	MW-1	WATER	07/26/96	TPHgBTEX
9607261- 2	MW-2	WATER	07/26/96	TPHgBTEX
9607261- 3	MW-3	WATER	07/26/96	TPHgBTEX
9607261- 4	MW-4	WATER	07/26/96	TPHgBTEX

REPORT SUMMARY
INCHCAPE, INC. (408)432-8192

MR. TOM PRICE
ENVIRONMENTAL TESTING & MGMT.
2916 MAGLIOCCO DR. SUITE 2
SAN JOSE, CA 95128

Workorder # : 9607261
Date Received : 07/29/96
Project ID : GERMAN AUTOCRAFT
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- All holding times have been met for the analyses reported in this section.

Cheryl Baeman 8/8/96
Department Supervisor Date

Chemist 8/8/96
Date

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX

INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES

(408) 432-8192

DATA SUMMARY FORM

Laboratory ID:	9607261-01	Client Project ID:	GERMAN AUTOCRAFT
Matrix:	WATER	Client Sample ID:	MW-1
Date Sampled:	7/26/96	Instrument ID:	HP4
Date Analyzed:	7/30/96	Surrogate Recovery:	111%
Date Released:	8/7/96	Concentration Units:	ug/L

COMPOUND	Dilution Factor	Reporting Limit	Amount Found
MtBE	1000	5000	ND
Benzene	1000	500	2900
Toluene	1000	500	7200
Ethylbenzene	1000	500	2900
Total Xylenes	1000	500	14000
Gasoline	1000	50000	91000

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Methyl tert-Butyl Ether, Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8020) following sample purge and trap by EPA Method 5030.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services approved methods.

Issued on 8/8/96 at 1:43 pm

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX

INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES

(408) 432-8192

DATA SUMMARY FORM

Laboratory ID:	9607261-02	Client Project ID:	GERMAN AUTOCRAFT
Matrix:	WATER	Client Sample ID:	MW-2
Date Sampled:	7/26/96	Instrument ID:	HP4
Date Analyzed:	7/30/96	Surrogate Recovery:	112%
Date Released:	8/7/96	Concentration Units:	ug/L

COMPOUND	Dilution Factor	Reporting Limit	Amount Found
MtBE	1000	5000	ND
Benzene	1000	500	1400
Toluene	1000	500	640
Ethylbenzene	1000	500	2100
Total Xylenes	1000	500	5000
Gasoline	1000	50000	180000

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Methyl tert-Butyl Ether, Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8020) following sample purge and trap by EPA Method 5030.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services approved methods.

Issued on 8/8/96 at 1:43 pm

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX

INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES

(408) 432-8192

DATA SUMMARY FORM

Laboratory ID:	9607261-03	Client Project ID:	GERMAN AUTOCRAFT
Matrix:	WATER	Client Sample ID:	MW-3
Date Sampled:	7/26/96	Instrument ID:	HP4
Date Analyzed:	7/31/96	Surrogate Recovery:	111%
Date Released:	8/7/96	Concentration Units:	ug/L

COMPOUND	Dilution Factor	Reporting Limit	Amount Found
MtBE	500	2500	ND
Benzene	500	250	6400
Toluene	500	250	3100
Ethylbenzene	500	250	3000
Total Xylenes	500	250	11000
Gasoline	500	25000	62000

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Methyl tert-Butyl Ether, Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8020) following sample purge and trap by EPA Method 5030.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services approved methods.

Issued on 8/8/96 at 1:41 pm

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX

INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES

(408) 432-8192

DATA SUMMARY FORM

Laboratory ID:	9607261-04	Client Project ID:	GERMAN AUTOCRAFT
Matrix:	WATER	Client Sample ID:	MW-4
Date Sampled:	7/26/96	Instrument ID:	HP4
Date Analyzed:	7/31/96	Surrogate Recovery:	112%
Date Released:	8/7/96	Concentration Units:	ug/L

COMPOUND	Dilution Factor	Reporting Limit	Amount Found
MtBE	1000	5000	ND
Benzene	1000	500	2300
Toluene	1000	500	5500
Ethylbenzene	1000	500	2500
Total Xylenes	1000	500	11000
Gasoline	1000	50000	67000

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Methyl tert-Butyl Ether, Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8020) following sample purge and trap by EPA Method 5030.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services approved methods.

Issued on 8/8/96 at 1:40 pm

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE WITH BTEX

INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES

(408) 432-8192

DATA SUMMARY FORM

Laboratory ID:	BL3001E1	Client Project ID:	GERMAN AUTOCRAFT
Matrix:	WATER	Client Sample ID:	Method Blank
Date Sampled:	N/A	Instrument ID:	HP4
Date Analyzed:	7/30/96	Surrogate Recovery:	109%
Date Released:	8/7/96	Concentration Units:	ug/L

COMPOUND	Dilution Factor	Reporting Limit	Amount Found
MtBE	1	5.0	ND
Benzene	1	0.5	ND
Toluene	1	0.5	ND
Ethylbenzene	1	0.5	ND
Total Xylenes	1	0.5	ND
Gasoline	1	50	ND

ND: Not detected at or above the reporting limit for the method.

TPHg: Total Petroleum Hydrocarbons as gasoline is determined by GC/FID (modified EPA Method 8015) following sample purge and trap by EPA Method 5030

BTEX: BTEX as Methyl tert-Butyl Ether, Benzene, Toluene, Ethylbenzene, and Total Xylenes is determined by GC/PID (modified EPA Method 8020) following sample purge and trap by EPA Method 5030.

Surrogate recovery quality control limits for p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services approved methods.

Issued on 8/7/96 at 3:11 pm

TOTAL PETROLEUM HYDROCARBONS AS BTEX

INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES

(408) 432-8192

BTEX LABORATORY CONTROL SAMPLE REPORT

Client Project ID:	GERMAN AUTOCRAFT	Laboratory ID:	ML3002E3
Matrix:	WATER	Date Released:	8/8/96
Date Analyzed:	7/30/96	Instrument ID:	HP4
		Concentration Units:	ug/L

COMPOUND NAME	SPIKE AMT	LCS CONC	%REC LCS
MtBE	10.0	8.9	89%
Benzene	10.0	10.0	100%
Toluene	10.0	10.5	105%
Ethylbenzene	10.0	10.9	109%
Total Xylenes	10.0	10.8	108%
p-Bromofluorobenzene			106%

Quality control limits for LCS recovery are 50-150% for MtBE, 52-133% for benzene, 57-136% for toluene, 56-139% for ethylbenzene, and 56-141% for total xylenes.

Quality control limits for p-Bromofluorobenzene recovery are 61-139%.

TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

INCHCAPE TESTING SERVICES/ ENVIRONMENTAL LABORATORIES

(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Client Project ID:	GERMAN AUTOCRAFT	Laboratory ID:	NL3002E1
Matrix:	WATER	Date Released:	8/8/96
Date Analyzed:	7/30/96	Instrument ID:	HP4
		Concentration Units:	ug/L

COMPOUND NAME	SPIKE AMT	LCS CONC	%REC LCS
Gasoline	400	390	98%
p-Bromofluorobenzene			101%

Quality control limits for LCS recovery are 67-127%

Quality control limits for p-Bromofluorobenzene recovery are 61-139%

Issued on 8/8/96 at 1:44 pm

[redacted] Testing [redacted]
Anametrix Laboratories

[redacted] Concord [redacted] Drive, [redacted] E
San Jose, CA 95131
(408) 432-8192 • Fax (408) 432-8198

9607266 (18)

CHAIN-OF-CUSTODY RECORD

PROJECT NUMBER	PROJECT NAME	Number of Cntnrs	Type of Containers	Type of Analysis: TPH g/BTEX	Condition of Samples	Initial
	German Autocraft.					
Send Report Attention of: Tom Price	Report Due: / /	Verbal Due: / /				
Sample Number	Date	Time	Comp	Matrix	Station Location					
(1) MW-1	7/26/96			W		3	40 ml VOAs	✓		
(2) MW-2	7/26/96			W		3	"	✓		
(3) MW-3	7/26/96			W		3	"	✓		
(4) MW-4	7/26/96			W		3	"	✓		

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Tom Price	7/26/96		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Tom Price	7/29/96 9:45 AM		
Relinquished by: (Signature)	Date/Time	Received by Lab:	Date/Time
		Josephine DeLeon	7/29/96 09:45

Remarks: Normal Turn Around Time.

COMPANY: Environmental Testing & Mgmt.
ADDRESS: 2916 Magliocco Dr. Suite #2
PHONE : San Jose CA FAX : 95128

Inchcape Testing Services
Environmental Laboratories

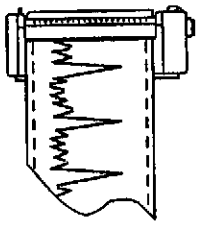
SAMPLE RECEIVING CHECKLIST

Workorder Number: 9607261	*Client Project ID:* German Autocraft	*Quote Number:*

Cooler			
Shipping documentation present? If YES, enter Carrier and Airbill #:	YES	NO	(N/A)
Custody Seal on the outside of cooler? *Condition*: Intact ☐ Broken ☐	YES	NO	(N/A)
Temperature of sample(s) within range? List temperatures of cooler(s): 6 °C **Note:** If all samples taken within previous 4 hr, circle N/A and place in sample storage area as soon as possible.	(YES)	NO	N/A
Samples			
Chain of custody seal present for each container? *Condition*: Intact ☐ Broken ☐	YES	NO	(N/A)
Samples arrived within holding time?	(YES)	NO	N/A
Samples in proper containers for methods requested? *Condition of containers*: Intact ☑ Broken ☐ If NO, were samples transferred to proper container(s)? Yes ☐ No ☐	(YES)	NO	
Were VOA containers received with zero headspace? If NO, were bubbles < 6 mm? Yes ☐ No ☐	(YES)	NO	N/A
Were container labels complete? (ID, date, time, preservative)	(YES)	NO	N/A
Were samples properly preserved? If NO, was the preservative added at time of receipt? Yes ☐ No ☐	(YES)	NO	N/A
pH check of samples required at time of receipt? If YES, pH checked and recorded by:	YES	(NO)	
Sufficient amount of sample received for methods requested? If NO, has the client or PM been notified? Yes ☐ No ☐	(YES)	NO	
Field blanks received with sample batch?	YES	NO	(N/A)
Trip blanks received with sample batch?	YES	NO	(N/A)
Chain of Custody			
Chain of custody form received with samples?	(YES)	NO	
Has it been filled out completely and in ink?	(YES)	NO	
Sample IDs on chain of custody form agree with labels?	(YES)	NO	
Number of containers on chain agree with number received?	(YES)	NO	
Analysis methods specified?	(YES)	NO	
Sampling date and time indicated? TIME	YES	(NO)	
Proper signatures of sampler, courier and custodian in appropriate spaces? With time and date? Yes ☐ No ☑	(YES)	NO	
Turnaround time? Standard ☑ Rush ☐			

Any NO responses and/or any BROKEN that was checked must be detailed in a Corrective Action Form.

Sample Custodian: J. D. Date: 7/29/96 Project Manager: KR Date: 7/29/96



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

Date: 7/26/96 Project Name: German Autocraft.

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

Depth of Well: 44.50 1 Well Volume: 3.2

Depth to Water: 23.66 4 Well Volumes: 12.8

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

Calculations: ~ 20 x 0.16 = 3.2 gallons

2" - * 0.1632
4" - * 0.653

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

Sample Method: ✓ Bailer ___ Other Specify: _____

Sheen: ___ No ✓ Yes, Describe rainbow sheen on top of vial meniscus.

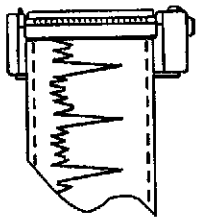
Odor: ___ No ✓ Yes, Describe strong HC.

Field Measurements:

Time	Volume	pH	Temp.	E.C.	Color

Remarks: _____

Sampler: Tom Price



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

Date: 7/26/96 Project Name: German Autocraft

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

Depth of Well: 34.0 1 Well Volume: 1.6

Depth to Water: 24.40 4 Well Volumes: 6.4

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

Calculations: ~10' x 0.16 = 1.6 gal.

2" - * 0.1632
4" - * 0.653

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

Sample Method: ✓ Bailer ___ Other Specify: _____

Sheen: ___ No ✓ Yes, Describe sheen on membranes - rainbow

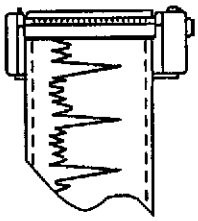
Odor: ___ No ✓ Yes, Describe Aged HC

Field Measurements:

Time	Volume	pH	Temp.	E.C.	Color

Remarks: _____

Sampler: Tom Price



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

Date: 7/26/96 Project Name: German Autocraft

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

Depth of Well: 35.40 1 Well Volume: 1.9

Depth to Water: 23.68 4 Well Volumes: 7.6

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

Calculations: ~12' · .16 = 1.9

2" - * 0.1632
4" - * 0.653

Purge Method: ✓Bailer ___Displacement Pump ___Impinger/Vacuum ___

Sample Method: ✓Bailer ___ Other Specify: _____

Sheen: ✓No ___ Yes, Describe _____

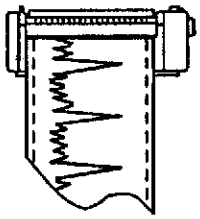
Odor: ___ No ✓Yes, Describe Aged HC.

Field Measurements:

Time	Volume	pH	Temp.	E.C.	Color

Remarks: _____

Sampler: Jon Price



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

Date: 7/26/96 Project Name: German Autocraft

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

Depth of Well: _____ 1 Well Volume: _____

Depth to Water: 23.91 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: _____

Sheen: ___ No ✓ Yes, Describe slight HC

Odor: ___ No ✓ Yes, Describe slight HC.

Field Measurements:

Time	Volume	pH	Temp.	E.C.	Color

Remarks: No product recovered from passive skimmer.

Sampler: Tom Price

APPENDIX D: QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

The quality assurance/quality control measures used for groundwater sampling conducted on July 26, 1996 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 TPHg and BTEX analysis with the other samples.

APPENDIX E: REPORT DISTRIBUTION LIST

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

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