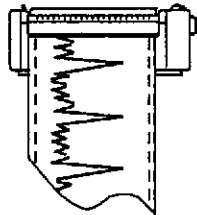


THIRD QUARTER 1997
QUARTERLY GROUNDWATER MONITORING PROGRAM
REPORT

ENVIRONMENTAL
PROTECTION
97 AUG -5 PM 2:42

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

Prepared by:



ENVIRONMENTAL TESTING & MGMT.
111 N. MARKET ST., 6th FLOOR
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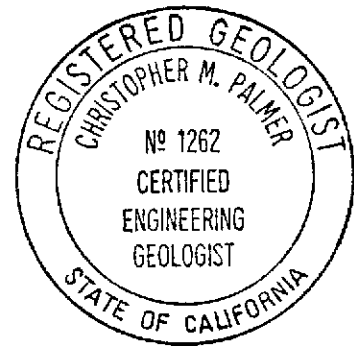
Prepared For:

Mr. Seung Lee
301 E. 14th Street
San Leandro, California

Tom Price, REA, CHMM
Project Manager



Christopher M. Palmer, RG, CEG, HG
Project Geologist



Report issued August 4, 1997



Date: 8/29/97

FROM

TO

Name: Tom Price

Name: Scott Seery

Company: Environmental Testing & Mgmt.

Company: Alameda Co. Dept. Env. Health

Phone: (408) 938-0939

Phone: (510) 567-6783

Fax: (408) 938-3929

Fax: (510) 337-9335

Total number of pages including cover: 2

Message: Attached are chemical test results, the units check out with the reported units in our recent report.

At this point, I am putting together a proposed budget for covering the tank pit.

As part of a Cost Pre-Approval Request, we hope to include a short note from you approving our rationale and approach "as corrective action" .

Thank you, Tom.

HROMALAB, INC.

Analytical Laboratory
Specializing in GC-GC/MS

- Environmental Analysis
- Hazardous Waste (#E694)
- Drinking Water (#955)
- Waste Water
- Consultation

October 8, 1990

ChromaLab File No.: 0990171

THE ENVIRONMENTAL CONSTRUCTION COMPANY

Attn: Thomas Smith

RE: Thirteen soil samples for Gasoline/BTEX, Diesel, and Oil & Grease analyses

Project Name: GERMAN AUTO CRAFT

Project Number: 238

Date Sampled: Oct. 1, 1990

Date Submitted: Oct. 1, 1990

Date Extracted: Oct. 2-8, 1990

Date Analyzed: Oct. 2-8, 1990

RESULTS:

Sample No.	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylenes (ug/Kg)	Oil & Grease (mg/Kg)
T-1-1	840	----	510	5400	6800	13000	----
T-1-2	360	----	2600	2900	3200	5100	----
T-2-1	33	----	350	430	550	930	----
T-2-2	11	----	57	38	120	260	----
T-3-1	360	----	410	270	1700	3900	----
T-4-1	7.1	----	18	11	100	210	----
T-4-2	35	----	47	14	470	850	----
T-5-1	47	----	13	17	150	460	----
T-5-2	N.D.	----	N.D.	N.D.	N.D.	N.D.	----
T-6-1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
C/S-1	36	----	N.D.	100	1400	310	----
C/S-2	75	----	N.D.	59	130	390	----
C/S-3	N.D.	N.D.	9.8	10	43	8.3	970
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
RECOVERY	91.7%	97.8%	98.6%	99.1%	103.5%	105.6%	----
DETECTION	91.1%	106.2%	89.3%	89.7%	90.0%	107.6%	----
LIMIT	2.5	5	5	5	5	5	10
METHOD OF ANALYSIS	5030/8015	3550/8015	8020	8020	8020	8020	503 D&E

UST pit bottom
Samples (10' BG)
stock p. to placed back into UST pits

HROMALAB, INC.

David Duong
David Duong
Senior Chemist

Eric Tam (by DJ)
Eric Tam
Laboratory Director

I. INTRODUCTION.....	2
II. BACKGROUND.....	3
III. WORK PERFORMED DURING THIRD QUARTER, 1997.....	3
IV. GROUNDWATER ELEVATION AND GRADIENT.....	4
V. GROUNDWATER SAMPLING AND ANALYTICAL RESULTS.....	4
VI. EVALUATION OF TANK PIT EXCAVATION DATA.....	5
TABLE 1. CHEMICAL TEST RESULTS OF STOCKPILED SOILS USED AS BACKFILL IN THE FORMER UST PIT.....	6
TABLE 2. CHEMICAL TEST RESULTS OF SOIL SAMPLES COLLECTED FROM UNDER FORMER GASOLINE USTS.....	7
TABLE 3. CHEMICAL TEST RESULTS OF SOIL SAMPLES COLLECTED FROM SOIL BORING THROUGH UST PIT TO AQUIFER AT CE-2.....	8
VII. CONCLUSIONS.....	9
VIII. RECOMMENDATIONS.....	9
IX. LIMITATIONS.....	10
X. REFERENCES.....	11
TABLE 4. THIRD QUARTER 1997 GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION DATA.....	13
TABLE 5. HISTORIC GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION DATA.....	14
TABLE 6. GROUNDWATER CHEMICAL TEST RESULTS.....	16
TABLE 7. HISTORIC GROUNDWATER CHEMICAL TEST RESULTS.....	17
FIGURE 1: LOCATION MAP.....	20
FIGURE 2: SITE MAP.....	21
FIGURES 3 GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CONTOUR MAP 7/17/97.....	22
APPENDIX A: FIELD SAMPLING AND GAUGING PROCEDURES.....	23
APPENDIX B: LABORATORY REPORTS AND CHAINS-OF-CUSTODY FORMS.....	24
APPENDIX C: FIELD DATA SHEETS/GROUNDWATER SAMPLING.....	25
APPENDIX D: QUALITY ASSURANCE/QUALITY CONTROL PROGRAM.....	26
APPENDIX E: UST REMOVAL SITE MAP, ENVIRONMENTAL CONSTRUCTION COMPANY.....	27
APPENDIX F: REPORT DISTRIBUTION LIST.....	28

I. INTRODUCTION

Following recommendations presented in the Soil and Groundwater Investigation (SWI) Workplan, dated June 7, 1995, Environmental Testing & Management (ETM) continued the quarterly groundwater monitoring program and related environmental activities completed during the calendar third 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 quarterly monitoring program is continued to meet the requirements of the ACDEH.

The purpose of this quarterly monitoring program is to evaluate potential impacts from soil contamination on groundwater in the area of five former underground fuel storage tanks (USTs) that were removed in 1990. Data accumulated from the program 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 quarterly monitoring program 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, 1997

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

- **July 17, 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 July 17, 1997, indicated that the elevation of the shallow groundwater surface beneath the site ranged from 24.31 to 24.55 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.

Table 1 presents the recent groundwater elevation data and Figure 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 two (2) feet in three months compared to the gauging event of the second quarter 1997 on April 25, 1997.

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 July 17, 1997, groundwater samples were collected from MW-1, MW-2, and MW-3 following the groundwater sampling procedures 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 increase in TPHg and BTEX concentrations in MW-1, MW-2, and MW-3. Most of the chemical constituents continue to exceed their respective California Drinking Water Maximum Contaminant Levels (MCLs) or Federal Action Levels (AL) with the exception of toluene at MW-2 (Table 3).

The sample from MW-1, located upgradient of the former gasoline tank area, contained: TPHg at 220,000 micrograms per liter ($\mu\text{g/L}$); benzene at 8,300 $\mu\text{g/L}$ which exceeds its MCL of 1 $\mu\text{g/L}$; toluene at 41,000 $\mu\text{g/L}$ which exceeds its MCL of 150 $\mu\text{g/L}$; ethyl benzene at 2,700 $\mu\text{g/L}$ which exceeds its MCL of 700 $\mu\text{g/L}$, and; total xylenes at 16,000 $\mu\text{g/L}$ which exceeds its MCL of 1,750 $\mu\text{g/L}$.

The sample from MW-2, located down gradient of the former gasoline tank area, contained 95,000 $\mu\text{g/L}$ of TPHg, 2,200 $\mu\text{g/L}$ of benzene, <0.5 $\mu\text{g/L}$ of toluene, 3,100 $\mu\text{g/L}$ of ethyl benzene, and 4,300 $\mu\text{g/L}$ of total xylenes.

Monitoring well MW-3, also located down gradient of the former gasoline tank area, contained 69,000 $\mu\text{g/L}$ of TPHg, 5,100 $\mu\text{g/L}$ of benzene, 1,100 $\mu\text{g/L}$ of toluene, 1,800 $\mu\text{g/L}$ of ethyl benzene, and 8,600 $\mu\text{g/L}$ of total xylenes.

VI. EVALUATION OF TANK PIT EXCAVATION DATA

The former UST tank pit/removed asphalt areas denoted on the Site Map (Figure 2) may allow surface water recharge through the former tank pit soils which have been documented to contain gasoline and related compounds. A compilation of available chemical test data related to contaminated soils in and under the former tank pit which provides the basis for a recommendation to backfill the former UST area to grade and cover it with asphalt to limit surface water recharge through the pit (see Table 1, Table 2, and Table 3)

Soils excavated from the former UST tank pit (total volume unknown) were stockpiled and tested (samples CGS¹-1 and CGS-2) for gasoline and related compounds. Also, approximately fifteen (15) cubic yards of soils were excavated from the waste oil tank pit were stockpiled and tested for gasoline and related compounds (CGS-3). Following are the chemical test results of the stockpiled soil composite samples:

TABLE 1. CHEMICAL TEST RESULTS OF STOCKPILED SOILS USED AS BACKFILE IN THE FORMER UST PIT

Date Sampled: October 1, 1990 Units: µg/Kg

SAMPLE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	TOG ²
CGS-1	36,000	<5	100	1,400	310	N/A
CGS-2	77,000	<5	59	130	390	N/A
CGS-3	<2500	9.8	10	43	8.3	970,000

After the five gasoline USTs [(2-1,000 gallon unleaded gasoline USTs T-1 and T-2), (1-550 gallon regular gasoline, UST T-3), and (2-2,000 gallon unleaded gasoline USTs T-4 and T-5)] were removed from the site, soil samples were collected from the ~~ten~~ (10) foot depth, approximately two feet below each tank, one sample at each end of each of the five tanks (only one sample from under T-3). **Appendix E** is a map showing the former USTs as documented by the Environmental Construction Company, the company that removed the USTs. Following are the chemical test results of the samples collected at the specified locations:

¹CGS = "Composite Grab Sample" as abbreviated by Environmental Construction Company.

²TOG = Total Oil and Grease.

**TABLE 2. CHEMICAL TEST RESULTS OF SOIL SAMPLES COLLECTED FROM
UNDER FORMER GASOLINE USTS**

Date Sampled: October 1, 1990 Units: $\mu\text{g}/\text{kg}$

SAMPLE	TPHg	BENZENE	TOLUENE	ETHYL- BENZENE	XYLENES
T-1-1	840,000	510	5,400	6,800	13,000
T-1-2	360,000	2,600	2,900	3,200	5,100
T-2-1	33,000	350	430	550	930
T-2-2	11,000	57	38	120	260
T-3-1	360,000	410	270	1,700	3,900
T-4-1	7,100	18	11	100	210
T-4-2	35,000	47	14	470	850
T-5-1	47,000	13	17	150	460
T-5-2	<2,500	<5	<5	<5	<5

This data indicates that elevated concentrations of gasoline and related compounds are present below the backfilled material which originated from both below the former gasoline USTs and the former waste oil UST (see Figure 2).

Additional chemical test data of soil samples collected at CE-2 by ETM in the UST pit (approximate location of former UST T-2) follows:

TABLE 3. CHEMICAL TEST RESULTS OF SOIL SAMPLES COLLECTED FROM SOIL BORING THROUGH UST PIT TO AQUIFER AT CE-2

Date sampled 12/13/94

Units: $\mu\text{g}/\text{Kg}$

DEPTH ³	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES
5'	<500	<5	<5	<5	<5
10'	<500	<5	<5	<5	<5
15'	57,000	<5	<5	590	1,800
20'	1,600,000	7.1	75,000	41,000	170,000

1,600 ppm 7.1 ppm 75 ppm 41 ppm 170 ppm

This data indicates that elevated concentrations of gasoline and related compounds were present in soil samples at greater depths with the highest concentration observed at the 20' depth below grade, or approximately 23.5' below the top of the asphalt parking lot.

³Note that the depths of soil samples collected at CE2 are from below grade in a depression area, approximately 3.5 feet below the normal grade of asphalt at the site.

VII. CONCLUSIONS

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

The recent groundwater sampling event showed a general increase in concentrations of TPHg and BTEX in MW-1, MW-2, and MW-3 from those concentrations measured in the previous quarter. Most of the chemical constituents continue to exceed their respective California Drinking Water Maximum Contaminant Levels (MCLs) or Federal Action Levels (AL) at MW-1, MW-2 and MW-3. The exception was at MW-2 where the concentration of toluene was below its MCL.

Available data related to gasoline and related compounds in soils used to backfill the former UST pit, and in soil samples collected under the former USTs, and in soil samples collected from a soil boring advanced to the aquifer at the UST pit have been compiled and indicate that elevated concentrations of gasoline are present at increasing depths. This suggests that shallow excavation of gasoline impacted soils at the site would produce a limited degree of corrective action by removing a source of contamination.

VIII. 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.

On the basis of our evaluation that shallow excavation of gasoline impacted soils at the site would produce only a limited degree of corrective action, and that a more comprehensive approach to corrective action (perhaps vapor extraction, limited pump and treat, or injection of oxygen releasing compounds) would be more effective for existing groundwater contamination.

We recommend that the former tank pit area be backfilled and covered with asphalt to prevent rainwater intrusion during the upcoming wet season.

IX. 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.

X. 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.
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- Environmental Testing and Management, *Second Quarter 1997 Quarterly Groundwater Monitoring Report, German Autocraft, 301 East 14th Street, San Leandro, California*, June 11, 1997.
- Environmental Testing and Management, *First Quarter 1997 Quarterly Groundwater Monitoring Report, German Autocraft, 301 East 14th Street, San Leandro, California*, March 24, 1997.
- Environmental Testing and Management, *Fourth Quarter 1996 Quarterly Groundwater Monitoring Report, German Autocraft, 301 East 14th Street, San Leandro, California*, January 21, 1997.
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- 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 4. THIRD QUARTER 1997 GROUNDWATER POTENTIOMETRIC SURFACE
ELEVATION DATA**

July 17, 1997			
WELL	CASING ELEVATION ⁴	Depth to Groundwater	Groundwater Elevation
MW-1	49.61	25.06	24.55
MW-2	50.14	25.83	24.31
MW-3	49.44	25.07	24.37

⁴Elevations in feet above mean sea level.

TABLE 5. HISTORIC GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION DATA

DATE	Groundwater Surface Elevation ⁵		
	MW-1	MW-2	MW-3
12/31/90	19.15 ⁶	-	-
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

⁵Elevations in feet above mean sea level.

⁶This 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
4/25/97	27.14	26.88	26.94
7/17/97	24.55	24.31	24.37

TABLE 6. GROUNDWATER CHEMICAL TEST RESULTS

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

Date Sampled: July 17, 1997 Units: µg/L

WELL	TPH _g	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MtBE ⁷
MW-1	220,000	8,300	41,000	2,700	16,000	N/A
MW-2	95,000	2,200	<0.5	3,100	4,300	N/A
MW-3	69,000	5,100	1,100	1,800	8,600	N/A
MCL/AL ⁸	-	1	150	700	1,750	35

⁷MtBE = 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.

⁸Maximum 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 7. 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 ⁹
	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 ¹⁰
	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	

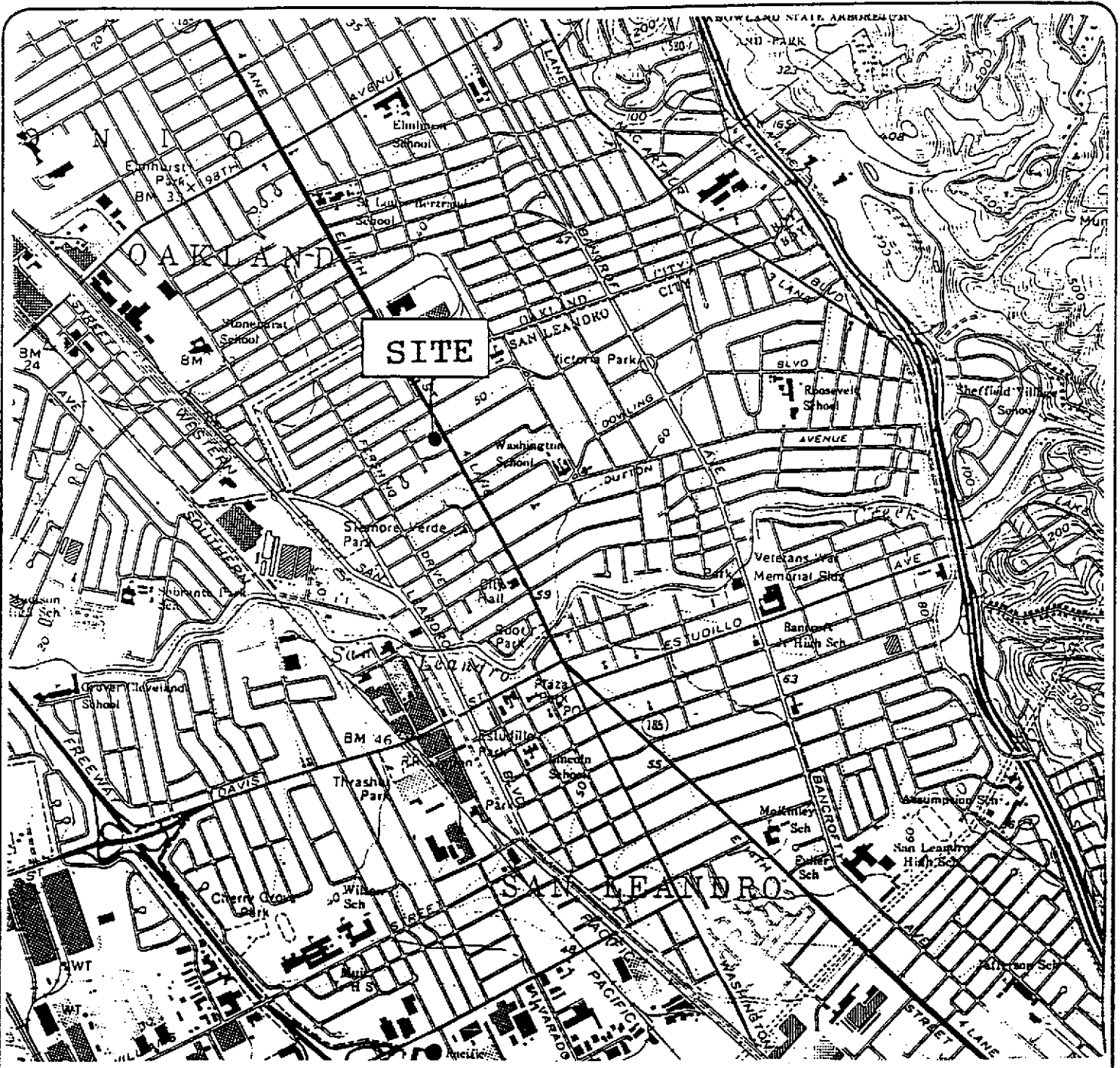
⁹N/A = Not Analyzed. The California Regional Water Quality Control Board initiated the requirement of quantitation of MtBE as an additional analyte for EPA Method 8020 as of January 12, 1996. The samples not analyzed for MtBE in this table pre-date the recent new requirement.

¹⁰This 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-1	4/25/97	180,000	6,900	20,000	2,600	13,000	N/A
	4/25/97	170,000	6,500	20,000	2,500	13,000	N/A
	7/17/97	220,000	8,300	41,000	2,700	16,000	N/A
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 ¹¹
	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
	4/25/97	23,000	790	26	820	730	N/A
	7/17/97	95,000	2,300	<0.5	3,100	4,300	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

¹¹This 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-3	4/25/97	180,000	6,900	20,000	2,600	13,000	N/A
	7/17/97	69,000	5,100	1,100	1,800	8,600	N/A



EXPLANATION:

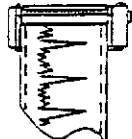
Scale: 1"=2000'

0 1000' 2000'



Base Map Reference:

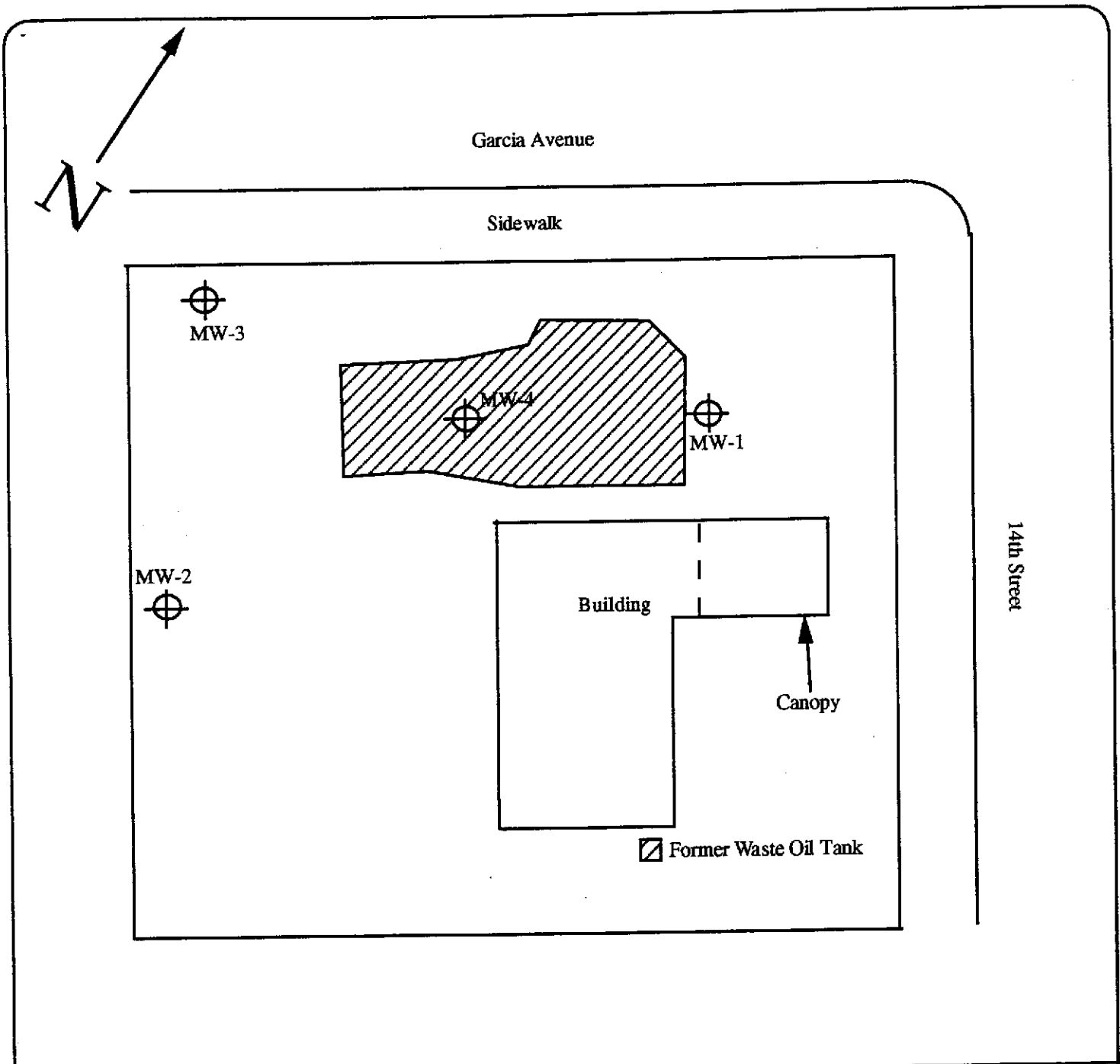
U.S.G.S. San Leandro 7.5 Minute Topographic, Quadrangle.

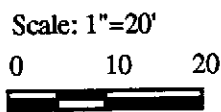
ENVIRONMENTAL TESTING & MGMT
 111 N. MARKET ST. SUITE 600
 SAN JOSE, CALIFORNIA 95113

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

Figure 1
 Project No. 94-52
 Date: 3/97



EXPLANATION:



MW-1 Monitoring Well

Former Tank Pit/Removed Asphalt Areas

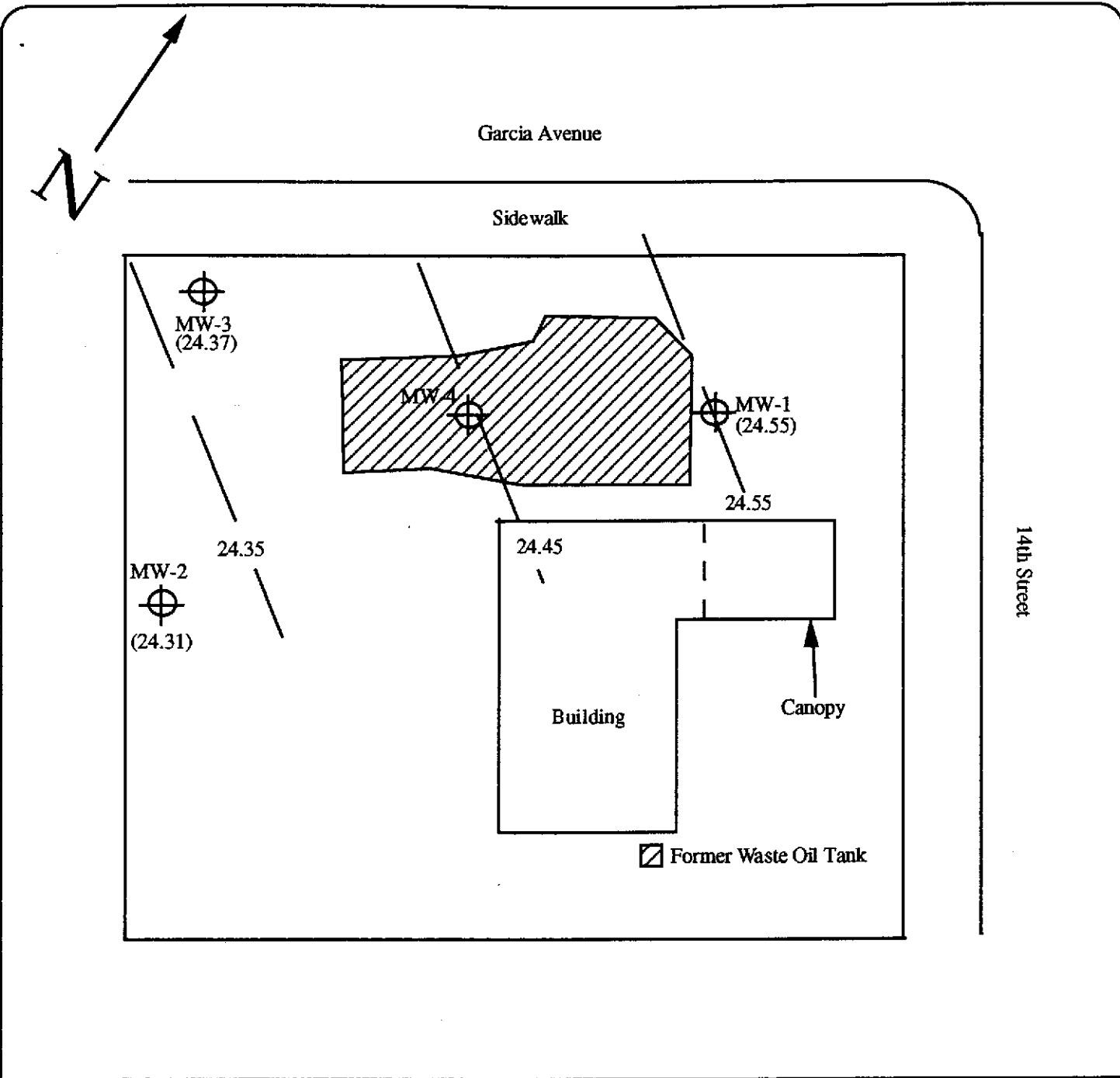
ENVIRONMENTAL TESTING & MGMT.
111 N. MARKET ST. SUITE 600
SAN JOSE, CALIFORNIA 95113

SITE MAP

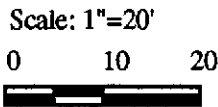
German Autocraft
301 East 14th Street
San Leandro, California


Figure 2

Project No.
94-52
Date: 3/97



EXPLANATION:



 MW-1 Monitoring Well

 Former Tank Pit/Removed Asphalt Areas

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



ENVIRONMENTAL TESTING & MGMT.
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SAN JOSE, CALIFORNIA 95113

GROUNDWATER POTENTIOMETRIC SURFACE
ELEVATION CONTOUR MAP 7/17/97
German Autocraft
301 East 14th Street
San Leandro, California

Figure 3

Date: 8/97

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 drying. 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. 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# 2224

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Attn: Tom Price
Environmental Testing & Management
111 N. Market Street, Suite 600
San Jose, CA 95113

Date:	7/25/97
Date Received:	7/18/97
Date Analyzed:	7/22/97
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	7/17/97		D11572	2,000	220,000	8,300	41,000	2,700	16,000
MW-2	7/17/97		D11573	400	95,000	2,200	ND	3,100	4,300
MW-3	7/17/97		D11574	200	69,000	5,100	1,100	1,800	8,600

1. DLR=DF x PQL
2. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

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

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG5970721

Matrix: Water

Units: µg/L

Date Analyzed: 07/21/97

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	%R
Benzene	8020	<0.5	25	ND	25.4	102	26.0	104	2.0	25	50-150
Toluene	8020	<0.5	25	ND	27.3	109	25.6	103	6.3	25	50-150
Ethyl Benzene	8020	<0.5	25	ND	27.4	109	26.1	104	4.7	25	50-150
Xylenes	8020	<0.5	75	ND	84	112	80	107	4.9	25	50-150
Gasoline	8015	<50.0	625	ND	619	99	590	94	4.8	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

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG5970722

Matrix: Water

Units: µg/L

Date Analyzed: 07/22/97

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	%R
Benzene	8020	<0.5	25	ND	27.0	108	27.0	108	0.0	25	50-150
Toluene	8020	<0.5	25	ND	31.0	124	31.0	124	0.0	25	50-150
Ethyl Benzene	8020	<0.5	25	ND	31.1	124	31.2	125	0.3	25	50-150
Xylenes	8020	<0.5	75	ND	81	108	82	109	1.2	25	50-150
Gasoline	8015	<50.0	625	ND	578	92	599	96	3.6	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 • Sunnyvale, CA 94086 • Telephone: (408) 735-1550 (800) 287-1799 • Fax: (408) 735-1554

Chain of Custody/Analysis Work Order

Client: Garmen Aircraft
 Address: _____
 Contact: Tom Price
 Telephone #: _____
 Date Received: 7/18/97
 Turn Around: _____

Project ID: _____

Purchase Order #: _____

Sampler/Company: <u>Tom Price/Environmental Testing & Mgmt.</u>	Telephone #: _____
Special Instructions/Comments <u>Normal Turn Around Time. Please mail results</u>	

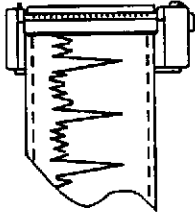
LAB USE ONLY

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	TPH	BTEX						
D11572	MW-1	Grab	W.	7/17/97	—	No	40 ml vials	✓	✓						
D11573	MW-2	"	"	"	—	"	"	✓	✓						
D11574	MW-3	"	"	"	—	"	"	✓	✓						
Relinq. By: <u>Tom Price</u>				Received By: <u>P. Salzer</u>				Date: <u>7/18/97</u>				Time: <u>1:50</u>			
Relinq. By: _____				Received By: _____				Date: _____				Time: _____			
Relinq. By: _____				Received By: _____				Date: _____				Time: _____			



ENVIRONMENTAL TESTING & MGMT.

111 N. MARKET ST., SUITE 600
SAN JOSE, CALIFORNIA 95113
408.938.0939 FAX: 408.938.3929

Date: 7/17/97 Project Name: German Autocraft
Project No.: _____ Well No./Description: MW-1
Depth of Well: 41.6 1 Well Volume: 2.5
Depth to Water: 25.06 4 Well Volumes: 10
Casing Diameter: 2" 4" Actual Volume Purged: 10

Calculations:

2" - * 0.1632
4" - * 0.653

15.5 x 0.16 = 2.5

Purge Method: Bailer Displacement Pump Impinger/Vacuum

Sample Method: Bailer Other Specify: _____

Sheen: No Yes, Describe light rainbow splashes

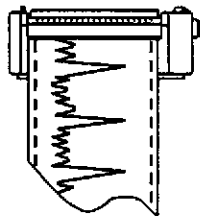
Odor: No Yes, Describe mild HC.

Field Measurements:

Time	Volume	pH	Temp.	E.C.	Color
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Remarks: 3³
15.5
16
1930
155
2520

Sampler: _____



ENVIRONMENTAL TESTING & MGMT.
 111 N. MARKET ST., SUITE 600
 SAN JOSE, CALIFORNIA 95113
 408.938.0939 FAX: 408.938.3929

Date: 7/17/97

Project Name: German Aircraft

Project No.: _____

Well No./Description: MW-2

Depth of Well: 33.7

1 Well Volume: 1.3

Depth to Water: 25.83

4 Well Volumes: 5.2

Casing Diameter: 2" 4"

Actual Volume Purged: 5.2

Calculations:

~ 8 x 0.16

2" - * 0.1632

4" - * 0.653

Purge Method: Bailer Displacement Pump Impinger/Vacuum

Sample Method: Bailer Other Specify: _____

Sheen: No Yes, Describe Rainbow, heavy

Odor: No Yes, Describe strong H.C.

Field Measurements:

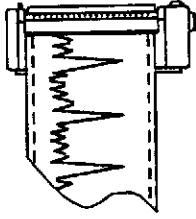
Time	Volume	pH	Temp.	E.C.	Color
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Remarks: 1.16

8

1.28

Sampler: Tom Price



ENVIRONMENTAL TESTING & MGMT.

111 N. MARKET ST., SUITE 600
SAN JOSE, CALIFORNIA 95113
408.938.0939 FAX: 408.938.3929

Date: 7/17/97

Project Name: German Aircraft

Project No.: _____

Well No./Description: MW-3

Depth of Well: 35.3

1 Well Volume: 21.6

Depth to Water: 25.07

4 Well Volumes: 6.4

Casing Diameter: 2" 4"

Actual Volume Purged: 6.4

Calculations:

10 x 0.16 = 21.6

2" - * 0.1632

4" - * 0.653

Purge Method: Bailer Displacement Pump Impinger/Vacuum

Sample Method: Bailer Other Specify: _____

Sheen: No Yes, Describe _____

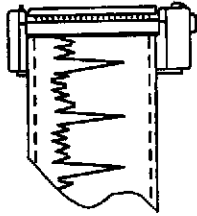
Odor: No Yes, Describe aged HC

Field Measurements:

Time	Volume	pH	Temp.	E.C.	Color
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Remarks: _____

Sampler: Tom Juice



ENVIRONMENTAL TESTING & MGMT.
 111 N. MARKET ST., SUITE 600
 SAN JOSE, CALIFORNIA 95113
 408.938.0939 FAX: 408.938.3929

Date: 7/17/97 Project Name: German Autocraft.

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

Depth of Well: 34.3 1 Well Volume: _____

Depth to Water: 25.30 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 _____

Odor: No Yes, Describe _____

Field Measurements:

Time	Volume	pH	Temp.	E.C.	Color
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Remarks: _____

Sampler: _____

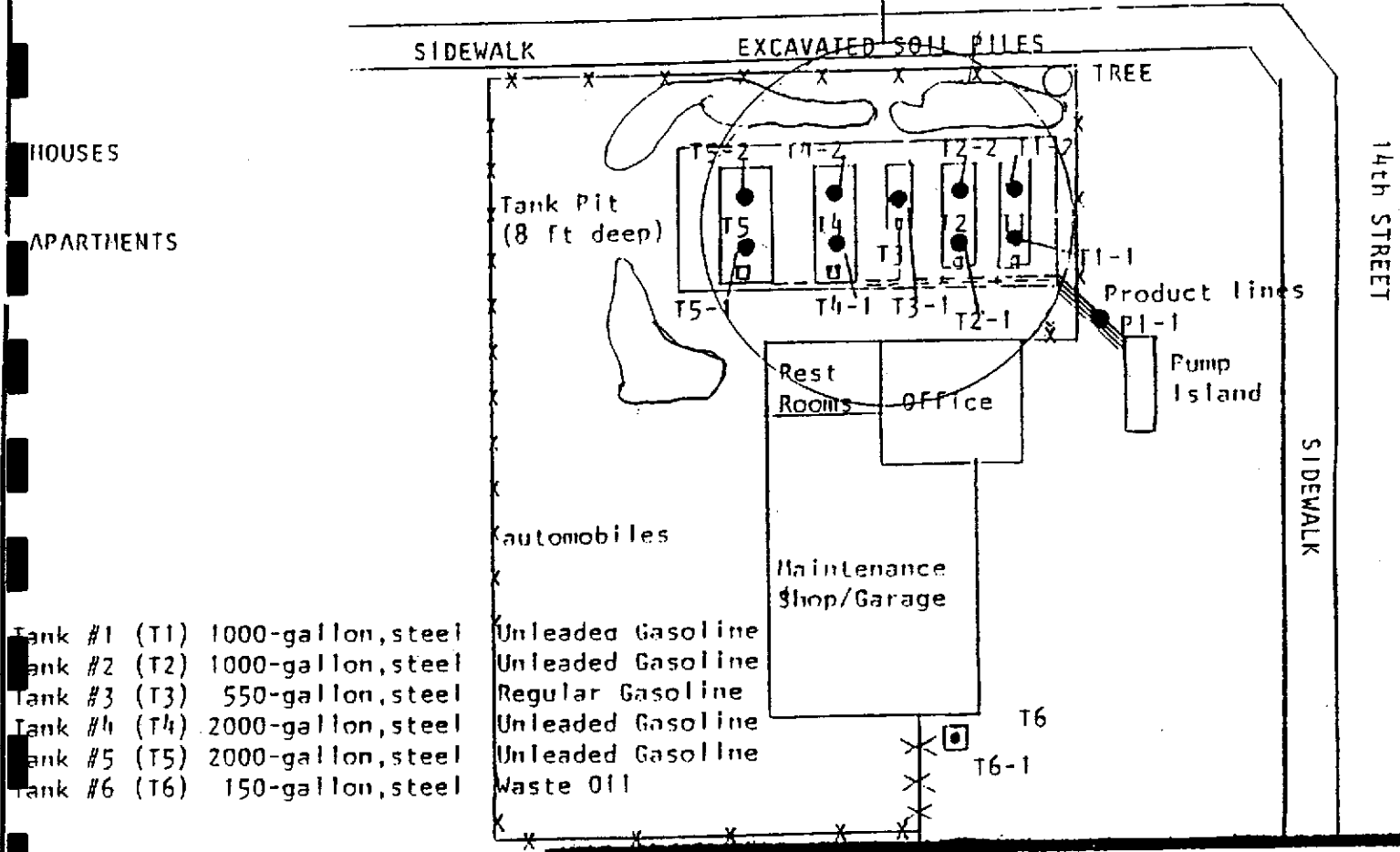
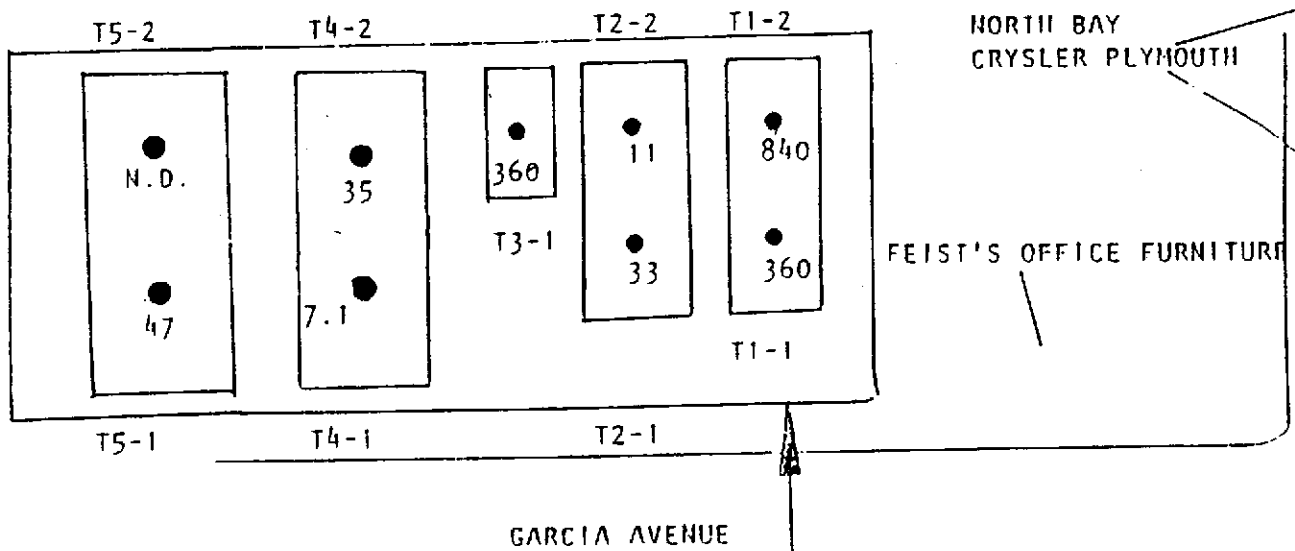
APPENDIX D: QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

The quality assurance/quality control measures used for groundwater sampling conducted on July 17, 1997 included the following:

- Groundwater samples were collected in triplicate.

The Environmental Construction Company

... WORKING TOWARDS A CLEANER ENVIRONMENT



- Tank #1 (T1) 1000-gallon, steel Unleaded Gasoline
- Tank #2 (T2) 1000-gallon, steel Unleaded Gasoline
- Tank #3 (T3) 550-gallon, steel Regular Gasoline
- Tank #4 (T4) 2000-gallon, steel Unleaded Gasoline
- Tank #5 (T5) 2000-gallon, steel Unleaded Gasoline
- Tank #6 (T6) 150-gallon, steel Waste Oil

VIKING LIQUOR STORE

THE ENVIRONMENTAL CONSTRUCTION CO.

SCALE: 1in=20ft	301 East 14th St. San Leandro, CA	DRAWN BY TS
DATE: 11/12/90		REVISED

TPH CONCENTRATION MAP (in ppm)
FIGURE #3

#238

APPENDIX F: 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

Mike Bakaldin
City of San Leandro Fire Department
835 E. 14th Street, Suite 200
San Leandro, California 94577