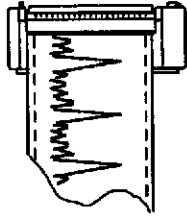


SOIL AND WATER INVESTIGATION AT  
GERMAN AUTOCRAFT  
301 E. 14TH STREET, SAN LEANDRO, CALIFORNIA

Prepared by:



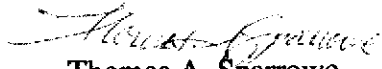
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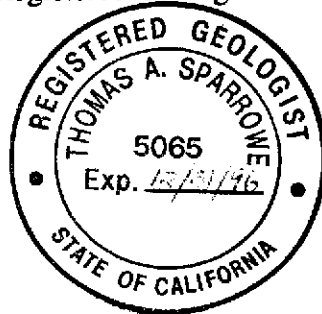
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PROTECTION  
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Report submitted April 12, 1995

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## I. EXECUTIVE SUMMARY

Chemist Enterprises (CE) was retained by Mr. Seung Lee to implement a soil and groundwater investigation at the German Autocraft property in San Leandro, California. The purpose of this investigation was to further define the source of petroleum hydrocarbons and volatile organic compounds (VOCs) in soil and groundwater on the Site. The investigation consisted of collecting soil and groundwater samples in potential contamination areas, analyses of selected soil and groundwater samples, and providing recommendations for additional environmental activities.

The Site was a gas station before 1981. Since then, the building on the Site is an automotive repair shop only. Use of six underground storage tanks (USTs) located on the property were discontinued in 1981. Mr. Lee purchased the property in 1985 and never used the USTs for the storage of fuels.

In 1990, The Environmental Construction Company (TECC) removed two 1,000-gallon unleaded gasoline; one 550-gallon leaded gasoline; two 2,000-gallon unleaded gasoline, and; one 150-gallon waste oil USTs. During their removal, the two 1,000-gallon unleaded gasoline and the 550-gallon leaded gasoline were observed to have holes in them. Strong petroleum odor and dark gray staining of soils below all USTs was observed. A total of 14 soil samples were collected from below the USTs at that time. Nine of the fourteen soil samples collected below the former gasoline tanks, contained detectable [greater than 2.5 parts per million (ppm)] Total Petroleum Hydrocarbons as Gasoline (TPHg) concentrations ranging from 7.1 to 840 ppm and detectable [greater than 5 parts per billion (ppb)] benzene concentrations ranging from 9.8 to 2,600 ppb. A soil sample collected from below the product lines had non-detectable (less than

2.5 ppm) TPHg. One soil sample collected from the bottom of the waste oil tank over-excavation contained non-detectable levels (less than 5 ppm) of Total Oil and Grease (TOG).

TECC over-excavated the waste oil tank pit by approximately fifteen cubic yards to remove contaminated soil. The gasoline tank pit was also over-excavated, however, the total volume of excavated soils was not reported. The gasoline tank pit was later lined with plastic, the excavated soil was placed back in the pit, and covered with plastic as a temporary containment measure. Information concerning the soil used for backfilling the waste oil tank pit was not documented.

In 1991, TECC performed a Preliminary Soil and Groundwater Subsurface Hydrocarbon Contamination Assessment of the Site to determine the extent of soil and groundwater contamination in the area of the former gasoline tanks. TECC's investigation included: the drilling of three soil borings (B-1, B-2, and B-3); the installation of one monitoring well (MW-1) adjacent to the former gasoline tank area; laboratory analysis of collected soil and groundwater samples, and; providing preliminary recommendations for remedial investigation and activities. Soil samples collected from the soil borings resulted in the detection of TPHg at concentrations ranging from 1.7 to 2,100 ppm. A groundwater sample collected from MW-1 contained dissolved TPHg at 51 ppm and grab groundwater sample collected from soil boring B-2 contained dissolved TPHg at 28 ppm.

In December 1994 and January 1995, a supplemental soil and groundwater investigation was performed by CE to define further soil and groundwater in the potential onsite source area. To evaluate the distribution of impacts to the soil and groundwater on the subject property, CE drilled four borings and installed two monitoring wells. A total of 17 soil samples were collected

for laboratory analyses. CE also collected a groundwater sample from each onsite well and soil boring for laboratory analyses.

The soil and groundwater samples were analyzed for Total Petroleum Hydrocarbon as gasoline (TPHg), benzene, toluene, ethyl benzene, and total xylenes (BTEX) and for Total Lead. The highest concentrations of contaminants in soil were detected in the boring located in the former tank excavation. In boring CE-2 at a depth of 15 feet , TPHg was detected at 57 mg/kg, benzene and toluene at <0.005 mg/kg, ethyl benzene at 0.59 mg/kg, and total xylenes at 1.8 mg/kg. However, the sample collected at 20 feet contained significantly higher levels of TPHg and BTEX. TPHg was measured at 1,600 mg/kg, benzene at 7.1 mg/kg, toluene at 75 mg/kg, ethyl benzene at 41 mg/kg, and total xylenes at 170 mg/kg.

The groundwater samples collected from the three monitoring wells and soil borings installed on the site contained BTEX concentrations which exceeded the California drinking water maximum contaminant level (MCLs) or action levels (AL).

The results of CE's soil and groundwater investigation indicate that a release occurred from the underground tanks formerly located in the western portion of the property and that this release has resulted in the contamination of groundwater. The highest concentrations of TPHg and BTEX were detected in samples from borings CE-1 and CE-2 located next to and inside the former tank excavation area. BTEX was detected in all of the groundwater samples collected from monitoring wells and soil borings exceeding their respective MCL or AL. Remediation will be required to mitigate contaminants on the site and to protect public health and the environment.

As a result of CE's work to date, we recommend the following activities be included in the next phase of work:

- Proper disposal of 7 DOT-rated 55 gallon drums of monitoring well purge water and rinsate.
- Proper disposal of 4 DOT-rated 55 gallon drums of gasoline-impacted soil cuttings generated during drilling operations.
- Initiation of monthly monitoring and quarterly sampling of the existing monitoring wells at the Site.
- Interim remedial steps be taken to mitigate soil and groundwater contamination that has occurred as a result of fuel releases from the former USTs.
- Additional soil and water investigation including the installation of two on-site monitoring wells, one close to the subject site north property corner, one close to the east property corner, and two off-site monitoring wells along the northern side of Garcia Avenue.

## **II. INTRODUCTION**

This report presents the results of recent field investigations conducted by CE at the German Autocraft property (the Site) is located at 301 East 14th Street in the city of San Leandro, Alameda County, California. **Figure 1** shows the general location of the Site. German Autocraft is an automotive repair outlet owned by Mr. Seung Lee. The Site is within the regulatory boundaries of Zone 7 Water Agency of Pleasanton, California. The purpose of this soil and groundwater investigation was to further characterize the distribution of volatile organic compounds (VOCs) and total petroleum hydrocarbons as gasoline (TPHg) in the soil and groundwater at the site identified during a previous investigation. The field work was performed under the direct supervision of Mr. Thomas Sparrowe, California Registered Geologist and CE Associate, on behalf of Mr. Lee.

On November 23, 1994, Mr. Lee retained the services of CE to conduct a soil and groundwater investigation to characterize further the vertical and horizontal extent of contamination on the Site. The scope of work was outlined in an October 25, 1994, work plan prepared by CE. It included preliminary activities including securing the necessary permits from Zone 7 Water Agency and preparation of a Health and Safety Plan; the collection and analyses of soil samples, installation of two new monitoring wells; supervision of drilling activities by a California Registered Geologist; the collection and analyses of groundwater samples from existing and new onsite monitoring wells, and; preparation of this technical report for submittal to Mr. Lee and the Alameda County Department of Environmental Health (ACDEH).

This report was written by Mr. Sparrowe and CE Project Manager Mr. Tom Price and presents the results of CE's December 1994 and January 1995 soil and groundwater sampling and investigation, the results of previous environmental sampling results, descriptions of field work and sampling procedures, boring logs, maps, laboratory reports, and chain of custody documentation, and evaluation of sampling data and recommendations for further environmental activities.

### **III. SITE DESCRIPTION**

The subject Site property is a rectangular shaped, approximately 7,500 square foot (sf) parcel of land, that supports a one-story building, paved parking, and landscaping. A large dirt fill depression is located on the northwestern portion of the Site. The Site is located in San Leandro at the southwest corner of 14th Street and Garcia Avenue. Garcia Avenue forms the northwestern boundary, East 14th Street borders the northeastern side, Viking Liquor Store and parking lot borders the southeastern side, and an apartment complex borders the southwestern side of the Site. The Site is presently being used as an automotive repair shop. The one-story building is located in the central portion of the Site and consists of a maintenance shop/garage,

office, and restrooms. A former gas pump island is located northeast of the building. A small pile of concrete, asphalt, and soil was observed in the western corner of the property.

#### **IV. LOCAL GEOLOGY AND HYDROGEOLOGY**

The Site is located in a commercial and residential area in the city of San Leandro, California. According to the United States Geological Survey (Helley et. al., 1979), the Site is located in the eastern edge of San Francisco Bay and is situated on nearly flat, alluvial fan deposits of recent age. The Site is situated in a large northwest-trending trough formed predominantly during the Pleistocene age (5 million years ago) and is associated with the Coast Range Geomorphic Province of northern California. The San Francisco Bay is bordered on the east by the Diablo Range and on the west by the Santa Cruz Mountain Range. The Site lies approximately 1 mile southwest of the northwest-trending Hayward fault. The San Andreas fault zone is located in the Santa Cruz Mountain Range in the southwest San Francisco Bay and approximately 15 miles southwest of the Site.

The surficial deposits occurring in the area have been mapped as coarse grained alluvial fan deposited at the base of Las Trampas Ridge (Helley et. al., 1979). The alluvial fan deposits are described as Quaternary age (Holocene, 0 to 10,000 years old) moderately sorted sand and silt with coarse grained sand and gravel. The soil borings completed at the subject site have not extended more than 45 feet bgs and bedrock or penetration refusal were not encountered.

The Site is approximately 3-miles east of the San Francisco Bay and 3,000-feet north of San Leandro Creek. The depth to first groundwater at the Site is approximately 20 feet below the ground surface.



## V. BACKGROUND/SITE HISTORY

According to a November 1990 report prepared by TECC of San Jose, California, the retail gas station property was purchased by Mr. Wilhelm on June 17, 1977. Use of six underground storage tanks (USTs) located on the property were discontinued in 1981. On October 16, 1983, Mr. Wilhelm sold the property to Mr. Andrati and on April 15, 1985, Mr. Andrati sold the property to Mr. Lee. Mr. Lee has owned the property since 1985 and never used the USTs for the storage of fuels.

In 1990, Mr. Lee retained the services of TECC to remove the six USTs from the Site. Subsequent to removal of the USTs, TECC prepared a technical report entitled "Underground Storage Tank Removals". The USTs included: two 1,000-gallon unleaded gasoline (Tank No.'s 1 and 2); one 550-gallon leaded gasoline (Tank No. 3); two 2,000-gallon unleaded gasoline (Tank No.'s 4 and 5), and; one 150-gallon waste oil (Tank No. 6). **Figure 2** shows the general locations of these former tanks on the Site.

During their removal, three USTs (Tank No.'s 1, 2, and 3) were observed to have holes in them. Strong petroleum odor and dark gray staining of soils below all USTs was observed. A total of 14 soil samples were collected from below the USTs at that time. Nine of the fourteen soil samples collected below the former gasoline tanks, contained detectable [greater than 2.5 parts per million (ppm)] Total Petroleum Hydrocarbons as Gasoline (TPHg) concentrations ranging from 7.1 to 840 ppm and detectable [greater than 5 parts per billion (ppb)] benzene concentrations ranging from 9.8 to 2,600 ppb. A soil sample collected from below the product lines had non-detectable (less than 2.5 ppm) TPHg. One soil sample collected from the bottom of the waste oil tank (Tank No. 6) over-excavation contained non-detectable levels (less than 5 ppm) of Total Oil and Grease (TOG). Three composite samples were collected from over-excavation stockpiles. TPHg concentration levels of 36 and 75 ppm were found in two of the

stockpiles and a TOG concentration of 970 ppm was found in the waste oil tank stockpile. No diesel or solvent products were identified in the waste oil tank sample.

TECC over-excavated the waste oil tank pit by approximately fifteen cubic yards to remove contaminated soil. The gasoline tank pit was also over-excavated, however, the total volume of excavated soils was not reported. The gasoline tank pit was later lined with plastic, the excavated soil was placed back in the pit, and covered with plastic as a temporary containment measure. Information concerning the soil used for backfilling the waste oil tank pit was not documented.

In 1991, subsequent to an environmental investigation, TECC prepared a report entitled "Preliminary Soil and Groundwater Contamination Assessment" in order to document the known extent of soil and groundwater contamination in the area of the former gasoline tanks. TECC's investigation included: the drilling of three soil borings (B-1, B-2, and B-3); the installation of one monitoring well (MW-1) adjacent to the former gasoline tank area; laboratory analysis of collected soil and groundwater samples, and; providing preliminary recommendations for remedial investigation and activities. Soil samples collected from the soil borings resulted in the detection of TPHg at concentrations ranging from 1.7 to 2,100 ppm. A groundwater sample collected from MW-1 contained dissolved TPHg at <sup>51,000 ug/l</sup> 51 ppm and grab groundwater sample collected from soil boring B-2 contained dissolved TPHg at 28 ppm. During CE's investigation, the locations of the above referenced borings were field-checked and the location of boring B-2 was corrected as shown on **Figure 2**.

## **VI. SOIL INVESTIGATION**

The objective of the subsurface soil investigation conducted by CE in December 1994 was to collect the data necessary to determine the extent of soil and contamination in the vicinity of the previous USTs and capillary zone along the southwest property line of the Site. Specifically, the objectives of this investigation were as follows:

### **A. PRELIMINARY ACTIVITIES**

Prior to beginning drilling, CE obtained the necessary drilling permits from Zone 7 Water Agency. Copies of the drilling permits are included in **Appendix A**. The Health and Safety plan was reviewed by all workers at a "tailgate meeting" prior to commencement of field work. Prior to beginning drilling, CE coordinated utility location with Underground Service Alert. As an added precaution before drilling, each borehole was first hand augered to a depth of 4-feet to check for underground utilities.

### **B. SOIL INVESTIGATION PROCEDURES**

The result of TECC's effort indicated that the highest concentrations of total petroleum hydrocarbons (TPHg) and benzene, toluene, ethyl benzene, and total xylenes (BTEX) were found in the vicinity of the former gasoline tanks. One boring (CE-1) was located outside the former tank excavation and a second (CE-2) was placed in the former tank area to characterize the soil that was used to backfill the tank pit and soils below this backfill material.

On December 12 and 13, 1994, soil samples were collected from 4 borings (CE-1 through CE-4) drilled at the site for lithologic identification and chemical analysis. The drilling sequence started with drilling the borings on the western edge of the property (MW-2 and MW-3) and

moving to the area of the former underground tank excavation (CE-1 and CE-2). The locations of the soil borings are shown in **Figure 2**.

A CME 75 truck-mounted drill rig, equipped with 7.25-inch OD and 3.25-inch ID hollow-stem augers was used to drill soil borings MW-2, MW-3, and CE-1. Borehole CE-2, located in the former UST area, was drilled using a hand auger because the area was inaccessible to the truck. The upper 4 feet of each boring was hand augered to clear underground utilities. Downhole equipment was decontaminated by steam cleaning after each borehole was completed. Soil borings MW-2, MW-3, and CE-1 were sampled at 5 foot intervals (5 feet, 10 feet, etc.) for lithologic description and chemical analysis. Borings MW-2 and MW-3 were drilled to 38 feet below the ground surface (bgs) and were completed as monitoring wells. Boring CE-1 and CE-2 were drilled to 30 feet and 24.5 feet bgs, respectively. All work performed for this project was under the direction of a California Registered Geologist.

Soil samples were collected for lithologic description and possible chemical analysis. Soil was sampled using 1.5-foot long split-spoon samplers. The split spoons were fitted with 1.5-inch OD, 6-inch long brass sleeves for sample collection. Soil cuttings (approximately 35 cubic feet) obviously impacted with hydrocarbons were placed in four labeled, DOT-rated 55-gallon drums. Overburden soil cuttings field determined to be free of hydrocarbons generated during drilling (approximately 50 cubic feet) were stockpiled behind German Autocraft building by placing the spoils on top of and covered by 6-mil plastic sheeting. Liquid wastes derived from decontamination procedures (approximately 100 gallons) were stored in two labeled, DOT-rated 55-gallon drums and placed next to the soil cuttings. The proper disposition of these wastes are not a part of the present scope of work however, proper disposal should be included as part of the next phase of work.

Soil samples were collected for lithologic description under the direct supervision of a California licensed Registered Geologist. Boring logs are included in this report as **Appendix B**. After the borings were completed, they were backfilled with Portland cement and bentonite chips, and capped with concrete.

All soil samples were field screened for organic vapors using a hand held Photovac Microtip 1000 photo-ionization detector (PID) analyzer calibrated for organic compounds. Based on the results of the field inspection, selected samples were submitted for laboratory analyses. In addition, all soil samples collected from the borings advanced through and within 10-feet of the tank pit (CE-1 and CE-2) were submitted for laboratory analyses. All samples collected for chemical analysis were covered at each end with aluminum foil, capped, taped, labeled, sealed in air-tight plastic bags, and placed on ice for delivery to the laboratory. Chain-of-custody information was recorded for each sample and shipped with the sample container. CE delivered the samples to the Inchcape laboratory in San Jose, California, at the end of each day. The soil samples were analyzed for TPHg and BTEX by EPA Method SW 846-5030/8020 and for Total Lead using EPA Method 6010A.

The data from the soil borings indicate that the underlying soil at the Site generally consist of grayish brown to yellowish brown sandy to fat clay with occasional lenses of silty and clayey sand and well-graded sand with gravel. Boring CE-2 was located in the center of the former tank area and a 7 foot thick section of fill was encountered. The fill material consists of very dark grayish brown to very dark brown sandy clay and fat clay. Underlying the fill material was native soil consisting of yellowish brown silty clay. Schematic cross-sections, based on logs of soil and well borings, are presented in **Figures 3 and 4**

Borings CE-1 and CE-2 exhibited moderate petroleum odors starting at approximately 20 feet that became strong by 22 feet and high PID(>100 ppm). The PID readings remained high in subsequent samples collected from CE-1 and CE-2 until groundwater was encountered (approximately 25 feet bgs). Soil borings MW-2 and MW-3 did not exhibit petroleum odor or high PID values (>100 ppm) until the groundwater was encountered. These readings strongly suggest that the sand layer underlying the former tank excavation backfill at approximately 23 feet is being contaminated with TPHg and VOCs.

CE researched applicable or relevant appropriate requirements for determining action levels as a means of determining whether the soils contained elevated levels of TPHg, BTEX, and Total Lead. During past investigations and CE's recent investigation the groundwater level on the site was determined to be greater than 5 feet below the bottom of the former tank excavation. In the state of California, action or cleanup level are typically established locally. The Zone 7 Agency has no established action cleanup levels for soils and defers to the State Water Resources Control Board (SWRCB) Leaking Underground Fuel Tank (LUFT) Field Manual for derivation of these levels.

The LUFT manual indicates that if the groundwater level is approximately 20 feet and the mean annual precipitation for Oakland is 18.7 inches (J.S. Fay et. al., 1991) the acceptable cumulative soil contamination level for benzene is 0 ppm.

The results for selected samples collected from each soil boring drilled on the Site are presented in Table 1 and are discussed below. A copy of the laboratory sheets are included in **Appendix C**.

#### Boring CE-1

Boring CE-1 was located west of the former gasoline tank area. The soil samples collected at 6, 11, and 16 feet did not contain contaminants concentrations exceeding the expected state action levels. However, soil samples collected at 21 and 26 feet contained TPHg and BTEX at significantly higher levels. TPHg was measured at 94 to 160 mg/kg, benzene at 1.1 to 5.6 mg/kg, toluene at 1.3 to 6.6 mg/kg, ethyl benzene at 2.4 to 7.3 mg/kg, and total xylenes at 5.1 to 16 mg/kg. The benzene concentrations are higher than the expected state action levels. Total Lead in all of the CE-1 soil samples ranged from 6.0 to 7.9 mg/kg and are consistent with baseline background levels for lead in the native soil.

#### Boring CE-2

Boring CE-2 was located in the former tank excavation approximately where Tank No. 2 was situated. The soil sample collected at 5 and 10 feet did not contain contaminant concentrations exceeding the expected state action levels. The soil sample collected at 15 feet contained TPHg at 57 mg/kg, benzene and toluene at <0.005 mg/kg, ethyl benzene at 0.59 mg/kg, and total xylenes at 1.8 mg/kg. However, the sample collected at 20 feet contained TPHg and BTEX concentrations at significantly higher levels. TPHg was measured at 1,600 mg/kg, benzene at 7.1 mg/kg, toluene at 75 mg/kg, ethyl benzene at 41 mg/kg, and total xylenes at 170 mg/kg. These BTEX concentrations are higher than the expected state action levels. Total Lead in the CE-2 soil samples ranged from 4.1 to 23.5 mg/kg. The samples collected at 5 and 20 feet contained Total Lead at 23.5 mg/kg and 12.4 mg/kg and are above the site background levels.

#### Boring MW-2

Boring MW-2 was located south of the former tank area. Soil boring MW-2 exhibited no petroleum odors and had low field PID values (<6.7 ppm) until the groundwater was encountered at approximately 27.5 feet bgs. Therefore, soil samples collected at 6, 11, 16, 21, and 26 feet were not submitted for laboratory analysis. After encountering groundwater, the field PID value

of the sample collected at 31 feet increased to 1700 ppm and was submitted for analysis. TPHg was measured at 6,300 mg/kg, benzene at 110 mg/kg, toluene at 65 mg/kg, ethyl benzene at 190 mg/kg, and total xylenes at 310 mg/kg. These BTEX concentrations are higher than the expected state action levels. The sample collected from 36 feet contained TPHg at 0.77 mg/kg, benzene at 0.015 mg/kg, toluene at 0.006 mg/kg, ethyl benzene at 0.038 mg/kg, and total xylenes at 0.085 mg/kg. The samples collected at 31 and 36 feet contained Total Lead at 4.5 mg/kg and 4.9 mg/kg and are consistent with site background levels for this constituent.

### Boring MW-3

Boring MW-3 was located west of the former gas tank area. Soil samples collected at 6, 11, and 16 feet exhibited no petroleum odors and had low field PID values (<9 ppm) and were not submitted for laboratory analysis. The samples collected from 21 and 26 feet exhibited faint to moderate petroleum odors and contained TPHg at 0.74 and 6.8 mg/kg, benzene at 0.024 and 0.16 mg/kg, toluene at 0.013 and 0.033 mg/kg, ethyl benzene at below non detect levels (<0.005 and 13 mg/kg, and total xylenes at 0.007 and 0.21 mg/kg respectively. These BTEX concentrations are lower than the expected state action levels. After encountering groundwater at 31.3 feet, the field PID value increased to 500 ppm. Laboratory analysis of the soil sampled measured TPHg at 420 mg/kg, benzene at 7.0 mg/kg, toluene at 3.9 mg/kg, ethyl benzene at 13 mg/kg, and total xylenes at 37 mg/kg. This benzene concentration is higher than the expected state action levels. Samples collected from soil underlying the aquifer at 36 and 37.5 feet contained TPHg at 0.86 and <0.5 mg/kg, benzene at 0.10 and 0.058 mg/kg, toluene at 0.007 and 0.009 mg/kg, ethyl benzene at 0.037 and 0.018 mg/kg, and total xylenes at 0.078 and 0.035 mg/kg respectively. Total Lead in analyzed MW-3 soil samples ranged from <4.0 to 6.5 mg/kg and are consistent with baseline background levels.



The results of the onsite soil sampling effort indicate that the highest concentrations of TPHg and BTEX are found in the western portion of the property (CE-1 and CE-2) in the area of the former gasoline tank area (see **Figure 2**). The lab test results from CE-2 indicate that spill or release to the soil has occurred in this area and extends to the shallow groundwater aquifer underlying the site. Since TPHg and BTEX concentrations in MW-2 and MW-3 decreased significantly in samples collected from aquitard material (fat clays) below the aquifer sediments it appears that contamination is confined to the shallow aquifer.

A copy of the certified analytical reports from Inchcape Laboratories are included in **Appendix C** and is summarized in **Table 1** below:

**TABLE 1. SOIL SAMPLE TEST RESULTS**

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

Date Sampled: December 12-13, 1994

Units: mg/Kg Soil

Compound:	TPHg	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Lead
Sample ID/ Depth						
MW2-6/31'	6,300	110	65	190	310	4.5
MW2-7/36'	0.77	0.015	0.006	0.038	0.085	4.9
MW3-4/21'	0.74	0.024	0.013	<0.005	0.007	6.5
MW3-5/21'	<0.5	<0.005	<0.005	<0.005	<0.005	5.5
MW3-6/26'	6.8	0.16	0.033	0.16	0.21	6.2
MW3-7/31'	420	7.0	3.9	13	37	5.5
MW3-8/36'	0.86	0.10	0.007	0.037	0.078	6.2
MW3-9/37.5'	<0.5	0.058	0.009	0.018	0.035	<4.0
CE1-1/6'	<0.5	<0.005	<0.005	<0.005	<0.005	6.0
CE1-2/11'	<0.5	<0.005	<0.005	<0.005	<0.005	7.9
CE1-3/16'	<0.5	<0.005	0.008	<0.005	<0.005	7.1
CE1-4/21'	94	1.1	1.3	2.4	5.1	7.0
CE1-5/26'	160	5.6	6.6	7.3	16	6.3
CE2-1/5'	<0.5	<0.005	<0.005	<0.005	<0.005	23.5
CE2-2/10	<0.5	<0.005	<0.005	<0.005	<0.005	5.7
CE2-3/15	57	<0.005	<0.005	0.59	1.8	4.1
CE2-4/20	1,600	7.1	75	41	170	12.4

*split sample*

*split sample*

## VII. [REDACTED] INVESTIGATION PROCEDURES

To determine whether the site is being affected by the downgradient migration of groundwater contaminated by BTEX and TPHg from the former UST area, monitoring wells MW-2 and MW-3 were installed on the southern and western sides of property to further characterize the groundwater contamination in the assumed downgradient direction from the former tank area (Figure 2).

Monitoring wells MW-2 and 3 were installed using the same drilling methods described earlier in the soil investigation section of this report. The wells were constructed of 2-inch diameter, Schedule 40 PVC riser and 10-foot, 0.01-inch machine slotted screen and bottom end cap. MW-2 was screened between 24 and 34 feet and MW-3 between 25 and 35 feet below grade. A filter pack of No. 2/12 sand was emplaced from the bottom of the hole to approximately 2 feet above the top of the screen section. A one-foot hydrated bentonite seal was emplaced on top of the sand pack and the remaining annular space was filled with Portland cement/bentonite grout. The top of the blank well casing was fitted with a water-tight expansion locking cap. The tops of the wells were covered with flush mounted, 8-inch diameter water-tight traffic-rated well box set in concrete.

After a minimum of 48-hours following well construction, the newly installed monitoring wells were developed by swabbing and over-pumping to remove fine-grained sediments entrained in the sand pack and near the well bore due to the drilling operations. Approximately 100 gallons of groundwater was removed from each of the newly installed monitoring wells during development.

## A. GROUNDWATER SAMPLING PROCEDURES

On December 13, 1994, CE collected grab groundwater samples from soil borings CE-1 and CE-2. The grab groundwater samples were collected using Teflon or stainless steel bailers. The bailers were cleaned prior to lowering into the groundwater by washing with Liquinox detergent, rinsing with tap water, and followed by a distilled water rinse.

*MW-2 and -3 drilled 12/12/94*

The groundwater sampling of monitoring wells was performed on January 6, 1994. Samples were collected from the one existing monitoring well and two newly installed monitoring wells for laboratory analyses. Sampling activities included measuring static water levels in the three wells using an electronic water level indicator accurate to 0.01 inch. Floating product thickness was measured by gently lowering a Teflon bailer into the water in each well approximately 2 feet. The liquid level in the bailer was allowed to equilibrate with the liquid level in the well. After raising the bailer, the thickness of floating product, if present, was measured in the transparent bailer with a ruler and noting the presence of sheen and odor. The wells were then purged of a minimum of four well volumes and/or until groundwater temperature, pH, and specific conductance had stabilized. Field purging and sampling data sheets may be found in **Appendix D**.

All groundwater samples were collected by gently pouring from the bailer into a 40-milliliter vial until a positive meniscus had formed at the top of the vial, each vial was capped, and checked to make sure no bubbles were present. Sample containers were labeled and chilled on ice immediately after collection.

The groundwater samples were analyzed for TPHg and BTEX and Total Lead by EPA modified Methods 5030 and 8020, and 6010A by Inchcape Testing Services, Anametrix Laboratories of

San Jose, California, a Department of Health Services (DHS)-certified laboratory. The quality assurance/quality control evaluation is presented in a section later in this report.

Water generated from development and sampling of the wells (totaling approximately 250 gallons) were stored in five labeled DOT-rated 55-gallon drums onsite. The next phase of work should include proper disposal of these wastes.

Sampling results were compared to the California Maximum Contaminant Levels (MCLs) or Action Levels (ALs) for drinking water. Sampling results are presented in **Table 2** and an evaluation of the results for each well is presented below. A copy of the laboratory reports are presented in **Appendix C**.

#### Monitoring Well MW-1

Well MW-1 is located northeast of the former gasoline tank area and is cross gradient to well MW-2. The sample from MW-1 contained: 13,000 µg/L of benzene which exceeds its MCL of 1 µg/L; 15,000 µg/L of toluene which exceeds its MCL of 150 µg/L; 4,800 µg/L of ethyl benzene which exceeds its MCL of 700 µg/L, and ; 13,000 µg/L of total xylenes which exceeds its MCL of 1,750 µg/L

#### Monitoring Well MW-2

Well MW-2 is located west of the former gasoline tank area and is down gradient of well MW-2. The sample from MW-2 contained 9,400 µg/L of benzene, 5,600 µg/L of toluene, 19,000 µg/L of ethyl benzene, and 43,000 µg/L of total xylenes. All of the constituents exceed their respective MCLs or AL.

### Monitoring Well MW-3

Well MW-3 is located west of the former gasoline tank area and is down gradient to well MW-2. The sample from MW-3 contained 11,000 µg/L of benzene, 2,300 µg/L of toluene, 8,300 µg/L of ethyl benzene, and 28,000 µg/L of total xylenes. All of the constituents exceed their respective MCLs or AL.

### Soil Boring CE-1

Soil Boring CE-1 was located west and down gradient of the former gasoline tank excavation. The grab groundwater sample from CE-1 contained benzene at 86,000 µg/L, toluene at 110,000 µg/L, ethyl benzene at 65,000 µg/L, and total xylenes at 220,000 µg/L. All of the constituents exceed their respective MCLs or AL.

### Soil Boring CE-2

Soil Boring CE-2 was located in the northern portion the former gasoline tank excavation. The grab sample from CE-2 contained benzene at 50,000 µg/L, toluene at 230,000 µg/L, ethyl benzene at 60,000 µg/L, and total xylenes at 290,000 µg/L. All of the constituents exceed their respective MCLs or AL.

The recent groundwater sampling showed a general increase in contaminant concentrations from those measured in February 1991 by TECC (4160 µg/L of BTEX). The persistence of BTEX in the indicates that the site is a source of groundwater contamination that is migrating off site in a northwesterly direction.

**TABLE 2. [REDACTED] TEST RESULTS**

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

Date Sampled: December 12-13, 1994 and January 6, 1995

Units: µg/L Water

Compound	TPHg	Benzene	Toluene	Ethyl-Benzene	Xylenes	Total Lead
Sample ID						
MW-1	110,000	13,000	15,000	4,800	13,000	134
MW-1 <sup>1</sup>	580,000	29,000	41,000	17,000	43,000	NA <sup>2</sup>
MW-2	980,000	9,400	5,600	19,000	42,000	411
MW-3	740,000	11,000	2,300	8,300	28,000	237
CE-1	2,600,000	86,000	110,000	65,000	220,000	3,270
CE-1 <sup>3</sup>	15,000,000	260,000	550,000	340,000	1,500,000	NA
CE-2	3,200,000	50,000	230,000	60,000	290,000	4,640
MCL	-	1	150	700	1750	-
AL	-	-	-	-	-	15

1/4" FP

**B. MONITORING WELL ELEVATION SURVEY**

As part of this investigation, an elevation survey of the monitoring wells was performed by Kier and Wright, a California licensed land surveyor. The top of well casing and adjacent ground surface elevations were measured in relation to mean sea level to 1/100th of a foot from an established benchmark. An analysis of groundwater flow based on February 1995 data suggests

<sup>1</sup>This sample was a blind duplicate for MW-1. The actual sample was labeled MW-4.

<sup>2</sup>NA = Not Analyzed.

<sup>3</sup>This sample was a duplicate.

that the groundwater gradient is approximately 0.0002 ft/ft in a west-northwest direction as denoted on **Figure 2**.

**TABLE 3. MONITORING WELL CASING TOP AND GROUNDWATER ELEVATIONS**

Well Number	Date	Casing Top Elevation (feet, MSL)	Depth to Groundwater (feet)	Groundwater Elevation (feet, MSL)
MW-1	2/10/95	49.61	20.02	29.59
MW-2	2/10/95	50.14	20.52	29.62
MW-3	2/10/95	49.44	19.87	29.57

### **IX. QUALITY ASSURANCE/QUALITY CONTROL MEASURES**

The quality assurance/quality control measures related to the soil and groundwater sampling included the following:

- Split duplicate soil samples (MW3-4 and MW3-5) were collected at the 20' depth from MW-3 and both of these samples were submitted for TPHg, BTEX, and Total Lead analyses.
- Groundwater samples were collected in triplicate.
- One trip blank was submitted for TPHg and BTEX analyses along with the grab groundwater samples collected on December 13, 1994.
- One duplicate grab groundwater sample was collected at borehole CE-1 on December 13, 1994 and submitted for TPHg and BTEX analyses.
- One trip blank was submitted for TPHg and BTEX analyses along with the monitoring well samples collected on January 6, 1995.
- One blind duplicate groundwater sample (labeled MW-4) was collected at MW-1 and submitted for TPHg and BTEX analyses on January 6, 1995.

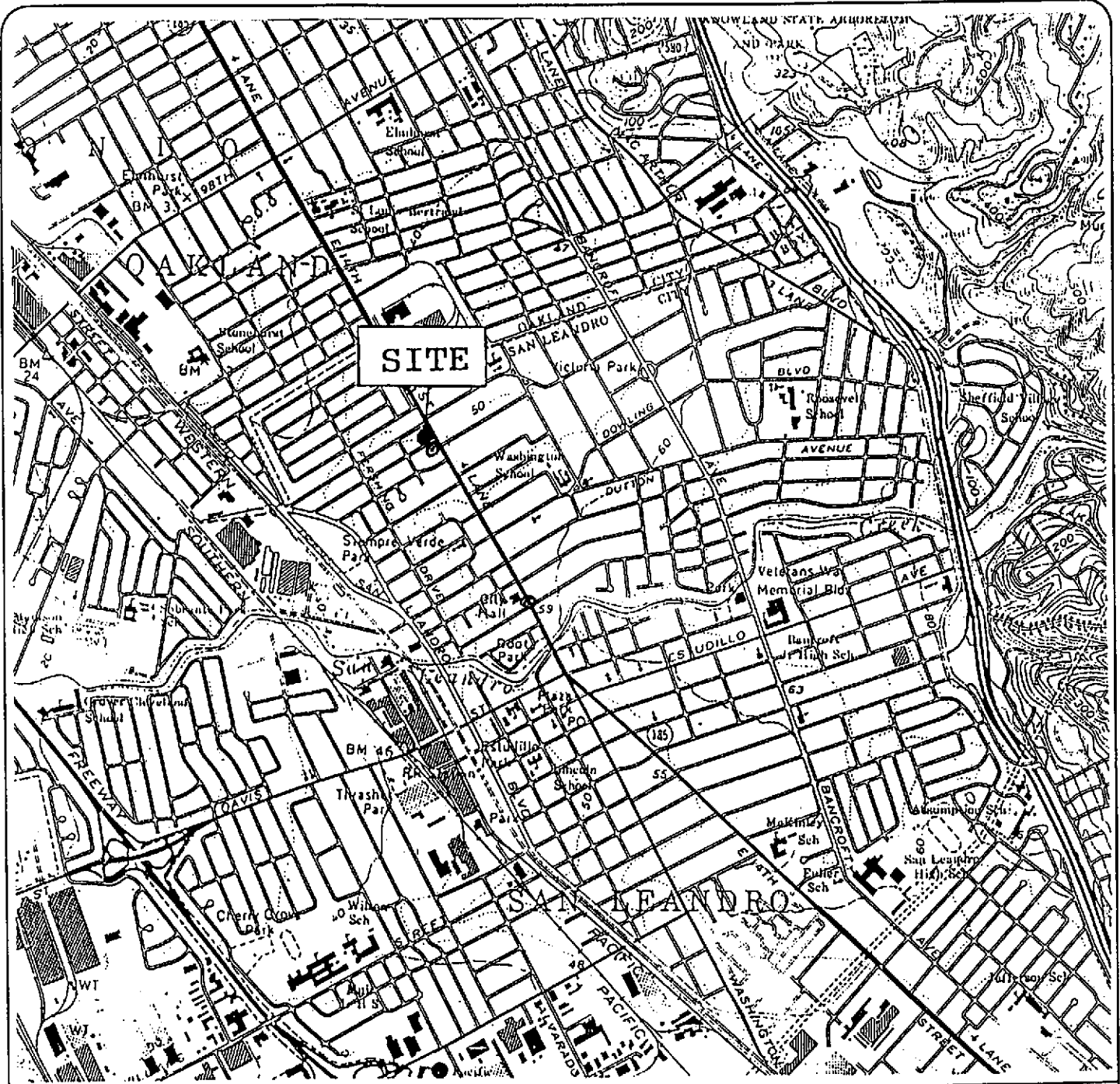


## IX. CONCLUSIONS AND DISCUSSION

Based on the results of the soil and groundwater data and site observations to date, there appears to be an onsite source of soil contamination at the German Autocraft property located on East 14th Street. The sampling results indicate that a release occurred from the underground tanks formerly located in the western portion of the property and that this release has resulted in the contamination of groundwater. The highest concentrations of TPHg and BTEX were detected in samples from borings CE-1 and CE-2 located next to and inside the former tank excavation area. BTEX was detected in all of the groundwater samples collected from monitoring wells and soil borings exceeding their respective MCL or AL. Remediation will be required to mitigate contaminants on the site and to protect public health and the environment.

As a result of CE's work to date, we recommend the following environmental activities be included in the next phase of work:

- Proper disposal of 7 DOT-rated 55 gallon drums of monitoring well purge water and rinsate.
- Proper disposal of 4 DOT-rated 55 gallon drums of gasoline-impacted soil cuttings generated during drilling operations.
- Initiation of monthly monitoring and quarterly sampling of the existing monitoring wells at the Site.
- Interim remedial steps be taken to mitigate soil and groundwater contamination that has occurred as a result of fuel releases from the former USTs.
- Additional soil and water investigation including the installation of two on-site monitoring wells, one close to the subject site north property corner, one close to the east property corner, and two off-site monitoring wells along the northern side of Garcia Avenue.



**EXPLANATION:**

Scale: 1"=2000'

0 1000' 2000'



Base Map Reference:

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

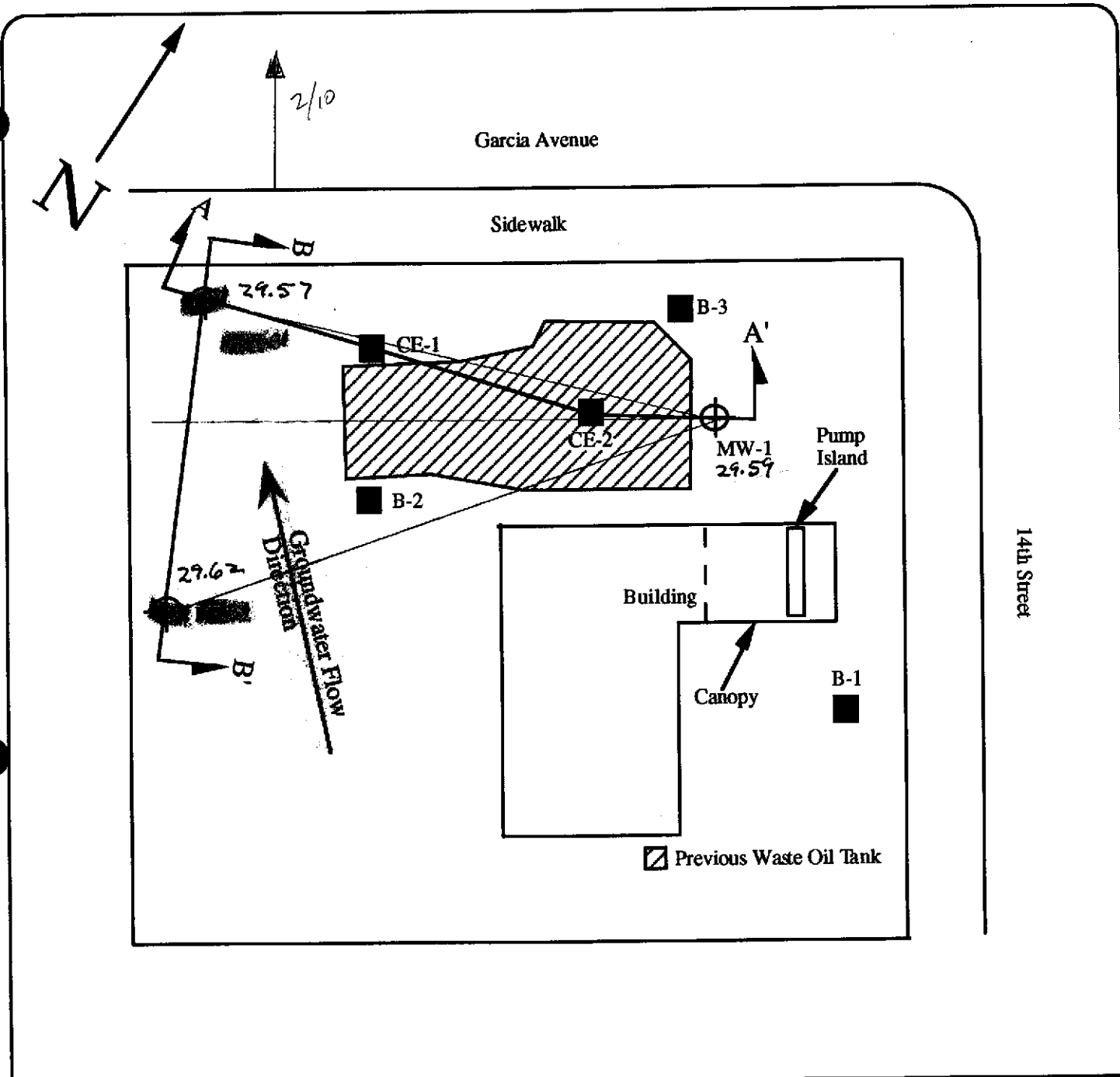


**Chemist Enterprises**  
Boulder Creek, California

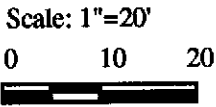
**LOCATION MAP**  
German Autocraft  
301 East 14th Street  
San Leandro, California

Figure 1

Project No.  
94-52  
Date: 8/94



**EXPLANATION:**



- Soil Boring Location
- ⊕ Monitoring Well
- ▨ Previous Tank Pit/Removed Asphalt Areas

NOTE: THE LOCATION OF THE PREVIOUS SOIL BORING B-2 ON THIS MAP IS CORRECT. THIS BORING WAS ERRONEOUSLY LOCATED IN A PREVIOUS ENVIRONMENTAL REPORT WE OBSERVED THE CEMENT AT THE SURFACE OF THE ABANDONED BOREHOLE IN THE FIELD.

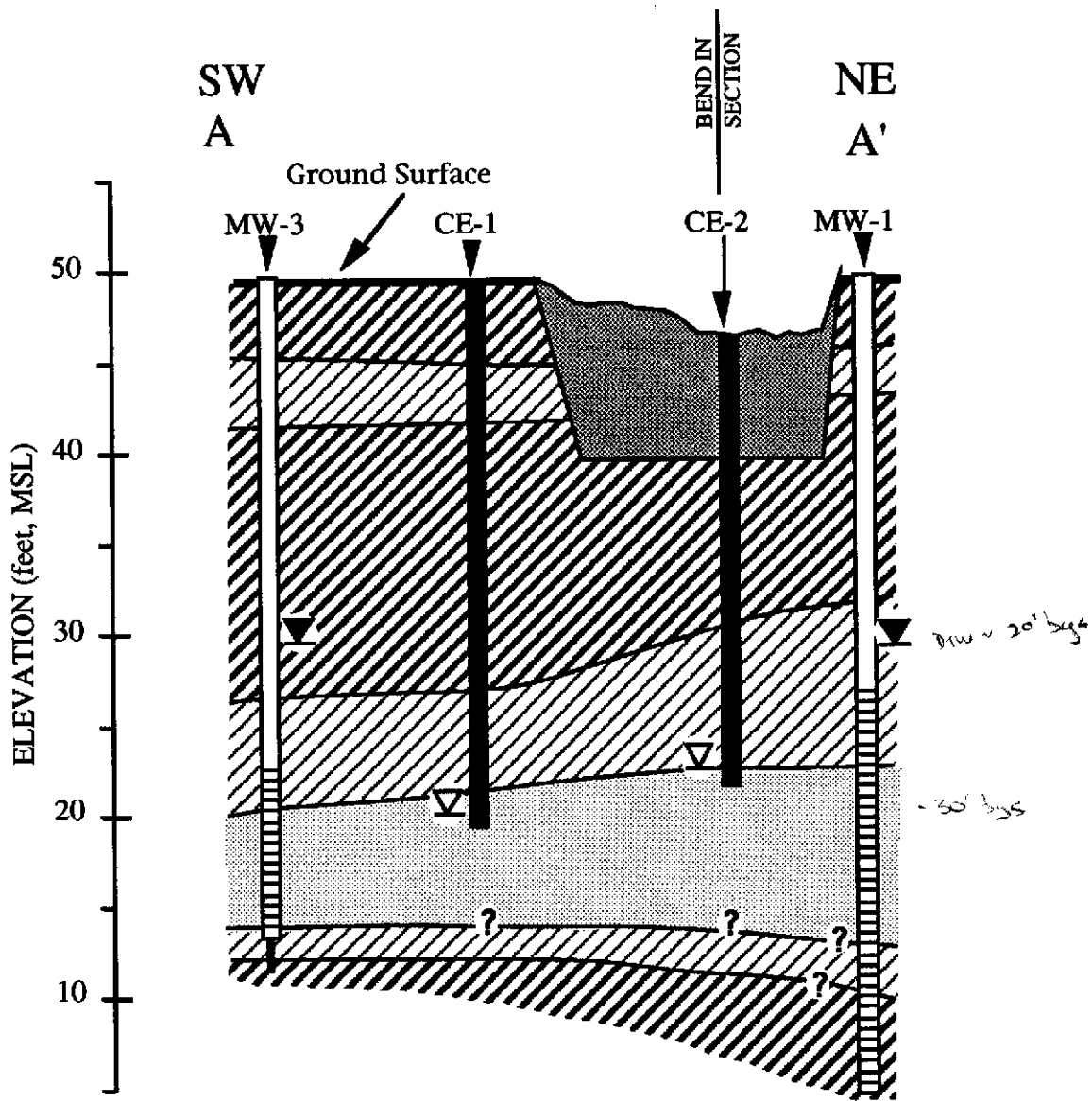


Chemist Enterprises  
Boulder Creek, California

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

Figure 2

Project No.  
94-52  
Date: 1/95



EXPLANATION

SCALE:  
Horizontal Scale: 1"=20'  
Vertical Scale: 1"=10'



Fat Clay (CH)



Poorly Graded Sand (SP)



Lean Clay (CL)



Well Graded Sand

Monitoring Well



Soil Boring



First Groundwater



Static Groundwater



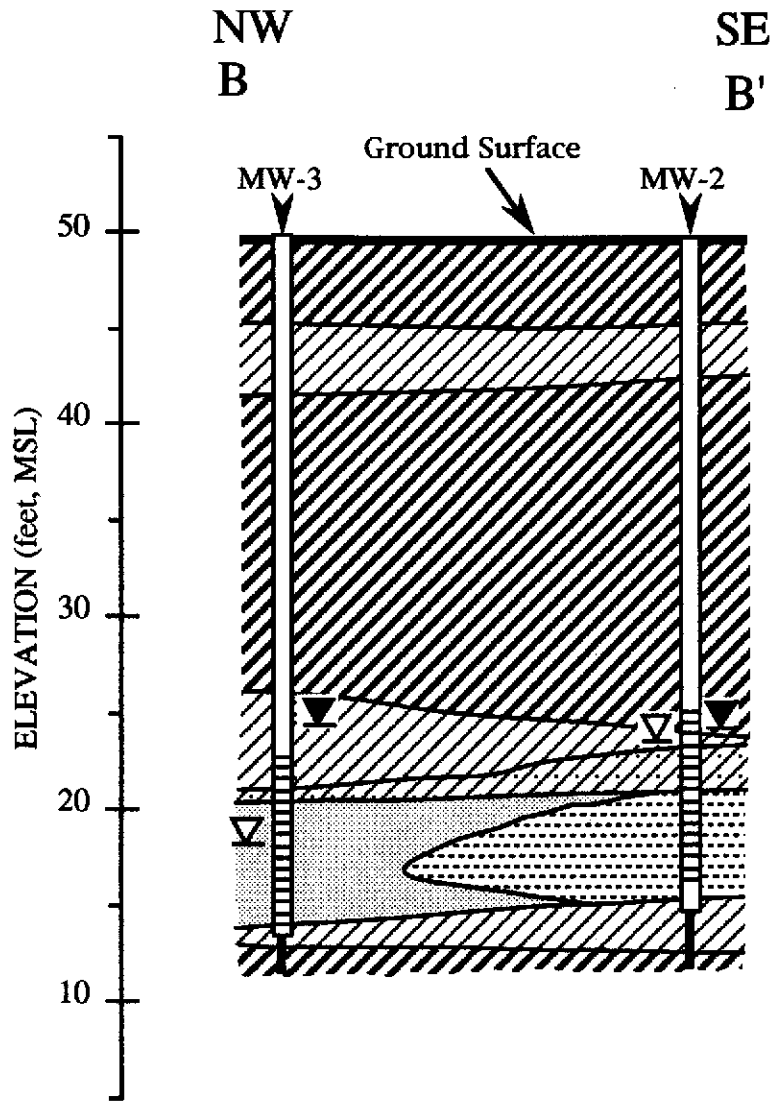
Chemist Enterprises  
Boulder Creek, California

SCHEMATIC CROSS SECTION A-A'  
German Autocraft  
301 East 14th Street  
San Leandro, California

Figure 3

Project No.  
94-52  
Date: 2/95

# SCHEMATIC CROSS-SECTION B-B'



## EXPLANATION

**SCALE**  
Horizontal Scale: 1"=20'  
Vertical Scale: 1"=10'

- |  |                |  |                         |  |                        |  |                           |
|--|----------------|--|-------------------------|--|------------------------|--|---------------------------|
|  | Fat Clay (CH)  |  | Poorly Graded Sand (SP) |  | <b>Monitoring Well</b> |  | <b>Soil Boring</b>        |
|  | Lean Clay (CL) |  | Well Graded Sand        |  | <b>Blank</b>           |  | <b>First Groundwater</b>  |
|  |                |  |                         |  | <b>Screen</b>          |  | <b>Static Groundwater</b> |
|  |                |  |                         |  | <b>Bentonite</b>       |  |                           |



**Chemist Enterprises**  
Boulder Creek, California

## SCHEMATIC CROSS SECTION B-B'

German Autocraft  
301 East 14th Street  
San Leandro, California

Figure 4

Project No.  
94-52  
Date: 2/95

**APPENDIX A: DRILLING PERMIT**



# ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600

FAX (510) 462-3914

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT

301 E. 14th Street  
San Leandro, CA 94577

PERMIT NUMBER

94767

LOCATION NUMBER

CLIENT

German Autocraft

301 E. 14th St. Voice (510) 638-5473  
San Leandro Zip 94577

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT

Chemist Enterprises

Tom Price Fax (408) 338-0198  
333-B Camino Verde Voice (408) 338-0198  
Boulder Creek, CA Zip 95006

A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

TYPE OF PROJECT

Construction	_____	Geotechnical Investigation	_____
Cathodic Protection	_____	General	_____
Water Supply	_____	Contamination	<u>X</u>
Monitoring	<u>X</u>	Well Destruction	_____

PROPOSED WATER SUPPLY WELL USE

Domestic	_____	Industrial	_____	Other	<u>Fuel Leak</u>
Municipal	_____	Irrigation	_____		<u>Investigation</u>

DRILLING METHOD:

Hand Rotary	_____	Air Rotary	_____	Auger	<u>X</u>
Other	_____				

DRILLER'S LICENSE NO. 604987

WELL PROJECTS

Drill Hole Diameter	<u>8.5</u> in.	Maximum	<u>45</u>
Casing Diameter	<u>2</u> in.	Depth	<u>40</u> ft.
Surface Seal Depth	<u>25</u> ft.	Number	<u>2</u>

GEOTECHNICAL PROJECTS

Number of Borings	<u>2</u>	Maximum	<u>45</u>
Hole Diameter	<u>8.5</u> in.	Depth	<u>40</u> ft.

ESTIMATED STARTING DATE

~~October 10~~ December 6, 1994

ESTIMATED COMPLETION DATE

~~October 11~~ December 7, 1994

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE

Tom Price

Date 9/19/94

Approved

Wyman Hong  
Wyman Hong

Date 2 Dec 94

**APPENDIX B: BORING LOGS AND WELL CONSTRUCTION DIAGRAMS**



MAJOR DIVISIONS				TYPICAL NAMES	
COARSE-GRAINED SOIL MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		WELL-GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
			GP		POORLY-GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 15% FINES	GM		SILTY GRAVELS, SILTY GRAVELS WITH SAND
			GC		CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SANDS MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES	SW		WELL-GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
			SP		POORLY-GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 15% FINES	SM		SILTY SANDS WITH OR WITHOUT GRAVEL
			SC		CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOIL MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS	ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS	
		CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS	
		OL		ORGANIC SILTS OR CLAYS OF LOW-PLASTICITY	
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%	MH		INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOILS, ELASTIC SILTS	
		CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
		OH		ORGANIC SILTS OR CLAYS OF MEDIUM TO HIGH PLASTICITY	
HIGHLY ORGANIC SOILS	PT		PEAT AND OTHER HIGHLY ORGANIC SOILS		

BLOWS/6" - Blows required to drive sampler 6 inches as indicated on the logs using sample drive hammer weight of 140- pounds falling 30 inches.






2.5Y3/2 - Soil color according to Muncell Soil Color Charts (1992 Edition)

- No Soil Sample Recovered
- Partial Soil Sample Recovered
- Undisturbed Soil Sample Recovered
- Soil Sample Submitted For Laboratory Analysis
- First Encountered Groundwater Level

<b>BORING LOG</b> Chemist Enterprises 333-B Camino Verde Boulder Creek, CA 95006	<b>GERMAN AUTOCRAFT</b> 301 EAST 14th STREET SAN LEANDO ALAMEDA COUNTY, CA	Boring No. CE-1 Sheet 1 of 3 Date Drilled 12/13/94
---	---	--

Drilling Co.: HEW Drilling Co. Driller: Perfecto Rodriguez Geologist: Thomas A. Sparrowe, R.G.	Boring Location: West portion of property. Ground Surface Elevation: TOC Elevation:	Drill Rig Type: CME 75 Method: Hollow-stem Auger Boring Diameter: 8 -1/4 inches Total Depth: 30 feet
--	---	---

<u>Outer Casing</u> Type: Diameter: Length:	<u>Well Casing/Screen/Filter Pack</u> Diameter/Type: Screen Length (ft): Slot Size:                      Sand Pack:	<u>Sampler</u> Method: California Split-Spoon Length (ft): 1.5 Hammer Weight (lbs)/Fall (in): 140/30
--	--	---

Sample Depth	Blows/6-in.	Inches Driven	PID (ppm)	Water Level Time & Date	Time	Sample Number	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTION
							0		3" Asphaltic Concrete 4" Aggregate Baserock
							1		Very dark grayish brown FAT CLAY with silt (CH) 10YR3/2, stiff, damp, 85% clay, 15% silt.
							2		
							3		
							4		Dark brown LEAN CLAY with sand (CL) 10YR3/3, stiff, damp, 70% clay, 20% fine-grained poorly graded sand, 10% silt.
							5		
	4	6					5.5		Very dark grayish brown LEAN CLAY with silt (CL) 10YR3/2, firm, moist, 80% clay, 20% silt, trace fine-grained sand.
	4	6					6		
6.0	6	6	5.0		0839	CE1-1	6		
							7		
							8		
							9		
							10		Dark yellowish brown FAT CLAY with silt (CH) 10YR4/4, very stiff, damp to moist, 90% clay, 10% silt, rare medium-grained angular sand.

Depth	Blows	Driven	PID (ppm)	Water Level Time & Date	Time	Sample Number	DEPTH	GRAPHIC LOG	DESCRIPTION
	13	6					11		Dark yellowish brown FAT CLAY with silt (CH) 10YR4/4, very stiff, damp to moist, 90% clay, 10% silt, rare medium-grained angular sand.
11.0	21	6	1.5		0850	CE1-2	at 11.4" FAT CLAY with sand (CH) 75% clay, 15% fine- to coarse-grained sand, 10% silt.		
							12		
							13		
							14		
	7	6					15		
	10	6					16		
16.0	19	6	1.0		0900	CE1-3	16		Dark grayish brown mottled dark reddish brown FAT CLAY with silt (CH) 10YR4/2 & 5YR3/4, stiff, moist, 80% clay, 20% silt, abundant rootholes.
							17		
							18		
							19		
							20		Grades to: -----
	3	6					20		
	4	6					21		
21.0	6	6	550		0910	CE1-4	21		Dark grayish brown FAT CLAY (CH) 2.5Y4/2, stiff, moist, 90% clay, 10% silt, faint petroleum odor.
							22		Grades to: ----- Brown mottled dark grayish brown FAT CLAY with silt (CH) 10YR4/3 & 2.5Y4/2, stiff, moist, 85% clay, 15% silt, [REDACTED]
							23		-----
							24		
							25		Dark grayish brown FAT CLAY with sand (CH) 2.5Y4/2, stiff, very moist, 85% clay, 15% fine-grained sand, [REDACTED]

Depth	Blows	Driven	PID (ppm)	Water Level Time & Date	Time	Sample Number	DEPTH	GRAPHIC LOG	DESCRIPTION
	4	6					25		Dark grayish brown FAT CLAY with sand (CH) 2.5Y4/2, stiff, very moist, 85% clay, 15% fine-grained sand, [REDACTED]
	4	6					26		
26.0	6	6	1100		0920	CE1-5			
							27		Dark greenish gray POORLY-GRADED SAND (SP) 5GY4/1, loose [REDACTED] 90% fine-grained sand, 10% silt, oil sheen, [REDACTED]
				1025 12/13			28		
					0935 0945	CE1-W1 CE1-W2	29		Drill to 30' bgs, no soil sample collected. Grab groundwater samples [REDACTED] and duplicate CE1-W2 collected and analyzed for TPHg, BTEX, and Pb.
							30		BORING TERMINATED AT 30.0 FEET
							31		BOREHOLE BACKFILLED WITH PORTLAND CEMENT/BENTONITE (5% MAX.) GROUT
							32		
							33		
							34		
							35		
							36		
							37		
							38		
							39		















<b>BORING LOG</b> Chemist Enterprises 333-B Camino Verde Boulder Creek, CA 95006	<b>GERMAN AUTOCRAFT</b> 301 EAST 14th STREET SAN LEANDRO ALAMEDA COUNTY, CA	Boring No. CE-2 Sheet 1 of 2 Date Drilled 12/13/94
Drilling Co.: Chemist Enterprises Driller: Tom Price/Tom Sparrowe Geologist: Thomas A. Sparrowe, R.G.	Boring Location: Bottom of tank excavation. Ground Surface Elevation: Approx 3 ft. bgs TOC Elevation:	Drill Rig Type: Method: Hand Auger Boring Diameter: 2-1/2 inches Total Depth: 24.5 feet
<u>Outer Casing</u> Type: Diameter: Length:	<u>Well Casing/Screen/Filter Pack</u> Diameter/Type: Screen Length (ft): Slot Size:                      Sand Pack:	<u>Sampler</u> Method: Hand driven Length (ft): 7 inches Hammer Weight (lbs)/Fall (in):

Sample Depth	Blows/6-in.	Inches Driven	PID (ppm)	Water Level Time & Date	Time	Sample Number	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTION
							1		Very dark grayish brown LEAN CLAY with sand (CL) 10YR3/2, stiff, very moist, 70% clay, 20% fine-grained sand, 10% silt.
							2		
							3		
							4		
							5		Very dark brown FAT CLAY (CH) 10YR2/2, very stiff, damp, 90% clay, 10% silt.
5.5		6	0		1205	CE2-1	6		
							7		
							8		Yellowish brown FAT CLAY with silt (CH) 10YR5/4, stiff, damp, 80% clay, 15% silt, 5% fine- to medium- grained sand.
							9		
10.5		6	1.5		1240	CE2-2	10		Dark greenish gray mottled yellowish brown FAT CLAY with sand (CH) 5GY4/1 and 10YR5/4, stiff, damp, 70% clay, 20% fine-grained sand, 10% silt.

							Project: German Autocraft		Boring No. CE-2	Sheet 2 of 2	
Depth	Blows	Driven	PID (ppm)	Water Level Time & Date	Time	Sample Number	DEPTH	GRAPHIC LOG	DESCRIPTION		
							11		Dark greenish gray mottled yellowish brown FAT CLAY with sand (CH) 5GY4/1 and 10YR5/4, stiff, damp, 70% clay, 20% fine-grained sand, 10% silt.		
			3.0				12		Dark olive gray FAT CLAY with silt (CH) 5Y3/2, very stiff, damp, 85% clay, 15% silt, <del>fine-grained sand</del>		
							13				
							14				
15.5		6	90		1326	CE2-3	15		Dark olive gray LEAN CLAY with silt (CL) 5Y3/2, very stiff, moist, 65% clay, 30% silt, 5% fine-grained sand, <del>fine-grained sand</del>		
							16				
							17				
							18				
							19				
20.5		6	2000		1400	CE2-4	20		Dark grayish brown FAT CLAY (CH) 2.5Y4/2, stiff, moist, 90% clay, 10% silt, <del>fine-grained sand</del>		
							21	Brown mottled dark grayish brown FAT CLAY with silt (CH) 10YR4/3 & 2.5Y4/2, stiff, moist, 90% clay, 10% silt, <del>fine-grained sand</del>			
							22				
							23	Olive gray POORLY GRADED SAND with clay (SC) 5Y4/2, loose, <del>fine-grained sand</del> 65% fine-grained sand, 25% lean clay, 10% silt. No soil sample collected. Grab groundwater sample collected and analyzed for TPHg/BTEX & Total Pb.			
							24				
			1446				25	BORING TERMINATED AT 24.5 FEET BGS BOREHOLE FILLED TO SURFACE WITH CEMENT/BENTONITE (5% max.) GROUT			




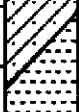
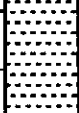
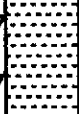
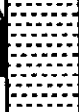
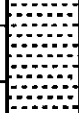
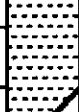
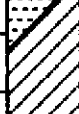







1446  
12/13

<b>BORING LOG</b> Chemist Enterprises 333-B Camino Verde Boulder Creek, CA 95006	<b>GERMAN AUTOCRAFT</b> 301 EAST 14th STREET SAN LEANDRO ALAMEDA COUNTY, CA	Boring No. MW-2 Sheet 1 of 3 Date Drilled 12/12/94
Drilling Co.: HEW Drilling Co. Driller: Perfecto Rodriguez Geologist: Thomas A. Sparrowe, R.G.	Boring Location: Southeast portion of site Ground Surface Elevation: 50.52 ft. MSL TOC Elevation: 50.14 ft. MSL	Drill Rig Type: CME 75 Method: Hollow-stem Auger Boring Diameter: 8 -1/4 inches Total Depth: 38 feet
<u>Outer Casing</u> Type: Diameter: Length:	<u>Well Casing/Screen/Filter Pack</u> Diameter/Type: 2" Sch 40 PVC Screen Length (ft): 10 Slot Size: 0.010 in. Sand Pack: #2/12	<u>Sampler</u> Method: California Split-Spoon Length (ft): 1.5 Hammer Weight (lbs)/Fall (in): 140/30

Sample Depth	Blows/6-in.	Inches Driven	PID (ppm)	Water Level Time & Date	Time	Sample Number	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTION
							0		2" Asphaltic Concrete
							1		4" Aggregate Baserock
							2		Very dark grayish brown FAT CLAY with silt (CH) 10YR3/2, stiff, very moist, 80% clay, 20% silt.
							3		
							4		Brown LEAN CLAY with sand (CH) 10YR4/3, firm, very moist, 60% clay, 30% fine-grained poorly graded sand, 10% silt, trace fine-grained gravel.
							5		
	2	6					6		Brown LEAN CLAY with sand (CH) 10YR4/3, firm, very moist, 60% clay, 30% fine-grained poorly graded sand, 10% silt, trace fine-grained gravel.
	3	6					6		
6.0	2	6	2.5		0858	MW2-1	6		Brown LEAN CLAY with sand (CH) 10YR4/3, firm, very moist, 60% clay, 30% fine-grained poorly graded sand, 10% silt, trace fine-grained gravel.
							7		
							8		Brown FAT CLAY with sand (CH) 10YR4/3, very stiff, very moist, 80% clay, 15% silt, 5% fine-grained sand, rare fine-grained chert derived gravel.
							9		
							10		Brown FAT CLAY with sand (CH) 10YR4/3, very stiff, very moist, 80% clay, 15% silt, 5% fine-grained sand, rare fine-grained chert derived gravel.
	7	6					10		

Depth	Blows	Driven	PID (ppm)	Water Level Time & Date	Time	Sample Number	DEPTH	GRAPHIC LOG	DESCRIPTION
	6	6					11		Brown FAT CLAY with sand (CH) 10YR4/3, very stiff, very moist, 80% clay, 15% silt, 5% fine-grained sand, rare fine-grained chert derived gravel.
11.0	9	6	1.8		0905	MW2-2	12		Between 12.0-12.5 feet grades to:
							13		Dark yellowish brown FAT CLAY with silt (CH) 10YR4/4, very stiff, moist, 80% clay, 15% silt, 5% fine-grained sand, trace fine-grained gravel.
							14		
	3	6					15		
	5	6					16		
16.0	7	6	1.8		0920	MW2-3	17		
							18		
							19		
							20		Grades to: -----
	3	6					21		Dark greenish gray FAT CLAY (CH) 5GY4/1, stiff, moist, 95% clay, 5% silt.
21.0	7	6					22		
	12	6	1.5		0925	MW2-4	23		-----
							24		
							25		Dark greenish gray POORLY-GRADED SAND with clay (SC) 5GY4/1, loose, 75% fine-grained sand, 20% lean clay, 5% silt.



Depth	Blows	Driven	PID (ppm)	Water Level Time & Date	Time	Sample Number	DEPTH	GRAPHIC LOG	DESCRIPTION
	3	6					25		
	3	6					26		Dark greenish gray POORLY-GRADED SAND with clay (SC) 5GY4/1, loose, 75% fine-grained sand, 20% lean clay, 5% silt, <del>_____</del>
26.0	5	6	6.7	0940 12/13	0940	MW2-5			
							27		
							28		
							29		
	13	6					30		
	15	6					31		Dark greenish gray WELL GRADED SAND with gravel (SW) 5GY4/1, dense, wet, 85% fine- to coarse-grained subangular to subrounded sand, 15% fine-grained subrounded gravel, <del>_____</del>
31.0	25	6	1700		0955	MW2-6			
							32		
							33		
							34		
	3	6					35		Dark yellowish brown LEAN CLAY with sand (CH) 10YR4/4, firm, moist, 65% clay, 30% fine-to medium-grained sand, 5% silt, <del>_____</del>
	4	6					36		
36.0	4	6	40		1005	MW2-7			
	8	6					37		
	10	6					38		Olive gray FAT CLAY (CH) 5Y4/2, stiff, moist, 80% clay, 10% fine-grained sand, 10% silt.
38.0	12	6	1.4		1010				
							39		

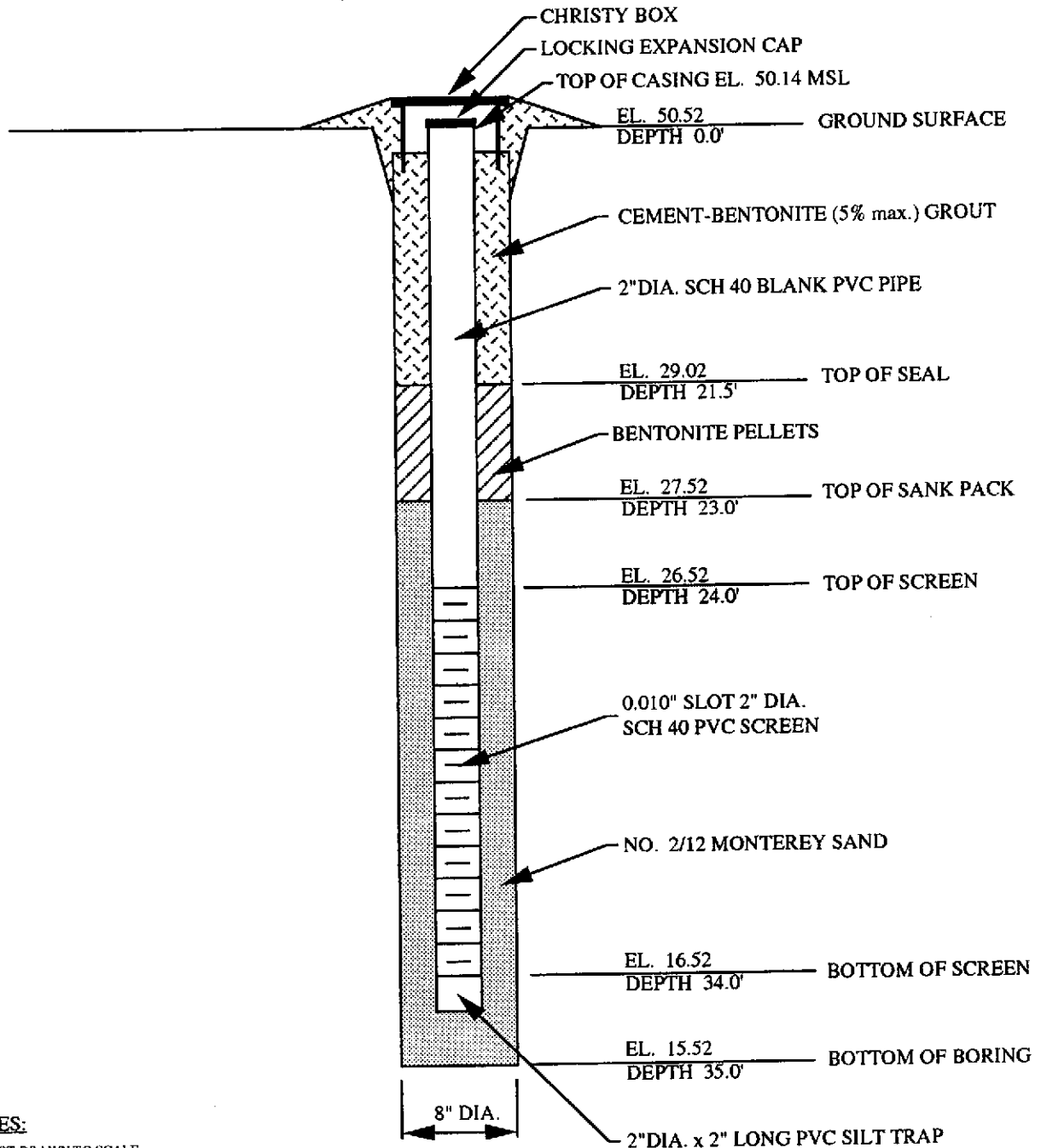
BORING TERMINATED AT 38.0 FEET

BOREHOLE CONVERTED TO MONITORING WELL MW-2

# Monitoring Well Detail

PROJECT NAME: GERMAN AUTOCRAFT WELL NO. : MW-2

WELL LOCATION: 310 E. 14th Street, San Leandro, CA DATE INSTALLED: 12/12/94















**NOTES:**

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

<b>BORING LOG</b> Chemist Enterprises 333-B Camino Verde Boulder Creek, CA 95006	<b>GERMAN AUTOCRAFT</b> 301 EAST 14th STREET SAN LEANDRO ALAMEDA COUNTY, CA	Boring No. MW-3 Sheet 1 of 3 Date Drilled 12/12/94
---	--	--

Drilling Co.: HEW Drilling Co. Driller: Perfecto Rodriguez Geologist: Thomas A. Sparrowe, R.G.	Boring Location: West corner of property. Ground Surface Elevation: 49.84 ft. MSL TOC Elevation: 49.44 ft. MSL	Drill Rig Type: CME 75 Method: Hollow-stem Auger Boring Diameter: 8 -1/4 inches Total Depth: 38 feet
--	--	---

<u>Outer Casing</u> Type: Diameter: Length:	<u>Well Casing/Screen/Filter Pack</u> Diameter/Type: 2" Sch 40 PVC Screen Length (ft): 10 Slot Size: 0.010 in. Sand Pack: #2/12	<u>Sampler</u> Method: California Split-Spoon Length (ft): 1.5 Hammer Weight (lbs)/Fall (in): 140/30
--	--	---

Sample Depth	Blows/6-in.	Inches Driven	PID (ppm)	Water Level Time & Date	Time	Sample Number	DEPTH IN FEET	GRAPHIC LOG	DESCRIPTION
							0		2" Asphaltic Concrete
							1		4" Aggregate Baserock
							2		Very dark grayish brown FAT CLAY with silt (CH) 10YR3/1, stiff, very moist, 80% clay, 20% silt.
						3			
						4			
	3	6					5		Brown LEAN CLAY with silt (CL) 2.5Y3/2, firm, moist, 65% clay, 25% silt, 10% fine-grained poorly graded sand.
	3	6				6			
6.0	3	6	9.0		1310	MW3-1			
							7		Dark yellowish brown FAT CLAY (CH) 10YR4/4, very stiff, moist, 90% clay, 10% silt, trace fine-grained sand and chert derived gravel.
							8		
							9		
	10	6					10		

Depth	Blows	Driven	PID (ppm)	Water Level Time & Date	Time	Sample Number	DEPTH	GRAPHIC LOG	DESCRIPTION	
	11	6					11		Dark yellowish brown FAT CLAY (CH) 10YR4/4, very stiff, moist, 90% clay, 10% silt, trace fine-grained sand and chert derived gravel.	
11.0	20	6	4.0		1315	MW3-2	11			
							12			Between 12.0-12.5 feet grades to:
							13			
							14			
	4	6					15			
	5	6					16			
16.0	6	6	2.0		1326	MW3-3	16			Dark grayish brown mottled dark reddish brown FAT CLAY with silt (CH) 10YR4/2 & 5YR3/4, stiff, moist, 80% clay, 20% silt, abundant rootholes.
							17			
							18			
							19			
							20		Grades to:	
	3	6					20.5			
	3	6				MW3-4	21		Dark greenish gray FAT CLAY (CH) 5GY4/1, firm, very moist, 90% clay, 10% silt, [redacted]	
21.0	3	6	7.0		1315	MW3-5	21		Soil sample MW3-5 duplicate of MW3-4	
							22			
							23		-----	
							24			
							25		Dark greenish gray LEAN CLAY with silt (CL) 5GY4/1, medium stiff, moist, 70% clay, 20% silt, 10% fine-grained sand, [redacted] or.	

Depth	Blows	Driven	PID (ppm)	Water Level Time & Date	Time	Sample Number	DEPTH	GRAPHIC LOG	DESCRIPTION
	3	6					25		Dark greenish gray LEAN CLAY with silt (CL) 5GY4/1, medium stiff, moist, 70% clay, 20% silt, 10% fine-grained sand, [REDACTED]
	3	6		1025 12/13			26		
26.0	5	6	115		1345	MW3-6			
							27		
							28		
							29		
	3	6					30		
	3	6					31		Dark greenish gray POORLY-GRADED SAND (SP) 5GY4/1, loose, 90% fine-grained sand, 10% silt, [REDACTED]
31.0	6	6	500	1405 12/12	1405	MW3-7			
							32		
							33		
							34		
	4	6					35		Dark yellowish brown LEAN CLAY with sand (CH) 10YR4/4, firm, moist, 65% clay, 30% fine-to medium-grained sand, 5% silt, [REDACTED]
	6	6					36		Dark greenish gray mottled dark yellowish brown FAT CLAY (CH) 5GY4/1 & 10YR4/4, stiff, moist, 90% clay, 5% silt, 5% fine-grained sand, trace medium-grained sand, [REDACTED]
36.0	7	6	30		1410	MW3-8			
	4	6					37		
	16	6					38		Olive gray FAT CLAY (CH) 5Y4/2, stiff, moist, 80% clay, 10% fine-grained sand, 10% silt.
38.0	18	6	120		1420	MW3-9			
							39		

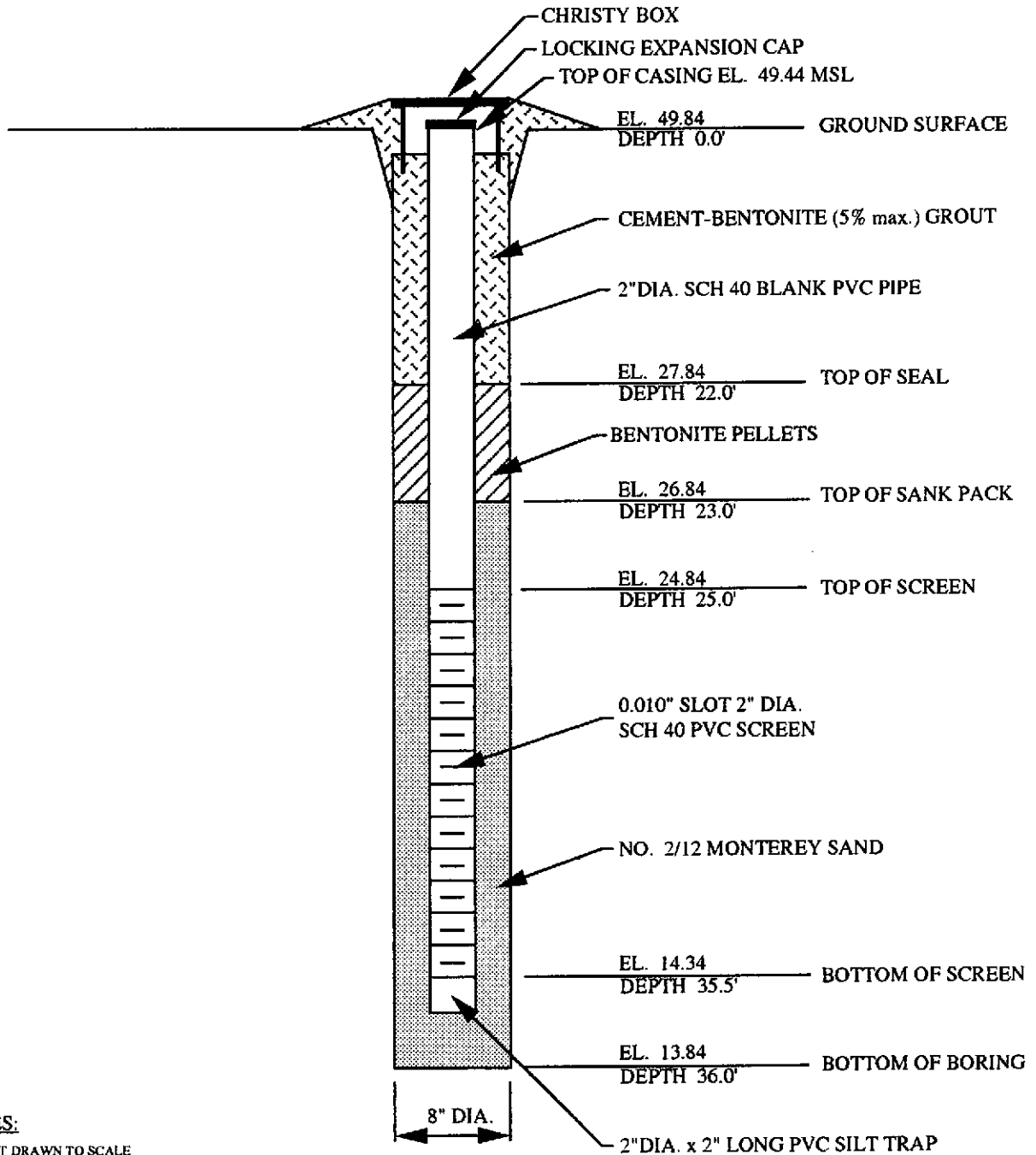
BORING TERMINATED AT 38.0 FEET

BOREHOLE CONVERTED TO MONITORING WELL MW-3

# Monitoring Well Detail

PROJECT NAME: GERMAN AUTOCRAFT WELL NO. : MW-3

WELL LOCATION: 310 E. 14th Street, San Leandro, CA DATE INSTALLED: 12/12/94



**NOTES:**

1. NOT DRAWN TO SCALE
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

**APPENDIX C: LABORATORY REPORTS AND CHAINS OF CUSTODY**



# Inchcape Testing Services

## Anamatrix Laboratories

1961 Concourse Drive  
Suite E  
San Jose, CA 95131  
Tel: 408-432-8192  
Fax: 408-432-8198

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412121  
Date Received : 12/12/94  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A

The following samples were received at Anamatrix for analysis :

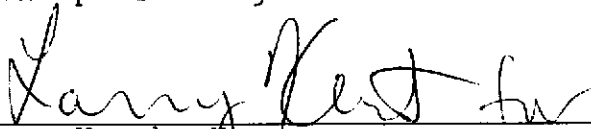
ANAMATRIX ID	CLIENT SAMPLE ID
9412121- 1	MW2-6
9412121- 2	MW2-7
9412121- 3	MW3-4
9412121- 4	MW3-5
9412121- 5	MW3-6
9412121- 6	MW3-7
9412121- 7	MW3-8
9412121- 8	MW3-9

This report is organized in sections according to the specific Anamatrix 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 Anamatrix cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Anamatrix 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.

  
Susan Kraska, Manager  
Laboratory Director

  
Steve Winkler  
Project Manager

12-22-94  
Date

This report consists of 10 pages.



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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412121  
Date Received : 12/12/94  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9412121- 1	MW2-6	SOIL	12/12/94	TPHgBTEX
9412121- 2	MW2-7	SOIL	12/12/94	TPHgBTEX
9412121- 3	MW3-4	SOIL	12/12/94	TPHgBTEX
9412121- 4	MW3-5	SOIL	12/12/94	TPHgBTEX
9412121- 5	MW3-6	SOIL	12/12/94	TPHgBTEX
9412121- 6	MW3-7	SOIL	12/12/94	TPHgBTEX
9412121- 7	MW3-8	SOIL	12/12/94	TPHgBTEX
9412121- 8	MW3-9	SOIL	12/12/94	TPHgBTEX

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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412121  
Date Received : 12/12/94  
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 Balmer 12/19/94  
Department Supervisor Date

Lucia Steer 12/21/94  
Chemist Date

**Organic Analysis Data Sheet**  
**Total Petroleum Hydrocarbons as Gasoline with BTEX**  
**ITS - Anamatrix Laboratories - (408)432-8192**

Lab Workorder : 9412121

Client Project ID : GERMAN AUTOCRAF

Matrix : SOIL

Units : mg/Kg

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		MW2-6	MW2-7	MW3-4	MW3-5	MW3-6
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		9412121-01	9412121-02	9412121-03	9412121-04	9412121-05
Benzene	0.0050	110	0.015	0.024	ND	0.16
Toluene	0.0050	65	0.006	0.013	ND	0.033
Ethylbenzene	0.0050	190	0.038	ND	ND	0.16
Total Xylenes	0.0050	310	0.085	0.007	ND	0.21
TPH as Gasoline	0.50	6300	0.77	0.74	ND	6.8
Surrogate Recovery		97%	110%	85%	110%	116%
Instrument ID		HP12	HP12	HP12	HP12	HP12
Date Sampled		12/12/94	12/12/94	12/12/94	12/12/94	12/12/94
Date Analyzed		12/15/94	12/14/94	12/14/94	12/14/94	12/15/94
RLMF		1000	1	1	1	2.5
Filename Reference		FRD12101.D	FPD12102.D	FPD12103.D	FPD12104.D	FRD12105.D

\* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

*Susan Shor* 12/21/94  
 Analyst Date

*Cheyl Balmer* 12/17/94  
 Supervisor Date

Organic Analysis Data Sheet  
 Total Petroleum Hydrocarbons as Gasoline with BTEX  
 ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9412121  
 Matrix : SOIL

Client Project ID : GERMAN AUTOCRAF  
 Units : mg/Kg

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		MW3-7	MW3-8	MW3-9		
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		9412121-06	9412121-07	9412121-08	METHOD BLANK	METHOD BLANK
Benzene	0.0050	7.0	0.10	0.058	ND	ND
Toluene	0.0050	3.9	0.007	0.009	ND	ND
Ethylbenzene	0.0050	13	0.037	0.018	ND	ND
Total Xylenes	0.0050	37	0.078	0.035	ND	ND
TPH as Gasoline	0.50	420	0.86	ND	ND	ND
Surrogate Recovery		96%	95%	100%	101%	104%
Instrument ID		HP12	HP12	HP12	HP12	HP12
Date Sampled		12/12/94	12/12/94	12/12/94	N/A	N/A
Date Analyzed		12/15/94	12/14/94	12/16/94	12/14/94	12/14/94
RLMF		100	1	1	1	1
Filename Reference		FRD12106.D	FPD12107.D	FRD12108.D	BD1401E1.D	BD1403E1.D

\* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucas Shor 12/21/94  
 Analyst Date

Cheryl Balmer 12/20/94  
 Supervisor Date

Organic Analysis Data Sheet  
 Total Petroleum Hydrocarbons as Gasoline with BTEX  
 ITS - Anamatrix Laboratories - (408)432-8192

Lab Workorder : 9412121

Client Project ID : GERMAN AUTOCRAF

Matrix : SOIL

Units : mg/Kg

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		METHOD BLANK	METHOD BLANK			
Benzene	0.0050	ND	ND			
Toluene	0.0050	ND	ND			
Ethylbenzene	0.0050	ND	ND			
Total Xylenes	0.0050	ND	ND			
TPH as Gasoline	0.50	ND	ND			
Surrogate Recovery		98%	101%			
Instrument ID		HP12	HP12			
Date Sampled		N/A	N/A			
Date Analyzed		12/15/94	12/16/94			
RLMF		1	1			
Filename Reference		BD1501E1.D	BD1601E1.D			

\* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucia Sher 12/21/94  
 Analyst Date

Cheryl Balmer 12/19/94  
 Supervisor Date

**Matrix Spike Report**  
**Total Petroleum Hydrocarbons as Gasoline**  
**ITS - Anamatrix Laboratories - (408)432-8192**

Project ID : GERMAN AUTOCRAFT  
 Sample ID : MW3-5  
 Matrix : SOIL  
 Date Sampled : 12/12/94

Laboratory ID : 9412121-04  
 Analyst : I S  
 Supervisor : S  
 Instrument ID : HP12  
 Units : mg/Kg

COMPOUND NAME	SPIKE AMOUNT	SAMPLE RESULTS	MS RECOVERY	MSD RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS
Gasoline	0.5	ND	78%	77%	50-139	1%	30
Surrogate Recovery		110%	102%	108%			
Date Analyzed		12/14/94	12/14/94	12/14/94			
Multiplier		1	1	1			
Filename Reference		FPD12104.D	FMD12104.D	FDD12104.D			

\* Limits established by Incheape Testing Services, Anamatrix Laboratories.

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as Gasoline**  
**ITS - Anametrix Laboratories - (408)432-8192**

Instrument ID : HP12

Analyst : IS

Matrix : SOLID

Supervisor : 9

Units : mg/Kg

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Gasoline	0.50	90%	56-141
Surrogate Recovery		95%	53-147
Date Analyzed		12/14/94	
Multiplier		1	
Filename Reference		MD1401E1.D	

\* Limits established by Inchcape Testing Services, Anametrix Laboratories.

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as BTEX**  
**ITS - Anametrix Laboratories - (408)432-8192**

Instrument ID : HP12  
 Matrix : SOLID

Analyst : IS  
 Supervisor : ~~JS~~  
 Units : mg/Kg

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Benzene	0.010	110%	52-133
Toluene	0.010	100%	57-136
Ethylbenzene	0.010	100%	56-139
Total Xylenes	0.010	110%	56-141
Surrogate Recovery		105%	53-147
Date Analyzed		12/15/94	
Multiplier		1	
Filename Reference		MD1501E1.D	

\* Limits established by Incheape Testing Services, Anametrix Laboratories.



**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as Gasoline**  
**ITS - Anametrix Laboratories - (408)432-8192**

Instrument ID : HPI2  
 Matrix : SOLID

Analyst : JS  
 Supervisor : *[Signature]*  
 Units : mg/Kg

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Gasoline	0.50	90%	56-141
Surrogate Recovery		97%	53-147
Date Analyzed		12/16/94	
Multiplier		1	
Filename Reference		MD1601E1.D	

\* Limits established by Inchcape Testing Services, Anametrix Laboratories.

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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412121  
Date Received : 12/12/94  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9412121- 1	MW2-6	SOIL	12/12/94	6010
9412121- 2	MW2-7	SOIL	12/12/94	6010
9412121- 3	MW3-4	SOIL	12/12/94	6010
9412121- 4	MW3-5	SOIL	12/12/94	6010
9412121- 5	MW3-6	SOIL	12/12/94	6010
9412121- 6	MW3-7	SOIL	12/12/94	6010
9412121- 7	MW3-8	SOIL	12/12/94	6010
9412121- 8	MW3-9	SOIL	12/12/94	6010

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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412121  
Date Received : 12/12/94  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

QA/QC SUMMARY :

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

Wannan 12/22/94  
Department Supervisor Date

Stephen Carroll 12/22/94  
Chemist Date

**INCHCAPE TESTING SERVICES  
ANAMETRIX LABORATORIES  
(408) 432-8192  
DATA REPORT**

Analyte-Method: **Lead-6010A**  
 Client Project Number: **GERMAN AUTOCRAFT**  
 Matrix - Units: **SOIL - mg/Kg**

Analyst:  
 Supervisor: **MU**

Anamatrix Sample ID	Client Sample ID	Prep. Method	Instr. ID	Date Sampled	Date Prepared	Date Analyzed	D.F.	Reporting Limit	Results	Q
9412121-01	MW2-6	3050A	ICP1	12/12/94	12/13/94	12/20/94	1	4.0	4.5	
9412121-02	MW2-7	3050A	ICP1	12/12/94	12/13/94	12/20/94	1	4.0	4.9	
9412121-03	MW3-4	3050A	ICP1	12/12/94	12/13/94	12/20/94	1	4.0	6.5	
9412121-04	MW3-5	3050A	ICP1	12/12/94	12/13/94	12/20/94	1	4.0	5.5	
9412121-05	MW3-6	3050A	ICP1	12/12/94	12/13/94	12/20/94	1	4.0	6.2	
9412121-06	MW3-7	3050A	ICP1	12/12/94	12/13/94	12/20/94	1	4.0	5.5	
9412121-07	MW3-8	3050A	ICP1	12/12/94	12/13/94	12/20/94	1	4.0	6.2	
9412121-08	MW3-9	3050A	ICP1	12/12/94	12/13/94	12/20/94	1	4.0	ND	
BD134SA	METHOD BLANK	3050A	ICP1	N/A	12/13/94	12/20/94	1	4.0	ND	

COMMENTS:

INCHCAPE TESTING SERVICES  
ANAMETRIX LABORATORIES  
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Lab. Control Sample ID: **LD134SA**  
Anamatrix WO #: **9412121**  
Client Project Number: **GERMAN AUTOCRAFT**  
Matrix: **SOIL**

Analyst: *SC*  
Supervisor: *WJ*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Spike Amount	LCS Results	% Recovery	Q
Lead	3050A	6010A	ICP1	12/13/94	12/20/94	1	mg/Kg	25.0	23.4	93.6	

COMMENTS:



**SAMPLE RECEIVING CHECKLIST**

WORKORDER NUMBER: 9412121

CLIENT PROJECT ID: German Aircraft

**COOLER**

Shipping slip (airbill, etc.) present?	YES	NO	<u>N/A</u>
If YES, enter carrier name and airbill # : _____			
Custody Seal on the outside of cooler?	YES	NO	<u>N/A</u>
Condition: INTACT _____ BROKEN _____			
Temperature of sample (s) within range?	<u>YES</u>	NO	N/A
List temperature of cooler (s): <u>6°C</u>			

**SAMPLES**

Chain of custody seal present for each container?	YES	NO	<u>N/A</u>
Condition: INTACT _____ BROKEN _____			
Samples arrived within holding time?	<u>YES</u>	NO	N/A
Samples in proper containers for methods requested?	<u>YES</u>	NO	
Condition of containers: INTACT <u>✓</u> BROKEN _____			
If NO, were samples transferred to proper container? _____			
Were VOA containers received with zero headspace?	YES	NO	<u>N/A</u>
If NO, was it noted on the chain of custody? _____			
Were container labels complete? (ID, date, time preservative, etc.)	YES	<u>NO</u>	
Were samples preserved with the proper preservative?	YES	NO	<u>N/A</u>
If NO, was the proper preservative added at time of receipt? _____			
pH check of samples required at time of receipt?	YES	<u>NO</u>	
If YES, pH checked and recorded by: _____			
Sufficient amount of sample received for methods requested?	<u>YES</u>	NO	
If NO, has the client or lab project manager been notified? _____			
Field blanks received with sample batch? # of Sets: _____	YES	NO	<u>N/A</u>
Trip blanks received with sample batch? # of Sets: _____	YES	NO	<u>N/A</u>

**CHAIN OF CUSTODY**

Chain of custody received with samples?	<u>YES</u>	NO
Has it been filled out completely and in ink?	YES	<u>NO</u>
Sample ID's on chain of custody agree with container labels?	<u>YES</u>	NO
Number of containers indicated on chain of custody agree with number received?	<u>YES</u>	NO
Analysis methods clearly specified?	<u>YES</u>	NO
Sampling date and time indicated?	YES	<u>NO</u>
Proper signatures of sampler, courier, sample custodian in appropriate place? with time and date?	YES	<u>NO</u>
Turnaround time? REGULAR <u>✓</u> RUSH _____		

Any NO response and/or any "BROKEN" that was checked must be detailed in the Corrective Action Form.

Sample Custodian: TJA

Date: 12/12/94

Project Manager: AW

Date: 12/13/94



9412121

CHAIN-OF-CUSTODY RECORD

PROJECT NUMBER		PROJECT NAME				Number of Cntrs	Type of Containers	Type of Analysis								Condition of Samples	Initial
Send Report Attention of: Tom Price		Report Due / /		Verbal Due / /				TPH <sub>9</sub> /BTEX	Total Lead								
Sample Number	Date	Time	Comp	Matrix	Station Location												
① MW2-6	12/12/94	10:02		S	MW-2 (30')	1	Brass Sleeve	✓	✓								
② MW2-7	12/12/94	10:17		S	MW-2 (35')	1		✓	✓								
③ MW3-4	12/12/94			S	MW3 (20')	1		✓	✓								
④ MW3-5	12/12/94			S	MW3	1		✓	✓								
⑤ MW3-6	12/12/94	1355		S	MW3	1		✓	✓								
⑥ MW3-7	12/12/94	1410		S	MW3	1		✓	✓								
⑦ MW3-8	12/12/94	14:25		S	MW3	1		✓	✓								
⑧ MW3-9	12/12/94	1429		S	MW3	1		✓	✓								
Relinquished by: (Signature) Tom Price		Date/Time 12/12/94 1531	Received by: (Signature)		Date/Time	Remarks: Normal Turn Around Time											
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Date/Time	COMPANY: Chemist Enterprises ADDRESS: 333-B Camino Verde Boulder Creek CA 95006 PHONE: (408) 338-0195 FAX: (408) 338-0195											
Relinquished by: (Signature)		Date/Time	Received by Lab: Tom Price		Date/Time 12/12/94 1831												



# Inchcape Testing Services

## Anamatrix Laboratories

1961 Concourse Drive  
 Suite E  
 San Jose, CA 95131  
 Tel: 408-432-8192  
 Fax: 408-432-8198

MR. TOM PRICE  
 CHEMIST ENTERPRISES  
 333-B CAMINO VERDE  
 BOULDER CREEK, CA 95006

Workorder # : 9412135  
 Date Received : 12/13/94  
 Project ID : GERMAN AUTOCRAFT  
 Purchase Order: N/A

The following samples were received at Anamatrix for analysis :

ANAMATRIX ID	CLIENT SAMPLE ID
9412135- 1	CE1-1
9412135- 2	CE1-2
9412135- 3	CE1-3
9412135- 4	CE1-4
9412135- 5	CE1-5
9412135- 6	CE1-W1
9412135- 7	CE1-W2

This report is organized in sections according to the specific Anamatrix 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 Anamatrix cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Anamatrix 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.

*Susan Kraska Yeager* for  
 Susan Kraska Yeager  
 Laboratory Director

*Grace Wokida*  
 Project Manager

12/23/94  
 Date

This report consists of 19 pages.



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

R. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412135  
Date Received : 12/13/94  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9412135- 1	CE1-1	SOIL	12/13/94	TPHgBTEX
9412135- 2	CE1-2	SOIL	12/13/94	TPHgBTEX
9412135- 3	CE1-3	SOIL	12/13/94	TPHgBTEX
9412135- 4	CE1-4	SOIL	12/13/94	TPHgBTEX
9412135- 5	CE1-5	SOIL	12/13/94	TPHgBTEX
9412135- 6	CE1-W1	WATER	12/13/94	TPHgBTEX
9412135- 7	CE1-W2	WATER	12/13/94	TPHgBTEX

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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412135  
Date Received : 12/13/94  
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 workorder.

Cheryl Belman  
Department Supervisor

12/22/94  
Date

Luna Shier 12/22/94  
Chemist Date

Organic Analysis Data Sheet  
 Total Petroleum Hydrocarbons as Gasoline with BTEX  
 ITS - Anamatrix Laboratories - (408)432-8192

Lab Workorder : 9412135

Client Project ID : GERMAN AUTOCRAF

Matrix : SOIL

Units : mg/Kg

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		CE1-1	CE1-2	CE1-3	CE1-4	CE1-5
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		9412135-01	9412135-02	9412135-03	9412135-04	9412135-05
Benzene	0.0050	ND	ND	ND	1.1	5.6
Toluene	0.0050	ND	ND	0.008	1.3	6.6
Ethylbenzene	0.0050	ND	ND	ND	2.4	7.3
Total Xylenes	0.0050	ND	ND	ND	5.1	16
TPH as Gasoline	0.50	ND	ND	ND	94	160
Surrogate Recovery		103%	104%	103%	109%	110%
Instrument ID		HP12	HP12	HP12	HP12	HP12
Date Sampled		12/13/94	12/13/94	12/13/94	12/13/94	12/13/94
Date Analyzed		12/16/94	12/16/94	12/16/94	12/20/94	12/16/94
RLMF		1	1	1	25	100
Filename Reference		FPD13501.D	FPD13502.D	FPD13503.D	FTD13504.D	FPD13505.D

\* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucia Sher 12/22/94  
 Analyst Date

Cheryl Balmer 12/22/94  
 Supervisor Date

Organic Analysis Data Sheet  
 Total Petroleum Hydrocarbons as Gasoline with BTEX  
 ITS - Anamatrix Laboratories - (408)432-8192

Lab Workorder : 9412135  
 Matrix : SOIL

Client Project ID : GERMAN AUTOCRAF  
 Units : mg/Kg

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		METHOD BLANK	METHOD BLANK			
Benzene	0.0050	ND	ND			
Toluene	0.0050	ND	ND			
Ethylbenzene	0.0050	ND	ND			
Total Xylenes	0.0050	ND	ND			
TPH as Gasoline	0.50	ND	ND			
Surrogate Recovery		101%	96%			
Instrument ID		HP12	HP12			
Date Sampled		N/A	N/A			
Date Analyzed		12/16/94	12/20/94			
RLMF		1	1			
Filename Reference		BD1601E1.D	BD2001E1.D			

\* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucia Shear 12/22/94  
 Analyst Date

Cheryl Balmer 12/22/94  
 Supervisor Date

Organic Analysis Data Sheet  
 Total Petroleum Hydrocarbons as Gasoline with BTEX  
 ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9412135  
 Matrix : WATER

Client Project ID : GERMAN AUTOCRAF  
 Units : ug/L

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		CE1-W1	CE1-W2			
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		9412135-06	9412135-07	METHOD BLANK	METHOD BLANK	
Benzene	0.50	86000	260000	ND	ND	
Toluene	0.50	110000	550000	ND	ND	
Ethylbenzene	0.50	65000	340000	ND	ND	
Total Xylenes	0.50	220000	1500000	ND	ND	
TPH as Gasoline	50	2600000	15000000	ND	ND	
Surrogate Recovery		97%	97%	96%	97%	
Instrument ID		HP12	HP12	HP12	HP12	
Date Sampled		12/13/94	12/13/94	N/A	N/A	
Date Analyzed		12/20/94	12/21/94	12/20/94	12/21/94	
RLMF		10000	25000	1	1	
Filename Reference		FTD13506.D	FQD13507.D	BD2001E1.D	BD2101E1.D	

\* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Luna Suer 12/22/94  
 Analyst Date

Cheryl Balman 12/22/94  
 Supervisor Date

Matrix Spike Report  
 Total Petroleum Hydrocarbons as Gasoline  
 ITS - Anamatrix Laboratories - (408)432-8192

Subject ID : GERMAN AUTOCRAFT  
 Sample ID : CE1-2  
 Matrix : SOIL  
 Date Sampled : 12/13/94

Laboratory ID : 9412135-02  
 Analyst : IS  
 Supervisor : *uj*  
 Instrument ID : HP12  
 Units : mg/Kg

COMPOUND NAME	SPIKE AMOUNT	SAMPLE RESULTS	MS RECOVERY	MSD RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS
Gasoline	1.0	ND	72%	74%	50-139	-3%	30
Surrogate Recovery		104%	101%	98%			
Date Analyzed		12/16/94	12/16/94	12/16/94			
Multiplier		1	1	1			
Filename Reference		FPD13502.D	FMD13502.D	FDD13502.D			

\* Limits established by Incheape Testing Services, Anamatrix Laboratories.

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as Gasoline**  
**ITS - Anametrix Laboratories - (408)432-8192**

Instrument ID : HP12  
 Matrix : SOLID

Analyst : IS  
 Supervisor : ~~as~~  
 Units : mg/Kg

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Gasoline	0.50	90%	56-141
Surrogate Recovery		97%	53-147
Date Analyzed		12/16/94	
Multiplier		1	
Filename Reference		MD1601E1.D	

\* Limits established by Inhccape Testing Services, Anametrix Laboratories.

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as Gasoline**  
**ITS - Anametrix Laboratories - (408)432-8192**

Instrument ID : HP12  
 Matrix : SOLID

Analyst : IS  
 Supervisor : us  
 Units : mg/Kg

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	LCSD RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS
Gasoline	0.50	100%	106%	56-141	-6%	30
Surrogate Recovery		95%	94%	53-147		
Date Analyzed		12/20/94	12/20/94			
Multiplier		1	1			
Filename Reference		MD2001E1.D	ND2001E1.D			

\* Limits established by Incheape Testing Services, Anametrix Laboratories.



**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as Gasoline**  
**ITS - Anametrix Laboratories - (408)432-8192**

Instrument ID : HP12

Analyst : IS

Matrix : LIQUID

Supervisor : Gy

Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Gasoline	500	78%	56-141
Surrogate Recovery		80%	61-139
Date Analyzed		12/20/94	
Multiplier		1	
Filename Reference		MD2002E1.D	

\* Limits established by Inhccape Testing Services, Anametrix Laboratories.

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as BTEX**  
**ITS - Anametrix Laboratories - (408)432-8192**

Instrument ID : HP12

Analyst : JS

Matrix : LIQUID

Supervisor : ds

Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Benzene	10	100%	52-133
Toluene	10	100%	57-136
Ethylbenzene	10	100%	56-139
Total Xylenes	10	98%	56-141
Surrogate Recovery		105%	61-139
Date Analyzed		12/21/94	
Multiplier		1	
Filename Reference		MD2101E1.D	

\* Limits established by Incheape Testing Services, Anametrix Laboratories.

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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412135  
Date Received : 12/13/94  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9412135- 1	CE1-1	SOIL	12/13/94	6010
9412135- 2	CE1-2	SOIL	12/13/94	6010
9412135- 3	CE1-3	SOIL	12/13/94	6010
9412135- 4	CE1-4	SOIL	12/13/94	6010
9412135- 5	CE1-5	SOIL	12/13/94	6010
9412135- 6	CE1-W1	WATER	12/13/94	6010

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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412135  
Date Received : 12/13/94  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

QA/QC SUMMARY :

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

Maury Guyer 12/22/94  
Department Supervisor Date

Steph Carroll 12/22/94  
Chemist Date

**INCHCAPE TESTING SERVICES  
ANAMETRIX LABORATORIES  
(408) 432-8192  
DATA REPORT**

Analyte-Method: **Lead-6010A**  
 Client Project Number: **GERMAN AUTOCRAFT**  
 Matrix - Units: **SOIL - mg/Kg**

Analyst: *sc*  
 Supervisor: *MW*

Anamatrix Sample ID	Client Sample ID	Prep. Method	Instr. ID	Date Sampled	Date Prepared	Date Analyzed	D.F.	Reporting Limit	Results	Q
9412135-01	CE1-1	3050A	ICP1	12/13/94	12/14/94	12/21/94	1	4.0	6.0	
9412135-02	CE1-2	3050A	ICP1	12/13/94	12/14/94	12/21/94	1	4.0	7.9	
9412135-03	CE1-3	3050A	ICP1	12/13/94	12/14/94	12/21/94	1	4.0	7.1	
9412135-04	CE1-4	3050A	ICP1	12/13/94	12/14/94	12/21/94	1	4.0	7.0	
9412135-05	CE1-5	3050A	ICP1	12/13/94	12/14/94	12/21/94	1	4.0	6.3	
BD144SA	METHOD BLANK	3050A	ICP1	N/A	12/14/94	12/14/94	1	4.0	ND	

COMMENTS:

**INCHCAPE TESTING SERVICES  
ANAMETRIX LABORATORIES  
(408) 432-8192  
DATA REPORT**

Analyte-Method: **Lead-6010A**  
 Client Project Number: **GERMAN AUTOCRAFT**  
 Matrix - Units: **WATER - ug/L**

Analyst: *SC*  
 Supervisor: *MJ*

Anamatrix Sample ID	Client Sample ID	Prep. Method	Instr. ID	Date Sampled	Date Prepared	Date Analyzed	D.F.	Reporting Limit	Results	Q
9412135-06	CE1-W1	3010A	ICP1	12/13/94	12/14/94	12/21/94	10	400	3270	I
BD144WB	METHOD BLANK	3010A	ICP1	N/A	12/14/94	12/21/94	1	40.0	ND	

COMMENTS:

INCHCAPE TESTING SERVICES  
ANAMETRIX LABORATORIES  
(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Lab. Control Sample ID: LD144SA  
Anametrix WO #: 9412135  
Client Project Number: GERMAN AUTOCRAFT  
Matrix: SOIL

Analyst: *SC*  
Supervisor: *MU*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Spike Amount	LCS Results	% Recovery	Q
Lead	3050A	6010A	ICP1	12/14/94	12/14/94	1	mg/Kg	50.0	42.6	85.2	

COMMENTS:

INCHCAPE TESTING SERVICES

ANAMETRIX LABORATORIES

(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Lab. Control Sample ID: **LD144WB**  
Anamatrix WO #: **9412135**  
Client Project Number: **GERMAN AUTOCRAFT**  
Matrix: **WATER**

Analyst: *SC*  
Supervisor: *MW*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Spike Amount	LCS Results	% Recovery	Q
Lead	3010A	6010A	ICP1	12/14/94	12/21/94	1	ug/L	500	452	90.4	

COMMENTS:





### SAMPLE RECEIVING CHECKLIST

WORKORDER NUMBER: 9412135

CLIENT PROJECT ID: German Autocraft

#### COOLER

Shipping slip (airbill, etc.) present?	YES	NO	<u>N/A</u>
If YES, enter carrier name and airbill #: _____			
Custody Seal on the outside of cooler?	YES	NO	<u>N/A</u>
Condition: INTACT _____ BROKEN _____			
Temperature of sample (s) within range?	<u>YES</u>	NO	N/A
List temperature of cooler (s): <u>2°C, 4°C</u>			

#### SAMPLES

Chain of custody seal present for each container?	YES	NO	<u>N/A</u>
Condition: INTACT _____ BROKEN _____			
Samples arrived within holding time?	<u>YES</u>	NO	N/A
Samples in proper containers for methods requested?	<u>YES</u>	NO	
Condition of containers: INTACT <u>✓</u> BROKEN _____			
If NO, were samples transferred to proper container? _____			
Were VOA containers received with zero headspace?	YES	<u>NO</u>	N/A
If NO, was it noted on the chain of custody? <u>yes</u>			
Were container labels complete? (ID, date, time preservative, etc.)	<u>YES</u>	NO	
Were samples preserved with the proper preservative?	<u>YES</u>	NO	N/A
If NO, was the proper preservative added at time of receipt? _____			
pH check of samples required at time of receipt?	<u>YES</u>	NO	
If YES, pH checked and recorded by: <u>MB</u>			
Sufficient amount of sample received for methods requested?	<u>YES</u>	NO	
If NO, has the client or lab project manager been notified? _____			
Field blanks received with sample batch? # of Sets: _____	YES	NO	<u>N/A</u>
Trip blanks received with sample batch? # of Sets: _____	YES	NO	<u>N/A</u>

#### CHAIN OF CUSTODY

Chain of custody received with samples?	<u>YES</u>	NO
Has it been filled out completely and in ink?	<u>YES</u>	NO
Sample ID's on chain of custody agree with container labels?	<u>YES</u>	NO
Number of containers indicated on chain of custody agree with number received?	<u>YES</u>	NO
Analysis methods clearly specified?	<u>YES</u>	NO
Sampling date and time indicated?	<u>YES</u>	NO
Proper signatures of sampler, courier, sample custodian in appropriate place? with time and date?	<u>YES</u>	NO
Turnaround time? REGULAR <u>✓</u> RUSH _____		

Any NO response and/or any "BROKEN" that was checked must be detailed in the Corrective Action Form.

Sample Custodian: MB

Date: 12/13/94

Project Manager: GW

Date: 12/14/94

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9412135

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# CHAIN-OF-CUSTODY RECORD

PROJECT NUMBER		PROJECT NAME				Number of Cntrs	Type of Containers	Type of Analysis						Condition of Samples	Initial
		German Autocraft													
Send Report Attention of:			Report Due		Verbal Due										
Tom Price			/ /		/ /										
Sample Number	Date	Time	Comp	Matrix	Station Location			TPHg/BTEX	Total Lead						
① CE1-1	12/13/94	0847		S		1	Brass sleeves	✓	✓						
② CE1-2	12/13/94	0850		S		1		✓	✓						
③ CE1-3	12/13/94	0902		S		1		✓	✓						
④ CE1-4	12/13/94	0910		S		1		✓	✓						
⑤ CE1-5	12/13/94	0917		S		1	↓	✓	✓						
⑥ CE1-W1	12/13/94	0935		W		4	VOAS & SOPOLY	✓	✓				one vial - bubbles		
⑦ CE1-W2	12/13/94	0945		W		3	VOAS	✓							

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Sampled by: (Signature) <i>Tom Price</i>	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature) <i>Tom Price</i>	Date/Time 12/13/94 1725	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received by Lab. <i>[Signature]</i>	Date/Time 12/13/94 1725

Remarks: **NORMAL TURN AROUND TIME**

COMPANY: Chemist Enterprises  
 ADDRESS: 333-B Camino Verde  
 Boulder Creek CA 95006  
 PHONE: (408) 338-0198 FAX: (408) 338-5100



# Inchcape Testing Services

## Anamatrix Laboratories

1961 Concourse Drive  
 Suite E  
 San Jose, CA 95131  
 Tel: 408-432-8192  
 Fax: 408-432-8198

MR. TOM PRICE  
 CHEMIST ENTERPRISES  
 333-B CAMINO VERDE  
 BOULDER CREEK, CA 95006

Workorder # : 9412136  
 Date Received : 12/13/94  
 Project ID : GERMAN AUTOCRAFT  
 Purchase Order: N/A

The following samples were received at Anamatrix for analysis :


ANAMATRIX ID	CLIENT SAMPLE ID
9412136- 1	CE2-1
9412136- 2	CE2-2
9412136- 3	CE2-3
9412136- 4	CE2-4
9412136- 5	CE2-W1
9412136- 6	T.BLANK

This report is organized in sections according to the specific Anamatrix 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 Anamatrix cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Anamatrix 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.

  
 Susan Kraska Yeager  
 Laboratory Director

  
 Project Manager

12/21/94  
 Date

This report consists of 21 pages.

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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412136  
Date Received : 12/13/94  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9412136- 1	CE2-1	SOIL	12/13/94	TPHgBTEX
9412136- 2	CE2-2	SOIL	12/13/94	TPHgBTEX
9412136- 3	CE2-3	SOIL	12/13/94	TPHgBTEX
9412136- 4	CE2-4	SOIL	12/13/94	TPHgBTEX
9412136- 5	CE2-W1	WATER	12/13/94	TPHgBTEX
9412136- 6	T. BLANK	WATER	12/13/94	TPHgBTEX

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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412136  
Date Received : 12/13/94  
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 workorder.

Cheryl Balmer 12/22/94  
Department Supervisor Date

Lucia Steer 12/22/94  
Chemist Date

Organic Analysis Data Sheet  
 Total Petroleum Hydrocarbons as Gasoline with BTEX  
 ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9412136  
 Matrix : SOIL

Client Project ID : GERMAN AUTOCRAF  
 Units : mg/Kg

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		CE2-1	CE2-2	CE2-3	CE2-4	
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		9412136-01	9412136-02	9412136-03	9412136-04	METHOD BLANK
Benzene	0.0050	ND	ND	ND	7.1	ND
Toluene	0.0050	ND	ND	ND	75	ND
Ethylbenzene	0.0050	ND	ND	0.59	41	ND
Total Xylenes	0.0050	ND	ND	1.8	170	ND
TPH as Gasoline	0.50	ND	ND	57	1600	ND
Surrogate Recovery		93%	89%	105%	102%	106%
Instrument ID		HP21	HP21	HP21	HP21	HP21
Date Sampled		12/13/94	12/13/94	12/13/94	12/13/94	N/A
Date Analyzed		12/19/94	12/16/94	12/16/94	12/16/94	12/16/94
RLMF		1	1	25	250	1
Filename Reference		FPD13601.D	FPD13602.D	FPD13603.D	FPD13604.D	BD1602E1.D

\* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

CR Patel 12/23/94  
 Analyst Date

Cheyl Balina 12/23/94  
 Supervisor Date

Organic Analysis Data Sheet  
Total Petroleum Hydrocarbons as Gasoline with BTEX  
ITS - Anamatrix Laboratories - (408)432-8192

Lab Workorder : 9412136

Client Project ID : GERMAN AUTOCRAF

Matrix : SOIL

Units : mg/Kg

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		METHOD BLANK				
Benzene	0.0050	ND				
Toluene	0.0050	ND				
Ethylbenzene	0.0050	ND				
Total Xylenes	0.0050	ND				
TPH as Gasoline	0.50	ND				
Surrogate Recovery		110%				
Instrument ID		HP21				
Date Sampled		N/A				
Date Analyzed		12/19/94				
RLMF		1				
Filename Reference		BD1902E1.D				

\* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Laura Sher      12/22/94  
Analyst                      Date

Cheryl Balmer      12/22/94  
Supervisor                      Date

Organic Analysis Data Sheet  
 Total Petroleum Hydrocarbons as Gasoline with BTEX  
 ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9412136  
 Matrix : WATER

Client Project ID : GERMAN AUTOCRAF  
 Units : ug/L

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		CE2-W1	T.BLANK			
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		9412136-05	9412136-06	METHOD BLANK	METHOD BLANK	
Benzene	0.50	50000	ND	ND	ND	
Toluene	0.50	230000	ND	ND	ND	
Ethylbenzene	0.50	60000	ND	ND	ND	
Total Xylenes	0.50	290000	ND	ND	ND	
TPH as Gasoline	50	3200000	ND	ND	ND	
Surrogate Recovery		111%	105%	106%	110%	
Instrument ID		HP21	HP21	HP21	HP21	
Date Sampled		12/13/94	12/13/94	N/A	N/A	
Date Analyzed		12/19/94	12/16/94	12/16/94	12/19/94	
RLMF		25000	1	1	1	
Filename Reference		FRD13605.D	FPD13606.D	BD1602E1.D	BD1902E1.D	

\* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucia Slor 12/22/94  
 Analyst Date

Cheryl Balmer 12/22/94  
 Supervisor Date



**Matrix Spike Report**  
**Total Petroleum Hydrocarbons as Gasoline**  
**ITS - Anamatrix Laboratories - (408)432-8192**

Object ID : GERMAN AUTOCRAFT  
 Sample ID : CE2-1  
 Matrix : SOIL  
 Date Sampled : 12/13/94

Laboratory ID : 9412136-01  
 Analyst : JS  
 Supervisor : W  
 Instrument ID : HP21  
 Units : mg/Kg

COMPOUND NAME	SPIKE AMOUNT	SAMPLE RESULTS	MS RECOVERY	MSD RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS
Gasoline	0.5	ND	69%	68%	50-139	1%	30
Surrogate Recovery		93%	111%	96%			
Date Analyzed		12/19/94	12/19/94	12/19/94			
Multiplier		1	1	1			
Filename Reference		FPD13601.D	FMD13601.D	FDD13601.D			

\* Limits established by Incheape Testing Services, Anamatrix Laboratories.

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as BTEX**  
**ITS - Anamatrix Laboratories - (408)432-8192**

Instrument ID : HP21  
 Matrix : LIQUID

Analyst : IS  
 Supervisor : *W*  
 Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Benzene	20	100%	52-133
Toluene	20	100%	57-136
Ethylbenzene	20	105%	56-139
Total Xylenes	20	100%	56-141
Surrogate Recovery		105%	61-139
Date Analyzed		12/16/94	
Multiplier		1	
Filename Reference		MD1601E1.D	

\* Limits established by Inchcape Testing Services, Anamatrix Laboratories.

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as BTEX**  
**ITS - Anamatrix Laboratories - (408)432-8192**

Instrument ID : HP21  
 Matrix : SOLID

Analyst : *IS*  
 Supervisor : *ly*  
 Units : mg/Kg

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Benzene	0.020	95%	52-133
Toluene	0.020	95%	57-136
Ethylbenzene	0.020	100%	56-139
Total Xylenes	0.020	95%	56-141
Surrogate Recovery		104%	53-147
Date Analyzed		12/16/94	
Multiplier		1	
Filename Reference		SD16X3E3.D	

\* Limits established by Incheape Testing Services. Anamatrix Laboratories.

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as Gasoline**  
**ITS - Anametrix Laboratories - (408)432-8192**

Instrument ID : HP21

Analyst : I<sup>3</sup>

Matrix : SOLID

Supervisor : M

Units : mg/Kg

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Gasoline	0.50	96%	56-141
Surrogate Recovery		114%	53-147
Date Analyzed		12/19/94	
Multiplier		1	
Filename Reference		MD1902E1.D	

\* Limits established by Inchcape Testing Services, Anametrix Laboratories.

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as Gasoline**  
**ITS - Anametrix Laboratories - (408)432-8192**

Instrument ID : HP21

Analyst : *DS*

Matrix : LIQUID

Supervisor : *W*

Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Gasoline	500	80%	56-141
Surrogate Recovery		114%	61-139
Date Analyzed		12/19/94	
Multiplier		1	
Filename Reference		MD1901E1.D	

\* Limits established by Incheape Testing Services, Anametrix Laboratories.

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

R. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412136  
Date Received : 12/13/94  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9412136- 1	CE2-1	SOIL	12/13/94	6010
9412136- 2	CE2-2	SOIL	12/13/94	6010
9412136- 3	CE2-3	SOIL	12/13/94	6010
9412136- 4	CE2-4	SOIL	12/13/94	6010
9412136- 5	CE2-W1	WATER	12/13/94	6010

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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9412136  
Date Received : 12/13/94  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

QA/QC SUMMARY :

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

Manny Lopez 12/22/94  
Department Supervisor Date

Stephen Carroll 12/22/94  
Chemist Date

**INCHCAPE TESTING SERVICES**  
**ANAMETRIX LABORATORIES**  
**(408) 432-8192**  
**DATA REPORT**

Analyte-Method: **Lead-6010A**  
Client Project Number: **GERMAN AUTOCRAFT**  
Matrix - Units: **SOIL - mg/Kg**

Analyst: *sc*  
Supervisor: *MW*

Anamatrix Sample ID	Client Sample ID	Prep. Method	Instr. ID	Date Sampled	Date Prepared	Date Analyzed	D.F.	Reporting Limit	Results	Q
9412136-01	CE2-1	3050A	ICP1	12/13/94	12/14/94	12/21/94	1	4.0	23.5	
9412136-02	CE2-2	3050A	ICP1	12/13/94	12/14/94	12/21/94	1	4.0	5.7	
9412136-03	CE2-3	3050A	ICP1	12/13/94	12/14/94	12/21/94	1	4.0	4.1	
9412136-04	CE2-4	3050A	ICP1	12/13/94	12/14/94	12/21/94	1	4.0	12.4	
BD144SA	METHOD BLANK	3050A	ICP1	N/A	12/14/94	12/14/94	1	4.0	ND	

COMMENTS:



**INCHCAPE TESTING SERVICES  
ANAMETRIX LABORATORIES  
(408) 432-8192  
DATA REPORT**

Analyte-Method: **Lead-6010A**  
Client Project Number: **GERMAN AUTOCRAFT**  
Matrix - Units: **WATER - ug/L**

Analyst: *sc*  
Supervisor: *MW*

Anamatrix Sample ID	Client Sample ID	Prep. Method	Instr. ID	Date Sampled	Date Prepared	Date Analyzed	D.F.	Reporting Limit	Results	Q
9412136-05	CE2-W1	3010A	ICP1	12/13/94	12/14/94	12/21/94	10	400	4640	I
BD144WB	METHOD BLANK	3010A	ICP1	N/A	12/14/94	12/21/94	1	40.0	ND	

COMMENTS:

**INCHCAPE TESTING SERVICES  
ANAMETRIX LABORATORIES  
(408) 432-8192  
SAMPLE DUPLICATE REPORT**

Anamatrix Sample ID: **9412136-05D**  
Client Sample ID: **CE2-W1**  
Client Project Number: **GERMAN AUTOCRAFT**  
Matrix: **WATER**

Analyst: *SC*  
Supervisor: *MU*

Analyte	Prep. Method	Analyt. Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Sample Conc.	Sample Duplicate Conc.	RPD	Q
Lead	3010A	6010A	ICP1	12/14/94	12/21/94	10	ug/L	4640	4900	5.5	

COMMENTS:

**INCHCAPE TESTING SERVICES**  
**ANAMETRIX LABORATORIES**  
(408) 432-8192  
**MATRIX SPIKE REPORT**

Anamatrix. Sample ID: 9412136-05MS,MD  
Client Sample ID: CE2-W1  
Client Proj. Number: GERMAN AUTOCRAFT  
Matrix: WATER

Analyst: SC  
Supervisor: MW

Analyte	Analyt. Method	Instr. I.D.	Date Prepared	Date Analyzed	Units	Spike Amount	Sample Conc.	Matrix Spike Conc.	% Rec.	Matrix Sp. Dup. Conc.	% Rec.	RPD	Q
Lead	6010A	ICP1	12/14/94	12/21/94	ug/L	500	4640	5930	NR	5530	NR	7.0	H

COMMENTS: NR - Not reported due to high level of lead in the unspiked sample compared to spike amount.

INCHCAPE TESTING SERVICES

ANAMETRIX LABORATORIES

(408) 432-8192

LABORATORY CONTROL SAMPLE REPORT

Lab. Control Sample ID: LD144SA

Anamatrix WO #: 9412136

Client Project Number: GERMAN AUTOCRAFT

Matrix: SOIL

Analyst: *sc*

Supervisor: *MN*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Spike Amount	LCS Results	% Recovery	Q
Lead	3050A	6010A	ICP1	12/14/94	12/14/94	1	mg/Kg	50.0	42.6	85.2	

COMMENTS:

**INCHCAPE TESTING SERVICES**

**ANAMETRIX LABORATORIES**

**(408) 432-8192**

**LABORATORY CONTROL SAMPLE REPORT**

Lab. Control Sample ID: **LD144WB**

Anamatrix WO #: **9412136**

Client Project Number: **GERMAN AUTOCRAFT**

Matrix: **WATER**

Analyst: *SC*  
Supervisor: *MW*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Spike Amount	LCS Results	% Recovery	Q
Lead	3010A	6010A	ICP1	12/14/94	12/21/94	1	ug/L	500	452	90.4	

COMMENTS:



### SAMPLE RECEIVING CHECKLIST

WORKORDER NUMBER: 9412136

CLIENT PROJECT ID: German Autocraft

#### COOLER

Shipping slip (airbill, etc.) present?	YES	NO	<input checked="" type="radio"/> N/A
If YES, enter carrier name and airbill # : _____			
Custody Seal on the outside of cooler?	YES	NO	<input checked="" type="radio"/> N/A
Condition: INTACT _____ BROKEN _____			
Temperature of sample (s) within range?	<input checked="" type="radio"/> YES	NO	N/A
List temperature of cooler (s): <u>2°C, 4°C</u>			

#### SAMPLES

Chain of custody seal present for each container?	YES	NO	<input checked="" type="radio"/> N/A
Condition: INTACT _____ BROKEN _____			
Samples arrived within holding time?	<input checked="" type="radio"/> YES	NO	N/A
Samples in proper containers for methods requested?	<input checked="" type="radio"/> YES	NO	
Condition of containers: INTACT <input checked="" type="checkbox"/> BROKEN _____			
If NO, were samples transferred to proper container? _____			
Were VOA containers received with zero headspace?	<input checked="" type="radio"/> YES	NO	N/A
If NO, was it noted on the chain of custody? _____			
Were container labels complete? (ID, date, time preservative, etc.)	<input checked="" type="radio"/> YES	NO	
Were samples preserved with the proper preservative?	YES	NO	N/A
If NO, was the proper preservative added at time of receipt? _____			
pH check of samples required at time of receipt?	<input checked="" type="radio"/> YES	NO	
If YES, pH checked and recorded by: <u>MB</u>			
Sufficient amount of sample received for methods requested?	<input checked="" type="radio"/> YES	NO	
If NO, has the client or lab project manager been notified? _____			
Field blanks received with sample batch? # of Sets: _____	YES	NO	<input checked="" type="radio"/> N/A
Trip blanks received with sample batch? # of Sets: <u>1</u>	<input checked="" type="radio"/> YES	NO	N/A

#### CHAIN OF CUSTODY

Chain of custody received with samples?	<input checked="" type="radio"/> YES	NO
Has it been filled out completely and in ink?	<input checked="" type="radio"/> YES	NO
Sample ID's on chain of custody agree with container labels?	<input checked="" type="radio"/> YES	NO
Number of containers indicated on chain of custody agree with number received?	<input checked="" type="radio"/> YES	NO
Analysis methods clearly specified?	<input checked="" type="radio"/> YES	NO
Sampling date and time indicated?	<input checked="" type="radio"/> YES	NO
Proper signatures of sampler, courier, sample custodian in appropriate place? with time and date?	<input checked="" type="radio"/> YES	NO
Turnaround time? REGULAR <input checked="" type="checkbox"/> RUSH _____		

Any NO response and/or any "BROKEN" that was checked must be detailed in the Corrective Action Form.

Sample Custodian: MB Date: 12/13/94 Project Manager: FW Date: 12/14/94

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**Inchcape Testing Services**  
Anamatrix Laboratories

1961 Concourse Drive, Suite E  
San Jose, CA 95131  
(408) 432-8192 • Fax (408) 432-8198

9412136

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# CHAIN-OF-CUSTODY RECORD

PROJECT NUMBER		PROJECT NAME				Number of Cntrs	Type of Containers	Type of Analysis						Condition of Samples	Initial
		German Autocraft													
Send Report Attention of:			Report Due		Verbal Due										
Tom Price			/ /		/ /										
Sample Number	Date	Time	Comp	Matrix	Station Location			TPH <sub>g</sub> /BTEX	Total lead						
① CE2-1	12/13/94	1205		S		1	Brass Sleeve	✓	✓						
② CE2-2	12/13/94	1240		S		1		✓	✓						
③ CE2-3	12/13/94	1320		S		1		✓	✓						
④ CE2-4	12/13/94	1420		S		1	↓	✓	✓						
⑤ CE2-W1	12/13/94	1500		W		4	VOAS SOCIAL Bly	✓	✓						
⑥ TRIP BLANK	—	—		W		3	VOAS	✓							

2005 MB

- ①
- ②
- ③
- ④
- ⑤
- ⑥

Sampled by: (Signature) <i>Tom Price</i>	Date/Time	Received by: (Signature)	Date/Time	Remarks: NORMAL TURN AROUND TIME CALLED IN FOR ESTIMATE ON THIS PROJECT.  COMPANY: CHEMIST ENTERPRISES ADDRESS: 333-B Camino Verde Boulder Creek CA 95006 PHONE: (408) 338-0198 FAX: (408) 338-0198
Relinquished by: (Signature) <i>Tom Price</i>	Date/Time 12/13/94 1731	Received by: (Signature)	Date/Time	
Relinquished by: (Signature)	Date/Time	Received by Lab: <i>[Signature]</i>	Date/Time 12/13/94 1731	



# Inchcape Testing Services

## Anamatrix Laboratories

1961 Concourse Drive  
 Suite E  
 San Jose, CA 95131  
 Tel: 408-432-8192  
 Fax: 408-432-8198

MR. TOM PRICE  
 CHEMIST ENTERPRISES  
 333-B CAMINO VERDE  
 BOULDER CREEK, CA 95006

Workorder # : 9501049  
 Date Received : 01/06/95  
 Project ID : GERMAN AUTOCRAFT  
 Purchase Order: N/A

The following samples were received at Anamatrix for analysis :

ANAMATRIX ID	CLIENT SAMPLE ID
9501049- 1	T.BLANK
9501049- 2	MW-4
9501049- 3	MW-1
9501049- 4	MW-2
9501049- 5	MW-3

This report is organized in sections according to the specific Anamatrix 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 Anamatrix cannot be responsible for the detachment, separation, or otherwise partial use of this report.

Anamatrix 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.

*Susan Kraska Yeager* for  
 Susan Kraska Yeager  
 Laboratory Director

*Steve Walker*  
 Project Manager

01/20/95  
 Date

This report consists of 14 pages.



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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9501049  
Date Received : 01/06/95  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9501049- 1	T.BLANK	WATER	01/06/95	TPHgBTEX
9501049- 2	MW-4	WATER	01/06/95	TPHgBTEX
9501049- 3	MW-1	WATER	01/06/95	TPHgBTEX
9501049- 4	MW-2	WATER	01/06/95	TPHgBTEX
9501049- 5	MW-3	WATER	01/06/95	TPHgBTEX

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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9501049  
Date Received : 01/06/95  
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 workorder.

Cheryl Balme                      1/18/95  
Department Supervisor                      Date

Luna Sher                      1/19/95  
Chemist                      Date

Organic Analysis Data Sheet  
 Total Petroleum Hydrocarbons as Gasoline with BTEX  
 ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9501049  
 Matrix : WATER

Client Project ID : GERMAN AUTOCRAF  
 Units : ug/L

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		T.BLANK	MW-4	MW-1	MW-2	MW-3
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		9501049-01	9501049-02	9501049-03	9501049-04	9501049-05
Benzene	0.50	ND	29000	13000	9400	11000
Toluene	0.50	ND	41000	15000	5600	2300
Ethylbenzene	0.50	ND	17000	4800	19000	8300
Total Xylenes	0.50	ND	43000	13000	42000	28000
TPH as Gasoline	50	ND	580000	110000	980000	740000
-----						
Surrogate Recovery		102%	104%	100%	103%	109%
Instrument ID		HP12	HP12	HP12	HP12	HP12
Date Sampled		01/06/95	01/06/95	01/06/95	01/06/95	01/06/95
Date Analyzed		01/11/95	01/11/95	01/17/95	01/12/95	01/11/95
RLMF		1	2500	1000	2500	2500
Filename Reference		FPJ04901.D	FPJ04902.D	FQJ04903.D	FLJ04904.D	FPJ04905.D

\* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Lucia Sheer 1/19/95  
 Analyst Date

Cheryl Belsman 1/18/95  
 Supervisor Date

Organic Analysis Data Sheet  
 Total Petroleum Hydrocarbons as Gasoline with BTEX  
 ITS - Anametrix Laboratories - (408)432-8192

Lab Workorder : 9501049  
 Matrix : WATER

Client Project ID : GERMAN AUTOCRAF  
 Units : ug/L

Compound Name	Method Reporting Limit*	Client ID	Client ID	Client ID	Client ID	Client ID
		Lab ID	Lab ID	Lab ID	Lab ID	Lab ID
		METHOD BLANK	METHOD BLANK	METHOD BLANK		
Benzene	0.5	ND	ND	ND		
Toluene	0.5	ND	ND	ND		
Ethylbenzene	0.5	ND	ND	ND		
Total Xylenes	0.5	ND	ND	ND		
TPH as Gasoline	50	ND	ND	ND		
Surrogate Recovery		99%	97%	94%		
Instrument ID		HP12	HP12	HP12		
Date Sampled		N/A	N/A	N/A		
Date Analyzed		01/11/95	01/12/95	01/17/95		
RLMF		1	1	1		
Filename Reference		BJ1101E1.D	BJ1201E1.D	BJ1701E1.D		

\* The Method Reporting Limit must be multiplied by the Reporting Limit Multiplication Factor (RLMF) to achieve the compound's reporting limit in the analysis.

ND : Not detected at or above the reporting limit for the analysis as performed.

TPHg : Determined by GC/FID following sample purge & trap by EPA Method 5030.

BTEX : Determined by modified EPA Method 8020 following sample purge & trap by EPA Method 5030.

Lab Control Limits for surrogate compound p-Bromofluorobenzene are 61-139%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Luca Shor                      1/19/95  
 Analyst    Date

Cheyl Balmer    1/18/95  
 Supervisor    Date

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as BTEX**  
**ITS - Anametrix Laboratories - (408)432-8192**

Instrument ID : HP12  
 Matrix : LIQUID

Analyst : IS  
 Supervisor : ~~CS~~  
 Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Benzene	10	98%	52-133
Toluene	10	100%	57-136
Ethylbenzene	10	110%	56-139
Total Xylenes	10	120%	56-141
<hr/>			
Surrogate Recovery		104%	61-139
Date Analyzed		1/11/95	
Multiplier		1	
Filename Reference		MJ1100E1.D	

\* Limits established by Inhcpe Testing Services, Anametrix Laboratories.

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as Gasoline**  
**ITS - Anamatrix Laboratories - (408)432-8192**

Instrument ID : HP12

Analyst : LS

Matrix : LIQUID

Supervisor : US

Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Gasoline	500	98%	56-141
Surrogate Recovery		87%	61-139
Date Analyzed		01/12/95	
Multiplier		1	
Filename Reference		MJ1201E1.D	

\* Limits established by Inchcape Testing Services, Anamatrix Laboratories.

**Laboratory Control Spike Report**  
**Total Petroleum Hydrocarbons as BTEX**  
**ITS - Anametrix Laboratories - (408)432-8192**

Instrument ID : HP12  
Matrix : LIQUID

Analyst : IS  
Supervisor : OS  
Units : ug/L

COMPOUND NAME	SPIKE AMOUNT	LCS RECOVERY	RECOVERY LIMITS
Benzene	10	100%	52-133
Toluene	10	110%	57-136
Ethylbenzene	10	120%	56-139
Total Xylenes	10	130%	56-141
Surrogate Recovery		104%	61-139
Date Analyzed		1/17/95	
Multiplier		1	
Filename Reference		MJ1701E1.D	

\* Limits established by Inchcape Testing Services, Anametrix Laboratories.

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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9501049  
Date Received : 01/06/95  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9501049- 3	MW-1	WATER	01/06/95	6010
9501049- 4	MW-2	WATER	01/06/95	6010
9501049- 5	MW-3	WATER	01/06/95	6010



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

MR. TOM PRICE  
CHEMIST ENTERPRISES  
333-B CAMINO VERDE  
BOULDER CREEK, CA 95006

Workorder # : 9501049  
Date Received : 01/06/95  
Project ID : GERMAN AUTOCRAFT  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

QA/QC SUMMARY :

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

Wayne 1/17/95  
Department Supervisor Date

Steph Carroll 1/17/95  
Chemist Date

**INCHCAPE TESTING SERVICES  
ANAMETRIX LABORATORIES  
(408) 432-8192  
DATA REPORT**

Analyte-Method: **Lead-6010A**  
 Client Project Number: **GERMAN AUTOCRAFT**  
 Matrix - Units: **WATER - ug/L**

Analyst: *SC*  
 Supervisor: *MD*

Anamatrix Sample ID	Client Sample ID	Prep. Method	Instr. ID	Date Sampled	Date Prepared	Date Analyzed	D.F.	Reporting Limit	Results	Q
9501049-03	MW-1	3010A	ICP1	01/06/95	01/09/95	01/12/95	1	40.0	134	
9501049-04	MW-2	3010A	ICP1	01/06/95	01/09/95	01/12/95	2	80.0	411	I
9501049-05	MW-3	3010A	ICP1	01/06/95	01/09/95	01/12/95	2	80.0	237	I
BJ094WA	METHOD BLANK	3010A	ICP1	N/A	01/09/95	01/12/95	1	40.0	ND	

COMMENTS:

**INCHCAPE TESTING SERVICES**

**ANAMETRIX LABORATORIES**

(408) 432-8192

**LABORATORY CONTROL SAMPLE REPORT**

Lab. Control Sample ID: LJ095WA

Anamatrix WO #: 9501049

Client Project Number: GERMAN AUTOCRAFT

Matrix: WATER

Analyst: SC

Supervisor: *W*

Analyte	Prep. Method	Analytical Method	Instr. ID	Date Prepared	Date Analyzed	Dil. Factor	Units	Spike Amount	LCS Results	% Recovery	Q
Lead	3010A	6010A	ICP1	01/09/95	01/12/95	1	ug/L	500	473	94.6	

COMMENTS:



**SAMPLE RECEIVING CHECKLIST**

WORKORDER NUMBER: 9501049

CLIENT PROJECT ID: German Autocraft

**COOLER**

Shipping slip (airbill, etc.) present?	YES	NO	<u>N/A</u>
If YES, enter carrier name and airbill #:			
Custody Seal on the outside of cooler?	YES	NO	<u>N/A</u>
Condition: INTACT _____ BROKEN _____			
Temperature of sample (s) within range?	<u>YES</u>	NO	N/A
List temperature of cooler (s): <u>6°C</u>			

**SAMPLES**

Chain of custody seal present for each container?	YES	NO	<u>N/A</u>
Condition: INTACT _____ BROKEN _____			
Samples arrived within holding time?	<u>YES</u>	NO	N/A
Samples in proper containers for methods requested?	<u>YES</u>	NO	
Condition of containers: INTACT <u>✓</u> BROKEN _____			
If NO, were samples transferred to proper container? _____			
Were VOA containers received with zero headspace?	YES	<u>NO</u>	N/A
If NO, was it noted on the chain of custody? <u>yes</u>			
Were container labels complete? (ID, date, time preservative, etc.)	<u>YES</u>	NO	
Were samples preserved with the proper preservative?	<u>YES</u>	NO	N/A
If NO, was the proper preservative added at time of receipt? _____			
pH check of samples required at time of receipt?	<u>YES</u>	NO	
If YES, pH checked and recorded by: <u>NB</u>			
Sufficient amount of sample received for methods requested?	<u>YES</u>	NO	
If NO, has the client or lab project manager been notified? _____			
Field blanks received with sample batch? # of Sets: _____	YES	NO	<u>N/A</u>
Trip blanks received with sample batch? # of Sets: <u>1</u>	<u>YES</u>	NO	N/A

**CHAIN OF CUSTODY**

Chain of custody received with samples?	<u>YES</u>	NO
Has it been filled out completely and in ink?	<u>YES</u>	NO
Sample ID's on chain of custody agree with container labels?	<u>YES</u>	NO
Number of containers indicated on chain of custody agree with number received?	<u>YES</u>	NO
Analysis methods clearly specified?	<u>YES</u>	NO
Sampling date and time indicated?	<u>YES</u>	NO
Proper signatures of sampler, courier, sample custodian in appropriate place? with time and date? <u>YES</u>		
Turnaround time? REGULAR <u>✓</u> RUSH _____		

Any NO response and/or any "BROKEN" that was checked must be detailed in the Corrective Action Form.

Sample Custodian: NB

Date: 1/6/95

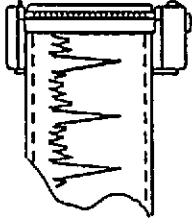
Project Manager: W

Date: 1/6/95



PROJECT NUMBER		PROJECT NAME				Number of Cntrns	Type of Containers	Type of Analysis										Condition of Samples	Initial
		German Aircraft						<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH9/BTEX</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Total Recd</div> </div>											
Tom Price		/	/	/	/														
Sample Number	Date	Time	Comp	Matrix	Station Location														
①	Trip Blank	1/6/95	—	W		3	VOAS	✓									one vial w/ bubbles	MB	
②	MW4	1/6/95	1230	W		3	VOAS	✓											
③	MW-1	1/6/95	1250	W		4	VOAS, POLY	✓	✓										
④	MW-2	1/6/95	1355	W		4	VOAS, POLY	✓	✓										
⑤	MW-3	1/4/95	1540	W		4	VOAS, POLY	✓	✓										
Sampled by: (Signature) Tom Price		Date/Time 1/6/95 17:05	Received by: (Signature)		Date/Time	Remarks: Normal Turn Around Time Send invoice ASAP (before report) *special pricing for this project*													
Relinquished by: (Signature)		Date/Time	Received by: (Signature)		Date/Time	COMPANY: Chemist Enterprises ADDRESS: 333-B Camino Verde Boulder Creek CA 95006 PHONE: (408) 335-0195 FAX: (408) 338-0008													
Relinquished by: (Signature)		Date/Time	Received by Lab:		Date/Time														
			P. ...		1/6/95 17:05														

**APPENDIX D: FIELD DATA SHEETS FOR MONITORING WELL SAMPLING**



Chemist Enterprises  
333-B Camino Verde  
Boulder Creek, California 95006  
ph. (408) 338-0198

Date: 1/6/95 Project Name: German Autocraft Technician: Tom Price

Project No.: \_\_\_\_\_ Boring/Well No/Description: MW-1

Depth of Boring/Well: 48.17

Depth From Surface Ft. to Ft.	Description Describe material, grain size, color, etc.

Depth to Water: 25.14 1 Well Volume: 3.75 gal 4 Well Volumes: 15.0 gallons  
Boring/Casing Diameter:  2"  4" Specify: \_\_\_\_\_ Actual Volume Purged: 16 gallons

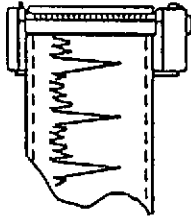
Calculations:  
2" - \* 0.1632 gal./ft.  
2-3/4" - \* 0.307 gal./ft.  
4" - \* 0.653 gal./ft.  
23.03 ft · 0.1632 gal/ft = 3.75

Purge/Sampling Method:  Bailer Specify: \_\_\_\_\_

Seen:  No  Yes, Describe 1/8" diameter, slight Odor:  No  Yes, Describe mild gasoline

Field Measurements:

Time	Volume	pH	Temp.	E.C.	Color
<u>11:55</u>	<u>4 gallons</u>	<u>6.22</u>	<u>56.3</u>	<u>0.64E3</u>	<u>gray</u>
<u>12:10</u>	<u>8 gal.</u>	<u>6.48</u>	<u>57.6</u>	<u>0.54E3</u>	<u>gray</u>
<u>12:22</u>	<u>12 gal.</u>	<u>6.54</u>	<u>57.9</u>	<u>0.52E3</u>	<u>gray</u>
<u>12:34</u>	<u>15 gal.</u>	<u>6.58</u>	<u>56.8</u>	<u>0.62E3</u>	<u>gray</u>
<u>12:39</u>	<u>R. charged to</u>	<u>to</u>	<u>25.30'</u>	<u>before</u>	<u>sampling</u>



Chemist Enterprises  
 333-B Camino Verde  
 Boulder Creek, California 95006  
 ph. (408) 338-0198

Date: 1/6/95 Project Name: German Autocr Technician: Tom Price  
 Project No.: \_\_\_\_\_ Boring Well No. 2 Description: MW-2  
 Depth of Boring/Well: 34.20

Depth From Surface Ft. to Ft.	Description Describe material, grain size, color, etc.

Depth to Water: 25.73 1 Well Volume: 1.38 4 Well Volumes: 5.5 gallons

Boring/Casing Diameter: 2" 4" Specify: \_\_\_\_\_ Actual Volume Purged: \_\_\_\_\_

Calculations:  
 2" - \* 0.1632 gal./ft.  
 2-3/4" - \* 0.307 gal./ft.  
 4" - \* 0.653 gal./ft.

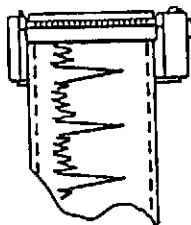
Purge/Sampling Method:  Bailer Specify: \_\_\_\_\_

Sheen:  No  Yes, Describe 1/16" diameter splashes Odor:  No  Yes, Describe moderate/strong gasoline

Field Measurements:

Time	Volume	pH	Temp.	E.C.	Color
<u>1332</u>	<u>2 gallons</u>	<u>6.36</u>	<u>56.0</u>	<u>0.90</u>	<u>gray</u>
<u>1343</u>	<u>4 gallons</u>	<u>6.15</u>	<u>58.8</u>	<u>0.92</u>	<u>gray</u>
<u>1354</u>	<u>6 gallons</u>	<u>6.1</u>	<u>58.2</u>	<u>0.96</u>	<u>gray</u>
<u>Recharged to 25.83 before sampling.</u>					





Chemist Enterprises  
 333-B Camino Verde  
 Boulder Creek, California 95006  
 ph. (408) 338-0198

Date: 1/6/95 Project Name: German Aircraft Technician: Tom Price  
 Project No.: \_\_\_\_\_ Boring/Well No./Description: MW-3  
 Depth of Boring/Well: 35.54

Depth From Surface Ft. to Ft.	Description Describe material, grain size, color, etc.

Depth to Water: 24.98 1 Well Volume: 1.7 4 Well Volumes: 6.8  
 Boring/Casing Diameter:  2"  4" Specify: \_\_\_\_\_ Actual Volume Purged: 7 gallons

Calculations:  
 2" - \* 0.1632 gal./ft.  
 2-3/4" - \* 0.307 gal./ft.  
 4" - \* 0.653 gal./ft.  
 $10.56 \times 0.1632 = 1.7 \times 4 = 6.8$

Purge/Sampling Method:  Bailer Specify: \_\_\_\_\_  
 Sheen:  No  Yes, Describe Very small spots <math>< 1/32''</math> Odor:  No  Yes, Describe mild gasoline

Field Measurements:

Time	Volume	pH	Temp.	E.C.	Color
<u>1509</u>	<u>3 gallons</u>	<u>6.4</u>	<u>50.7</u>	<u>0.81E3</u>	<u>gray</u>
<u>1521</u>	<u>6 gallons</u>	<u>6.3</u>	<u>53.5</u>	<u>0.73E3</u>	<u>gray</u>
<u>1533</u>	<u>7 gallons</u>	<u>6.3</u>	<u>55.0</u>	<u>0.76E3</u>	<u>gray</u>
<u>Recharged</u>	<u>to 25.18'</u>	<u>before</u>	<u>sampling.</u>		

**APPENDIX E: SURVEYOR'S CASING ELEVATION REPORT**

January 6, 1995  
Job No. 95501

**Monitoring Well Table of Elevations**

**German Autocraft Site  
301 East 14th Street  
San Leandro, CA**

<u>Well No.</u>	<u>Elevation</u>
MW-1	49.96 Top of Well cover 49.61 Cut X on top of threaded brass collar @ north side
MW-2	50.60 Top of well cover 50.14 Cut notch on top north edge of PVC casing
MW-3	49.92 Top of well cover 49.44 Cut notch on top north edge of PVC casing
Tank pit boring	46.62 Top of concrete at boring

**Benchmark:** City of Oakland Benchmark #1880: Cut square on the mid point of return at the northeast corner of Durant Avenue and East 14th Street on the nose of an island in front of the GM plant.

Elevation = 45.76 M.S.L.

## **APPENDIX F: REFERENCES**

- California Code of Regulations, Article 11, Title 23, "Corrective Action Requirements"
- California Regional Water Quality Control Board, Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites, 1990.
- Environmental Construction Company, "Report of Findings, Preliminary Soil and Groundwater Contamination Assessment; German Autocraft, 301 East 14th Street, San Leandro, California 94577" February, 1991.
- Environmental Construction Company, "Report of Findings, Underground Storage Tank Removals, German Autocraft, 301 East 14th Street, San Leandro, California 94577" November, 1990.
- J.S. Fay, Senior Editor, California Almanac, 5th Edition, 1991, from National Oceanographic and Atmospheric Agency, "Climatology of the United States, Average Annual Rainfall, 1951-1980, Oakland, California", Pacific Data Resources, p. 135.
- E.J. Helley and K.R. Lajoie (USGS), W.E. Spangle and M.L. Blair (William Spangle and Associates) USGS Professional Paper 943, "Flatland Deposits of the San Francisco Bay Region, their Geology and Engineering Properties and their Importance to Comprehensive Planning, 1979.
- State of California, Division of Drinking Water and Environmental Management, Department of Health Services "Summary, Maximum Contaminant and Action Levels" November, 1994.
- State of California, Leaking Underground Fuel Tank Task Force; Leaking Underground Fuel Tank Field Manual: Guidelines for Site Assessment, Cleanup and Underground Storage Tank Closure, October, 1989.

**APPENDIX G: STATEMENTS OF QUALIFICATIONS OF PROJECT PERSONNEL**

## **Thomas A. Sparrowe - Senior Geologist**

### **Experience Summary:**

Mr. Sparrowe has 10 years experience as a professional geologist working on a variety of projects including environmental, groundwater hydrology, geologic, and seismic hazard studies, and fault investigations.

### **Education:**

Graduate Program Student/Completed 30 units in Hydrogeology and Engineering Geology program at San Jose State University.

B.S., Geology, Humbolt State University

### **Registration:**

State of California: Registered Geologist, 5065

### **Certification:**

40 hours Safety Training, OSHA Hazardous Waste Operations and Emergency Response.

### **Environmental Project Experience:**

**Project Geologist:** Managed and conducted a groundwater monitoring program at an underground storage tank (UST) site for Sun Microsystems in Silicon Valley, California.

**Project Geologist:** Performed Phase I and Phase II site assessments for a Potential Responsible Party at a Superfund Site in Silicon Valley, California.

**Project Geologist:** Supervised drilling for a Department of Defense project on the Hunters Point Naval Shipyard in San Francisco. Supervised field exploration work, installed groundwater monitoring wells, collected samples for laboratory analyses, and provided detailed geologic and hydrogeologic data for the design of soil and groundwater remediation systems.

**Project Geologist:** Contaminant plume definition, design of well network programs for determining recovery well performance, investigating abandoned agricultural wells, evaluation of reports, oversight of groundwater treatment system, interpretation of geologic, hydrogeologic, and chemical data for the design of soil and groundwater treatment systems and the Middlefield-Ellis-Whisman Superfund site and former Fairchild Semiconductor Corporation facility, Silicon Valley, California.

**Project Geologist:** Conducted environmental investigations in North America and Europe that involved evaluation and remediation of soil and groundwater contamination. Projects included site characterization, preparation of site closure reports, and preparation of Phase I and Phase II Environmental Site Assessment studies, remedial investigations/feasibility studies, and risk assessments, remediation of VOCs, petroleum, and heavy metal contaminated soil and groundwater sites. Supervised field explorations, selected samples and determined appropriate analytical methods, and analyzed geologic and hydrogeologic data for the design of soil and groundwater treatment systems.

## Tom Price, Project Manager

### Experience Summary:

Tom has 5 years experience working as an environmental scientist and manager on a variety of environmental projects including soil and water investigations, soil and water remediation, and air pollution studies.

### Education:

B.S., Chemistry, University of Arizona, 1988.

### Certification:

40 hours Safety Training and 8 hour refresher courses per OSHA Hazardous Waste Operations and Emergency Response.

Visible Emissions Readings, California Air Resources Board

### Environmental Project Experience:

**Project Manager:** Managed a soils excavation project for a leaking underground storage tank (UST) site at Swim Pool Supply Company in San Jose. Activities included field work, writing investigative and corrective action work plans and reports.

**Project Manager:** Managed the installation of a groundwater monitoring well, development, and sampling of groundwater at a UST site, A. Dariano & Son, Inc. in San Jose. Activities included field work and writing a work plan and report.

**Project Manager:** Managed a groundwater monitoring program at an UST site, Advance Interiors in Fremont. Activities included field work, writing a work plan and report.

**Project Manager:** Managed a soil and water investigation at a UST site, Honda Suzuki of San Mateo. Activities included writing a work plan, report, and conducting hand augering, soil sampling, and groundwater sampling.

**Field Chemist:** On-site analyses of soil gases at approximately 10 leaking UST sites involving chlorinated solvents and fuels around Silicon Valley, California. Analyses were performed using gas chromatographs equipped with flame ionization, photo ionization, and electron capture detectors.

**Field Chemist:** On-site analyses of soil gases at approximately 20 leaking UST sites including Beacon Oil Stations throughout northern California. Analyses were performed with a simple flame ionization detector.

**Sampling Technician:** Collection of soil and water samples for UST leak sites. Activities include directing the collection of soil and water samples using percussion sampling and augering. Experience includes water sampling using micro-bailers for plume definition mapping.

**Air Quality Technician:** Air Quality Compliance testing for UST remediation sites. Activities include air flow rate measurements, collection of samples, analyses, calculation of emission rates and reporting to the Bay Area Air Quality Management District.

**Air Quality Technician:** Stack sampling technician at major industrial plants from San Diego to Portland, Oregon. Activities include flow rate measurements, sampling train management, wet chemistry analyses, and report writing.