

SOIL AND GROUND WATER
TESTING REPORT
FOR
"ABC MUSTANG" SITE
STID #4394
15960 EAST 14TH STREET
SAN LEANDRO, CALIFORNIA

Geology / Engineering Geology / Environmental Studies

HOEXTER CONSULTING, INC.

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April 27, 1993
E-19-2-064
HCRpts:ABCMust./Rpt.

Mr. James Stokley
Stokley Construction
P.O. Box 1008
Tracy, California 95378-1008

Lorraine M. Berg
Barbara J. Paxton
5079 Seaview Drive
Castro Valley, California 94546

RE: SOIL AND GROUND WATER
TESTING
"ABC MUSTANG" SITE
STID #4394
15960 EAST 14TH STREET
SAN LEANDRO, CALIFORNIA

Ladies and Gentlemen:

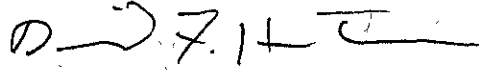
Enclosed is our soil and ground water testing report for the property located at 15960 East 14th Street, in San Leandro, California. The report contains a description of our investigation, results of soil and ground water sample analyses, and our conclusions and recommendations regarding site environmental quality. The general scope of investigation was presented in our proposal dated September 13, 1992, approved by Mr. Stokley on December 17, 1992.

Stokley Construction; E-19-2-064; April 27, 1993

We appreciate the opportunity to provide services to you on this project and trust this report meets your needs at this time. If you have any questions, or require additional information, please do not hesitate to call.

Very truly yours,

HOEXTER CONSULTING, INC.

A handwritten signature in black ink, appearing to read 'D. F. Hoexter', with a stylized flourish at the end.

David F. Hoexter, RG/CEG/REA
Principal

SOIL AND GROUND WATER
TESTING REPORT

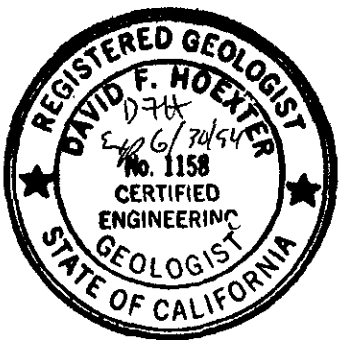
For

"ABC Mustang" Site
STID #4394
15960 East 14th Street
San Leandro, California

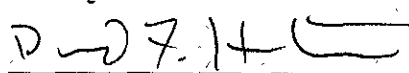
To

Mr. James Stokley
Stokley Construction
P.O. Box 1008
Tracy, California 95378-1008

Lorraine M. Berg
Barbara J. Paxton
5079 Seaview Drive
Castro Valley, California 94546



April 27, 1993



David F. Hoexter, RG/CEG/REA
Principal

EXECUTIVE SUMMARY

Stokley Construction, representing the property owners, requested Hoexter Consulting to perform this soil and ground water testing program as part of their compliance with Alameda County's requirement for site investigation following removal of underground storage tanks at the site. Previously obtained data were evaluated, a site and vicinity reconnaissance was conducted, a detailed work plan prepared, and one ground water monitoring well was installed, developed, and sampled.

Results of the sampling program indicate that low residual levels of gasoline contamination are present in soils at the location of the monitoring well. Benzene and toluene are not present. Gasoline was detected in the monitoring well ground water sample at a concentration of 0.081 part per million (ppm), with no detection of purgeable aromatic compounds (benzene, toluene, xylenes, and ethylbenzene).

In our opinion, the relatively low detected level of gasoline in the soil and ground water samples is most likely representative of ground water at the site, although it is possible that "hot spots" of higher levels exist. It is unlikely, in our opinion, that the site would significantly impact ground water resources in the general site vicinity, particularly due to the absence of benzene and toluene in both soil and ground water samples.

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SOIL AND GROUND WATER
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FOR
"ABC MUSTANG" SITE
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15960 EAST 14TH STREET
SAN LEANDRO, CALIFORNIA

I. INTRODUCTION

This report presents the results of an investigation of soil and ground water quality at the "ABC Mustang" site, located at 15960 East 14th Street, on the northeast side between 159th and 160th Avenues, in San Leandro, California. The project location is shown on the Site Location Map, Figure 1.

This investigation has been conducted in response to requirements for subsurface investigation, specifically a County of Alameda Department of Environmental Health letter to Lorraine M. Berg and Barbara J. Paxton, dated December 17, 1992. The purpose of this investigation has been to collect soil and ground water samples to evaluate the on-site soil and ground water quality.

The scope of services generally provided during this investigation consisted of collecting and analyzing soil and ground water samples from one on-site exploratory boring and from a monitoring well completed at the location of the exploratory boring. The soil and ground water samples were analyzed for total petroleum hydrocarbons as gasoline and for purgeable aromatic compounds (BTEX). Sampling locations and site layout are shown on Figure 2, Site Plan.

Note that additional material presented in our February 14, 1993 work plan, such as waste manifests, is not included in this report. Please refer to the work plan for this information.

II. BACKGROUND

A. Site Ownership and Description

The site is currently utilized for automotive restoration, and is operated under the name of Tom and Sons Body Shop, operated by Tom Cheveres, Sr. Tom and Sons leases the property from the owners. It is our understanding that the current lessee (Mr. Cheveres) has only been engaged in automotive restoration, and has not dispensed gasoline from the site. Property owners are Lorraine Berg and Barbara J. Paxton, 5079 Seaview Avenue, Castro Valley, California 94546, telephone (510) 538-1044. The contractor engaged to excavate the tanks was Stokley Construction, represented by Mr. James T. Stokley, P.O. Box 1008, Tracy, California 95378, telephone (209) 832-5012.

The property currently consists of the service building, in which Tom & Sons Body Shop is located; an asphalt-paved parking lot, where the former fuel tanks were located, and a large, fenced open lot at the rear of the property. The front part of the site, as shown on Figure 2, is on the order of 90 by 100 feet in plan dimensions. The property is bordered by East 14th Street and small commercial buildings on the southwest, by small commercial buildings on the northwest and southeast, and by a residential area to the northeast.

B. Site History

The site is currently occupied by an auto collision repair facility, Tom and Sons Body and Fender. An automotive parts shop, ABC Mustang, previously occupied part of the site, fronting on East 14th Street. The ABC building is currently vacant. Previous businesses at the site included ABC Auto Wreckers, which was located at the rear of the property in the now-vacant lot.

Two underground fuel tanks were removed by Stokley Construction in March, 1992. Holes were observed in the tanks at the time of their removal, and gasoline was detected in native soils beneath the former tanks and in ground water which subsequently collected within the tank pit. An underground storage tank (UST) Unauthorized Release (Leak) Report was filed on March 31, 1992. Initially, in informal discussions, and subsequently in a letter dated December 17, 1992, Alameda County Department of Environmental Health requested that a Preliminary Site Assessment (PSA) be conducted.

The two - 250 gallon steel tanks were installed on the site in the late 1940's. These two tanks were used until the mid 1950's. They reportedly were not used since that time. The tanks were used to store leaded gasoline. The precise origin of the tanks is unknown. Upon removal, they were tentatively identified as pressure vessels, although they were subsequently identified to Mr. Stokley as World War II-era buoys. The tanks were constructed of steel. The tanks were planned for removal because the property is being offered for sale. Due to the length of time since they were last used, they had not been tested for tightness. To our knowledge, there are currently no operating or additional abandoned underground tanks on the property.

There are no known estimates of quantity of fuel lost.

C. Site Closure

The following discussion is based primarily on site inspection notes recorded by Mr. Scott Seery, of the Alameda County Department of Environmental Health, and on discussions with Mr. James (Tex) Stokley, the contractor responsible for removal of the tanks. Applicable documents are presented in the work plan prepared for this investigation, dated February 14, 1993. Site closure was initiated on March 31, 1992. Closure was conducted by Stokley Construction, of Tracy, California, under permit to Alameda County, Department of Environmental Health. Mr. Scott Seery of the Alameda County Department of Environmental Health and Mr. Ed Ladani of the ECFD (fire department) witnessed the tank excavation.

Prior to inerting, the tanks were triple-rinsed with high pressure water and a non-halogenated cleaner. The rinsate was contained and manifested, and transported by Falcon Energy/Evergreen Environmental Services of Ripon, California, for disposal at the Kiesel Company in St. Louis, Missouri. Holes were observed in each of the tanks. The inerted tanks were transported under manifest, and disposed of by Erickson, Inc. of Richmond, California. Soil in the excavation appeared stained, and a soil sample was obtained from below each tank.

On April 14, 1992, Stokley Construction overexcavated the UST pit to dimensions of approximately 16 by 17 by 8 to 9 feet deep. Water was noted in the pit at a depth of approximately 8.5 feet. Only a slight, if any, odor was noted. The four side walls were sampled, at a depth of approximately 7 to 8 feet below the ground surface. When the pit bottom was sampled, a strong gasoline odor was noted, and the excavation was deepened to approximately 10.5 feet. Ground water appeared to well upward into the pit at that time. A sample of water was thus obtained.

Figure 2 indicates the locations of pertinent site features, including the existing buildings and former UST locations. The tank excavation is also indicated.

The initial tank excavation was approximately 10 by 10 by 8 feet deep. The excavation was subsequently extended to include a volume of approximately 16 by 17 by approximately 10.5 feet deep. Water was first observed in the excavation at a depth of 8.5 feet, during an initial phase of over-excavation. When the excavation was deepened to its ultimate depth of 10.5 feet, water was observed entering the excavation at an increased rate.

According to Mr. Seery's field notes, the native soil in the excavation, where unstained by petroleum hydrocarbons, was light tan in color. This material extended to 8-8.5 feet below the ground surface. Underlying this light tan material was a dark brown, organic silty clay. Additional light tan soil was encountered at the total depth excavated, 10.5 feet.

Confirmation samples were obtained by Stokley Construction by driving brass tubes into a representative mass of soil. The sampler was driven into a large sample of soil obtained with the backhoe bucket. Samples were sealed with foil and tape, retained in an iced cooler, and transported under chain of custody protocol to the analytical laboratory.

The excavation and soil/ground water sampling results are presented in our February 14, 1993 work plan. Analyses were conducted by Trace Analysis Laboratory, Inc., of Hayward, California. Trace Analysis Laboratory is California EPA/DHS certified to conduct the requested analyses. One thousand, one hundred (1,100) parts per million (ppm) total petroleum hydrocarbons as gasoline (TPH-G) were detected in the initial, south confirmation sample, from under the south tank. The purgeable aromatic compounds benzene, toluene, ethylbenzene, and xylenes (BTEX) were also detected. TPH-G was detected in the northern sample at a concentration of 5.8 ppm. Subsequent confirmation testing, following additional excavation, did not detect TPH-G in four samples, from a depth of approximately 7 to 8 feet. Very low levels of ethylbenzene and xylenes were detected in two of the four samples. A soil sample was not obtained from the excavation bottom, although it had been deepened due to the observation of petroleum hydrocarbon odors in the bottom soils, as this sample would have been obtained from below the water table. A grab sample of ground water was obtained from the open excavation on April 14, 1992. TPH-G was detected at a concentration of 10 ppm.

Contaminated ground water was not produced during the excavation. Contaminated soil was stored on site. Approximately 126 yards of soil were produced. The soil was aerated on site, and sampled on July 24 and August 14, 1992. The test results are included in the February 14, 1993 work plan. The soil was then shipped to the BFI Vasco site, as described above.

The excavation has been backfilled with clean, imported soils.

D. Investigations Within Site Vicinity

There are two reported hazardous materials releases within the near-site vicinity (Figure 1).

A release of petroleum fuels reportedly has occurred at 16035A East 14th Street (corner of Ashland), at the United Auto Center/Quality Used Cars and Trucks site. According to Mr. Scott Seery, a subsurface investigation has not to date been conducted at this site.

Investigations of a fuel release at the Unocal station, 15803 East 14th Street at 159th Avenue, have been conducted by Kaprealian Engineering, Inc. According to Mr. Seery,

ground water at this site flows to the northwest, at a gradient of 0.002 ft/ft. Depth to ground water was on the order of 10 to 11-1/2 feet in July, 1992.

A study of ground water flow in the general site vicinity has recently been conducted by Woodward Clyde Consultants (WCC). According to Mr. Seery, ground water was found by WCC to flow in a west to southwest direction. This direction is partially cross-gradient to the local flow observed at the Unocal site.

III. SCOPE OF SERVICES

The work performed during this investigation consisted of the following tasks:

1. A brief site reconnaissance during the proposal phase of the project.
2. Discussions with the property owners and contractor, and with Mr. Scott Seery, Senior Hazardous Materials Specialist, Alameda County Department of Environmental Health, UST Local Oversight Program.
3. Preparation of a work plan, dated February 14, 1993, for review and approval by Alameda County. The work plan was approved by letter dated February 26, 1993.
4. Drilling of one boring with a truck-mounted auger rig, to a maximum drilled depth of 25.0 feet and sampled depth of 26.5 feet, for soil and ground water sample collection. Installation of one ground water monitoring well. Water samples were obtained by using a teflon bailer in the developed and purged monitoring well.
5. Analysis of soil and ground water samples by a contract analytical laboratory.
6. Evaluation of the data and preparation of this report.

IV. TOPOGRAPHIC AND GEOLOGIC SETTING

A. Topographic and Cultural Setting

The ABC Mustang property is situated at an elevation of approximately 33 feet MSL (Figure 3). The site is located on the East Bay Plain, a gently westward sloping feature underlain by a sequence of alluvial deposits with a maximum thickness of 1,100 feet. Ground water underlying the East Bay Plain flows westward from recharge areas along the eastern fringe of the plain, and locally from the central portion, towards San Francisco Bay (Alameda County Flood Control and Water Conservation District, 1988). The ground surface slopes gently to the west southwest, at an average gradient of one to 250 (vertical to horizontal).

The nearest perennial stream is San Lorenzo Creek, approximately 5,000 feet south of the site. Estudillo Creek, which is situated in a box culvert, is located approximately 800 feet to the west. Another drainage channel, which is open, is located approximately 450 feet to the south. It is possible that additional, buried, stream channels are located between these two drainages.

The immediate site vicinity is not an area of active ground water recharge.

A survey of water supply and monitoring wells was not conducted for this study. Domestic water supplies in the site vicinity are composed of regional surface sources which would not be impacted by the ground water quality. It is possible that individual owners in the site vicinity have constructed shallow low-production wells for yard irrigation purposes, or that older irrigation wells, most likely no longer in use, exist in the site vicinity.

Underground utilities were located by members of Underground Service Alert (USA) prior to removal of the tanks. They were again located prior to initiation of the field investigation. Approximate utility locations are shown on Figure 2.

B. Regional Geology

The subject property is situated upon deposits of recent alluvium (Dibblee, 1980). According to Alameda County Flood Control and Water Conservation District (1988), the younger (recent) alluvium is generally from 10 to 50 feet thick, and is mostly unsaturated, with localized perched ground water zones. It thus yields little to wells, and is not a ground water source except locally for generally non-potable domestic use. Ground water in the deeper aquifer of the East Bay Plain is confined, due to the deposition of clay and other fine-grained material over beds of relatively coarse, water-bearing sand and gravel.

V. FIELD INVESTIGATION

A. Well Location and Rationale

One monitoring well was proposed for installation (Figure 2). At the request of Mr. Scott Seery, the well was placed as close to the former tank excavation as possible, but outside of the tank excavation. The well was located in the approximate regional down gradient ground water flow direction. This direction was based on data from the nearby Unocal site, although it is at an approximately 45 degree variance from the direction reportedly delineated in the Woodward Clyde study. A monitoring well located to the southwest would have been located within the sidewalk or traffic lanes of East 14th Street. This location would not be practical from a safety viewpoint. In our opinion the well location provides a reasonably representative ground water sample.

B. Drilling and Soil Sampling

The field investigation was initiated on March 15, 1993, and concluded on the same day. The driller holds a valid C-57 contractor's license. The investigation consisted of drilling a total of one soil boring at the approximate location shown on Figure 2, and the completion of the boring as a monitoring well, under permit to Alameda County Flood Control and Water Conservation District, Zone 7. The boring was drilled to a depth of 25.0 feet, and the sampler was driven an additional 1.5 feet. The boring was drilled with a Mobile Model B-61 drill rig, equipped with 8-inch diameter hollow stem augers. Soils encountered during drilling were classified in the field by our geologist by visual examination, in accordance with the Unified Soil Classification System. A log of the borings is presented in Appendix A.

Soil samples were collected with a two-inch diameter Modified California type split spoon sampler at approximately three-foot intervals, from five to seventeen feet, and five-foot intervals, from 17 feet to the total depth drilled, 25 feet. The samples were retained in stainless steel tubes. The sampler was driven with a standard 140-pound hammer falling 30 inches. The number of blows required to drive the sampler the final 12 inches of an 18-

inch drive, or the actual distance driven if less than 18 inches, is recorded as the penetration resistance (blows/foot) on the boring logs. The samples were examined for logging, sealed with teflon tape and teflon lids, secured with "duct tape", labeled and immediately placed in refrigerated storage. A chain-of-custody form was initiated in the field and accompanied the samples to the analytical laboratory.

The augers were steam-cleaned prior to drilling, and the sampler was thoroughly cleaned with tri-sodium phosphate (TSP) between samples, to reduce the potential for cross-contamination.

C. Well Construction Details

Details of the well installation are included along with the boring log in Appendix A. Well construction commenced immediately following the drilling and sampling of the boring. The well was completed to approximately 25 feet below the ground surface using 15 feet of 0.02 inch slotted Schedule 40 PVC well screen packed with 2/12 washed Monterey Lapis Lustré sand filter material. The well seal was completed by adding 12-inches of 3/3-inch, hydrated bentonite pellets to the top of the filter pack, and then filling the remaining annular space with a Portland cement grout mixture. The well was completed at the ground surface with a locking cap and traffic-rated water-tight box, standing slightly above grade.

D. Well Development

Well development was performed on March 17, 1993 by vigorous bailing with a teflon bailer. A total of approximately 45 gallons (approximately 17 well volumes) of water was removed from the well. Development water was contained in an appropriately labeled, 55-gallon drum.

E. Well Sampling

The well was sampled on March 19, 1993 by a representative of Sequoia Analytical Laboratory, assisted by David F. Hoexter of Hoexter Consulting. An initial sounding with the bailer for floating product was conducted. Neither floating product nor a hydrocarbon sheen were observed. Four casing volumes of water were then purged from the well with a teflon bailer prior to sampling. Temperature, pH and conductivity were monitored after each well volume was purged. Ground water samples were collected from the well with the teflon bailer immediately following the purging. The samples were decanted into laboratory-supplied containers, labelled and placed in refrigerated storage immediately after sampling.

The samples were delivered under chain of custody control to the laboratory on the day of sampling. Purge water collected during the well sampling was contained in appropriately labeled containers, and transported to the laboratory for appropriate disposal. Well purge and sampling logs are attached to this report as a part of Appendix C.

The well development and sampling equipment were cleaned with a TSP solution, and rinsed with water, and then purified water. Ground water sample bottles were supplied by the analytical laboratory.

F. Surveying

The well was not surveyed, as site-specific ground water flow data cannot be generated from one well.

G. Subsurface Conditions

The ground surface at the site was generally covered with approximately one to two inches of asphalt. Base rock was not observed at the location of monitoring well MW-1. The asphalt was underlain by ten feet of generally plastic silty clay with interbedded clayey silt. Clayey silt was encountered from a depth of approximately 11 feet, to the total depth explored, 26.5 feet. This stratum included lenses of silty clay and fine-grained silty sand, as well as lenses of sand and gravel.

Ground water was initially encountered at a depth of 13 feet. Following completion of the drilling, water was observed at a depth of approximately 12 feet. The well was therefore completed with slotted casing from 10 to 25 feet, to allow for both the relatively shallow depth to water, and anticipated drop in water level during future, relatively dry periods. The logical completion at a higher level was not employed, in order to reduce the potential for outward flow into the former tank excavation from the shallower depths of the well, if an up-ward gradient were to develop.

Following well development, and allowing two days for the water level to stabilize, the ground water level was measured at 7.2 feet below the top of casing, approximately 7.5 feet below the ground surface. Thus, ground water at the site appears to be present under piezometric conditions, with a slight upward gradient under semi-confined conditions.

Please note that although ground water levels apparently reached near-equilibrium levels, ground water levels may vary within the season and from year to year. Although ground water flow parameters were not determined, on a qualitative basis flow to the well during development was relatively rapid. Thus, it can be inferred that representative water samples were obtained.

Odors were observed in soil samples, at depths of from 8 to approximately 13 feet.

The attached boring logs and related information (Appendix A) depict location-specific subsurface conditions encountered during our field investigation. The approximate location of the monitoring well was determined by taping and should be considered accurate only to the degree implied by the method used. The passage of time could result in changes in the surface or subsurface conditions due to natural occurrences or human intervention.

VI. ANALYTICAL RESULTS

A. Laboratory Procedures

The soil and ground water samples were analyzed by Sequoia Analytical of Redwood City, California. Sequoia Analytical is certified by the California Environmental Protection Agency / Department of Health Services for the analyses conducted for this investigation. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) using EPA Method 5030/8015 GCFID; and for the purgeable aromatic compounds benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8020.

The laboratory detection limits are provided in Tables 1 and 2.

B. Analytical Results

1. Soil Sample

Soil samples were obtained from the exploratory boring in three and five-foot sample intervals. Three samples, from 6.0 to 6.5 feet, 9.0 to 9.5 feet, and 12.0 to 12.5 feet, were evaluated for possible analytical analysis. The sample from 9.0 feet was deemed the most

representative, as an odor was observed at the time of drilling at this depth, and the sample appeared to be from the capillary fringe zone above the water table. Following well development, it became evident that this sample was obtained from the zone of first water, and as noted above, is from below the current, stabilized water table. The 6.0-6.5 foot sample did not exhibit an odor.

Results of the soil sample analysis are presented on Table 1, and the laboratory reports are attached to this report as Appendix B. The soil sample analysis identified gasoline, at a concentration of 59 mg/kg (ppm). Ethylbenzene and total xylenes were detected at respective concentrations of 0.12 and 0.26 ppm. Benzene and toluene were not detected. The laboratory report indicates the presence of "non-gas mix" in the range greater than C-6. According to the lab representative, this chromatograph signature often denotes the presence of a component of diesel in the sample.

2. Ground Water Sample

One sample of ground water was analyzed from monitoring well MW-1. Results of the ground water analyses are presented on Table 2 and the laboratory reports are attached to this report as Appendix C. Table 2 also includes appropriate published maximum contaminant level (MCL) or drinking water standard information.

As indicated in Table 2, 81 ug/l (ppb) of gasoline were detected by the laboratory. Purgeable aromatic compounds were not detected.

VII. DISCUSSION

The purpose of this investigation was to obtain representative soil and ground water samples, and to analyze these samples for the compounds most likely to be introduced to the site from nearby or on-site sources. Soil and ground water samples have been obtained from one monitoring well. The monitoring well was placed in a representative location to obtain both soil and ground water samples.

A. Soil

The soil sample analyses indicate generally low levels of petroleum hydrocarbons. The sample represents an area immediately adjacent to the tank excavation, and thus indicates that the excavation following tank removal did not successfully remove all contaminated soil. The sample was obtained from below the current water table. Based on visual and olfactory observations, the detected concentration of 59 ppm appears to be the highest level present in well MW-1. The lack of benzene and toluene suggests that the gasoline has degraded.

B. Ground Water

There are no indications of floating product within the site. The ground water monitoring well sample contained 81 ug/l (ppb) gasoline, with no detected purgeable aromatic (BTEX) compounds. The well was located to be representative of ground water at the site. The lack of purgeable aromatic compounds suggests that the gasoline has degraded.

VIII. CONCLUSIONS

The information collected to date indicates very low levels of residual soil contamination by degraded gasoline. In our opinion, these residual levels of contamination are unlikely to

significantly impact the environment or public health at the site. Please note, however, that future excavations could encounter areas of additional, relatively low levels of petroleum hydrocarbons in the site soils.

Similarly, relatively low levels of degraded petroleum hydrocarbons as gasoline are present in the representative ground water sample obtained from the site. Benzene and other purgeable aromatic compounds are not present. In our opinion, due to the minimal (if any) utilization of shallow ground water in the site vicinity, and distance of the site from recharge zones, it is unlikely that the relatively low level of petroleum hydrocarbons at the site would significantly impact ground water resources in the site vicinity.

IX. RECOMMENDATIONS

In our opinion, potential sources of ground water contamination at the site have been adequately removed. Based on the relatively low detected levels of residual soil and ground water contamination, it is our opinion that further investigation and ground water remediation are not warranted. Therefore, it is our recommendation that the existing monitoring well be monitored on a quarterly basis for at least the next four quarters.

X. LIMITATIONS

This report has been prepared according to generally accepted geologic and environmental practices. No other warranty, either expressed or implied as to the methods, results, conclusions or professional advice provided is made. It should be recognized that certain limitations are inherent in the evaluation of subsurface conditions, and that certain conditions may not be detected during an investigation of this type. If you wish to reduce the level of uncertainty associated with this study, we should be contacted for additional consultation.

The analysis, conclusions and recommendations contained in this report are based on site conditions as they existed at the time of our investigation; review of previous reports relevant to the site conditions; and laboratory results from an outside analytical laboratory. Changes in the information or data gained from any of these sources could result in changes in our conclusions or recommendations. If such changes do occur, we should be advised so that we can review our report in light of those changes.

REFERENCES

Alameda County Flood Control and Water Conservation District, June, 1988, "Geohydrology and Ground Water Quality Overview of the East Bay Plain Area, Alameda County, California", 205 (j) report prepared under contract to the California Regional Water Quality Control Board, San Francisco Bay Region.

Dibblee, T.W, Jr, 1980, "Preliminary Geologic Map of the Hayward Quadrangle, Alameda and Contra Costa Counties, California", USGS OFR 80-540, Scale 1:24,000.

Unites States Geological Survey, Hayward, 1959 revised 1980 and San Leandro, 1959 revised 1980 Quadrangle 7.5' Topographic Maps, Scale 1:24,000.

TABLE 1

SUMMARY OF ANALYTICAL TEST RESULTS - SOIL
(Results reported in parts per million, mg/kg)

<u>Constituent/Method</u>	<u>MW-1 (9.0')</u>	<u>Detection Limit</u>
<u>EPA-5030/8015</u> TPH Gasoline	59	1.0
<u>EPA-8020</u> Benzene	ND (1)	0.005
Toluene	ND	0.005
Ethylbenzene	0.12	0.005
Xylenes	0.26	0.005

Notes:

(1) ND - non-detect

TABLE 2

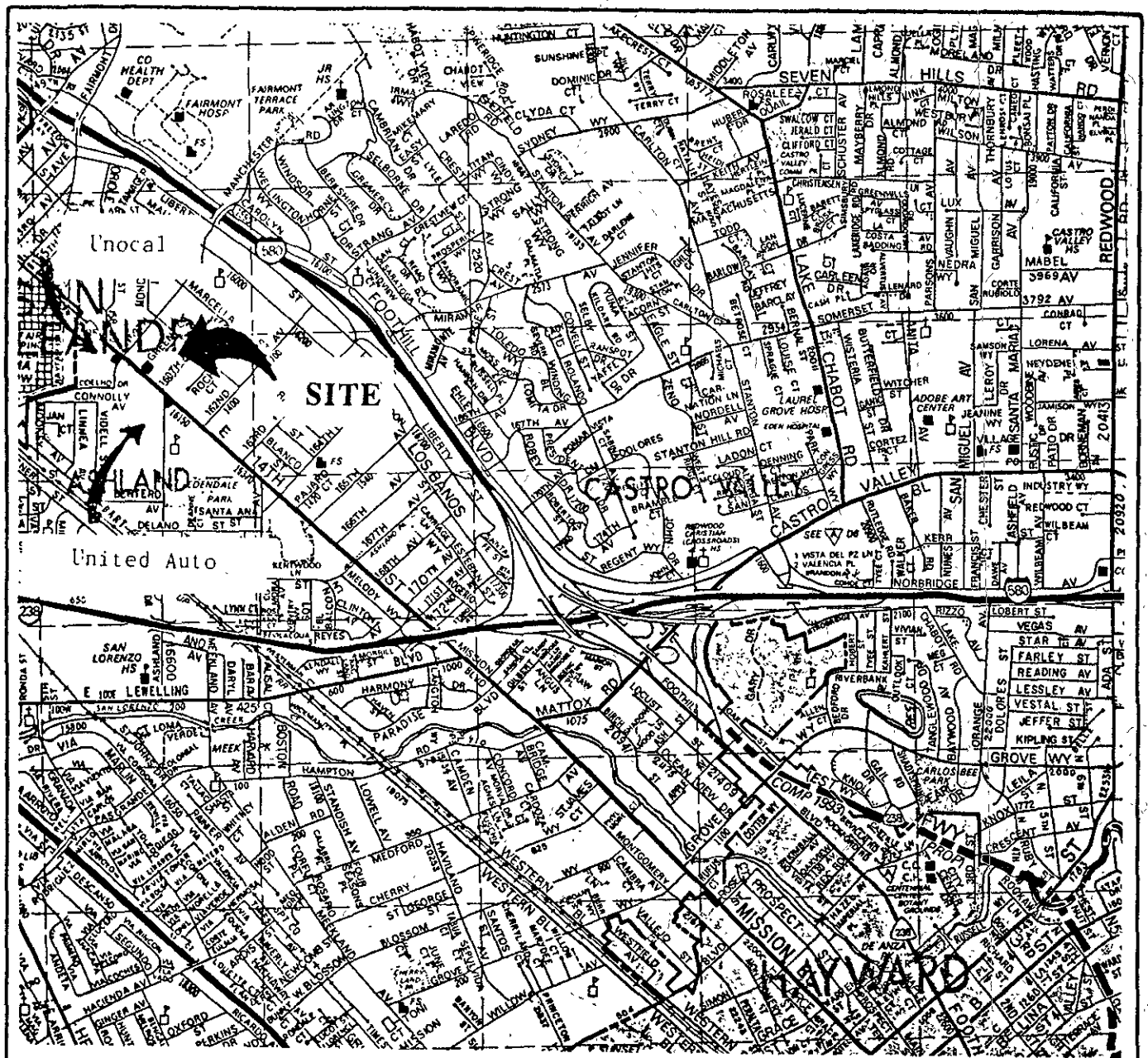
SUMMARY OF ANALYTICAL TEST RESULTS - WATER
 (Results reported in parts per billion, ug/L)(1)

<u>Constituent and Method</u>	<u>MCL (3)</u>	<u>Detection Limits</u>	<u>MW-1</u>
<u>EPA-5030/8015</u> TPH-G	-	50	81
<u>EPA-8020 (602)</u> Benzene	1.0	0.50	ND
Toluene	1,000	0.50	ND
Ethylbenzene	680/700 (2)	0.50	ND
Xylenes	1750/10,000 (2)	0.50	ND

Notes:

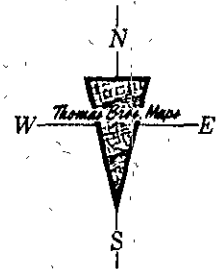
- (1) ND - non-detect
- (2) Second value effective July, 1992
- (3) MCL - maximum contaminant level

FIGURES



ALAMEDA COUNTY

1991 *Thomas Guide*

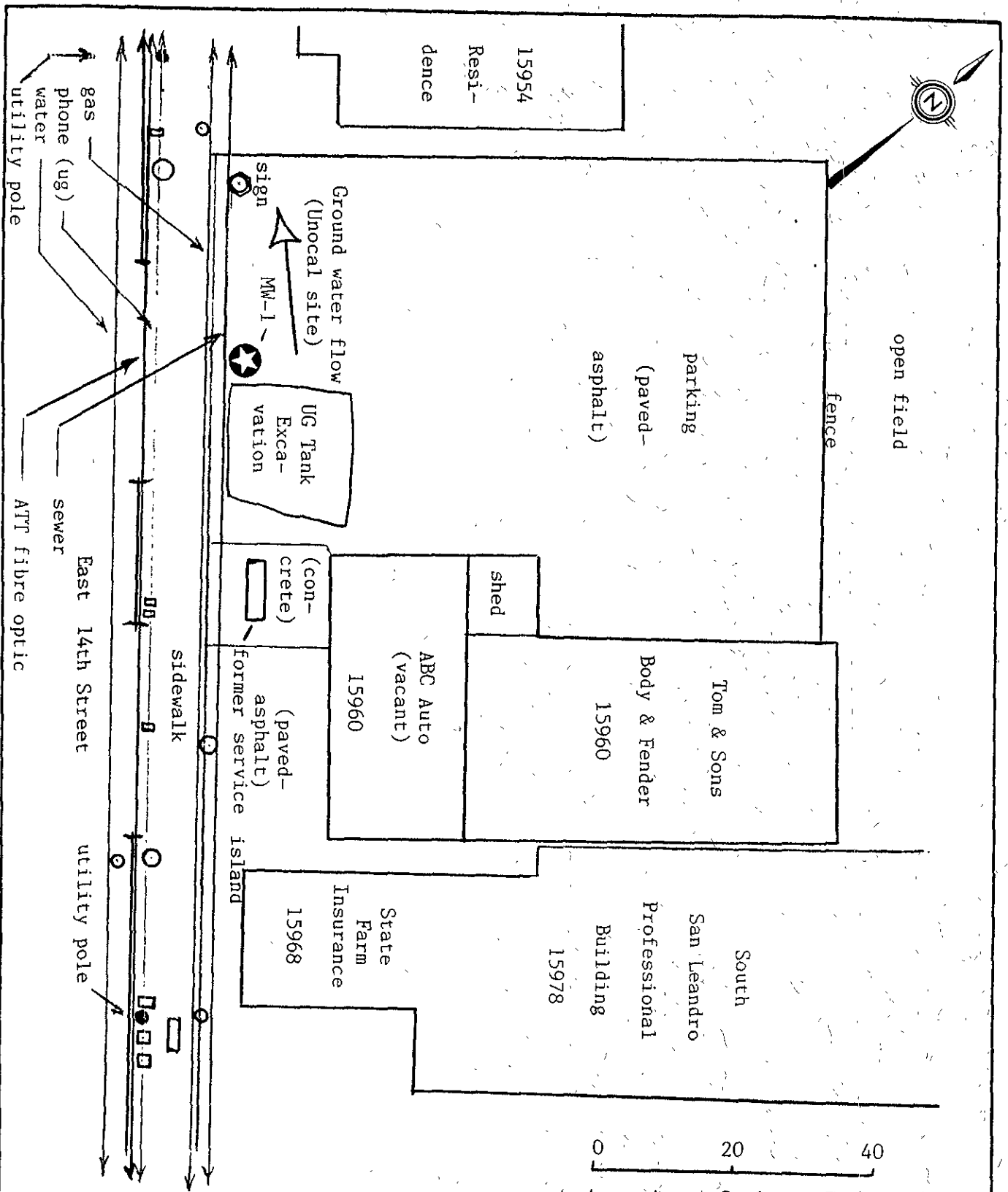


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 Geology
 Engineering Geology
 Environmental Studies

LOCATION MAP


15960 EAST 14 TH STREET
 SAN LEANDRO, CALIFORNIA

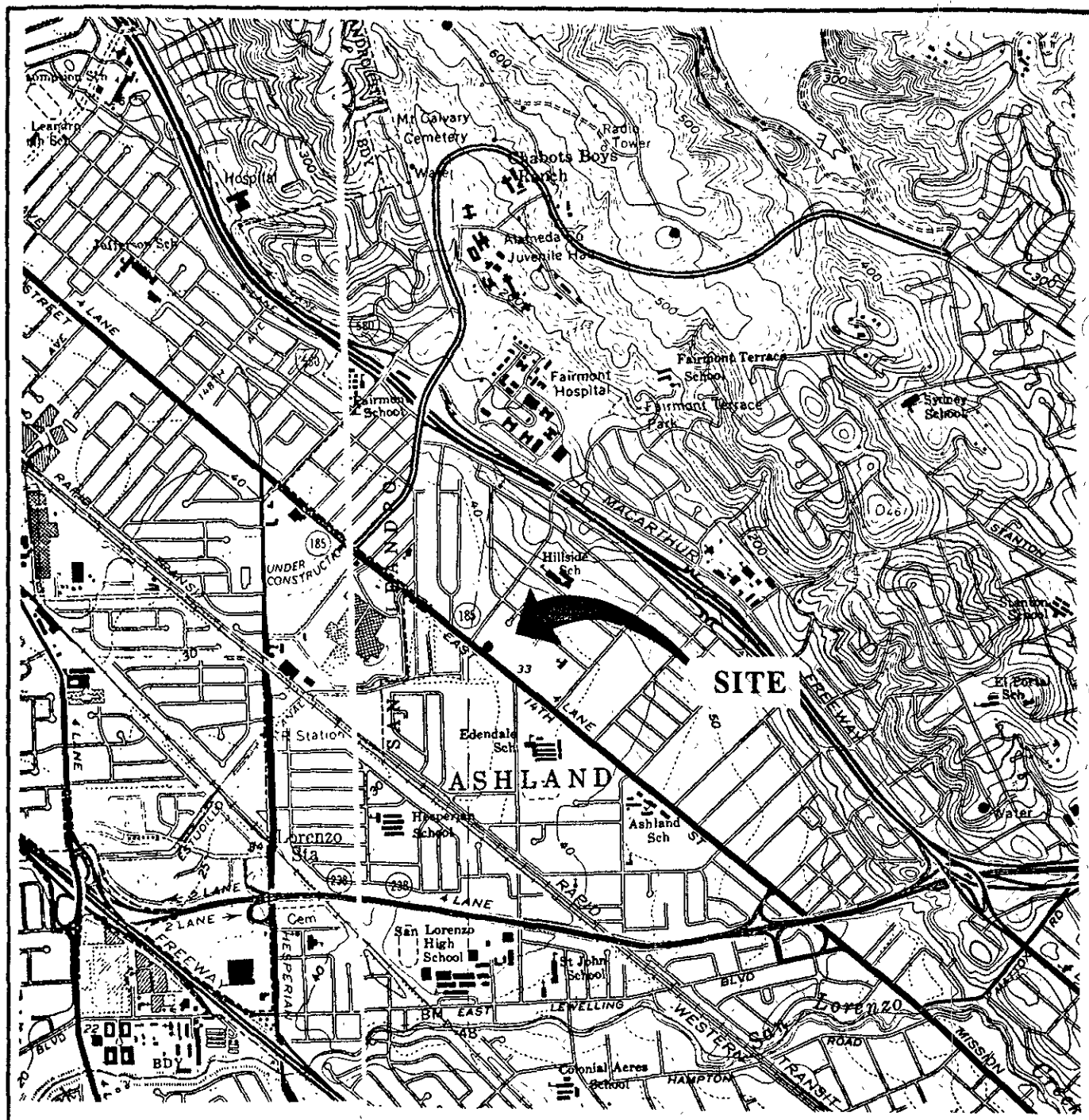
PROJECT NO.	DATE	Figure 1
E-19-2-064	April, 1993	



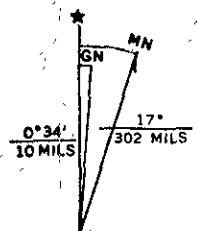
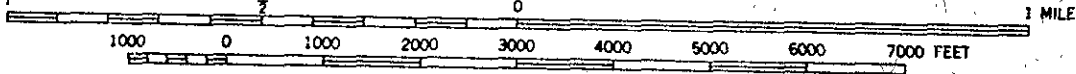
Base: Tape survey, D.F. Hoexter, 9/9/93

Approximate Scale in Feet

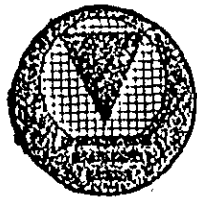
 <p>HOEXTER CONSULTING Geology Engineering Geology Environmental Studies</p>	SITE PLAN		
	15960 EAST 14 TH STREET SAN LEANDRO, CALIFORNIA		
	PROJECT NO.	DATE	Figure 2
	E-19-2-064	April, 1993	



SCALE 1:24 000



Base: USGS Hayward and San Leandro 7.5' Quadrangles, 1959 rev. 1980



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TOPOGRAPHIC MAP

15960 EAST 14 TH STREET
 SAN LEANDRO, CALIFORNIA

PROJECT NO. E-19-2-064	DATE April, 1993.	Figure 3
----------------------------------	-----------------------------	-----------------

APPENDIX A
EXPLORATORY BORING LOGS
AND EXPLANATION

PROJECT : ABC Mustang: 15960 E. 14th St, San Leandro, California

BORING NO: Explanation

DATE DRILLED/LOGGED BY

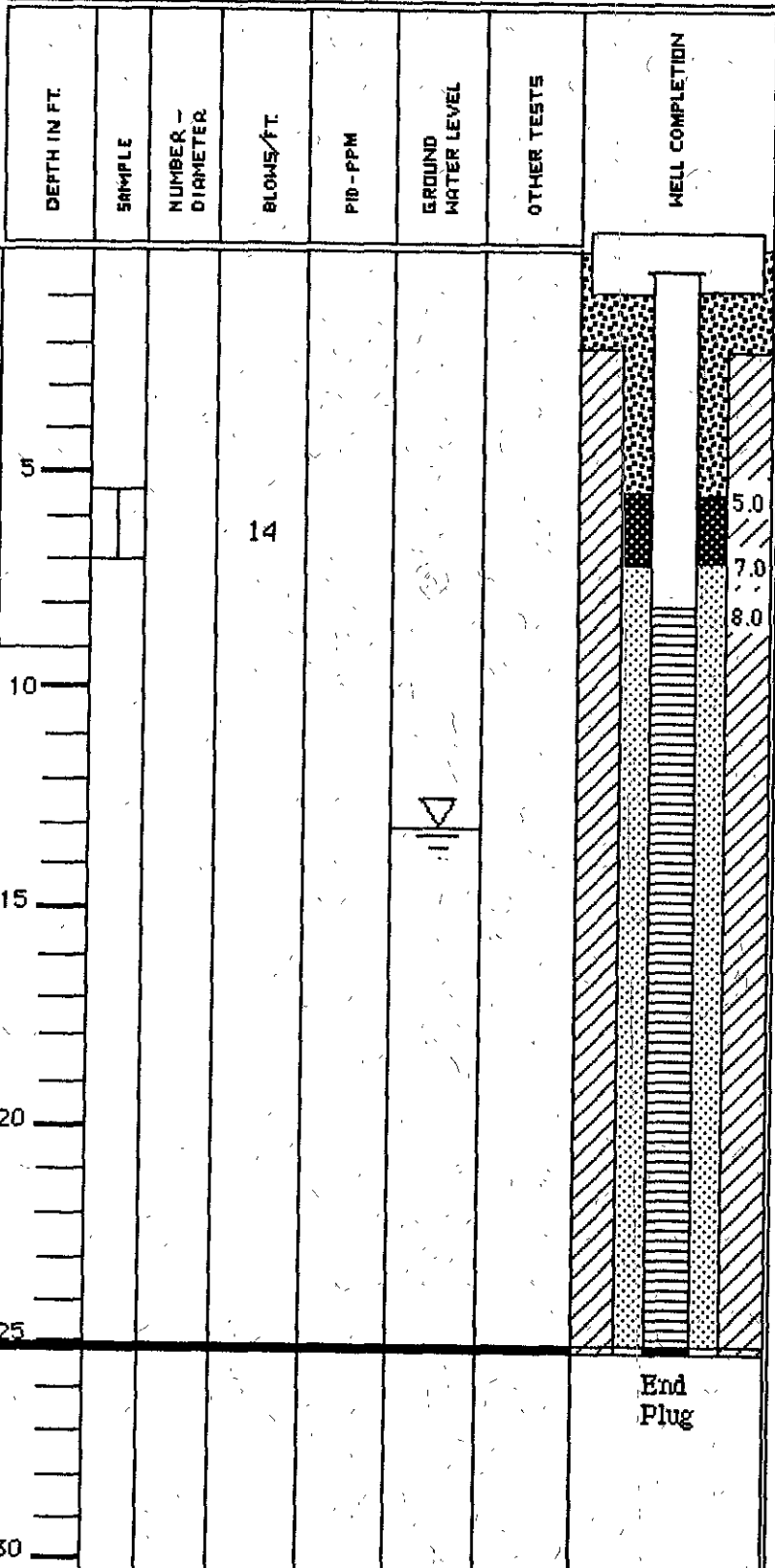
SAMPLES

TYPE OF BORING /DIAMETER

SURFACE ELEVATION

HAMMER WEIGHT

DESCRIPTION OF MATERIALS :








PID = Photoionization Detector

Driven sample interval (5.5-7.0'), indicating number of blows per last 12" of drive

Approximate depth of contact between soil/rock types

Ground water level

Explanation of well completion symbols:

-  Slotted well casing
-  Cement grout
-  Sand
-  Bentonite
-  Native materials

Total depth of boring = 25.0'

JOB NO:
E-19-2-064

HOEXTER CONSULTING, INC.

FIGURE: A-0

PROJECT: ABC Mustang: 15960 E. 14th St, San Leandro, California

BORING NO: MW-1

DATE DRILLED/LOGGED BY 3/15/93 / DPH

SAMPLES

TYPE OF BORING/DIAMETER 8" HSA

SURFACE ELEVATION

HAMMER WEIGHT 140 lb.

DESCRIPTION OF MATERIALS:

DEPTH IN FT.	SAMPLE NUMBER - DIAMETER	BLOWS/FT.	PID - PPM	GROUND WATER LEVEL	OTHER TESTS	WELL COMPLETION
5	2" Mod CA	27	no odor	stable water		7.0 8.0
10	2" Mod CA	21	odor			
15	2" Mod CA	17	no odor	initial water		10.0
20	2" Mod CA	27	no odor			
25	2" Mod CA	19	no odor			

Asphalt: 1 to 2 "

CH: Clay, black, moist, occasional gravel

CH: Silty clay to clayey silt with sand, blue-gray, moist, very stiff

CH: Clay, light black, moist, "pin-hole" structure

CL/CH: Silty clay, light blue-black, finely laminated with thin orange lamanae, moist, very stiff

ML: Clayey silt, brown, moist to wet, "pinhole" and blocky structure; occasional lenses of black silty clay, cream silty clay, and fine silty sand

sand lense at tip

gravel lense (based on drilling)

TD = 25.0 drilled, 26.5 sampled

Completed well with 2" diameter 0.020 slot casing; RMC Lonestar 2/12 washed Monterey lapis lustre sand; bentonite pellet seal; and RMC Lonestar Type I-II Portland Cement

JOB NO:
E-19-2-064

HOEXTER CONSULTING, INC.

FIGURE: A-1

APPENDIX B

**CHAINS OF CUSTODY AND
ANALYTICAL TEST RESULTS - SOIL**

CHAIN-OF-CUSTODY RECORD

Project Number E-19-2-064		Project Name ABC Mustang					Number/Type of Containers	Analytical Tests TPH-5 / BTEX *										Remarks
Sampler's Name (printed) DAVID F. HOEXTER																		
Boring Number	Date	Time	Soil	Water	Sample Location or Depth	Sample Number												
MW-1	7/15/93		X		6.0-6.5		2"SS											Hld
"	"		X		9.0-9.5		"	X										Hld
"	"		X		12.0-12.5		"											Hld

Relinquished by: (Signature) [Signature]	Date/Time 7/15/93 15⁰⁰	Received by: (Signature) [Signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature) [Signature]

Ship To: Sequoia Analytical
680 Chosoma Dr.
Redwood City CA 94063

Attention: Todd Gronicher
 Phone No: 415-364-9600

Requested Turnaround Time: 15 dy Contact: DAVID F. HOEXTER Phone: 415-494-2505

Remarks: * Analyze per RWQCB LUFT Guidelines

Hoexter Consulting
 Engineering Geology
 734 Torreya Court
 Palo Alto, CA 94303



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

RECEIVED
APR 01 1993

E-19-2-064 / HC
p414/27K

Hoexter Consulting Eng. Geology
734 Torreya Court
Palo Alto, CA 94303
Attention: David F. Hoexter

Client Project ID: E-19-2-064
Sample Matrix: Soil
Analysis Method: EPA 5030/8015/8020
First Sample #: 3C87301

Sampled: Mar 15, 1993
Received: Mar 15, 1993
Reported: Mar 27, 1993

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3C87301 MW-1	Sample I.D.	Sample I.D.	Sample I.D.	Sample I.D.	Sample I.D.
Purgeable Hydrocarbons	1.0	59					
Benzene	0.0050	N.D.					
Toluene	0.0050	N.D.					
Ethyl Benzene	0.0050	0.12					
Total Xylenes	0.0050	0.26					

Chromatogram Pattern: Non-Gas
Mix > C6

Quality Control Data

Report Limit Multiplication Factor:	10
Date Analyzed:	3/24/93
Instrument Identification:	GCHP-6
Surrogate Recovery, %: (QC Limits = 70-130%)	94

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

3C87301.HHH <1>



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Hoexter Consulting Eng. Geology
734 Torreya Court
Palo Alto, CA 94303
Attention: David F. Hoexter

Client Project ID: E-19-2-064
Matrix: Water
Soil / OFM 4/27/93
QC Sample Group 3C87301

Reported: Mar 27, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	C.Donohue	C.Donohue	C.Donohue	C.Donohue
Conc. Spiked:	0.20	0.20	0.20	0.20
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	GBLK032393	GBLK032393	GBLK032393	GBLK032393
Date Prepared:	3/23/93	3/23/93	3/23/93	3/23/93
Date Analyzed	3/24/93	3/24/93	3/24/93	3/24/93
Instrument I.D.#:	GCHP-6	GCHP-6	GCHP-6	GCHP-6
LCS % Recovery:	100	100	100	97
Control Limits:	66-142	59-139	60-133	60-133
MS/MSD Batch #:	G3C9409	G3C9409	G3C9409	G3C9409
Date Prepared:	3/23/93	3/23/93	3/23/93	3/23/93
Date Analyzed	3/24/93	3/24/93	3/24/93	3/24/93
Instrument I.D.#:	GCHP-6	GCHP-6	GCHP-6	GCHP-6
Matrix Spike % Recovery:	60	95	80	90
Matrix Spike Duplicate % Recovery:	100	97	100	95
Relative % Difference:	31	5.1	17	5.3

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

3C87301.HHH <2>

APPENDIX C
CHAINS OF CUSTODY, WELL SAMPLING DATA,
AND ANALYTICAL TEST RESULTS - WATER



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

- 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600 FAX (415) 364-9233
- 819 West Striker Ave. • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
- 1900 Bates Ave., Suite LM • Concord, CA 94520 • (510) 686-9600 FAX (510) 686-9688

Company Name: <u>Hoexter Consulting</u>		Project Name: <u>15960 East 14th St, San Leandro</u>	
Address:		Billing Address (if different):	
City:	State:	Zip Code:	
Telephone: <u>494-2505</u>	FAX #:	P.O. #:	
Report To: <u>David Hoexter</u>	Sampler:	QC Data: <input checked="" type="checkbox"/> Level A (Standard) <input type="checkbox"/> Level B <input type="checkbox"/> Level C <input type="checkbox"/> Level D	

Turnaround Time: 10 Working Days 3 Working Days 2 - 8 Hours
 7 Working Days 2 Working Days
 5 Working Days 24 Hours

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested										Comments
1. MW-1	3-19-93 11:30 x3	W	3	VOC	01	3/19/93 TPH-9/BTEX										BTEX added by J. Fuver per D. Hoexter
2.																
3. W-1																
4.																
5.					W.O. # 93 03 961											
6.																
7.																
8.																
9.																
10.																

Relinquished By: <u>[Signature]</u>	Date: <u>3-19-93</u>	Time: <u>12:40</u>	Received By: <u>[Signature]</u>	Date: <u>3-19-93</u>	Time: <u>11:50</u>
Relinquished By: <u>[Signature]</u>	Date: <u>3-19-93</u>	Time: <u>12:40</u>	Received By: <u>[Signature]</u>	Date: <u>3/19/93</u>	Time: <u>1240</u>
Relinquished By: <u>[Signature]</u>	Date: <u>3/19/93</u>	Time: <u>1240</u>	Received By Lab: <u>[Signature]</u>	Date: <u>3/19/93</u>	Time: <u>1240</u>

Were Samples Received in Good Condition? Yes No

Samples on Ice? Yes No Method of Shipment _____

Pink - Client

Yellow - Sequoia

White - Sequoia



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Hoexter Consulting Eng. Geo.
734 Torrey Court
Palo Alto, CA 94303
Attention: David Hoexter

Well Number: MW-1, (ABC)
Sampled By: Mark

Date Sampled: Mar 19, 1993
Time Sampled: 9:30 AM

Report ID: 3C96001

Date Reported: Mar 30, 1993

WELL SAMPLING DATA

PURGE METHOD

Bailer
 "TRI-LOC"
 Purge Pump

SAMPLING METHOD

Bailer
 Pump
 Other

SAMPLE TYPE

Composite
 Grab

FREE PRODUCT

Yes
 No
centimeters

WELL DATA

Well Depth, ft. 23.02
Water Level, ft. 7.2
Casing Diam., in. 2"
1 Casing Volume 2.6 gallons*

*Casing volume =
(Casing Diameter)² * 0.041 * (Well Depth - Water Level)

Well Volumes		pH	Cond. (μS)	Temp (°C)
1	2.6	7.6	1100	20
2	5.2	7.6	1000	20
3	7.8	7.6	1000	20
4	10.4	7.6	1100	20
5				
6				
7				
8				
9				
10				

Comments:

Clean
No Odors
Quick Recharge

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager



SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

RECEIVED
MAR 31 1993

E-19-2-064/Hc

Hoexter Consultant Engineering Geo.
734 Torrey Court
Palo Alto, CA 94303
Attention: David F. Hoexter

Client Project ID: 15960 East 14th St., San Leandro
Sample Matrix: Water
Analysis Method: EPA 5030/8015/8020
First Sample #: 3C96101

Sampled: Mar 19, 1993
Received: Mar 19, 1993
Reported: Mar 25, 1993

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3C96101 MW-1	Sample I.D.	Sample I.D.	Sample I.D.	Sample I.D.	Sample I.D.
Purgeable Hydrocarbons	50	81					
Benzene	0.50	N.D.					
Toluene	0.50	N.D.					
Ethyl Benzene	0.50	N.D.					
Total Xylenes	0.50	N.D.					
Chromatogram Pattern:		Discrete Peaks					

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Analyzed:	3/23/93
Instrument Identification:	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	103

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

3C96101.HHH <1>