Geology / Engineering Geology / Environmental Studies

HOEXTER CONSULTING
David F. Hoexter, C.E.G./R.E.A.

734 Torreya Court
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(415) 494-2505 (ph & fax)

December 17, 1993
E-10-1-019
HCWorkplans:Seminary(Grimit)WP

Mr. Thomas F. Peacock, Supervising HMS
Hazardous Materials Division
Alameda County Department of Environmental Health
UST Local Oversight Program
80 Swan Way, Room 200
Oakland, California 94621

RE: PROPOSED SUBSURFACE INVESTIGATION
FORMER GRIMIT AUTO AND REPAIR - STID 553
1970 SEMINARY AVENUE
OAKLAND, CALIFORNIA

Dear Mr. Peacock:

The purpose of this letter is to briefly summarize the subsurface investigation work plan for the above-referenced site. The plan is based on our review of work accomplished to date, on our discussions with you and the property owner, and on your letters addressed to Mr. Grimit.

In summary, two monitoring wells will be installed at the site to supplement the one existing well. We do not at this time contemplate further investigation of soil quality at the site, pending results of the ground water investigation. The two new wells are situated to provide representative regional down-gradient ground water samples for chemical analysis, and to provide ground water elevation data for the determination of the site ground water flow direction and gradient. Details of the investigation are presented in the following sections of this plan.

LOCATION

The project site is located at 1970 Seminary Avenue, at the southern corner of the Seminary Avenue - Harmon Avenue intersection, in Oakland, Alameda County, California (Figure 1). The property is bordered by Seminary Avenue on the northwest and by Harmon Avenue on the northeast, and by residences to the southeast and southwest. The

HOEXTER CONSULTING, INC.

734 Torreya Court
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(415) 494-2505 (phone & fax)

ALCO
HAZMAT

93 DEC 21 PM 2:57

TRANSMITTAL

TO Ala. Co. - Haz. Mat. Div.
80 Swan Way, Room 200
Oakland CA 94621

DATE 12/17/93
VIA US Mail
FAX NO. _____

ATTENTION Thomas Peacock

PROJECT 1970 Seminary
Oakland CA

JOB NO. E-10-1-019

DESCRIPTION
Work plan 12/17/93

Number of pages, including cover page, if FAX _____

COMMENTS wells to be installed within a couple weeks - CCi need to implement quarterly monitoring, CVi Biology

ACTION

_____ As requested
_____ For your use
_____ Please return when finished
__X__ Please review and comment
_____ Other_____

COPY TO D. Grimit

BY David F. Hoexter

If enclosures are not as noted, kindly notify us at once

Rev. 7/6/93

neighborhood generally consists of single family residences and one, two or three- story apartment houses. A commercial retail shopping district is located along East 14th Street, approximately five blocks to the southwest.

BACKGROUND - SUBSURFACE INVESTIGATIONS

The site was formerly operated as an automotive service and gasoline station. [redacted] underground fuel tanks and one waste oil tank were removed on November 17, 1989. Holes were observed in two of the tanks at the time of their removal, and gasoline and oil were detected in native soils beneath the former tanks. An UST Unauthorized Release (Leak) Report was not filed at the time (the report was filed on May 5, 1992; copy enclosed). One ground water monitoring well, and three exploratory borings were advanced at the site during August, 1990, and documented in a report by Kaldveer Associates (1990). An initial sample round of the monitoring well was conducted by Kaldveer for the 1990 report. Supplemental excavation of the waste oil tank pit was conducted on May 16, 1991. Hoexter Consulting provided three quarterly ground water sampling events, in January, April, and August, 1982.

Initially, as informal discussions, and subsequently in writing, the Alameda County Department of Environmental Health requested that a additional subsurface investigation of the site be conducted. This work plan delineates the proposed investigation.

SITE HISTORY

The site was formerly operated by Grimit Auto and Repair Service. The site is currently occupied by an auto electric and general repair facility, Amor's Auto Electric Repair. Amor's Auto Electric Repair is a tenant of the site, which is owned by Mr. Doyle Grimit, the former site operator. Amor's is not a responsible party to the release.

Four - approximately 550 gallon steel tanks were installed on the site in the 1930's. These or replacement tanks were used until fueling service was discontinued, on September 30, 1989. Three of the tanks were used to store gasoline. The fourth tank was used to store waste oil. 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 or waste oil lost.

SITE CLOSURE AND EXCAVATIONS

The following discussion is based primarily on information and copies of documents and analytical data provided by Mr. Doyle Grimit, former operator of the property. Additional information was also provided by discussions with Mr. Thomas F. Peacock, Supervising HMS with the Hazardous Materials Division of the Alameda County Department of Environmental Health, Mr. Wayne Wellock of Petro Tech, Inc., and with Mr. Grimit. Applicable documents are presented in Appendix A. Relevant documents are listed in the References section of this report.

Site closure was initiated on November 17, 1989. Closure was conducted by Petro Tech, of Santa Rosa, California, under permit to Alameda County, Department of Environmental Health. Mr. Larry Seto of the Alameda County Department of Environmental Health witnessed the tank excavation.

The tanks were constructed of steel. Holes were observed in two of the tanks. The inerted tanks were transported under manifest by H & H Ship Service, San Francisco, California, and disposed of at the Levin Metals Corporation, Richmond, California, as scrap metal. Soil in the excavation appeared stained. [redacted] temporarily [redacted]. Ground water was not encountered.

On May 16, 1991, Petro Tech [redacted] dimensions of approximately 7 by 10 by 7.5 feet deep. A total of approximately [redacted] of soil was removed and stockpiled on site. Further excavation was limited due to the immediate proximity of the adjacent property line and service building. Water was not present in the pit. The four side walls were sampled, at a depth of approximately five feet below the ground surface. The pit bottom was sampled at two locations. A single composite sample of the stockpile was also obtained. The contaminated soil was disposed [redacted] Richmond, California facility as "non-hazardous petroleum contaminated soils".

The excavations were backfilled with clean, imported soils.

Analytical test results of the confirmation testing are discussed in a later section of this work plan.

There were no reported unusual problems encountered during the tank closure or site excavation, other than the limited area available for excavation.

PREVIOUS SITE INVESTIGATIONS

An initial subsurface investigation has been conducted by Kaldveer Associates. The Kaldveer report is titled "Soil and ground Water Testing Report for 1970 Seminary Avenue, Oakland, California", and is dated September 28, 1990. The Kaldveer investigation consisted of advancing three soil borings, two in the vicinity of the former waste oil tank, and one through the backfill of one of the fuel tanks; and drilling and installing one ground water monitoring well at a fourth location. The approximate boring and well locations are shown on Figure 3 of this work plan.

INVESTIGATIONS WITHIN SITE VICINITY

According to Mr. Thomas Peacock, there are no reported site investigations within the site vicinity which are close enough to the site to provide useful information.

SITE DESCRIPTION

The Grimit Auto and Repair property is situated at an elevation of approximately 41 feet MSL (Figure 2). 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 subject property is situated upon deposits of Quaternary age alluvium (Radbruch, 1969). According to Alameda County Flood Control and Water Conservation District (1988), the shallow alluvium in the general site vicinity 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.

The nearest perennial stream is Arroyo Viejo, approximately 5,000 feet southwest of the site. Local, ephemeral drainages are located approximately 400 feet to the northwest and 2,000 feet to the southeast. It is possible that additional, buried, stream channels are located in the site vicinity.

The Grimit Auto site is on the order of 50 by 100 feet in plan dimension. The site consists of the service building with attached canopy, and a small detached storage building. Although this building has the appearance of a pump house, Mr. Grimit states that there never has been a domestic or irrigation well on the site. The former tank excavations have been backfilled to the adjacent grade. Figure 3 indicates the locations of pertinent site features, including the existing buildings and former UST locations. The tank excavations are also indicated.

The site vicinity consists primarily of single family residences and of apartments.

EXCAVATION AND SOIL/GROUND WATER SAMPLING RESULTS

Confirmation samples from the initial tank removal were obtained by Trans Tech Consultants, of Santa Rosa, California, under contract to Petro Tech. A total of seven soil samples were obtained from below the tanks, and variously tested for gasoline, oil and grease, heavy total hydrocarbons, volatile organic compounds, and organic lead. The analytical test results are summarized on Table 1 and presented in Appendix B. Sample locations are shown on the figure included in Appendix B. Analyses were conducted by NET Pacific, Inc, of Santa Rosa, California. NET Pacific is California EPA/DHS certified to conduct the requested analyses.

Five of the seven samples were obtained from below the three gasoline tanks. The maximum detected total petroleum hydrocarbons as gasoline (TPH-g) was 21 mg/kg (equivalent to parts per million, or ppm), with two samples non-detect. Purgeable aromatic compounds (BTXE) were also detected, although generally present at relatively low levels. Organic lead was not detected in one sample, from the middle gasoline tank. Total oil and grease (TOG) was detected in the two waste oil tank samples, at 5,500 and 8,200 ppm, with lower detected levels of extractable petroleum hydrocarbons, diesel and motor oil. Of the volatile organic compounds, only purgeable aromatic compounds were detected.

The subsequent Kaldveer Associates soil investigation analytical testing was limited to TPH-g and TOG. TPH-g was tested for only in one boring extended through the backfill of the former fuel tanks, and ranged from 0.5 to 4 to 50 ppm. TOG was detected in both test borings adjacent to the former waste oil tank, at a maximum level of 4,200 ppm at a depth of 10 feet, but decreasing to non-detect and 150 ppm at 16 feet.

Confirmation sampling of the subsequent waste oil tank pit overexcavation side walls and bottom, and a composite of the excavated soil, were also conducted. Total oil and grease was detected on the order of several thousand ppm, with a maximum of 15,000. TOG was detected in both side walls and the excavation bottom. Other TPH and purgeable aromatic compounds were also detected. In addition, analysis of eight RCRA heavy metals was

conducted. Various detections of metals, which most likely are attributable to naturally occurring levels, were made.

Analysis of ground water obtained on four occasions from Monitoring Well MW-1 are presented in Table 2. The initial sampling was conducted by Kaldveer Associates, and the subsequent three sampling events by Hoexter Consulting. TPH-g has been detected at from 54 to 2,000 mg/l (equivalent to parts per million, ppm). TPH-g was 170 and 175 ppm in the two most-recent sample events, April and August, 1992. TOG is also present in the ground water, most recently at a level of 120 ppm. Purgeable aromatic compounds are present at elevated levels, with benzene detected at 4.2 ppm during the August, 1992 sampling event.

UTILITIES

Underground utilities were located by Underground Service Alert (USA) prior to removal of the tanks. They will be located a second time prior to initiation of the field investigation. Approximate utility locations are shown on Figure 3. To our knowledge, the only underground utilities are water and sewer service in the east corner of the site. In our opinion, based on the depth of ground water and probable relatively shallow depth of buried utilities in relation to the tanks, it is unlikely that utilities have provided a pathway for contaminant migration.

Overhead lines occur along the perimeter of the site. Service lines cross the site. It will be necessary to exercise caution during site drilling, to avoid overhead lines.

SOIL CONTAMINATION DETERMINATION

The extent of soil contamination has been addressed through confirmation testing of the excavation bottom and side walls and the Kaldveer exploratory borings. Residual side wall soil contamination is present at levels as elevated as 15,000 ppm TOG. Excavation bottom sampling at a depth of approximately 7.5 feet indicated maximum levels of 5,500 TOG. The Kaldveer borings, located at the extremities of the subsequent soil overexcavation, each indicated a decrease of TOG at a depth of 16 feet to non-detect and 150 ppm.

Soil borings for the express purpose of further determining extent of soil contamination are not planned for this investigation, based on the above data. Soil samples for visual examination and lithologic description will be obtained from the proposed monitoring wells, which will be located in native materials beyond the tank excavation. Chemical analysis of one sample each, to be obtained from the current vadose zone at each well location, is planned. A description of the proposed soil sampling and analysis is included in the following section on ground water contamination determination.

GROUND WATER CONTAMINATION DETERMINATION

Monitoring Well Rationale

Two monitoring wells are proposed for installation. The wells will be located as shown on Figure 3, in the approximate regional down gradient ground water flow direction. This coverage will provide information on the site ground water flow direction, as well as provide representative ground water quality data for the regional down-gradient portion of the site. In our opinion the proposed wells will provide reasonably representative ground water sample coverage of the site.

The most recently measured depth to ground water at the site was 22.20 feet, in August, 1992. Water was encountered by Kaldveer Associates during drilling at a depth of approximately 24 feet. We anticipate completing the proposed wells at a depth of approximately 35 feet below grade. We anticipate screening the wells from 35 to 15 feet below grade. Although the screen length of 20 feet is relatively long, it would allow for possible declines in water depth, precluding a dry well, and it would allow for potential rise in ground water level to 15 feet below grade. Thus, if ground water levels rise, it will still be possible to observe the monitoring wells for floating product.

No characterization of site-specific hydrogeologic parameters will be performed.

Exploratory Boring Drilling and Sampling

David F. Hoexter, RG/CEG, will be present during drilling to assist in obtaining relatively undisturbed samples of the subsurface materials, to maintain a log of borings, and to make observations of the site conditions. A well installation permit will be obtained from Alameda County Flood Control and Water Conservation District, Zone 7. Drilling will be performed utilizing a truck-mounted drill rig equipped with eight-inch diameter hollow stem augers. A site safety plan is included with this work plan as Appendix C.

Soil samples will be obtained at minimum five foot intervals, or at significant lithologic changes, as deemed appropriate by the field geologist or engineer. Samples will be obtained with a 2- or 2-1/2 inch ID Modified California type sampler lined with brass or stainless steel tubes. The samples will be driven with a 140 pound hammer falling 30 inches. The sampler and tubes will be appropriately cleaned with a detergent solution, and triple-rinsed with distilled water.

Upon retrieval, the samples will be contained with a plastic cap over teflon liners, and taped at each end. The samples will be stored in a cooled ice chest, and transported to the analytical laboratory under chain of custody procedures. One sample, from above the water level at the capillary fringe (vadose) zone within each boring, will be chemically analyzed.

Soils will be visually classified in accordance with the Unified Soil Classification System. The work will be supervised by the undersigned registered geologist/certified engineering geologist. Boring logs, indicating applicable subsurface information, such as soil lithologies, depth to ground water, sample locations, and other pertinent information, will be developed in the field, and will be included in the subsequent reporting.

Monitoring Well Installation

A preliminary construction diagram of the proposed monitoring wells is attached to this work plan as Appendix D. This well completion is essentially the same as employed by Kaldveer Associates for Monitoring Well MW-1.

The monitoring wells will be constructed of two-inch flush threaded PVC schedule-40 pipe. The well screen will consist of 20 feet of 0.02 inch schedule-40 flush threaded PVC. The most recent sampling event of well MW-1 suggests that the PVC casing slots may be partially plugged. This well is also completed with 0.02 inch slots. Thus, it is our opinion that narrower slots would not be prudent at this site. The screened interval will be completed approximately five feet above and 15 feet below the existing water level, thus

from approximately 15 to 35 feet below grade. An appropriately graded sand will be used as filter media around the screened interval. The screen slot size and sand will be selected in the field, based on visual observation of the soils encountered during drilling. The sand will extend approximately two feet above the top of the well screen. A seal composed of a minimum of one foot of hydrated bentonite pellets will be placed atop the filter media.

The remaining annulus will be back-filled with a cement slurry to the ground surface. A locking well head will be installed, and a water-tight at-grade surface vault will be placed for security. The design of the monitoring well is in general compliance with the State of California Department of Water Resources Bulletin 74-90 Monitoring Well Standards and the Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites, revised August, 1990.

Surveying

The one existing and two new wells will be surveyed to a common elevation datum. A licensed surveyor will be employed.

Well Development and Sampling

The two new wells will be developed a minimum of two days following completion, using hand bailing and surging and/or by using a positive displacement pump. Well development methods which employ air-lift or the introduction of air into the well will not be used. The wells will be developed until they are relatively free of sediment and turbidity.

The wells will be sampled with a teflon bailer a minimum of two days after they are developed. The depth to ground water will be initially measured with an electronic well sounder, and the bailer will then be used to observe the water interface for sheen or floating product. The wells will then be purged a minimum of four volumes, and will be sampled following stabilization of pH, temperature and specific conductivity. If the well is slow to recover while it is being purged, it will be sampled following recovery to 80 percent of its original stabilized level.

Decontamination

The augers will be steam-cleaned prior to commencement of the investigation. The soil sampler will be disassembled between sampling attempts, washed in a detergent solution, rinsed with clean water and then purified water, and reassembled with cleaned sample tubes. This will minimize the potential of spreading contaminants among samples, if any are present.

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

DRILLING SPOILS, WELL DEVELOPMENT AND PURGE WATER

Auger cuttings and water produced during the well development and sampling process will be placed within plastic sheeting and/or in labeled drums and retained on-site. The results of chemical analysis of the soil and ground water samples will be used to evaluate the appropriate disposal of these materials. The property owner will be responsible for disposal of auger cuttings and produced ground water.

ANALYTICAL TESTING

The samples will be analyzed by a California Environmental Protection Agency/Department of Health Services approved analytical laboratory. The testing will consist of the following analyses, which is based on the site history and previous testing:

> Total petroleum hydrocarbons as gasoline (TPH-G) using EPA Method 5030/8015; for purgeable aromatic compounds (BTEX) using EPA Method 8020; and for oil and grease (total recoverable petroleum oil, TOG) using Standard Method 5520 C&F (IR).

One soil sample from each new monitoring well, and one ground water sample from each of the three wells, will be analyzed for the above-constituents.

REPORTING

Following completion of the tasks outlined in this sampling plan, a report will be prepared which summarizes the results of the investigation. The report will include a listing of nearby wells, based on data supplied by the Alameda County flood Control and Water Conservation District; soil analytical testing results and a tabular summary of the results; boring logs and a description of the strata encountered in the investigation; a depiction of the site ground water flow direction, based on depth to ground water in the three survey monitoring wells; a graphical presentation of the monitoring well completion; a location map; a site plan showing the boring locations; and our conclusions and recommendations, if any.

SUPPLEMENTAL INVESTIGATIONS AND MONITORING

Future investigation or monitoring requirements will be based on the results of the subject investigation. In particular, if elevated levels of gasoline or oil are detected in the two proposed monitoring wells, it may be necessary to install additional up- or lateral-gradient wells or borings. Recommendations for future activities, if any, will be included in the investigation report.

PROJECT MANAGEMENT

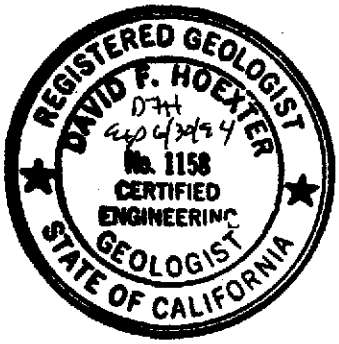
The project will be managed by David F. Hoexter. Mr. Hoexter is a registered geologist and certified engineering geologist, and registered environmental assessor, in the State of California. A qualifications statement for Mr. Hoexter is included in this plan as Appendix E.

PROJECT SCHEDULE

Hoexter Consulting is prepared to begin this study upon receipt of approval of this work plan and a monitoring well permit from the Alameda County, Zone 7 Water Agency. The field investigation will commence approximately one week following receipt of the approval and well permit. We will notify Mr. Thomas Peacock, or his designee, of the drilling date once it is established. The monitoring wells will be drilled, developed, and sampled during the following week. A two week laboratory turn-around is anticipated. The report will be completed within another one to two weeks. Thus, the total elapsed time

for completion of the investigation will be five to six weeks following work plan approval and receipt of the well permit.

We trust this work plan will satisfy your needs. Please call if you have any questions.



Very truly yours,

HOEXTER CONSULTING, INC.

David F. Hoexter, RG/CEG/REA
Principal Geologist

Attachments:

References

Table 1: Summary of Soil Analyses
Table 2: Summary of Ground Water Analyses

Figure 1: Location Map
Figure 2: Topographic Map
Figure 3: Site plan

Appendix A: Site Closure Documents
Appendix B: Analytical Test Results and Sample Locations (excluding consultant's reports)
Appendix C: Site Safety Plan
Appendix D: Monitoring Well Construction Diagram
Appendix E: Qualifications: David F. Hoexter

Copies:

Mr. Doyle Grimit

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.

Hoexter Consulting, Inc, "Quarterly Ground Water Sampling Reports for 1970 Seminary Avenue, Oakland, California", dated February 24, 1992, May 29, 1992, and August 31, 1992.

Kaldveer Associates, Inc. "Soil and Ground Water Testing Report, 1970 Seminary Avenue, Oakland, California", September 28, 1990.

NET / National Environmental Testing, Inc, "Project 0380", December 5, 1989.

....."Grimit Auto, Oakland, Job 1319, June 5, 1991", analytical test results.

Petro Tech, "Underground Tank Removal, Invoice 0380", November 28, 1989.

....."Clean-up Effort Related to Waste Oil Excavation, Job 1319", letter dated May 21, 1991.

Radbruch, Dorothy H, 1969, "Aerial and Engineering Geology of the Oakland East Quadrangle, California", USGS GQ-769, Scale 1:24,000.

United States Geological Survey, Oakland East Quadrangle, 1959 photorevised 1968 and 1973, 7.5' Topographic Map Series, Scale 1:24,000.

TABLE 1

SUMMARY OF SOIL ANALYSES
(Results reported in parts per million, mg/kg,
or parts per billion, ug/kg, as noted) (1)

Sample	TPH-g	TPH-d (3550)	B	T	E	X	Vol. Org (8240)	TOG	Motor oil (3550)	Org. Pb
	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/
11/17/89 - (Original tank removal confirmation sampling)										
1 (S. tank)	22	-	ND	ND	ND	ND	-	-	-	-
2 "	ND	-	ND	ND	ND	ND	-	-	-	-
3 (W.O. tank)	-	[redacted]	[redacted]	510	480	1,700	ND	[redacted]	[redacted]	-
4 (W.O. tank)	-	[redacted]	[redacted]	400	810	2,400	ND	[redacted]	[redacted]	
5 (center tank)	20	-	ND	31	ND	200	-	-	-	ND
6 (N. tank)	ND	-	68	ND	ND	ND	-	-	-	
7 (N. tank)	21	-	[redacted]	2,900	320	1,700	-	-	-	
8/3/90 - (Kaldveer Subsurface investigation)										
EB-1-16'	4	-	-	-	-	-	-	-	-	
21'	0.5	-	-	-	-	-	-	-	-	
26'	50	-	-	-	-	-	-	-	-	

Table 1 (continued)

Sample	TPH-g	TPH-d (3550)	B	T	E	X	Vol. Org (8240)	TOG	Motor oil (3550)	Org. Pb
	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg	mg/kg	mg/kg	mg/kg	mg/kg
8/13/90 - (Kaldveer subsurface investigation (continued))										
EB-2-10'	-	-	-	-	-	-	-	41,200	-	
16'	-	-	-	-	-	-	-	ND	-	
-10'	-	-	-	-	-	-	-	2,800	-	
-16'	-	-	-	-	-	-	-	150	-	
5/16/91 - (Waste oil tank over excavation confirmation sampling)										
1 (S. side)	190	570	ND	ND	580	1,300	-	15,000	2,700	
								9,800		
2 (W. side)	ND	ND	ND	ND	ND	ND	-	1,200	61	
								890		
3 (E. side)	4.4	ND	ND	ND	8.3	21	-	11,000	41,400	
								7,500		
4 (N. side)	12	ND	4.2	ND	9.1	21	-	410	250	
								230		
5 (W. floor)	270	[redacted]	ND	[redacted]	[redacted]	ND	-	[redacted]	670	
								[redacted]		
6 (E. floor)	260	[redacted]	ND	ND	[redacted]	[redacted]	-	[redacted]	680	
								[redacted]		
Stockpile (composite)	11	ND	3.1	ND	44	94	-	1,500	710	
								1,000		

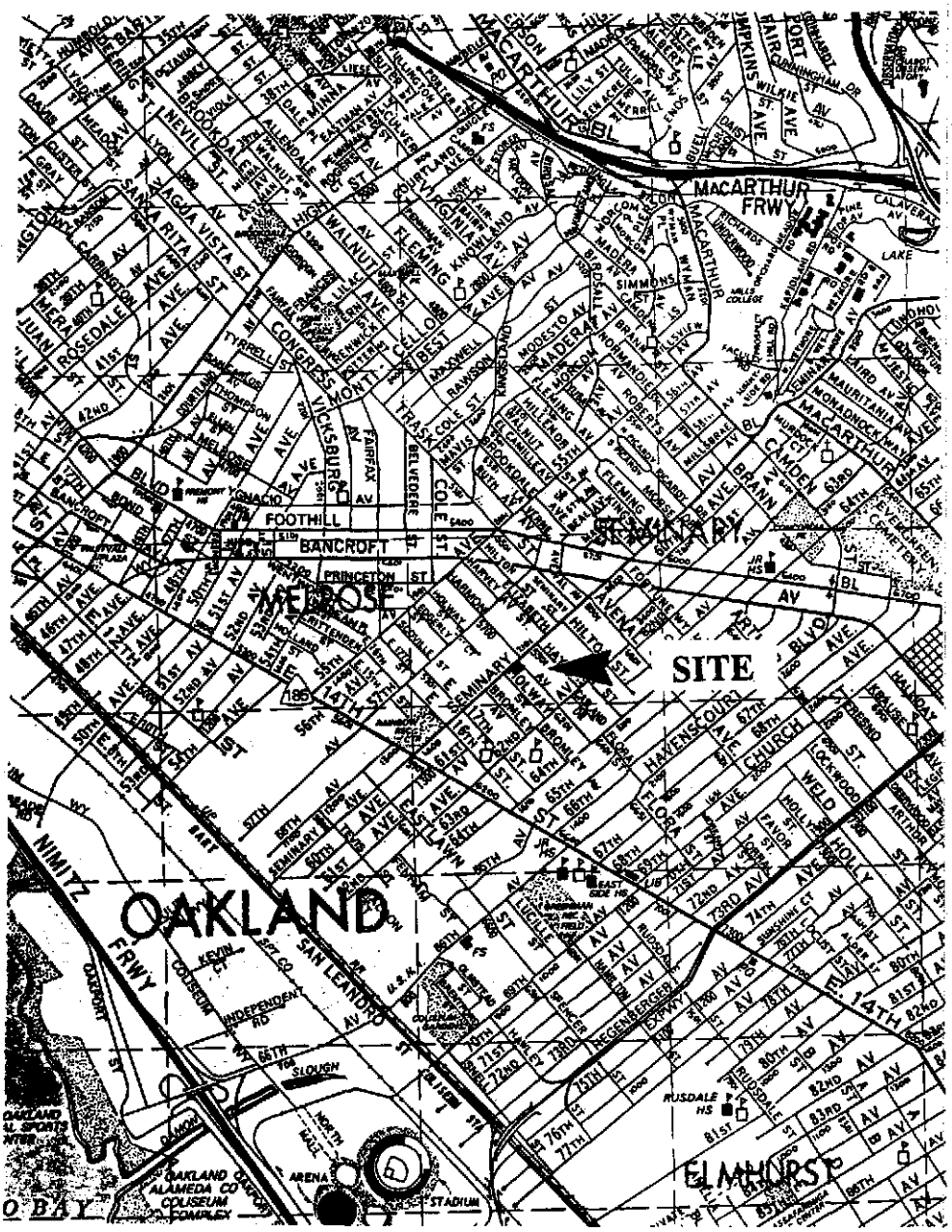
TABLE 2

SUMMARY OF GROUND WATER ANALYSES
(Results reported in parts per million, mg/l) (1)

Date	TPH Gasoline	Benzene	Toluene	Xylenes	Ethyl-benzene	Oil & Grease
8/6/90 (2)	54	3.9	3.2	9.4	1.9	7.6
1/28/92 (3)	[illegible]	[illegible]	17.0	120.0	28.0	75 (5)
4/27/92 (3)	[illegible]	[illegible]	6.4	45.0	10.0	440 (6)
4/27/92 (4)	175	4.2	4.4	14.6	3.2	N/A
8/10/92 (3)	170	[illegible]2	4.2	15.0	3.3	120 (6)

Notes:

(1) ND - non-detect; N/A - not applicable
(2) Kaldveer Associates report, September, 1990
(3) Sequoia Analytical Laboratory (Hoexter Consulting)
(4) Applied Remediation Laboratory (Hoexter Consulting)
(5) Gravimetric Method
(6) Infrared Method



ALAMEDA COUNTY

1991 *Thomas Guide.*

0 ¼ ½ ¾ 1 MILES
0 1 2 3 KILOMETERS

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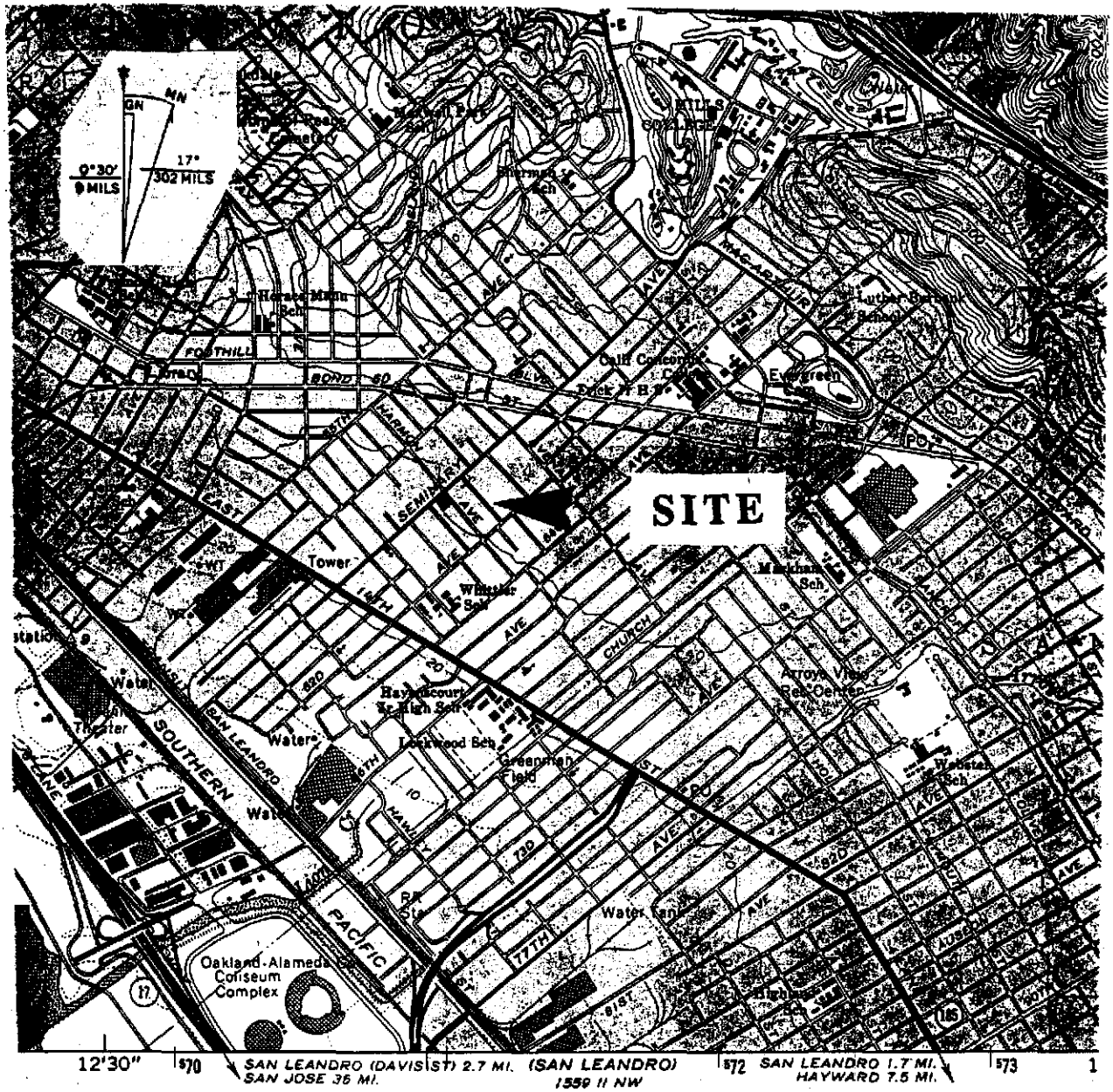
Environmental Studies

LOCATION MAP

1970 Seminary Avenue
Oakland, California

Project No.	Date	Figure
E-10-1-019	December, 1993	1



Base: Oakland East 7.5" Quad, 1959 photorev. 1968, 1973, USGS

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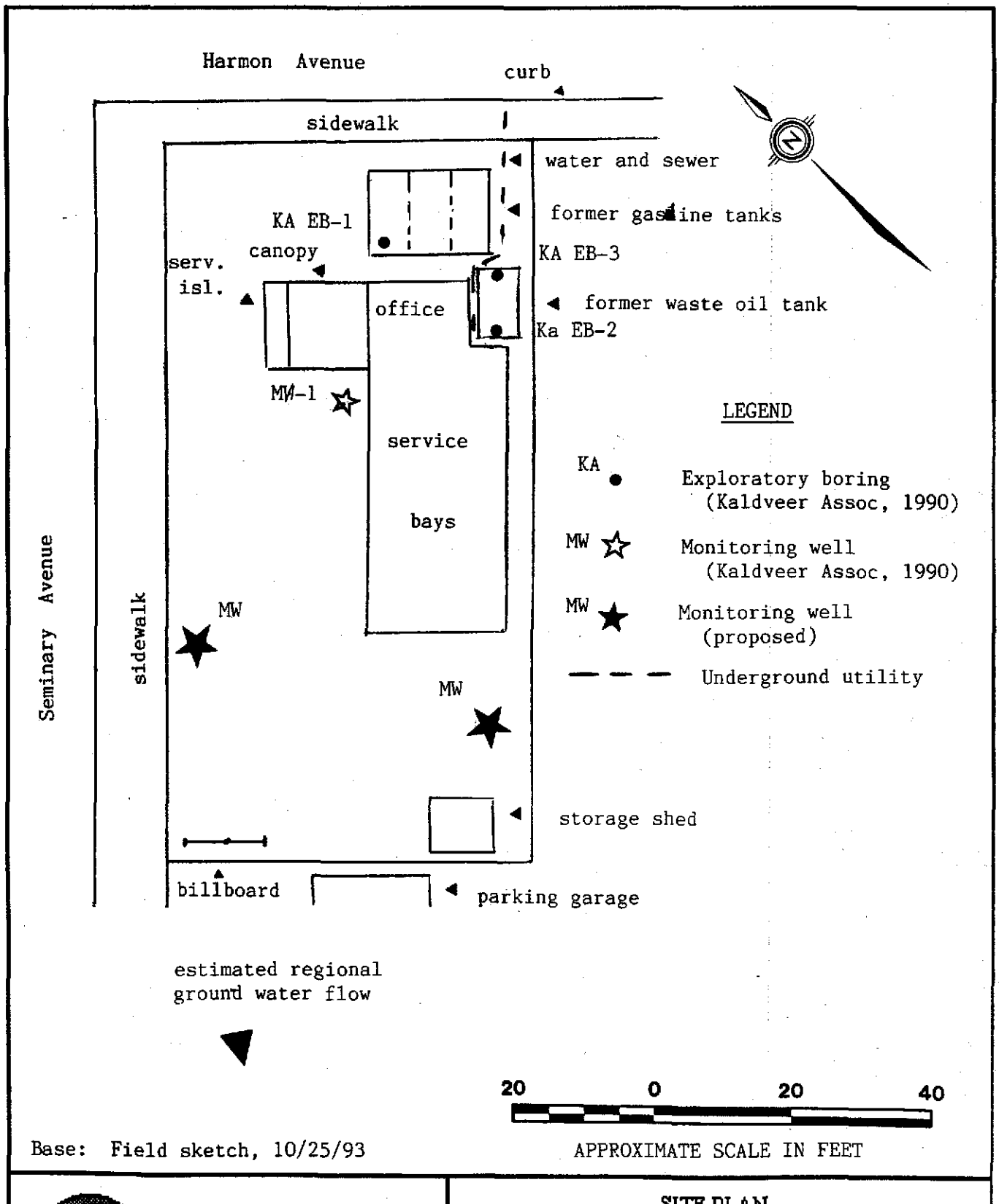
TOPOGRAPHIC MAP

1970 Seminary Avenue
Oakland, California

Project No.	Date	Figure
E-10-1-019	December, 1993	2



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SITE PLAN

1970 Seminary Avenue
Oakland, California

Project No.	Date	Figure
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APPENDIX A

SITE CLOSURE DOCUMENTS

ENVIRONMENTAL SERVICES
(DIVISION OF H&H SHIP SERVICE CO., INC.)

89 DEC 33 AM 11:39

REGULATORY AGENCY COPY

220 CHINA BASIN, P.O. BOX 77363 • SAN FRANCISCO, CA 94107 • DAY AND NIGHT: 543-4835

CERTIFICATE OF DISPOSAL

NOVEMBER 21, 1989

H & H Ship Service Company hereby certifies to PETRO TECH that:

1. The storage tank(s), sizes(s) FOUR (4) 550 GALLONS removed from the GRIMIT AUTO facility at 1970 SEMINARY AVENUE OAKLAND, CALIFORNIA were transported to H & H Ship Service Company, 220 China Basin Street, San Francisco, California 94107.

2. The following tank(s), H & H Job Number 2461 have been steamed cleaned, cut with approximately 2' x 2' holes, rendered harmless and disposed of as scrap metal.

3. Disposal site: LEVIN METALS CORPORATION, RICHMOND, CA.

4. The foregoing method of destruction/disposal is suitable for the materials involved, and fully complies with all applicable regulatory and permit requirements.

5. Should you require further information, please call (415) 543-4836.

Very Truly Yours,

Cleveland Valrey
Operations Coordinator

Please print or type. (Form designed for use on elite (12-pitch) typewriter).

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
CAC000202803	00001	Page 1 of 1	

3. Generator's Name and Mailing Address
CRIMIT AUTO
1970 Seminary Ave
Oakland, CA 94621

4. Generator's Phone (415) 562 0235

A. State Manifest Document Number 89492513

B. State Generator's ID

5. Transporter 1 Company Name: H & H SHIP SERVICE COMPANY
6. US EPA ID Number: CAD004771168

C. State Transporter's ID 003758
D. Transporter's Phone (415) 543 4835

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
H & H SHIP SERVICE COMPANY
220 China Basin Street
San Francisco, CA 94107

10. US EPA ID Number: CAD004771168

G. State Facility's ID CAD004771168
H. Facility's Phone (415) 543 4835

	11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RESIDUE GASOLINE TANKS (CALIFORNIA ONLY REGULATED WASTE)	003	TP	001550	P	State 512; EPA/Other
b.	RESIDUE WASTE OIL TANK (CALIFORNIA ONLY REGULATED WASTE)	001	TP	00550	P	State 512; EPA/Other
c.						State; EPA/Other
d.						State; EPA/Other

REGULATORY AGENCY COPY

J. Additional Descriptions for Materials Listed Above
PUMPED OUT 550 GALLON TANKS LAST CONTAINING GASOLINE OR WASTE OIL.
TANK INERTED WITH DRY ICE FOR TRANSPORT.

K. Handling Codes for Wastes Listed Above
a. 01 b.
c. d.

15. Special Handling Instructions and Additional Information
APPROPRIATE PROTECTIVE CLOTHING AND RESPIRATOR.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year
Keith Colorado	Keith Colorado	11 17 89

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
ROBERT V. PETRUCCI	Robert V. Petrucci	11 17 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
[signature]	[signature]	11 17 89

GENERATOR — TRANSPORTER — FACILITY

IN CASE OF EMERGENCY OR SPILL, CONTACT THE NATIONAL RESPONSE CENTER 1-800-424-8802, WITHIN CALIFORNIA CALL 1-800-852-7550

8022 A (1/88)
8700—22
(Rev. 9-88) Previous editions are obsolete.

Do Not Write Below This Line

White: TSDF SENDS THIS COPY TO DOHS WITHIN 30 DAY
To: P.O. Box 3000, Sacramento, CA 95812

2717 Goodrick Ave.
Richmond, CA 94804

Phone (415) 237-5866
FAX (415) 529-2483

Remco

INVOICE

Grimit Auto
1970 Seminary Ave
Oakland, Ca 94621

DATE	NUMBER	PAGE	DUE DATE
1.2292			1.2292

SHIP VIA	F.O.B.	TERMS	YOUR #	OUR #
8-Ball Trading	Oakland	C.O.D.		92-0088

DESCRIPTION	ORDERED	SHIPPED	UNIT PRICE	EXTENDED PRICE
Disposal of Non-Haz Petroleum Contaminated Soils	20	20 min	120.00	2,400.00
Loader -				200.00

Thank You
Randy Benning

SUB TOTAL	2600.00
TAX	
TOTAL	3,000.00
NET TO PAY	1 400.00

UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY ☐ YES ☑ NO

HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED ? ☐ YES ☑ NO

FOR LOCAL AGENCY USE ONLY
I HEREBY CERTIFY THAT I HAVE DISTRIBUTED THIS INFORMATION ACCORDING TO THE DISTRIBUTION SHOWN ON THE INSTRUCTION SHEET ON THE BACK PAGE OF THIS FORM.
SIGNED _____ DATE 5-5-92

REPORT DATE 05/05/92 | CASE # _____

REPORTED BY
NAME OF INDIVIDUAL FILING REPORT: DOYLE E. GRIMIT | PHONE: (510) 357-5133 | SIGNATURE: Doyle E Grimit
REPRESENTING ☑ OWNER/OPERATOR ☐ REGIONAL BOARD ☐ LOCAL AGENCY ☐ OTHER _____ | COMPANY OR AGENCY NAME: Owner
ADDRESS: 14366 LARK ST STREET | CITY SAN LEANDRO | STATE CA | ZIP 945[illegible]

RESPONSIBLE PARTY
NAME: DOYLE E. GRIMIT ☐ UNKNOWN | CONTACT PERSON: SAME | PHONE: (510) 357-5133
ADDRESS: 14366 LARK ST STREET | CITY SAN LEANDRO | STATE CA | ZIP 94577

SITE LOCATION
FACILITY NAME (IF APPLICABLE): GRIMIT AUTO REPAIR & SERVICE | OPERATOR: DOYLE GRIMIT | PHONE: (510) 357-5133
ADDRESS: 1970 SEMINARY STREET | CITY OAKLAND | COUNTY ALAMEDA | ZIP 94602
CROSS STREET: HARMON AVE

IMPLEMENTING AGENCIES
LOCAL AGENCY AGENCY NAME: ALAMEDA COUNTY | CONTACT PERSON: LARRY SETO | PHONE: (510) 271-4320
REGIONAL BOARD: SAN FRANCISCO | RICH HIETT | PHONE: (415) 464-4359

SUBSTANCES INVOLVED
(1) NAME: GASOLINE | QUANTITY LOST (GALLONS) _____ ☑ UNKNOWN
(2) WASTE OIL _____ ☑ UNKNOWN

DISCOVERY/ABATEMENT
DATE DISCOVERED: 11/17/89 | HOW DISCOVERED ☐ INVENTORY CONTROL ☐ SUBSURFACE MONITORING ☐ NUISANCE CONDITIONS ☐ TANK TEST ☑ TANK REMOVAL ☐ OTHER _____
DATE DISCHARGE BEGAN _____ ☑ UNKNOWN
HAS DISCHARGE BEEN STOPPED ? ☑ YES ☐ NO IF YES, DATE _____
METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY)
☑ REMOVE CONTENTS ☑ CLOSE TANK & REMOVE ☐ REPAIR PIPING ☐ REPAIR TANK ☐ CLOSE TANK & FILL IN PLACE ☐ CHANGE PROCEDURE ☐ REPLACE TANK ☐ OTHER _____

SOURCE/CAUSE
SOURCE OF DISCHARGE: ☑ TANK LEAK ☐ UNKNOWN ☐ PIPING LEAK ☐ OTHER
CAUSE(S): ☐ OVERFILL ☐ RUPTURE/FAILURE ☐ SPILL ☑ CORROSION ☐ UNKNOWN ☐ OTHER _____

CASE TYPE
CHECK ONE ONLY
☐ UNDETERMINED ☐ SOIL ONLY ☑ GROUNDWATER ☐ DRINKING WATER - (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)

CURRENT STATUS
CHECK ONE ONLY
☐ NO ACTION TAKEN ☐ PRELIMINARY SITE ASSESSMENT WORKPLAN SUBMITTED ☐ POLLUTION CHARACTERIZATION
☐ LEAK BEING CONFIRMED ☐ PRELIMINARY SITE ASSESSMENT UNDERWAY ☑ POST CLEANUP MONITORING IN PROGRESS
☐ REMEDIATION PLAN ☐ CASE CLOSED (CLEANUP COMPLETED OR UNNECESSARY) ☐ CLEANUP UNDERWAY

REMEDIAL ACTION
CHECK APPROPRIATE ACTION(S) (SEE BACK FOR DETAILS)
☐ CAP SITE (CD) ☐ CONTAINMENT BARRIER (CB) ☐ VACUUM EXTRACT (VE)
☑ EXCAVATE & DISPOSE (ED) ☐ EXCAVATE & TREAT (ET) ☐ NO ACTION REQUIRED (NA) ☐ OTHER (OT) _____
☐ REMOVE FREE PRODUCT (FP) ☐ PUMP & TREAT GROUNDWATER (GT) ☐ TREATMENT AT HOOKUP (HU)
☐ ENHANCED BIO DEGRADATION (IT) ☐ REPLACE SUPPLY (RS) ☐ VENT SOIL (VS)

COMMENTS

HSC 05 (8/90)

APPENDIX B

ANALYTICAL TEST RESULTS AND
SAMPLE LOCATIONS--
(excluding consultant's reports)

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Wayne Wellock
Petrotech
1903 San Miguel Ave.
Santa Rosa, CA 95403

Date: 12-05-89
NET Client Acct. No: 546
NET Pacific Log No: 8644
Received: 11-20-89 1050

Client Reference Information

Proj# 0380

Dear Mr. Wellock:

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Judy Ridley for
Jules Skamarack
Laboratory Manager

/ma
Enclosure(s)

mailed to CO + Cust 11-8-89

SAMPLE DESCRIPTION: #1 S tank9.5'W.11-17-89 1315
LAB Job No: (-39992)

Parameter	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS	--	--	
VOLATILE (SOIL)	--	--	
DILUTION FACTOR *		1	
DATE ANALYZED		12-01-89	
METHOD GC FID/5030	--	--	
as Gasoline	10	22	mg/Kg
METHOD 8020	--	--	
Benzene	25	ND	ug/Kg
Ethylbenzene	75	ND	ug/Kg
Toluene	25	ND	ug/Kg
Xylenes, total	75	ND	ug/Kg

SAMPLE DESCRIPTION: #2 S tank7.5'E.11-17-89 1325
LAB Job No: (-39993)

Parameter	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS	--	--	
VOLATILE (SOIL)	--	--	
DILUTION FACTOR *		1	
DATE ANALYZED		11-30-89	
METHOD GC FID/5030	--	--	
as Gasoline	10	ND	mg/Kg
METHOD 8020	--	--	
Benzene	25	ND	ug/Kg
Ethylbenzene	75	ND	ug/Kg
Toluene	25	ND	ug/Kg
Xylenes, total	75	ND	ug/Kg

SAMPLE DESCRIPTION: #6 N tank9.5'W.11-17-89 1435
LAB Job No: (-39994)

Parameter	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS	--	--	
VOLATILE (SOIL)	--	--	
DILUTION FACTOR *		1	
DATE ANALYZED		12-01-89	
METHOD GC FID/5030	--	--	
as Gasoline	10	ND	mg/Kg
METHOD 8020	--	--	
Benzene	25	68	ug/Kg
Ethylbenzene	75	ND	ug/Kg
Toluene	25	ND	ug/Kg
Xylenes, total	75	ND	ug/Kg

SAMPLE DESCRIPTION: #7 N tank9.5'E.11-17-89 1445
LAB Job No: (-39995)

Parameter	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS	--	--	
VOLATILE (SOIL)	--	--	
DILUTION FACTOR *		1	
DATE ANALYZED		12-01-89	
METHOD GC FID/5030	--	--	
as Gasoline	10	21	mg/Kg
METHOD 8020	--	--	
Benzene	25	2400	ug/Kg
Ethylbenzene	75	320	ug/Kg
Toluene	25	2900	ug/Kg
Xylenes, total	75	1700	ug/Kg

Client: 546
NET Log No: 8644

Date: 12-05-89

SAMPLE DESCRIPTION: #3 w.oilex5'SSW 11-17-891400
LAB Job No: (-39996)

Parameter	Reporting Limit	Results	Units
Oil & Grease (total)	50	[redacted]	mg/Kg
PETROLEUM HYDROCARBONS		--	
EXTRACTABLE (SOIL)		--	
DILUTION FACTOR *		1	
DATE EXTRACTED		11-30-89	
DATE ANALYZED		11-30-89	
METHOD GC FID/3550		--	
as Diesel	1	360	mg/Kg
as Motor Oil	10	760	mg/Kg
METHOD 8240			
DATE ANALYZED		11-22-89	
DILUTION FACTOR *		1	
Benzene	25	93	ug/Kg
Bromodichloromethane	25	ND	ug/Kg
Bromoform	25	ND	ug/Kg
Bromomethane	25	ND	ug/Kg
Carbon tetrachloride	25	ND	ug/Kg
Chlorobenzene	25	ND	ug/Kg
Chloroethane	25	ND	ug/Kg
2-Chloroethyl Vinyl Ether	50	ND	ug/Kg
Chloroform	25	ND	ug/Kg
Chloromethane	25	ND	ug/Kg
Dibromochloromethane	25	ND	ug/Kg
1,2-Dichlorobenzene	25	ND	ug/Kg
1,3-Dichlorobenzene	25	ND	ug/Kg
1,4-Dichlorobenzene	25	ND	ug/Kg
1,1-Dichloroethane	25	ND	ug/Kg
1,2-Dichloroethane	25	ND	ug/Kg
1,1-Dichloroethene	25	ND	ug/Kg
trans-1,2-Dichloroethene	25	ND	ug/Kg
1,2-Dichloropropane	25	ND	ug/Kg
cis-1,3-Dichloropropene	25	ND	ug/Kg
trans-1,3-Dichloropropene	25	ND	ug/Kg
Ethylbenzene	25	480	ug/Kg
Methylene chloride	25	ND	ug/Kg
1,1,2,2-Tetrachloroethane	25	ND	ug/Kg
Tetrachloroethene	25	55	ug/Kg
Toluene	25	510	ug/Kg
1,1,1-Trichloroethane	25	ND	ug/Kg
1,1,2-Trichloroethane	25	ND	ug/Kg
Trichloroethene	25	ND	ug/Kg
Trichlorofluoromethane	25	ND	ug/Kg
Vinyl chloride	25	ND	ug/Kg
Xylenes, total	25	1,700	ug/Kg

Client: 546
NET Log No: 8644

Date: 12-05-89

SAMPLE DESCRIPTION: #4 w.oilex6'SWW 11-17-891410
LAB Job No: (-39997)

Parameter	Reporting Limit	Results	Units
Oil & Grease (total)	50	7,200	mg/Kg
PETROLEUM HYDROCARBONS		--	
EXTRACTABLE (SOIL)		--	
DILUTION FACTOR *		1	
DATE EXTRACTED		11-30-89	
DATE ANALYZED		11-30-89	
METHOD GC FID/3550		--	
as Diesel	1	190	mg/Kg
as Motor Oil	10	460	mg/Kg
METHOD 8240			
DATE ANALYZED		11-22-89	
DILUTION FACTOR *		2	
Benzene	25	160	ug/Kg
Bromodichloromethane	25	ND	ug/Kg
Bromoform	25	ND	ug/Kg
Bromomethane	25	ND	ug/Kg
Carbon tetrachloride	25	ND	ug/Kg
Chlorobenzene	25	ND	ug/Kg
Chloroethane	25	ND	ug/Kg
2-Chloroethyl Vinyl Ether	50	ND	ug/Kg
Chloroform	25	ND	ug/Kg
Chloromethane	25	ND	ug/Kg
Dibromochloromethane	25	ND	ug/Kg
1,2-Dichlorobenzene	25	ND	ug/Kg
1,3-Dichlorobenzene	25	ND	ug/Kg
1,4-Dichlorobenzene	25	ND	ug/Kg
1,1-Dichloroethane	25	ND	ug/Kg
1,2-Dichloroethane	25	ND	ug/Kg
1,1-Dichloroethene	25	ND	ug/Kg
trans-1,2-Dichloroethene	25	ND	ug/Kg
1,2-Dichloropropane	25	ND	ug/Kg
cis-1,3-Dichloropropene	25	ND	ug/Kg
trans-1,3-Dichloropropene	25	ND	ug/Kg
Ethylbenzene	25	810	ug/Kg
Methylene chloride	25	ND	ug/Kg
1,1,2,2-Tetrachloroethane	25	ND	ug/Kg
Tetrachloroethene	25	ND	ug/Kg
Toluene	25	400	ug/Kg
1,1,1-Trichloroethane	25	ND	ug/Kg
1,1,2-Trichloroethane	25	ND	ug/Kg
Trichloroethene	25	ND	ug/Kg
Trichlorofluoromethane	25	ND	ug/Kg
Vinyl chloride	25	ND	ug/Kg
Xylenes, total	25	2,400	ug/Kg

SAMPLE DESCRIPTION: method blank
LAB Job No: (-39998)

Parameter	Reporting Limit	Results	Units
METHOD 8240			
DATE ANALYZED		11-22-89	
DILUTION FACTOR *		1	
Benzene	25	ND	ug/Kg
Bromodichloromethane	25	ND	ug/Kg
Bromoform	25	ND	ug/Kg
Bromomethane	25	ND	ug/Kg
Carbon tetrachloride	25	ND	ug/Kg
Chlorobenzene	25	ND	ug/Kg
Chloroethane	25	ND	ug/Kg
2-Chloroethyl Vinyl Ether	50	ND	ug/Kg
Chloroform	25	ND	ug/Kg
Chloromethane	25	ND	ug/Kg
Dibromochloromethane	25	ND	ug/Kg
1,2-Dichlorobenzene	25	ND	ug/Kg
1,3-Dichlorobenzene	25	ND	ug/Kg
1,4-Dichlorobenzene	25	ND	ug/Kg
1,1-Dichloroethane	25	ND	ug/Kg
1,2-Dichloroethane	25	ND	ug/Kg
1,1-Dichloroethene	25	ND	ug/Kg
trans-1,2-Dichloroethene	25	ND	ug/Kg
1,2-Dichloropropane	25	ND	ug/Kg
cis-1,3-Dichloropropene	25	ND	ug/Kg
trans-1,3-Dichloropropene	25	ND	ug/Kg
Ethylbenzene	25	ND	ug/Kg
Methylene chloride	25	ND	ug/Kg
1,1,2,2-Tetrachloroethane	25	ND	ug/Kg
Tetrachloroethene	25	ND	ug/Kg
Toluene	25	ND	ug/Kg
1,1,1-Trichloroethane	25	ND	ug/Kg
1,1,2-Trichloroethane	25	ND	ug/Kg
Trichloroethene	25	ND	ug/Kg
Trichlorofluoromethane	25	ND	ug/Kg
Vinyl chloride	25	ND	ug/Kg
Xylenes, total	25	ND	ug/Kg

Client: 546
NET Log No: 8644

Date: 12-05-89

SAMPLE DESCRIPTION: #5center8'WE 11-17-89 1425
LAB Job No: (-39999)

Parameter	Reporting Limit	Results	Units
Organic Lead	0.05	ND	mg/Kg
PETROLEUM HYDROCARBONS	--	--	
VOLATILE (SOIL)	--	--	
DILUTION FACTOR *		1	
DATE ANALYZED		12-01-89	
METHOD GC FID/5030	--	--	
as Gasoline	10	20	mg/Kg
METHOD 8020	--	--	
Benzene	25	ND	ug/Kg
Ethylbenzene	75	ND	ug/Kg
Toluene	25	31	ug/Kg
Xylenes, total	75	200	ug/Kg

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following, which supercedes the listed reporting limit.
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

* Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated reporting limits by the dilution factor.

[redacted]

435 TESCONI CIRCLE
SANTA ROSA, CA 95401
TEL: 707-526-7200
FAX: 707-526-9623

CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME
0380	Grimmit Auto

SAMPLERS (Signature): Neil Dech

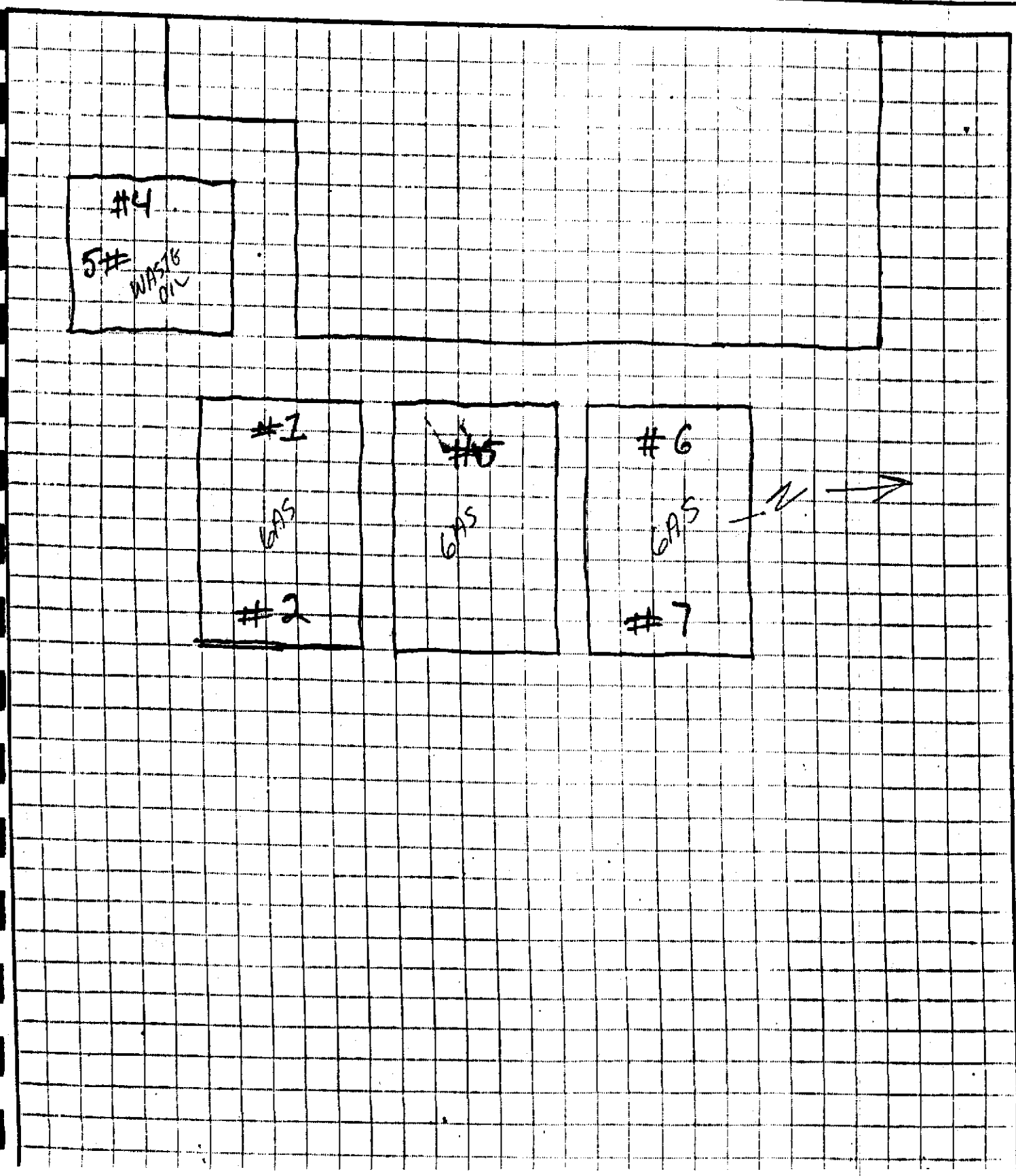
STA. NO.	DATE	TIME	COMP	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH Gas+BTXE	Total Organic Lead	TPH Heavy	Oil & Grease	8240	REMARKS
#1	11/17	1315		X	So. Tank 9½' West		X					
#2	11/17	1325		X	So. Tank 7½ East		X					
#3	11/17	1400		X	Waste Oil Exc. 5' S.S.W.				X	X	X	
#4	11/17	1410		X	Waste Oil Exc. 6' Sidewall west				X	X	X	
#5	11/17	1425		X	Center Tank 8' West End		X	X				
#6	11/17	1435		X	No. Tank 9½' West		X					
#7	11/17	1445		X	No. Tank 9½' East		X					

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Neil Dech			Barbara Wilhide		
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		J Schwartz	11-20-87 1050	8644	

PETRO TECH
1903 San Miguel Avenue
SANTA ROSA, CALIFORNIA 95403
(707) 544-TECH

Site Grimit Auto #0380
Address
Scale
Drawn By Neil Decker
Drawing of

Date 11/17



PETRO TECH

1903 San Miguel Avenue
Santa Rosa CA 95403
(707) 544-8324
FAX (707) 578-7145

CA Contractors Lic. #518977 A, C61/D40, HAZ
CA Tank Testing Lic. #90-1063

June 13, 1991

Mr. Doyle Grimit
14366 Lark Street
San Leandro, CA 94578-1728
(415) 357-5133

RE: Soil sample analysis NET LOG #7564.

Dear Mr. Grimit,

Enclosed please find and review the final soil sample analysis related to the recent excavation attempt of the former waste oil tank pit. Samples #1-4 represent sidewall samples of native soils, samples #5 & 6 represent native soils in the floor of the excavation, and sample #7 represents the stockpile of removed soils (approximately 20 cubic yards or less).

All samples appear to be primarily contaminated with oil and grease, motor oil, and gasoline with its constituents BTX&E. Some metals were detected but at low levels. It would appear that the soil samples indicate waste motor oil constituents and gasoline constituents most likely from the nearby gasoline tanks (removed).

If you have any further questions please feel free to call me.

Wayne S. Wellock

Encl. NET Final Report LOG #7564
Sample Chain of Custody

cc: Mr. Larry Seto - Alameda County Health

SAMPLE CHAIN OF CUSTODY RECORD

Petro Tech 1903 San Miguel Ave., Santa Rosa, CA 95403 (707) 544-8324

Job # 1319	Job Name Grimit Auto
Job Address	1970 Seminary Av. Oakland
Sampler's Signature	
Witness Signature	Bill Brayton

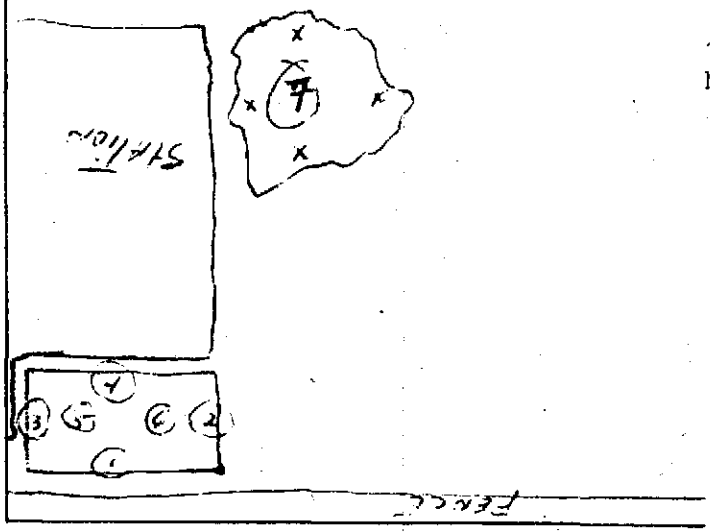
I.D.#	DATE	TIME	COMP	GRAB	QTY	DEPTH	SAMPLE LOCATION	TPH GAS	TPH HVY D/NO	BTEX	TOT LEAD	ORG LEAD	TOT O&G	8240	8270	8 RCRA METALS
1	5-16-91	1175		X	1	5 FT	So. Side wall	X	X	X			X			X
2	5-16-91	1181		X	1	5 FT	E. " "	X	X	X			X			X
3	5-16-91	1185		X	1	5 FT	N. " "	X	X	X			X			X
4	5-16-91	1201		X	1	5 FT	W. " "	X	X	X			X			X
5	5-16-91	1208		X	1	5.5 FT	FLOOR WEST	X	X	X			X			X
6	5-16-91	1216		X	1	7.5 FT	FLOOR EAST	X	X	X			X			X
7	5-16-91		X		4		N.E. Side of Stockpile	X	X	X			X			X

ANALYSIS REQUESTED

REMARKS

2"x6" Brass driver Tubes
2ND PIT BOTTOM SAMPLE REQUESTED BY INSPECT.
8 RCRA METALS ARE: CADMIUM, CHROMIUM, ZINC, LEAD, COPPER, NICKLE, ECT.

SAMPLE LOCATION SKETCH



TURNAROUND REQUEST

STAT	RUSH	ASAP
(10-15 days)	(5 days)	(1-2 days)

SAMPLE POSSESSION RECORD

Relinquished by	Received by	Date	Time
		5/17/91	0845

LOG NUMBER ASSIGNED AT LABORATORY IS: 7564

original = laboratory yellow = job file pink = office

NATIONAL ENVIRONMENTAL TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Wayne Wellock
Petrotech
1903 San Miguel Ave.
Santa Rosa, CA 95403

Date: 06-05-91
NET Client Acct No: 546
NET Pacific Log No: 7564
Received: 05-17-91 0845

Client Reference Information

Grimit Auto, Oakland; Job: 1319

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

JS:rct
Enclosure(s)

NET Pacific, Inc.

Client No: 546
Client Name: Petrotech
NET Log No: 7564

Date: 06-05-91

Ref: Grimit Auto, Oakland; Job: 1319

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 1 SOUTH SIDE 05-16-91 1175 85520	 2 WEST SIDE 05-16-91 1181 85521	Units
Oil & Grease(Total)	EPA9071	50	15,000	1,200	mg/Kg
Oil & Grease(Non-Polar)	SM5520EF	50	9,800*	890	mg/Kg
Arsenic	7060	0.5	6.0	6.3	mg/Kg
Barium	6010	2	140	110	mg/Kg
Cadmium	6010	2	2	3	mg/Kg
Chromium	6010	2	47	53	mg/Kg
Lead (EPA 7421)	7421	0.2	54	5.5	mg/Kg
Mercury	7471	0.1	0.10	ND	mg/Kg
Selenium	7740	0.5	ND	ND	mg/Kg
Silver	6010	2	ND	ND	mg/Kg
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (SOIL)			--	--	
DILUTION FACTOR *			10	1	
DATE ANALYZED			05-29-91	05-29-91	
METHOD GC FID/5030			--	--	
as Gasoline		1	190	ND	mg/Kg
METHOD 8020			--	--	
DILUTION FACTOR *			10	1	
DATE ANALYZED			05-29-91	05-29-91	
Benzene		2.5	ND	ND	ug/Kg
Ethylbenzene		2.5	580	ND	ug/Kg
Toluene		2.5	ND	ND	ug/Kg
Xylenes, total		2.5	1,300	ND	ug/Kg
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (SOIL)			--	--	
DILUTION FACTOR *			40	1	
DATE EXTRACTED			05-18-91	05-18-91	
DATE ANALYZED			05-23-91	05-23-91	
METHOD GC FID/3550			--	--	
as Diesel		1	570 *	ND	mg/Kg
as Motor Oil		10	2,700	61	mg/Kg

* NOTE: Petroleum hydrocarbon as diesel result due to a petroleum hydrocarbon that is lighter than diesel.

NET Pacific, Inc.

Client No: 546
Client Name: Petrotech
NET Log No: 7564

Date: 06-05-91
Page: 3

Ref: Grimit Auto, Oakland; Job: 1319

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 3 EAST SIDE 05-16-91 1185 85522	 4 NORTH SIDE 05-16-91 1201 85523	Units
Oil & Grease(Total)	EPA9071	50	11,000	410	mg/Kg
Oil & Grease(Non-Polar)	SM5520EF	50	7,500	230	mg/Kg
Arsenic	7060	0.5	8.9	12	mg/Kg
Barium	6010	2	120	250	mg/Kg
Cadmium	6010	2	2	5	mg/Kg
Chromium	6010	2	38	110	mg/Kg
Lead (EPA 7421)	7421	0.2	6.5	28	mg/Kg
Mercury	7471	0.1	0.17	ND	mg/Kg
Selenium	7740	0.5	ND	ND	mg/Kg
Silver	6010	2	ND	ND	mg/Kg
PETROLEUM HYDROCARBONS VOLATILE (SOIL)			--	--	
DILUTION FACTOR *			--	--	
DATE ANALYZED			1	1	
METHOD GC FID/5030			05-29-91	05-29-91	
as Gasoline		1	--	--	
METHOD 8020			4.4	12	mg/Kg
DILUTION FACTOR *			--	--	
DATE ANALYZED			1	1	
Benzene		2.5	05-29-91	05-29-91	
Ethylbenzene		2.5	ND	4.2	ug/Kg
Toluene		2.5	8.3	9.1	ug/Kg
Xylenes, total		2.5	ND	ND	ug/Kg
PETROLEUM HYDROCARBONS EXTRACTABLE (SOIL)			21	21	ug/Kg
DILUTION FACTOR *			--	--	
DATE EXTRACTED			--	--	
DATE ANALYZED			100	20	
METHOD GC FID/3550			05-18-91	05-18-91	
as Diesel		1	05-28-91	05-23-91	
as Motor Oil		10	--	--	
			ND	ND	mg/Kg
			4,400	250	mg/Kg

NET Pacific, Inc.

Client No: 546 Date: 06-05-91
Client Name: Petrotech
NET Log No: 7564 Page: 4

Ref: Grimit Auto, Oakland; Job: 1319

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 5 WEST FLOOR 05-16-91 1208 85524	 6 EAST FLOOR 05-16-91 1216 85525	Units
Oil & Grease(Total)	EPA9071	50	5,500	3,500	mg/Kg
Oil & Grease(Non-Polar)	SM5520EF	50	3,700	2,200	mg/Kg
Arsenic	7060	0.5	10	14	mg/Kg
Barium	6010	2	230	250	mg/Kg
Cadmium	6010	2	4	5	mg/Kg
Chromium	6010	2	51	59	mg/Kg
Lead (EPA 7421)	7421	0.2	120	27	mg/Kg
Mercury	7471	0.1	0.19	0.16	mg/Kg
Selenium	7740	0.5	ND	ND	mg/Kg
Silver	6010	2	ND	ND	mg/Kg
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (SOIL)			--	--	
DILUTION FACTOR *			20	100	
DATE ANALYZED			05-29-91	05-28-91	
METHOD GC FID/5030			--	--	
as Gasoline		1	270	260	mg/Kg
METHOD 8020			--	--	
DILUTION FACTOR *			20	200	
DATE ANALYZED			05-29-91	05-24-91	
Benzene		2.5	ND	ND	ug/Kg
Ethylbenzene		2.5	1,300	1,200	ug/Kg
Toluene		2.5	3,500	ND	ug/Kg
Xylenes, total		2.5	ND	2,500	ug/Kg
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (SOIL)			--	--	
DILUTION FACTOR *			10	10	
DATE EXTRACTED			05-18-91	05-18-91	
DATE ANALYZED			05-23-91	05-23-91	
METHOD GC FID/3550			--	--	
as Diesel		1	140 *	110 *	mg/Kg
as Motor Oil		10	670	680	mg/Kg

* NOTE: Petroleum hydrocarbon as diesel results are due to a petroleum hydrocarbon that is lighter than diesel.

NET Pacific, Inc.

Client No: 546
Client Name: Petrotech
NET Log No: 7564

Date: 06-05-91
Page: 5

Ref: Grimit Auto, Oakland; Job: 1319

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 7 comp STOCKPILE 05-16-91 85526	Units
Oil & Grease(Total)	EPA9071	50	1,500	mg/Kg
Oil & Grease(Non-Polar)	SM5520EF	50	1,000	mg/Kg
Arsenic	7060	0.5	6.6	mg/Kg
Barium	6010	2	120	mg/Kg
Cadmium	6010	2	2	mg/Kg
Chromium	6010	2	34	mg/Kg
Lead (EPA 7421)	7421	0.2	39	mg/Kg
Mercury	7471	0.1	ND	mg/Kg
Selenium	7740	0.5	ND	mg/Kg
Silver	6010	2	ND	mg/Kg
PETROLEUM HYDROCARBONS			--	
VOLATILE (SOIL)			--	
DILUTION FACTOR *			1	
DATE ANALYZED			05-29-91	
METHOD GC FID/5030			--	
as Gasoline		1	11	mg/Kg
METHOD 8020			--	
DILUTION FACTOR *			1	
DATE ANALYZED			05-29-91	
Benzene		2.5	3.1	ug/Kg
Ethylbenzene		2.5	44	ug/Kg
Toluene		2.5	ND	ug/Kg
Xylenes, total		2.5	94	ug/Kg
PETROLEUM HYDROCARBONS			--	
EXTRACTABLE (SOIL)			--	
DILUTION FACTOR *			20	
DATE EXTRACTED			05-18-91	
DATE ANALYZED			05-23-91	
METHOD GC FID/3550			--	
as Diesel		1	ND	mg/Kg
as Motor Oil		10	710	mg/Kg

NET Pacific, Inc.

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 16th Edition, APHA, 1985.

SITE SAFETY PLAN

Project No. E-10-1-019 Field Activities Date Jan, 1993

Client Doyle Grimit Address 14366 Lark St, San Leandro CA

Contact Person Doyle Grimit Telephone No. 510-357-5133

Job Location 1970 Seminary, Oakland CA

Project Description monitoring well installing

Project Manager David F. Hoexter Site Health & Safety Manager David F. Hoexter

Site History former gasoline service station - tanks removed

Chemical Hazards

Chemical Name	Description	Health & Safety Standards	Persons Exposed and Potential Routes of Exposure	Symptoms of Acute Exposure
Gasoline	Flam. liquid	300 ppm	Driller & field geo-	Dizziness,
	or contam.	-8 hr.	sist / tech -	headache,
	solid soil		inhalation / dermal	nausea
Petroleum oil		above	levels apply	

Physical Hazards normal drilling hazards - trip / fall, handling heavy equipment, auto traffic, underground utilities; overhead lines

Personal Protective Equipment Required PPE-D; have PPE-C available, Steel toe boots, hard hats req

Air Monitoring Strategy (including action levels) Anticipated soil, water or air levels are moderate. If nuisance odors persist, employ level C protection (half or full-face resp. protect. with organic vapor cartridge)

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Palo Alto, CA 94303

Site Control Measures use traffic cones to block autos and limit pedestrian traffic; no smoking, eating or drinking in work area

Decontamination Procedures (personal and equipment) sampling equipment - TSP/water; drilling equipment - steam clean, retain decon. water; dermal exposure - soap & water

Hospital/Clinic Highland General Hospital Phone 510-534-8055

Hospital Address 1411 E. 31st St., Oakland CA

Paramedic 911 Fire Dept. 911 Police Dept. 911

Emergency Procedures Evacuate to open air. First aid equipment (first aid kit, fire extinguisher, emergency eye wash) located with drill rig and with SHSM/project mgr. - telephone on site

Prepared by Dan J. Hoexter

Date 12/17/93

Reviewed/Approved by _____

Date _____

Read by _____ Date _____

_____ Date _____

_____ Date _____

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


PIEDMONT
Lake
MONTCLAIR GOLF CLUB
GREEK ORTHODOX CHURCH
MORMON TEMPLE
COAST GUARD
ISLAND
U.S. COAST GUARD
CRAA CLAIMS OFC.
ISLAND YACHT CLUB
Sp. Peralta
MILLS COLLEGE
SITE
OAKLAND-ALAMEDA CO. COLISEUM
SPORTS ARENA
STADIUM
R-5
B-3,J,K-4,5
R-6
H-3
J-2
E-7
C-7
E-7
B,C-2,K-4
C-7
R-7
E-5

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Palo Alto, CA 94303

SAFETY MEETING

Date _____ Time _____ Job Number _____

Project Name _____ Address _____

Specific Location _____

Type of Work _____

Chemicals Used _____

SAFETY TOPICS PRESENTED

Protective Clothing/Equipment _____

Chemical Hazards _____

Physical Hazards _____

Emergency Procedures _____

Hospital/Clinic _____ Phone _____ Paramedic Phone _____

Hospital Address _____

Special Equipment _____

Other _____

ATTENDEES

Name (printed)	Signature

Meeting conducted by:

_____ _____

Name (printed) Signature

Supervisor _____

APPENDIX D

MONITORING WELL
CONSTRUCTION DIAGRAM

PROJECT: Grimit - 1970 Seminary Ave, Oakland, CA | **BORING NO:** MW -

DATE DRILLED/LOGGED BY * / DFH

TYPE OF BORING/DIAMETER 8" / HSA

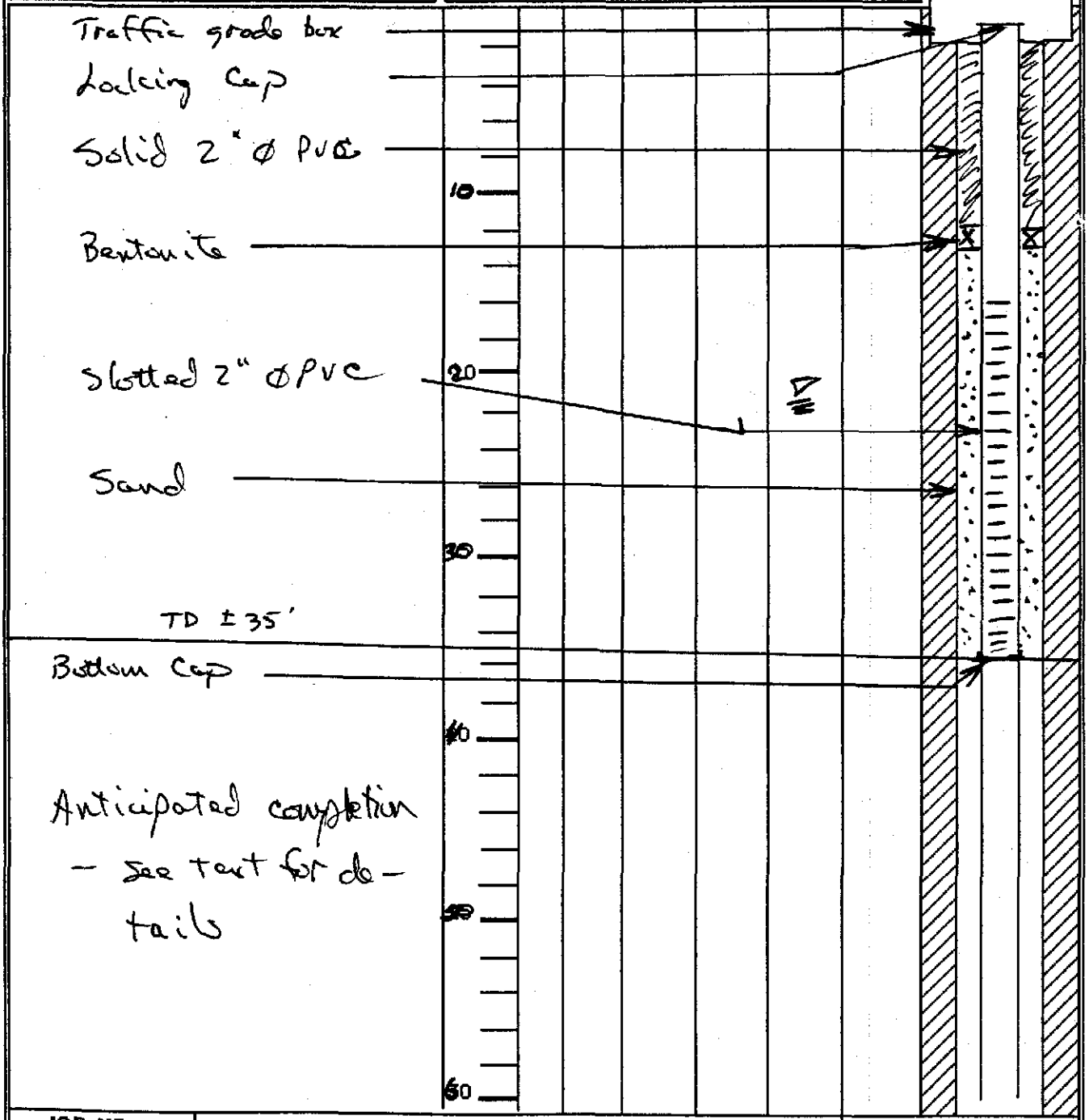
SURFACE ELEVATION * MSL

HAMMER WEIGHT 140# / 30"

DESCRIPTION OF MATERIALS:

SAMPLES

DEPTH IN FT. | SAMPLE | NUMBER - DIAMETER | BLOWS/FT. | PID - PPM | GROUND WATER LEVEL | OTHER TESTS | WELL COMPLETION



JOB NO: E-10-1-019

HOEXTER CONSULTING, INC.

FIGURE: *

APPENDIX E

QUALIFICATIONS
DAVID F. HOEXTER

HOEXTER CONSULTING, INC.

734 Torreya Court
Palo Alto, California 94303

(415) 494-2505

DAVID F. HOEXTER

ENVIRONMENTAL QUALIFICATIONS

BACKGROUND SUMMARY

David F. Hoexter is an engineering geologist with 18 years of varied geoscience consulting experience. His career has included both engineering geology and environmental consultations, including soil and ground water remediation studies, property transfer assessments, and geologic input to environmental impact reports. He has particular experience within Northern California, as well as throughout the United States, and abroad. Mr. Hoexter founded Hoexter Consulting, Inc., in October, 1991.

PROFESSIONAL EDUCATION

M.S. Engineering Geology, 1975, Stanford University.
B.A. Geology and Political Science, 1972, University of California, Santa Barbara.

REGISTRATION

Registered Geologist, RG 3536, 1981.
Certified Engineering Geologist, CEG 1158, 1983.
Registered Environmental Assessor, REA 762, 1988.

GENERAL EXPERIENCE

* Soil and ground water remediation of industrial, commercial, underground tank sites.
* Property transfer/environmental assessments, including initial Phase I and Phase II soil and ground water quality studies; studies conducted for developers, financial institutions, engineers.
* Completed and current certifications of Health and Safety Training for Hazardous Waste Workers [OSHA 29CFR 1910.120(e)]: 40 hour basic, 8 hour update, and 8 hour supervisor's training.
* Corporate Health and Safety Manager for 60 person firm.
* Engineering geologic studies for site development, including subdivisions, residences, office and commercial structures; dam sites; slope stability studies; fault rupture hazard; seismicity; stream erosion; environmental impact reports.
* Expert witness testimony.
* Damage causation evaluations for insurance companies, attorneys, homeowners.
* Publications in engineering geology and environmental studies.
* Current chairman (1992-94) of 400 member San Francisco Section of the Association of Engineering Geologists.

REPRESENTATIVE EXPERIENCE

Parcel Distribution Facility, Richmond California: conducted preliminary environmental assessment and follow-up subsurface investigations and remediation of 63 acre former industrial site; initial studies resulted in delineation of 12 areas of possible contamination and consequent soil and ground water quality investigation. Delineated contaminated areas. Contaminants consisted of TCE, petroleum hydrocarbons, oils, and heavy metals. Conducted hydrogeologic parameter and beneficial use studies. Negotiated cleanup standards with regulatory agencies. Developed work plan for mitigation and remediation of contaminated soils and ground water. Initiated site remediation.

TCA Release, Industrial Facility, Union City, California: principal investigator of a TCA release from a paint dip tank. Conducted subsurface investigations, consisting of delineating extent of soil and ground water contamination, and supervised excavation and disposal of contaminated soil and ground water. Conducted extensive negotiations among property owner, responsible party, and regulatory agencies.

Clement Street Building, Alameda, California: project manager of cyanide remediation project. Soils contaminated with cyanide and metals from a photoetching company were identified, and the extent of contamination evaluated. The site was located in the basement of a building in use as offices. An innovative combination of soil removal and in-situ encapsulation was developed and implemented. A health-risk evaluation, and extensive regulatory agency negotiations were conducted. Ground water testing indicated minimal risk to drinking water or marine resources.

Los Gatos Parking Structure, Los Gatos, California: during site grading, petroleum hydrocarbon, solvent, and semi-volatile organic compounds were encountered in the vicinity of three previously unknown wooden vats and two underground fuel tanks. A historical review established that the site had been utilized for coal gasification. Managed investigation of this site, including installation of eight monitoring wells and 16 additional borings. Provided observation of tank, vat, and contaminated soil removals, and provided recommendations for soil and ground water remediation.

Pesticide Contamination, Residential Subdivision, Mountain View, California: expert witness for homeowners association. The site was originally a plant nursery. Prior to development of the subdivision, pesticide-contaminated soils were excavated and placed under streets prior to paving. Subsequently, the asphalt has failed, necessitating repairs which may necessitate contact with the encapsulated soils. This will result in significantly increased construction costs. Hoexter Consulting reviewed extensive regulatory agency and consultants' files, and has provided consultations related to the history of activities on the site and options to mitigate the problem. Negotiations are currently being held with the project developer and state agencies.

Proposed San Pablo Shopping Center, San Pablo, California: conducted preliminary environmental assessment of approximate 25 acre property, and delineated potential environmental concerns. Performed soil sampling and analytical testing of a former service station on the site, to determine the extent of soils contaminated by gasoline. Confirmed that there was no contamination of ground water to a depth of 50 feet. Recommended contaminated soil mitigation by removal and encapsulation under

pavement areas. Negotiated clean-up levels with agencies, and observed and documented the soil remediation.

Paradox Basin Nuclear Waste Repository, Moab, Utah: as member of hydrogeologic team assessing 3,000 foot deep proposed nuclear waste repository for Battelle Memorial Institute and the U.S. Department of Energy; supervised drilling and testing of 5,000 foot deep hydrogeologic test borings and wells. Study involved a multi-million dollar budget to determine primary non-military nuclear waste for entire United States.

Waste Chemical Disposal Wells, Tennessee, Louisiana, Ohio, Alabama: responsible for permitting, installation, and rehabilitation of 3-4,000 foot deep waste chemical by-product brine injection wells.

Chemical Plant Studies, California, Idaho, Utah: investigated the seismic setting of 12 chemical production facilities, as input to structural engineering studies of each site. Evaluated production facilities, waste ponds, and chemical storage vessels.

Proposed Subdivision, Lafayette, California: prepared engineering geologic and geotechnical engineering input to environmental impact evaluation and report for proposed subdivision.

Insurance Company Causation Studies, Northern California: evaluated soil and erosion problems at numerous sites for insurance company claims; studies included extensive evaluation of the flooding at Alviso, Santa Clara County, during winter of 1982-83; landslides; settlement; expansive soil; stream erosion.

Tallahalla Creek Oil Field, Mississippi: evaluated the production potential of an operating oil field. Study included correlation and interpretation of geophysical well logs and structural sections, and determination of remaining recoverable oil.

PUBLICATIONS

"A Method of Evaluating the Relative Stability of Ground for Hillside Development" (with G. Holzhausen and A.E. Soto); Engineering Geology (Elsevier), 12:319-336, 1978.

"The Structure of a Monocline in the Syrian Arc System, Middle East - Surface and Subsurface Analysis" (with Z. Reches and F. Hirsch), Journal Petroleum Geology, 3.4:413-425, April, 1981.

"Holocene Seismic and Tectonic Activity in the Dead Sea Area" (with Z. Reches), in Dead Sea Rift, R. Freund and Z. Garfunkel, eds., Tectonophysics 80:235-254, 1981.

"Hydrogeologic Testing of the E.J. Kubat Borehole, San Juan County, Utah: Utilization of a High Pressure Instrumented Flow Control System", in Proceedings 1982 Symposium on Instrumentation and Control of Fossil Energy Processes, Argonne National Laboratory, prepared for U.S. Department of Energy, 540-547, 1982.

"Deformation Along the Hayward Fault Zone, North Berkeley: Fault Creep and Landsliding" (with C. Levine, B. Hecht, and G. Collier", in Hart, E.W, et al, Proceedings: Conference on Earthquake Hazards of the Eastern San Francisco Bay

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Area: C.D.M.G. S.P. 62:217-226, 1982.

"Results of Hydrologic Tests at Gibson Dome No. 1, Elk Ridge No. 1, and E.J. Kubat Boreholes, Paradox Basin, Utah" (with J.W. Thackston, L.M. Preslo and N. Donnelly); Battelle Memorial Institute, Report 491, 1984.

"Pre-Purchase Site Characterization of Soil and Ground Water Quality from the Perspective of California's Silicon Valley" (with D.M. Laduzinsky), Association of Engineering Geologists, Abstracts and Program, 29th Annual Meeting, 1986.

"Pre-Purchase Site Characterization of Soil and Ground Water Quality", Association of South Bay Brokers, Newsletter, Summer, 1986.

"Creep and Downslope Movements in the Hayward Fault Zone in North Berkeley: Ten Years Later", with K. Knudsen, B. Hecht, D. Laduzinsky, and G. Fiedler, in Borchardt, G, et al, Proceedings of the Second Conference on Earthquake Hazards in the eastern San Francisco Bay Area, California Division of Mines and Geology, Special Publication 113, in press.

"Potential for Triggered Slip on Secondary Faults in the East Bay: Implications for the Planning Process", in Borchardt, G, et al, Proceedings of the Second Conference on Earthquake Hazards in the eastern San Francisco Bay Area, California Division of Mines and Geology, Special Publication 113, in press.

dfhrev 7/24/93

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