Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

90 DEC 14 AM 9:10

December 10, 1990

Mr. Rafat Shahid
Alameda County
Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Re: Former Chevron Service Station #9-5607
5269 Crow Canyon Road
Castro Valley, CA

Dear Mr. Shahid:

Enclosed we are forwarding the Blaine Tech Services, Inc. Report dated October 24, 1990, documenting the soils sampled during the removal of the underground product tanks and piping and subsequent contaminant remediation activities.

As indicated in the report, the underground storage tanks removed appeared to be in good condition. Limited contamination was encountered in the former tank pit. No contamination was detected in the product line trenches with the exception of Xylene being detected at .0097 ppb in the north product line trench.

Overexcavation of the tank pit was performed to remove elevated levels of contamination. The tank pit was excavated to a depth of twenty-two (22) feet. The final excavation samples collected from the former tank pit detected ND to very low levels of TPH-gasoline with the exception of the sample collected from the northwest corner which detected TPH-gasoline at 1300 ppm. This area was not overexcavated due to the practical limitations of the excavation equipment. In reviewing past historic water data, depth to groundwater in this area has ranged from approximately 16 to 23 feet. It thus appears that the vadose zone contamination in this area is a result of the dissolved contaminants traveling along the capillary fringe.

Based on this information, no further soils remediation work is warranted at this time. The existing groundwater extraction system was temporarily shut down to allow for the tank excavation construction. On November 11, 1990, the system was back in operation. Chevron will continue to monitor this site and report findings on a quarterly basis.

If you have any questions or comments, please do not hesitate to contact me at (415) 842-9581.

Very truly yours,
C.G. Trimbach

By 
Nancy Vukelich

NLV/jmr
Enclosure

cc: Mr. Lester Feldman
RWQCB - Bay Area
1800 Harrison St., Ste. 700
Oakland, CA 94612

Ms. Bette Brummett-Owen
Chevron Property Management Specialist

TABLE OF CONTENTS

Chevron Station 95607

BLAINE
TECH SERVICES INC.

1370 TULLY RD., SUITE 505
SAN JOSE, CA 95122
(408) 995-5535

October 24, 1990

Chevron USA, Inc.
2410 Camino Ramon
San Ramon, CA 94583

Attn: Cynthia Wong

SITE:
Chevron Service Station No. **95607**
5269 Crow Canyon
Castro Valley

PROJECT:
Tank Removal

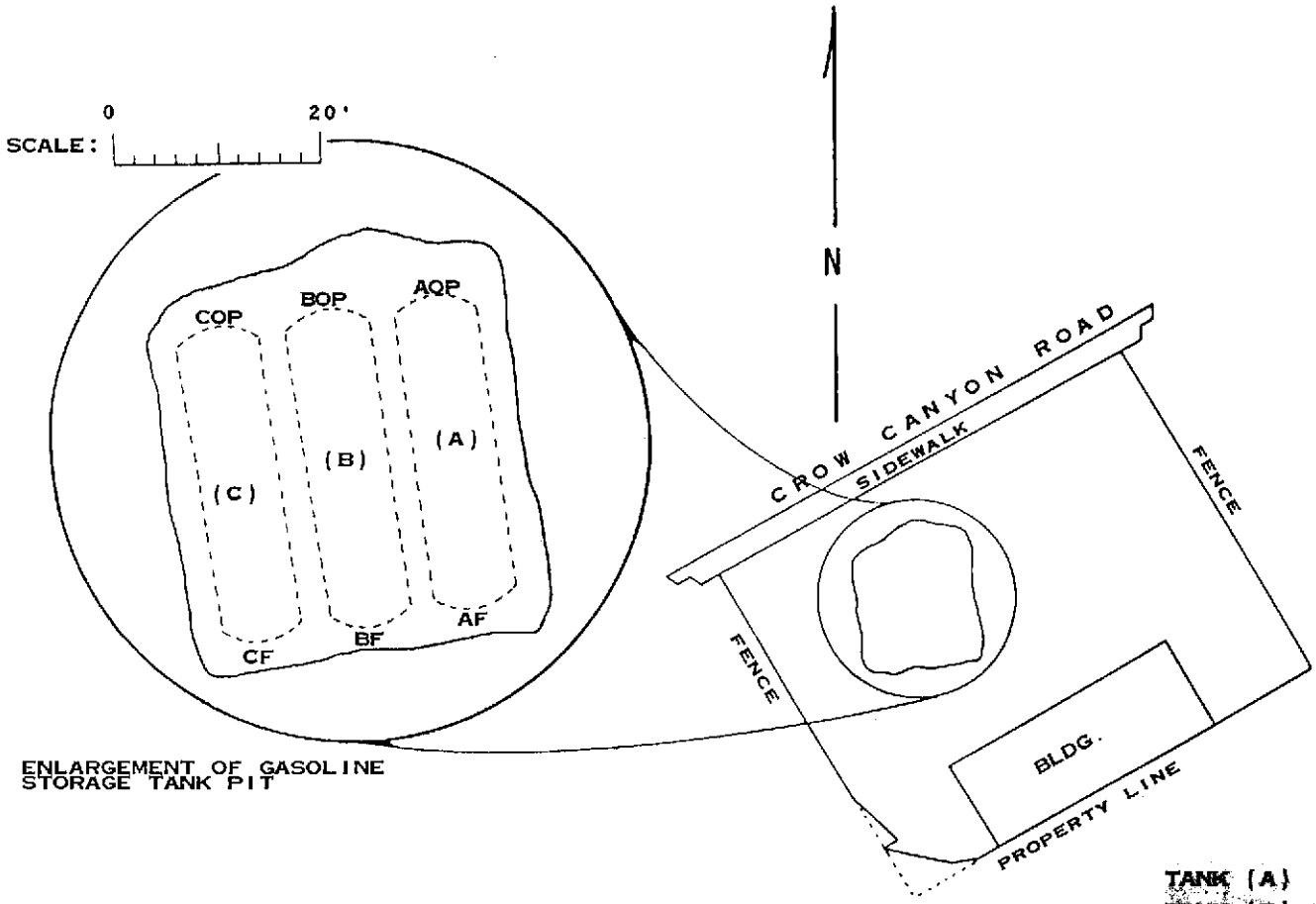
MULTIPLE EVENT SAMPLING REPORT 901022-V-2

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. does not participate in the interpretation of analytical results or engage in the marketing or installation of remedial systems.

This report covers the environmental sampling performed by our personnel during a series of four different sampling events that were completed during the tank removal project work at the site. The report presents each of these sampling events in chronological order, and contains descriptive text, diagrams, and a (fold out) comprehensive table of sampling locations and analytical results. The chain of custody records and certified analytical reports are presented as supporting documents in an appendix following the close of the report.

MASTER SITE DIAGRAM

Chevron Station 95607



SCALE: 0 75'

MAP REF: THOMAS BROS., ALAMEDA COUNTY P. 31 B-3

LEGEND: F = FILL END
OF = OPPOSITE THE FILL END

TANK (A) 10,000 GALLON FIBERGLASS GASOLINE TANK
TANK (B) 10,000 GALLON FIBERGLASS GASOLINE TANK
TANK (C) 10,000 GALLON FIBERGLASS GASOLINE TANK

TANK REMOVAL SAMPLING

October 2, 1990 / 901002-V-1

SCOPE OF REQUESTED SERVICES

In accordance with your request, our office was asked to provide field personnel who would be sent to the site for the specific purpose of obtaining environmental samples following the removal of three gasoline tanks.

Our personnel would collect the samples, arrange for the proper analyses of the samples and maintain adequate documentation for the issuance of a formal Sampling Report. The collection of environmental samples was to be performed in accordance with the requirements of the State Water Resources Control Board, Regional Water Quality Control Board, and the specific directions of the Local Implementing Agency (LIA) inspector.

EXECUTION OF THE WORK PERFORMED ON OCTOBER 2, 1990

Personnel were dispatched from our office and arrived at the subject site on Tuesday, October 2, 1990.

The subject site is located within the overall jurisdiction of the Regional Water Quality Control Board -- San Francisco Bay Region. Initial inspection and evaluation of the site is customarily conducted by the local implementing agency (LIA), which was the Alameda County Health Agency. The local implementing agency was represented by Mr. Scott Seery, who was present to observe the tank removal and sampling.

Chevron USA, Inc. was represented by Ms. Cynthia Wong.

In accordance with the local regulations and the field judgment of the LIA representative, a detailed inspection was conducted in which the tanks were visually inspected and likely failure points were probed with small pointed metal examination tools. No holes were observed in any of the tanks.

The tanks being removed were fiberglass and had been in the ground for approximately five years. They replaced steel tanks which had been in the ground for a longer period of time. We were told that there was a fuel loss associated with the steel tanks. Please note that we have no information on the location and orientation of the earlier steel tanks. From the information given to us, we understand that the fiberglass tanks were installed in the same pit from which the steel tanks were removed. While this is a common industry practice, dimensional differences sometimes require enlargement of the installation pit along one or two of its sides to accommodate fiberglass tanks. We have not attempted to reference the current sampling location to those earlier tanks.

The waste oil tank on the property was to remain and would be used by the new property owner.

TANK I.D.	SIZE IN GALLONS	TANK CONTENT	MATERIAL OF CONSTRUCTION	INSPECTION FOUND
A	10,000	GAS/REGULAR	FIBERGLASS	NO HOLES
B	10,000	GAS/SUPER	FIBERGLASS	NO HOLES
C	10,000	GAS/UNLEADED	FIBERGLASS	NO HOLES

Standard RWQCB interface samples were taken of the native soil at points corresponding to both ends of each underground storage tank. Stockpile samples of the soil generated during the excavation were also obtained, as were samples of the soil underlying the product line that conducted fuel from the underground storage tanks to the dispenser pumps. (Note: The tanks were bedded in pea gravel. This material was examined and it was decided that it need not be sampled.) The sampling was performed in accordance with the direction of the LIA representative, Mr. Seery. In the paragraphs that follow, the samples are described in the order in which they were collected:

Sample #1 was a standard interface sample taken at the end of Tank A opposite the fill pipe at a depth of eighteen feet (18.0') below grade.

Sample #2 was a standard interface sample taken at the fill pipe end of Tank A at a depth of seventeen feet (17.0') below grade.

Sample #3 was a standard interface sample taken at the end of Tank B opposite the fill pipe at a depth of sixteen feet (16.0') below grade.

Sample #4 was a standard interface sample taken at the end of Tank C opposite the fill pipe at a depth of sixteen feet (16.0') below grade.

Sample #5 was a standard interface sample taken at the fill pipe end of Tank C at a depth of fifteen feet (15.0') below grade.

Sample #6 was a standard interface sample taken at the fill pipe end of Tank B at a depth of seventeen feet (17.0') below grade.

Sample #7 was collected from the soil underlying the product line adjacent to the dispenser pump island closest to the station building at a depth of three and a half feet (3.5') below grade.

Sample #8 was collected from the soil underlying the product line adjacent to the dispenser pump island closest to Crow Canyon Road at a depth of three and a half feet (3.5') below grade.

Sample #9A-D was a four part composite collected from the stockpile of soil generated during the removal of the tanks. The stockpile was estimated to contain approximately 50 cubic yards of soil. As described in the Sampling Methodology section of the report, the sample consisted of four individual brass sample liners (#1-A, #1-B, #1-C, and #1-D) which were collected from different faces of the stockpile.

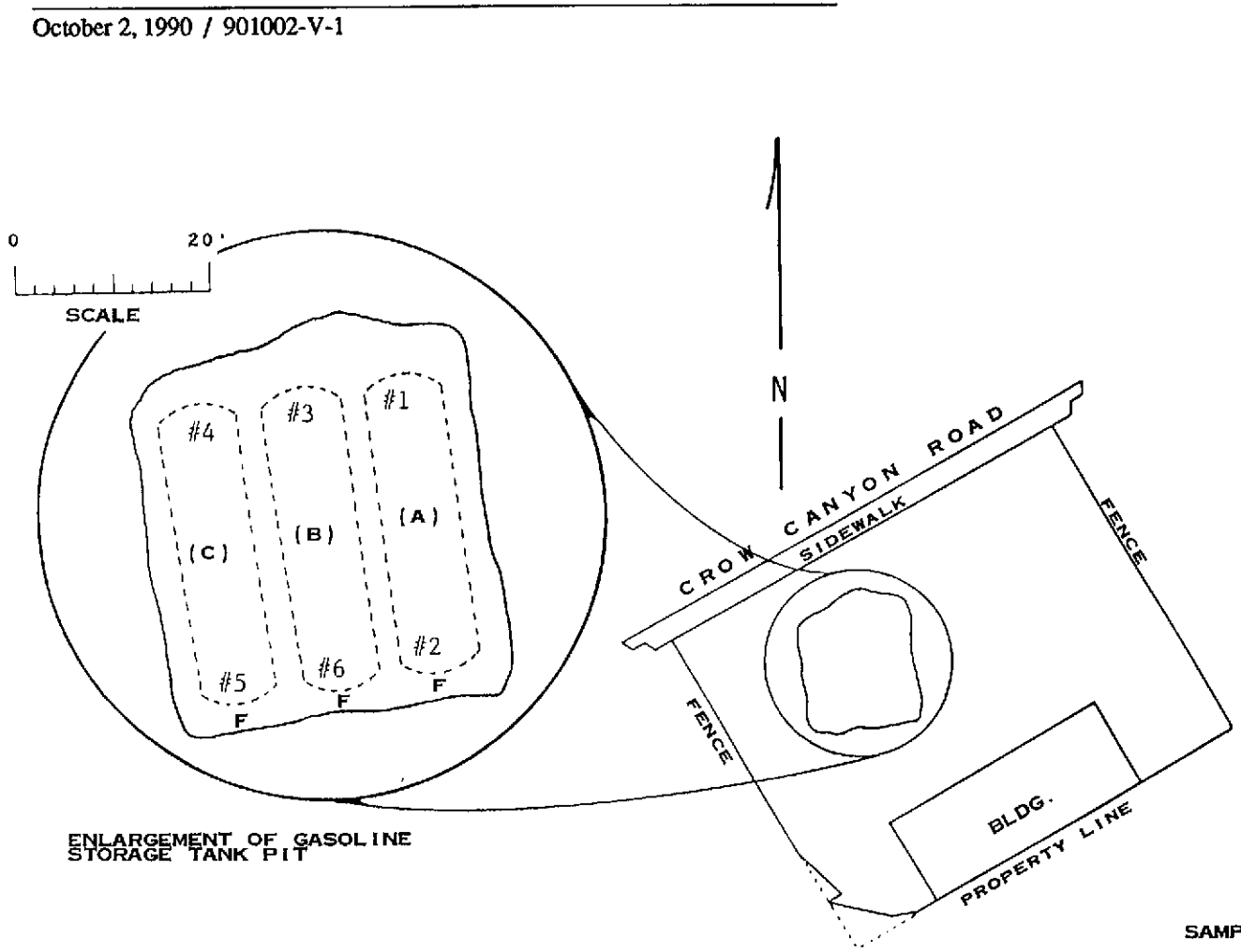
After completion of the field work, the sample containers were delivered to Sequoia Analytical Laboratory in Redwood City, California. Sequoia Analytical Laboratory is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1210.

It was requested that the analytical procedures used for these analyses be those specified by the Regional Water Quality Control Board -- San Francisco Bay Region. The methods are defined in attachments to the San Francisco RWQCB (Region 2) publication, Guidelines For Addressing Fuel Leaks and in documents issued to clarify the Board's interpretation of the California LUFT Manual.

TANK REMOVAL DIAGRAM

DIAGRAM ONE

October 2, 1990 / 901002-V-1



0 75'

SCALE:

MAP REF: THOMAS BROS.
ALAMEDA COUNTY
P. 31 B-3

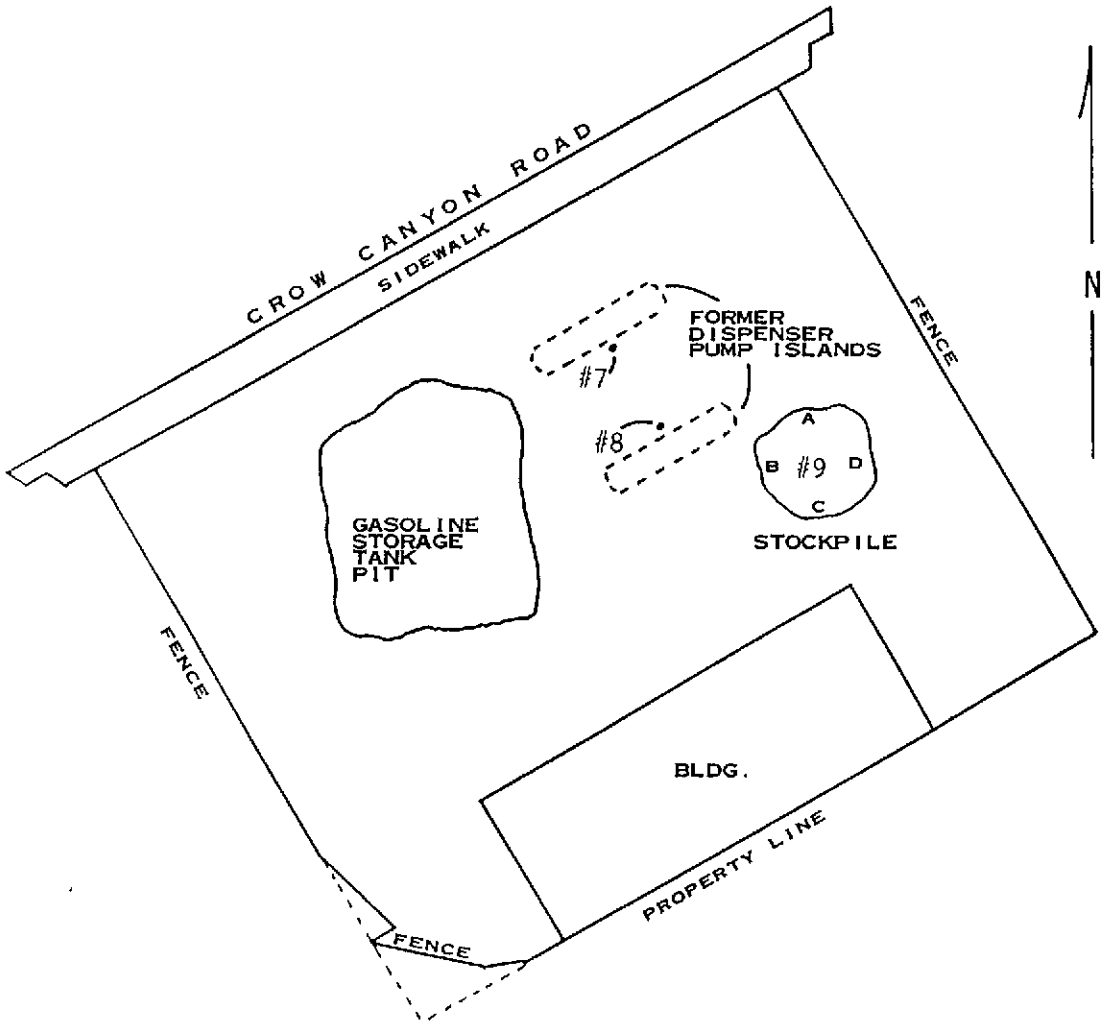
LEGEND: F = FILL END
OP = OPPOSITE THE FILL END

SAMPLING PERFORMED BY FRED VAN DEN BROECK
DIAGRAM PREPARED BY LEAH MORRIS

TANK REMOVAL DIAGRAM

October 2, 1990 / 901002-V-1

DIAGRAM TWO

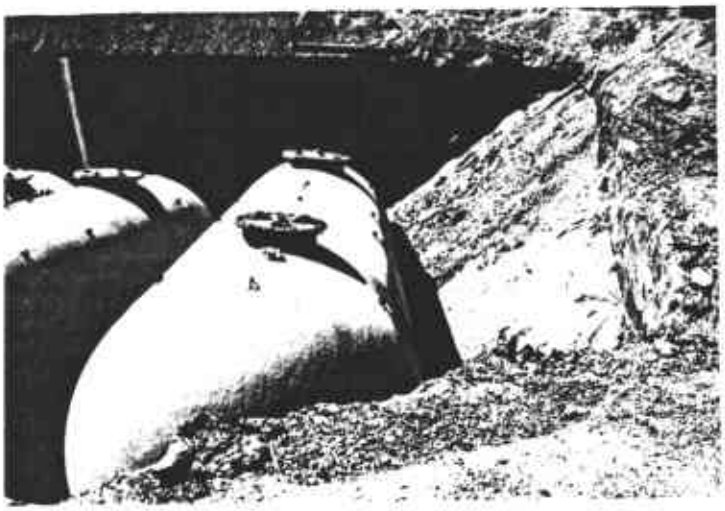


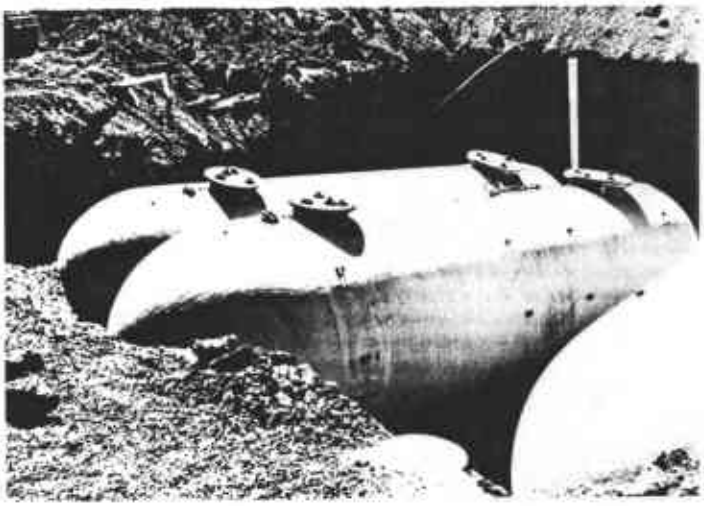
SCALE: 0 25' 50' 75'

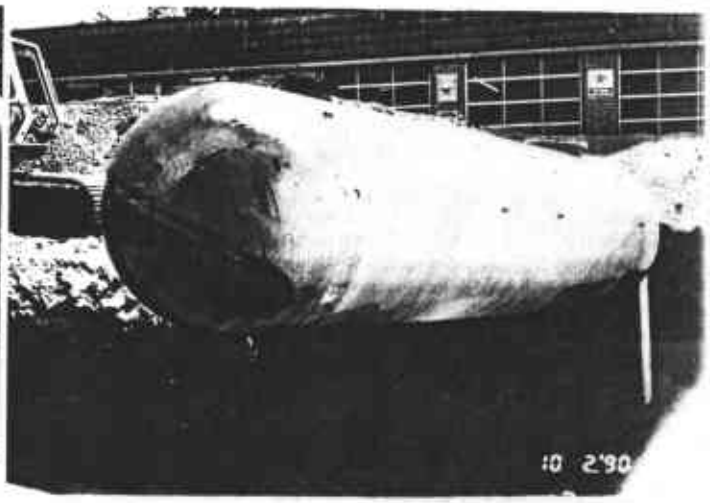
MAP REF: THOMAS BROS.
ALAMEDA COUNTY
P. 31 B-3

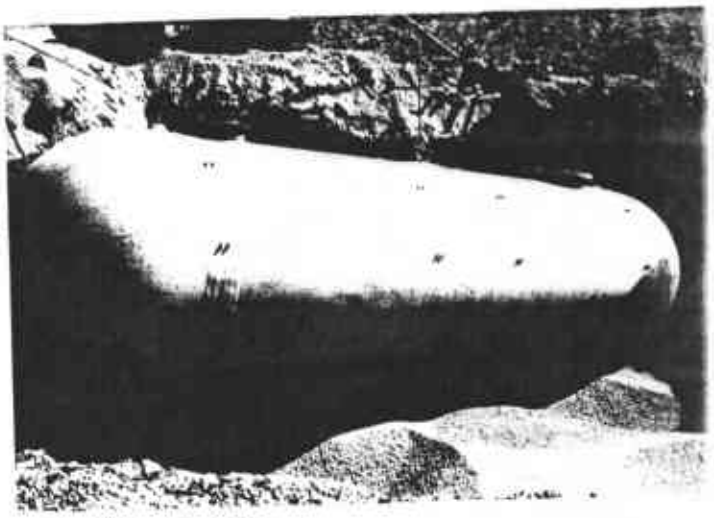
SAMPLING PERFORMED BY FRED VAN DEN BROECK
DIAGRAM PREPARED BY LEAH MORRIS

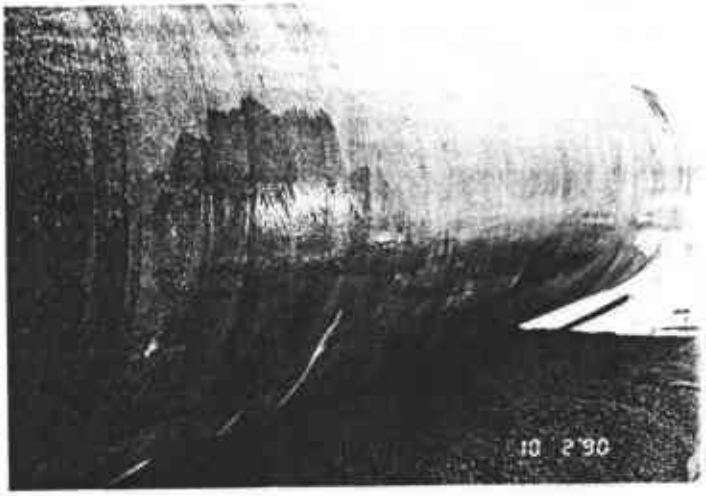

DEEP
OPEN TRENCH
DANGER

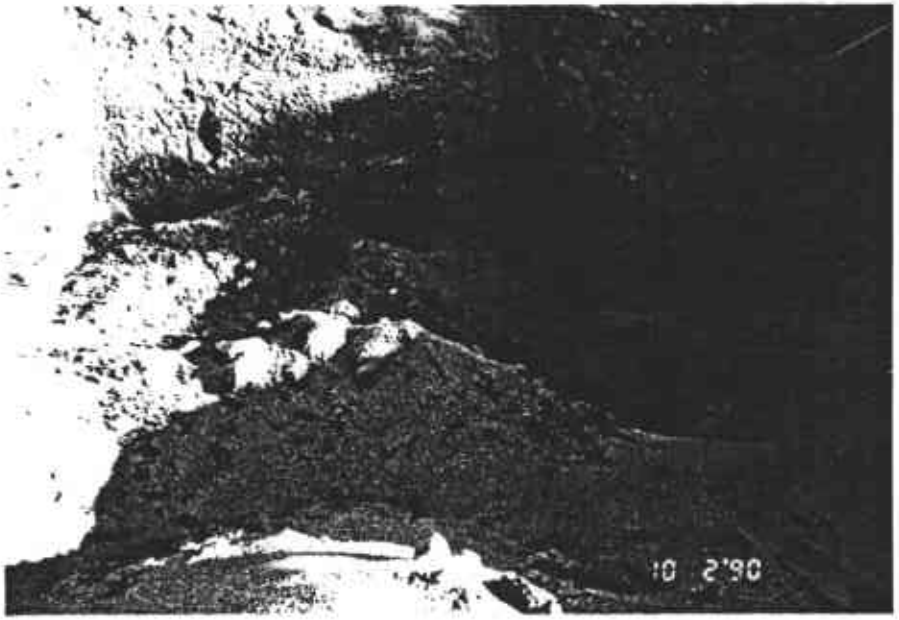












ADDITIONAL EXCAVATION SAMPLING

October 5, 1990 / 901005-H-5

SCOPE OF REQUESTED SERVICES

In accordance with your request, field personnel from our office would be dispatched to the site to observe the removal of additional soil from the gasoline tank pit bottom, collect samples, arrange for the proper analyses of the samples, and maintain adequate documentation culminating in the issuance of a formal Sampling Report.

EXECUTION OF THE WORK PERFORMED ON OCTOBER 5, 1990

Personnel from our office were present on Friday, October 5, 1990 to perform sampling following the additional excavation work. Our representative met with the LIA representative, Mr. Scott Seery of the Alameda County Health Agency, and Ms. Cynthia Wong of Chevron USA, Inc.

With the assistance of a backhoe, four samples were obtained from the north end of the tank pit. It was along this side of the tank pit that the ends of the tanks opposite the fill pipe were located.

Two confirming soil samples were taken, one at the end of Tank B and Tank C opposite the fill pipe. Two exploratory samples were taken, one from the east end and west end of the north wall of the tank pit. Both exploratory samples were taken in an area where discoloration of the soil was evident. The sampling was performed in accordance with the direction of the LIA representative, Mr. Seery. In the paragraphs that follow, the samples are described in the order in which they were collected:

Sample #1 was taken at the end of Tank B opposite the fill pipe at a depth of nineteen and a half feet (19.5') below grade.

Sample #2 was taken at the end of Tank C opposite the fill pipe at a depth of twenty feet (20.0') below grade.

Sample #3 was taken from the west end of the north wall of the tank pit at a depth of fifteen feet (15.0') below grade.

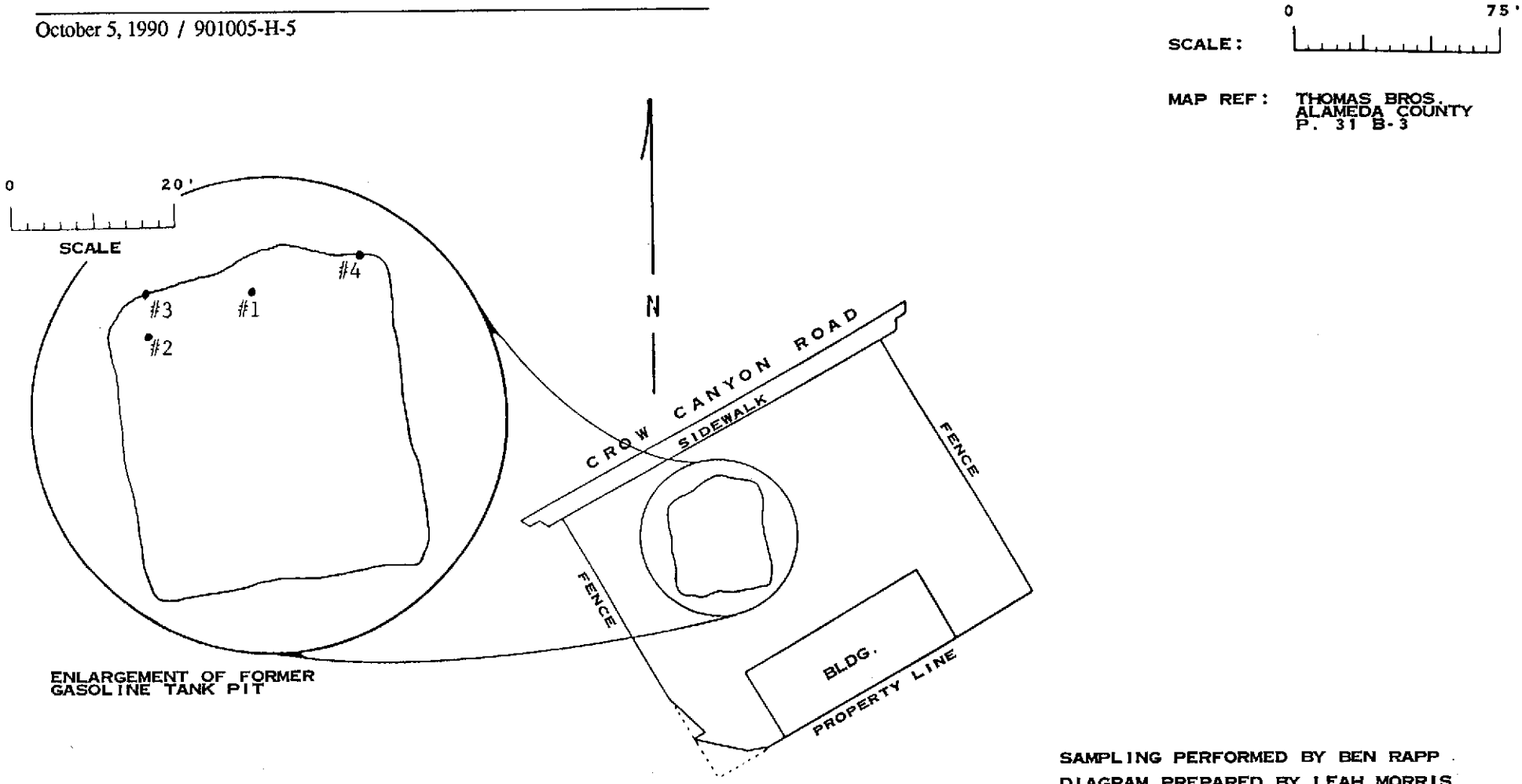
Sample #4 was taken from the east end of the north wall of the tank pit at a depth of eleven feet (11.0') below grade.

After completion of the field work, the sample containers were delivered to Sequoia Analytical Laboratory in Redwood City, California. Sequoia Analytical Laboratory is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1210.

It was requested that the analytical procedures used for these analyses be those specified by the Regional Water Quality Control Board -- San Francisco Bay Region. The methods are defined in attachments to the San Francisco RWQCB (Region 2) publication, Guidelines For Addressing Fuel Leaks and in documents issued to clarify the Board's interpretation of the California LUFT Manual.

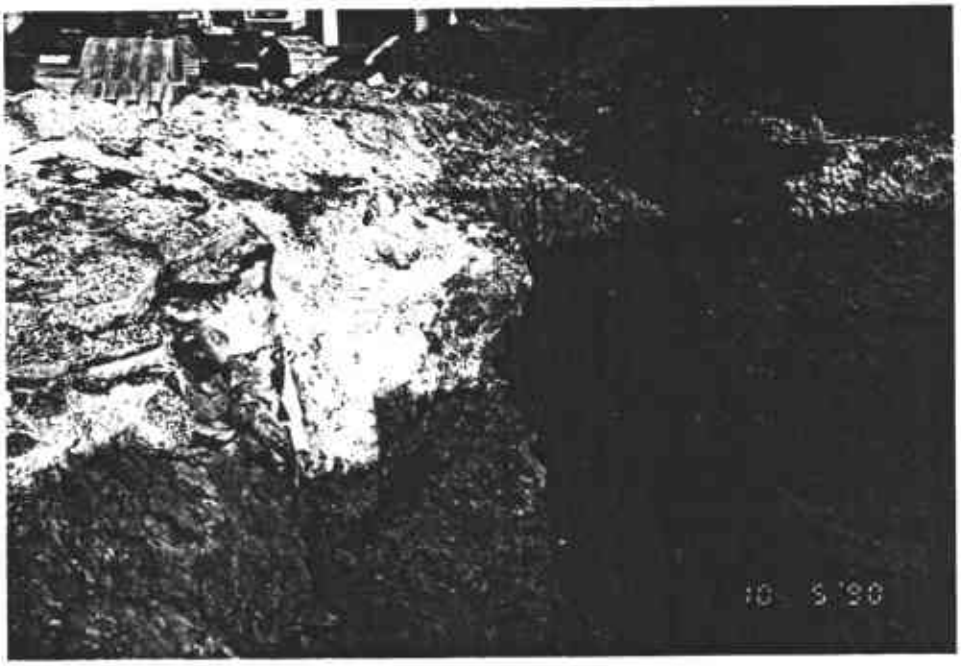
ADDITIONAL EXCAVATION DIAGRAM

October 5, 1990 / 901005-H-5



SAMPLING PERFORMED BY BEN RAPP

DIAGRAM PREPARED BY LEAH MORRIS


10 5'90

ADDITIONAL EXCAVATION SAMPLING

October 11, 1990 / 901011-V-1

SCOPE OF REQUESTED SERVICES

In accordance with your request, field personnel from our office would be dispatched to the site to observe the removal of additional soil from the gasoline tank pit bottom, collect samples, arrange for the proper analyses of the samples, and maintain adequate documentation culminating in the issuance of a formal Sampling Report.

EXECUTION OF THE WORK PERFORMED ON OCTOBER 11, 1990

Personnel from our office were present on Thursday, October 11, 1990 to perform sampling following the additional excavation work. Our representative met with the LIA representative, Mr. Scott Seery of the Alameda County Health Agency, and Ms. Nancy Vukelich of Chevron USA, Inc.

With the assistance of a backhoe, three confirming soil samples were obtained from the tank pit bottom. Two samples were taken from beneath the former location of Tank C and one sample was taken from beneath the former location of Tank A. This phase of the sampling was performed in accordance with the direction of the LIA representative, Mr. Seery.

Samples of the stockpiled soil generated during the removal of additional soil were also taken. This phase of the sampling was performed in accordance with the direction of the Chevron USA, Inc. representative, Ms. Vukelich.

The samples are listed in the following paragraphs:

Sample #1 was taken at the fill pipe end of Tank C at a depth of eighteen feet (18.0') below grade.

Sample #2 was taken at the end of Tank C opposite the fill pipe at a depth of twenty-two and a half feet (22.5') below grade.

Sample #7 was taken at the fill pipe end of Tank A at a depth of twenty-two and a half feet (22.5') below grade.

The additional excavation produced approximately 300 cubic yards of soil. This material was placed into two stockpiles. One pile was stacked to the west of the tank pit. The other pile was stacked to the east of the tank pit.

For sampling purposes, the stockpiled soil stacked to the west of the tank pit was divided into two sections (#3, #4). This stockpile was estimated to contain approximately 100 cubic yards of soil.

Sample #3A-D was a four part composite. As described in the Sampling Methodology section of the report, the sample consisted of four individual brass sample liners (#3-A, #3-B, #3-C, and #3-D) which were collected from different faces of the stockpile.

Sample #4A-D was also a four part composite and consisted of four individual brass sample liners.

For sampling purposes, the stockpiled soil stacked to the east of the tank pit was divided into four sections (#5, #6, #8 and #9). This stockpile was estimated to contain approximately 200 cubic yards of soil.

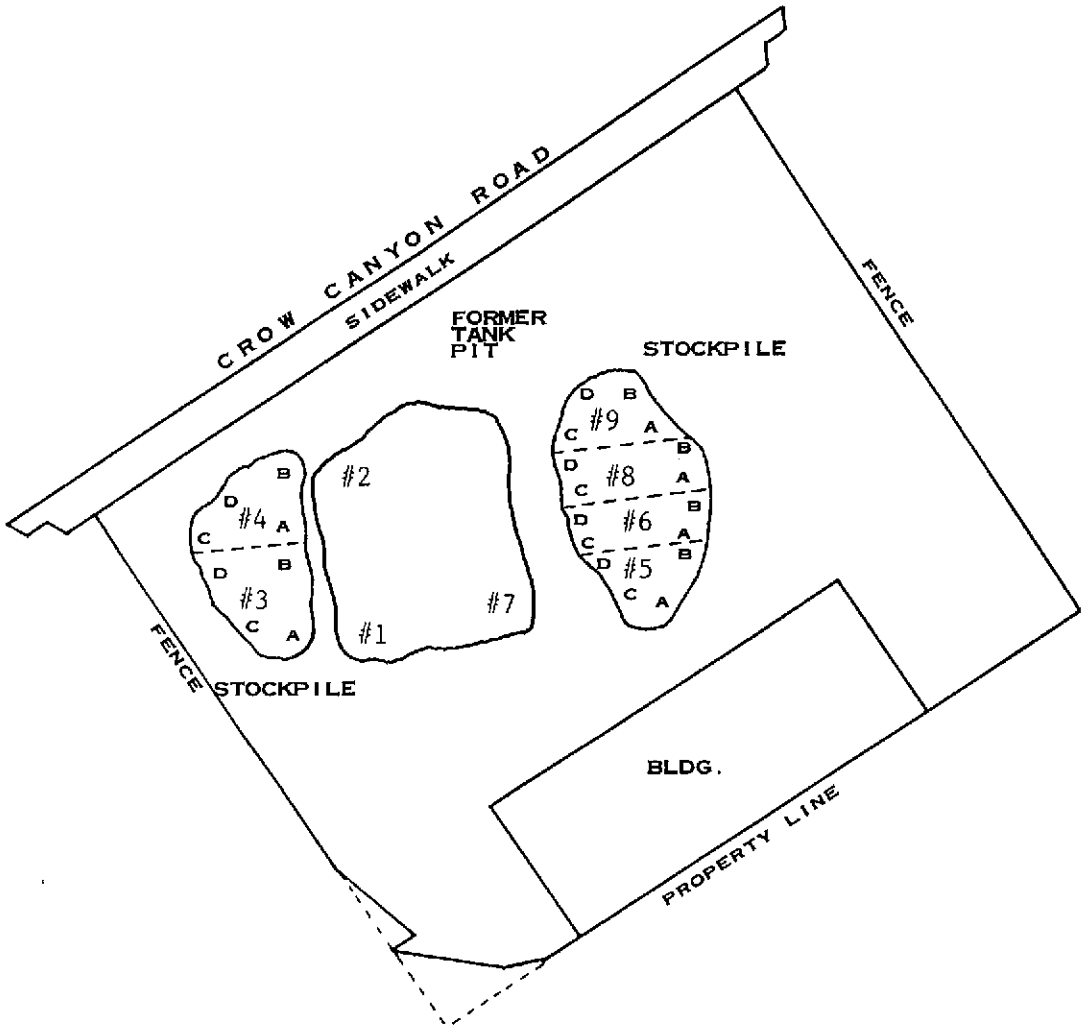
Sample #5A-D, #6A-D, #8A-D and #9A-D were four part composite samples. Each sample consisted of four individual brass sample liners which were collected from different faces of the stockpile.

After completion of the field work, the sample containers were delivered to Sequoia Analytical Laboratory in Redwood City, California. Sequoia Analytical Laboratory is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1210.

It was requested that the analytical procedures used for these analyses be those specified by the Regional Water Quality Control Board -- San Francisco Bay Region. The methods are defined in attachments to the San Francisco RWQCB (Region 2) publication, Guidelines For Addressing Fuel Leaks and in documents issued to clarify the Board's interpretation of the California LUFT Manual.

ADDITIONAL EXCAVATION DIAGRAM

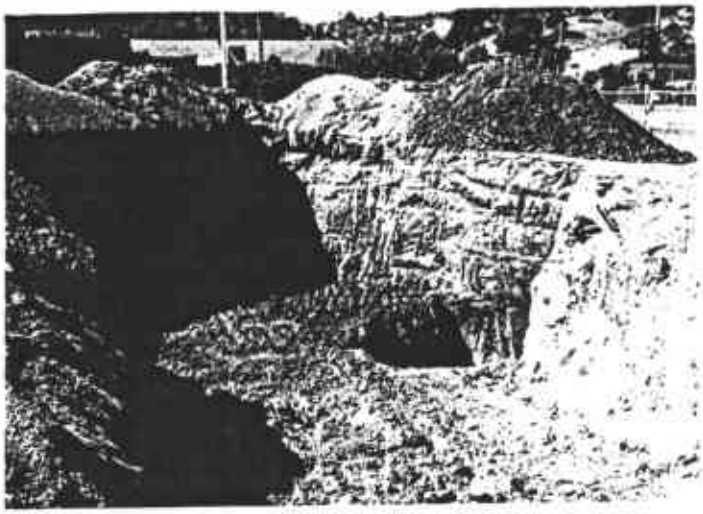
October 11, 1990 / 901011-V-1



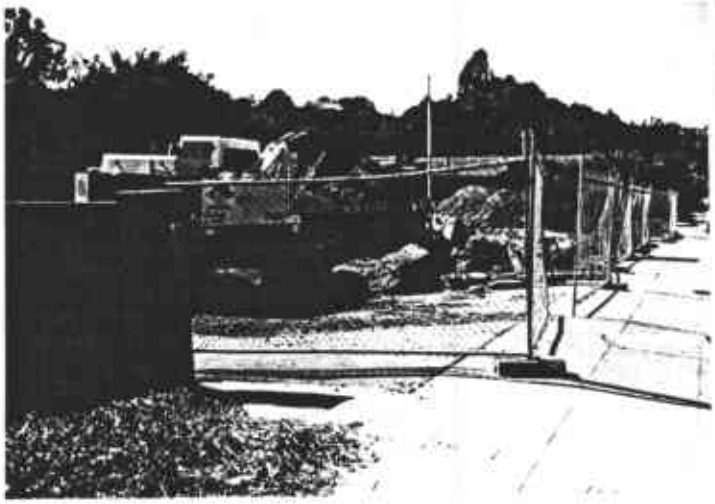
SCALE: 0 25' 50' 75'

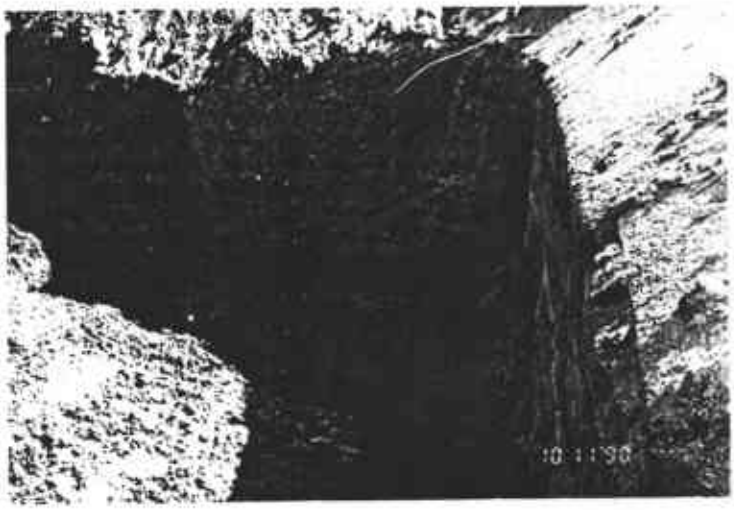
MAP REF: THOMAS BROS. ALAMEDA COUNTY P. 31 B-3

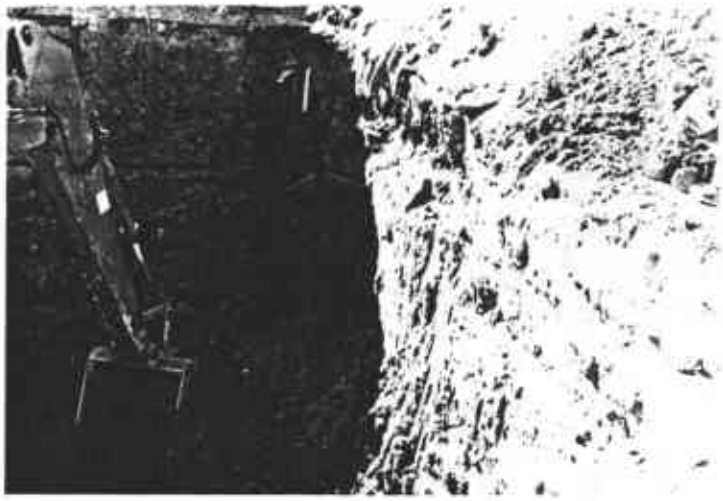
SAMPLING PERFORMED BY FRED VAN DEN BROECK
DIAGRAM PREPARED BY LEAH MORRIS

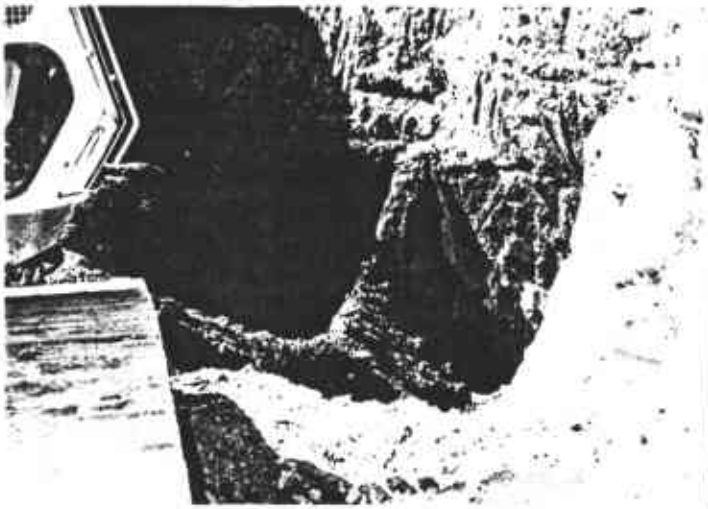


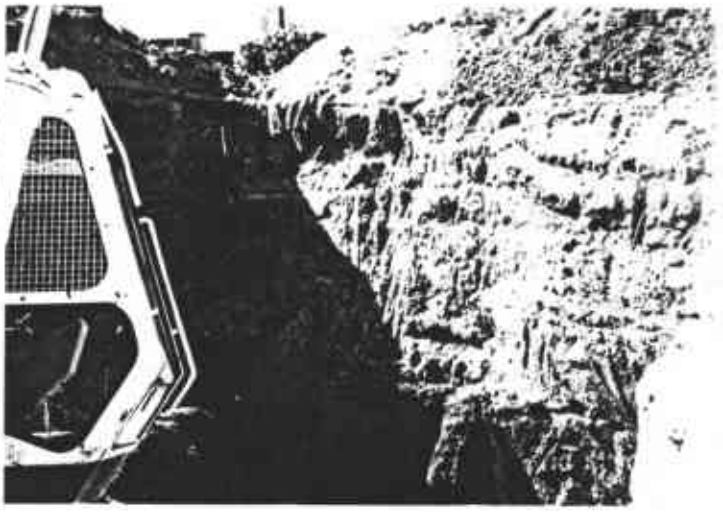

Link-Belt

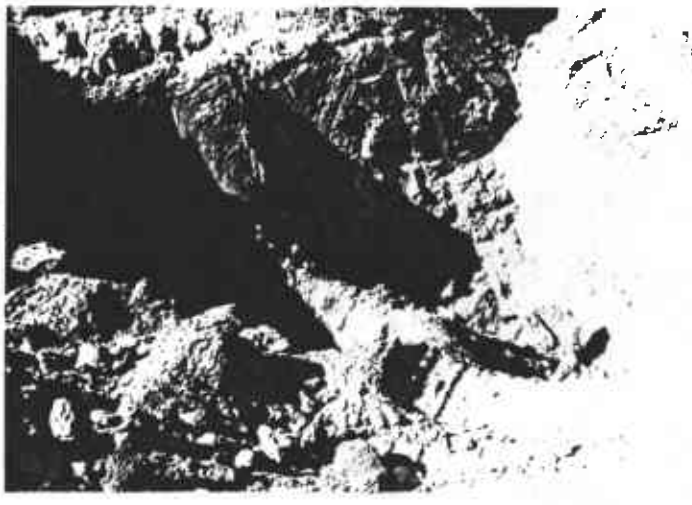


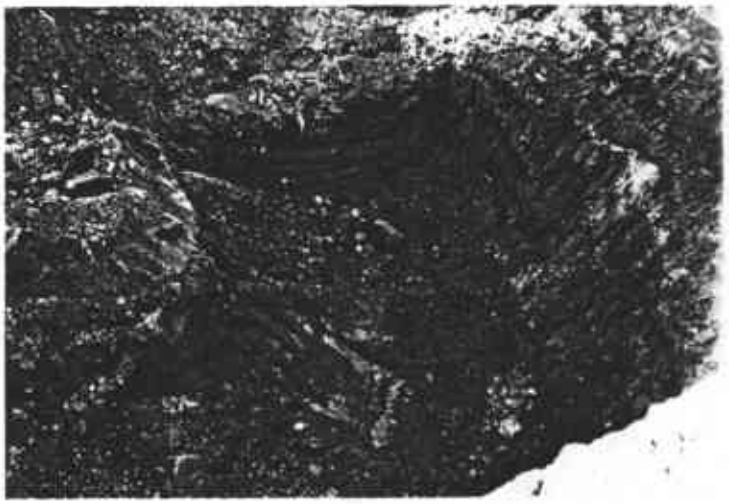


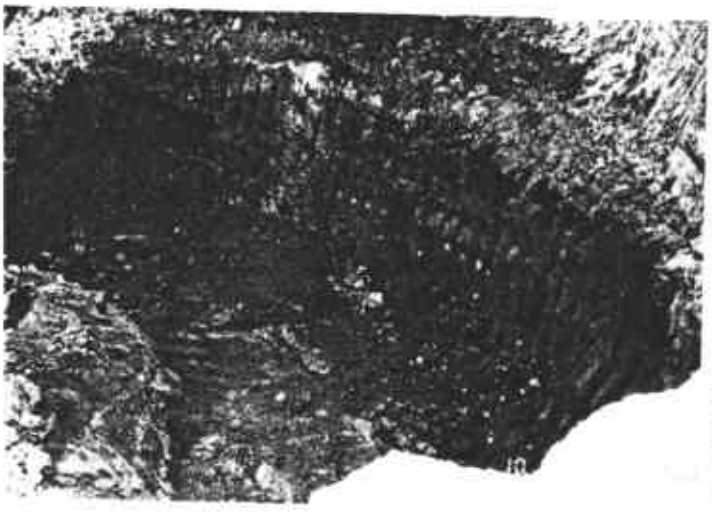


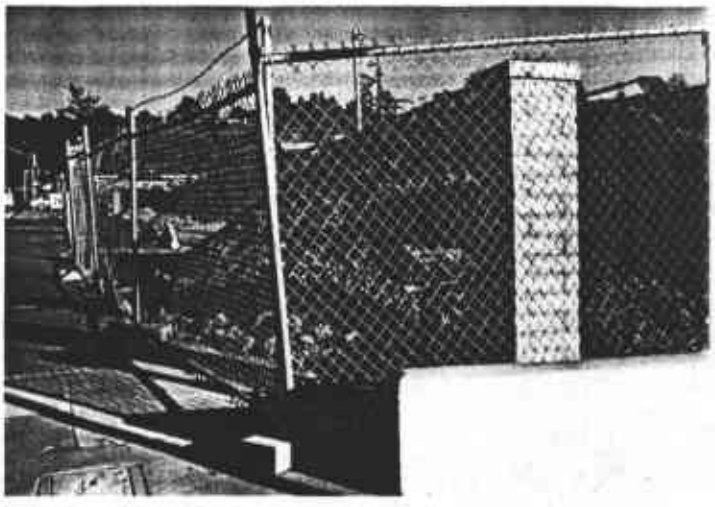












STOCKPILE SAMPLING

October 22, 1990 / 901022-V-2

SCOPE OF REQUESTED SERVICES

In accordance with your request, field personnel would be dispatched to the site to obtain additional samples from the stockpiled soil where sample #3A-D had been collected on October 11, 1990. Sample collection was to be in accordance with standard methodologies with documentation sufficient to prepare a formal Sampling Report.

EXECUTION OF THE WORK PERFORMED ON OCTOBER 22, 1990

Personnel were dispatched from our office and arrived at the subject site on Monday, October 22, 1990 to collect samples from the stockpiled soil.

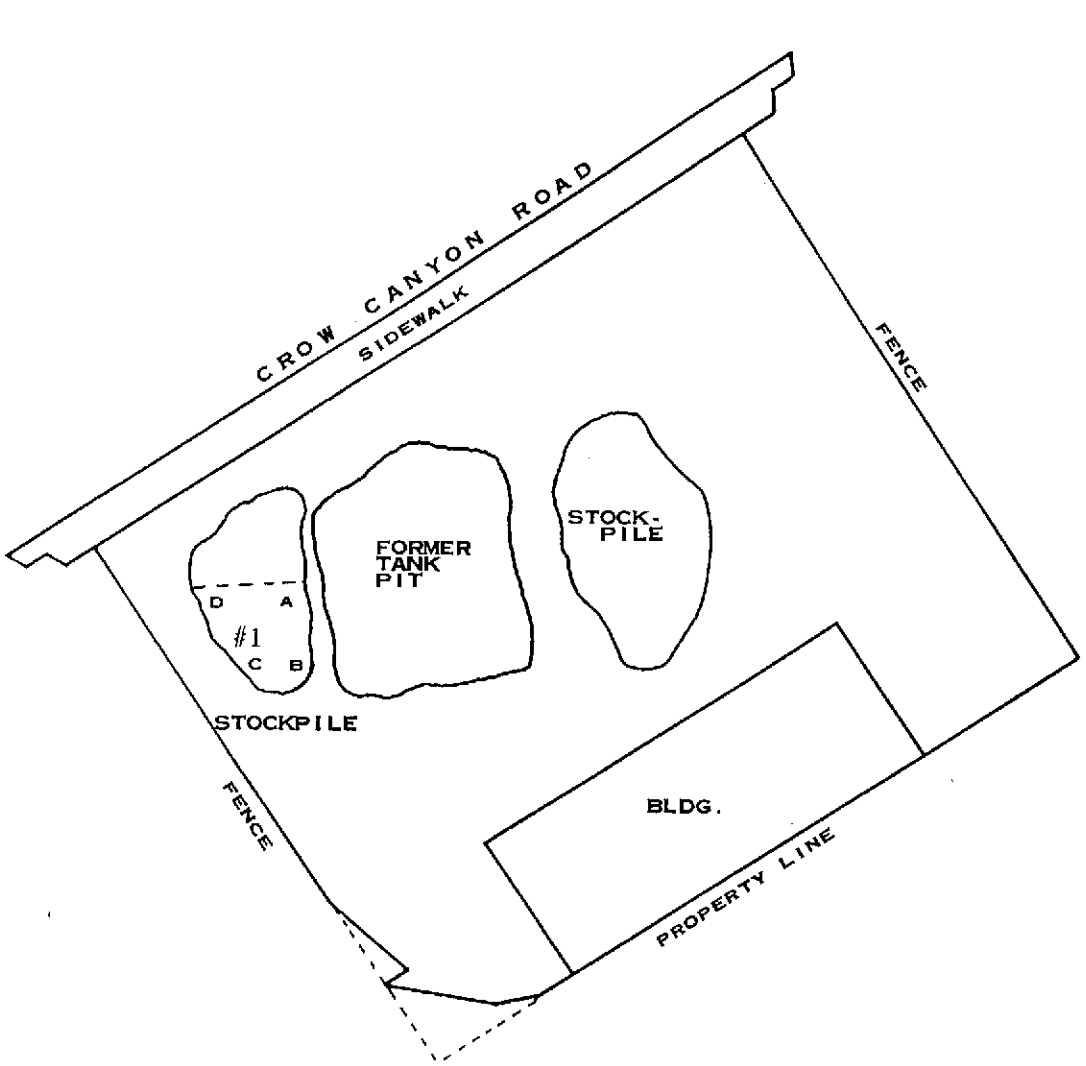
Samples were collected from the stockpiled soil where sample #3A-D had been collected on October 11, 1990. Within this section, four sample locations were arbitrarily chosen. One sample container of soil was collected at each of the four locations by clearing away the upper twelve inches (12") of soil, and then forcing the sample container into the newly exposed soil. After being properly sealed and labeled, the four sample containers were submitted to the laboratory with instructions that they should be composited into one sample (#1A-D) prior to analysis.

After completion of the field work, the sample containers were delivered to Sequoia Analytical Laboratory in Redwood City, California. Sequoia Analytical Laboratory is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1210.

It was requested that the analytical procedures used for these analyses be those specified by the Regional Water Quality Control Board -- San Francisco Bay Region. The methods are defined in attachments to the San Francisco RWQCB (Region 2) publication, Guidelines For Addressing Fuel Leaks and in documents issued to clarify the Board's interpretation of the California LUFT Manual.

STOCKPILE DIAGRAM

October 22, 1990 / 901022-V-2



SCALE: 0 25' 50' 75'

MAP REF: THOMAS BROS. ALAMEDA COUNTY P. 31 B.3

SAMPLING PERFORMED BY FRED VAN DEN BROECK
DIAGRAM PREPARED BY LEAH MORRIS

TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS

NOTE: Analytical results are reported in Parts Per Million or Parts Per Billion

I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE & METHOD FOR THE SAMPLE OBTAINED	SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TPH AS GAS	PPM BEN-ZENE	PPM TOL-UENE	PPM ETHYL BEN-ZENE	PPM XY-LENES
AF	17.0	STANDARD	INTRFACE	SOIL	10/02/90	901002-V-1	#2	SEQUOIA	010-0283	2.8	0.37	ND	0.010	0.17
	22.5	LIA	CONFIRM	SOIL	10/11/90	901011-V-1	#7	SEQUOIA	010-1747	ND	ND	ND	ND	ND
Aop	18.0	STANDARD	INTRFACE	SOIL	10/02/90	901002-V-1	#1	SEQUOIA	010-0282	ND	0.020	0.023	0.0078	0.019
BF	17.0	STANDARD	INTRFACE	SOIL	10/02/90	901002-V-1	#6	SEQUOIA	010-0287	ND	ND	ND	ND	ND
Bop	16.0	STANDARD	INTRFACE	SOIL	10/02/90	901002-V-1	#3	SEQUOIA	010-0284	440	3.9	2.0	11	42
	19.5	LIA	CONFIRM	SOIL	10/05/90	901005-H-5	#1	SEQUOIA	010-1003	75	0.73	0.58	2.6	12
CF	15.0	STANDARD	INTRFACE	SOIL	10/02/90	901002-V-1	#5	SEQUOIA	010-0286	ND	ND	ND	ND	ND
	18.0	LIA	CONFIRM	SOIL	10/11/90	901011-V-1	#1	SEQUOIA	010-1741	11	0.27	0.074	0.27	1.1
Cop	16.0	STANDARD	INTRFACE	SOIL	10/02/90	901002-V-1	#4	SEQUOIA	010-0285	2.2	0.20	0.0058	0.017	0.042
	20.0	LIA	CONFIRM	SOIL	10/05/90	901005-H-5	#2	SEQUOIA	010-1004	240	1.5	9.5	7.0	34
	22.5	LIA	CONFIRM	SOIL	10/11/90	901011-V-1	#2	SEQUOIA	010-1742	1,300	5.2	37	28	140
STOCK	12"	STANDARD	BAAQMD-M	SOIL	10/02/90	901002-V-1	#9A-D	SEQUOIA	0100292 A-D	110	0.17	0.75	1.2	6.2
	12"	STANDARD	BAAQMD-M	SOIL	10/11/90	901011-V-1	#3A-D	SEQUOIA	0101743 A-D	140	29	7.9	2.3	14
	12"	STANDARD	BAAQMD-M	SOIL	10/11/90	901011-V-1	#4A-D	SEQUOIA	0101744 A-D	3.4	ND	ND	ND	ND
	12"	STANDARD	BAAQMD-M	SOIL	10/11/90	901011-V-1	#5A-D	SEQUOIA	0101745 A-D	17	ND	ND	0.0055	0.22
	12"	STANDARD	BAAQMD-M	SOIL	10/11/90	901011-V-1	#6A-D	SEQUOIA	0101746 A-D	ND	ND	ND	ND	ND
	12"	STANDARD	BAAQMD-M	SOIL	10/11/90	901011-V-1	#8A-D	SEQUOIA	0101748 A-D	12	0.056	0.15	0.13	0.69
	12"	STANDARD	BAAQMD-M	SOIL	10/11/90	901011-V-1	#9A-D	SEQUOIA	0101749 A-D	33	0.13	0.73	0.58	3.5
	12"	STANDARD	BAAQMD-M	SOIL	10/22/90	901022-V-2	#1A-D	SEQUOIA	010-3006	ND	ND	ND	ND	ND
PRODUCT LINE														
PL	3.5	STANDARD	INTRFACE	SOIL	10/02/90	901002-V-1	#7	SEQUOIA	010-0288	ND	ND	ND	ND	ND
	3.5	STANDARD	INTRFACE	SOIL	10/02/90	901002-V-1	#8	SEQUOIA	010-0289	ND	ND	ND	ND	0.0097
[redacted]	15.0	LIA	EXPLOR	SOIL	10/05/90	901005-H-5	[redacted]	SEQUOIA	010-1005	55	0.30	0.80	1.5	8.0
	11.0	LIA	EXPLOR	SOIL	[redacted]	901005-H-5	[redacted]	SEQUOIA	010-1006	2.0	0.026	0.053	0.068	0.33

I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE & METHOD FOR THE SAMPLE OBTAINED	SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TPH-HRF DIESEL	PPM TOTAL OIL & GREASE	PPM ORGANIC LEAD
AF	17.0	STANDARD	INTRFACE	SOIL	10/02/90	901002-V-1	#2	SEQUOIA	010-0283	ND	ND	ND
Aop	18.0	STANDARD	INTRFACE	SOIL	10/02/90	901002-V-1	#1	SEQUOIA	010-0282	ND	ND	ND

Standard - The location conformed to established (professional or regulatory) definitions for the type of sample being collected. Example: a standard RWQCB interface sample.

LIA - The local implementing agency inspector chose a sampling location that was different from a standard (pre-defined) location.

Elective - Elective samples are not taken to comply with regulatory requirements, but to obtain information. Sampling locations may be chosen by the property owner, the contractor, a consultant, etc. The samples may or may not be analyzed.

SAMPLING METHODOLOGIES

Specific methods used on this project

Standard RWQCB Interface Samples: Samples taken immediately following a tank removal are required to conform to criteria established by the Regional Water Quality Control Boards. Interpretation of these criteria is usually entrusted to the discretion of the local implementing agency inspector, but are widely known and conformance with these criteria is expected even when no regulatory agency personnel are present to direct the procedures. Accordingly, "Standard Interface samples" are those which have been taken in accordance with the standard protocol for obtaining interface samples. These samples fall into the category of samples which are known to be of primary concern to the interested regulatory agencies for determining if additional action will be required at a site and the methodology has been closely defined in state and RWQCB publications, supplements, and presentations. These specify both the acceptable depth and lateral situation of sample collection points. In accordance with these specifications, sample collection is executed as close as possible to the center line (longitudinal axis) of the tank and on a vertical axis with the fill pipe. A corresponding location is also found at the opposite end of the tank whenever standard interface samples are being collected.

Briefly, the method consists of digging up native soil from directly below the fill pipe and the corresponding opposite end of the tank and obtaining a sample from the backfill/native soil interface or a short distance below the interface. A short distance has been defined by Region 2 Board engineers as not greater than twenty-four inches below the backfill/native soil interface and is generally taken to be one foot below the backfill/native soil interface. This soil is brought up in the backhoe bucket. A shovel or trowel is used to cut away surface soil and backfill material which may have been included in the bucket, and the sample is taken by pushing or driving a brass sample liner into the newly exposed soil from the designated depth and location. Additional clarifications by Region 2 Board engineers have indicated that when there is an obvious difference in the relative contamination of soil brought up from the interface depth, then it is the relatively more contaminated soil that should be selected for inclusion in the sample.

Stockpile Survey (Modified BAAQMD Protocol): This sampling follows a survey pattern, but uses a modified BAAQMD protocol for sampling stockpiles of material that have been newly removed from a tank pit excavation. This protocol calls for a discrete sample container to be collected for every 12.5 cubic yards of material. The survey includes opposite sides of the stockpile. Strict observance of the BAAQMD protocol (for purposes of evaluating the levels of fuel vapor likely to be discharged from a stockpile) calls for inclusion of the surface material in the brass liner which is driven into the pile at a right angle (to the angle of repose) until the liner is full. Unless specifically asked to follow the BAAQMD protocol, our personnel routinely modify the procedure to exclude the surface soil and collect soil from a depth of eight to eighteen inches. While this prejudices the sample in the direction of yielding higher results than would a strict BAAQMD sample, it is more representative of the levels of fuel hydrocarbons present in the soil and is not likely to mislead the client or contractor into offhauling or backfilling with soil stockpiles that are relatively clean at the surface, but unacceptably contaminated through the remainder of their volume.

Elective Confirming Samples Following Additional Excavation: In cases where, as a precaution, excavation is continued in order to remove soil which may be contaminated, it is customary to obtain one or more samples of the soil at the furthest extent of excavation. These samples provide information on the condition of the soil remaining after the excavation effort was completed.

As the precautionary excavation is completed, the backhoe is used to dig up soil representative of the material which remains in the bottom of the pit. The sample material is collected and handled according to the same procedures used with other backhoe assisted sampling methodologies and duplicates RWQCB standard interface sampling in all respects except the depth at which the soil is obtained.

Elective Exploratory Samples: This type of sampling employs the same sample collection and handling procedures as are used in standard RWQCB interface sampling, but soil is typically obtained at a greater depth or from a position that is laterally offset from the interface location.

STANDARD PROCEDURES

Conventions and practices

General Practices

U.S. Environmental Protection Agency standards serve as the foundation for all field sampling operations performed by our firm. The EPA SW 846 is the primary publication from which procedures are derived, though there are additional EPA sources such as training films and verbal communications. Sampling related to underground storage tanks and tank related threats to groundwater are governed by the California Water Resources Control Board and its Regional Water Quality Control Boards. While some aspects of field and laboratory work may be delegated to the California Department of Health Services, the CWRCB and the nine Regional Water Quality Control Boards establish the general and specific criteria for sampling performed in connection with underground storage tanks. This is done through the publication of guidance documents, the issuance of memoranda, and verbal announcements.

Other agencies, such as Air Pollution Control Districts, may require additional samples, but these are usually in addition to samples required by the RWQCB. Local implementing agency (LIA) inspectors are frequently present during the tank removal phase of a project and either direct or request that samples be taken according to RWQCB specifications. Additional samples may, and frequently are, taken at the request of the LIA inspector.

Based on field conditions directly observable by the LIA inspector, our field personnel may be asked to collect samples that are tailored to the specific situation and which the inspector judges will provide substantial information about the site. Quite often these directions or suggestions coincide with the sampling areas established by the RWQCB as the proper collection points for samples which will be used as the Primary Criteria for a

Regulatory Agency Determination on whether additional exploration or remediation will be required at a particular site. Similarly, there are instances when the LIA inspector's judgments do not coincide with Board specifications.

Two common examples of this are as follows:

1. A local implementing agency inspector notes that soil dug up from the correct RWQCB interface sampling point is relatively clean, but observes that there is quite obviously contaminated backfill underlying the center of the tank. The inspector directs that the contaminated backfill should be taken instead of the clean interface soil so as to provide information about the "worst case" conditions within the tank pit.

2. The soil at the specified interface sampling depth is found to be slightly contaminated, but much less so than the soil only a few inches above. Noting the relatively dense soil, the local implementing agency inspector decides not to have the interface soil sampled and has the backhoe dig deeper to see if the contamination diminishes to acceptable levels. This exploration saves the property owner the cost of running two samples at that location, and enables the inspector to directly observe the condition of the deeper soil.

In both examples, different material is collected in lieu of a standard RWQCB interface sample. Further, the material collected is substantially different from what would have been obtained by taking representative soil at the Board specified sampling location. Note that both of these samples were taken at the direction of the local implementing agency inspector who was present at the site and elected to select alternative sampling locations. Note too, that these alternative samples may provide more information about the site than standard Board specified samples. However, as the LIA elected samples do not accurately reflect soil conditions at the sampling points specified by the RWQCB, the decision making process may be hampered.

Clearly there is no advantage in limiting the ability of the regulator in the field to make prudent judgments. Likewise, regulatory personnel and consultants who will review the reports without benefit of having been present at the site need to know that the samples taken were not obtained at the standard locations. A simple resolution to these situations is a brief notation indicating that the sampling was elective rather than in accordance with a standard Board specification. These notations appear in the third column of the TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS. By referring to the notations in column three and four in the TABLE, any party reviewing the report should be able to determine if something other than Board standard samples were obtained, and when variant sampling was performed, clarify whether it was elected by the LIA inspector, elected by our field personnel, or the result of some physical condition at the site that made it impossible to obtain material from the correct sampling location.

Sample Containers

Our firm uses new sample containers of the type specified by either EPA or the RWQCB for the collection of samples at sites where underground storage tanks are involved. Water samples are contained in 40 ml volatile organic analysis vials (VOAs) when analysis for gasoline and similar light volatile compounds is intended. These containers are prepared according to EPA SW 846 and will contain a small amount of preservative when the

analysis is for TPH as gasoline or EPA 602. Vials intended for EPA 601 analysis and EPA 624 GCMS procedures are not preserved. Closure is accomplished with an open headed (syringe accessible) plastic screw cap brought down on top of a Teflon faced septum which is used to seal the sample without headspace.

Water samples intended for semivolatile and nonvolatile analysis such as total oil and grease (TOG) and diesel (TPH HBF) are collected and transported in properly prepared new glass liter bottles. Dark amber glass is used in the manufacture of these bottles to reduce any adverse effect on the sample by sunlight. Antimicrobial preservative may be added to the sample liquid if a prolonged holding time is expected prior to analysis. Closure is accomplished with a heavy plastic screw cap.

Soil samples for volatile, semivolatile and nonvolatile analyses are all collected in properly prepared new brass liners which are 2 inches in diameter by 4 inches in length. Closure is accomplished with press fit plastic end caps which are fitted to the open ends of brass tube liners after a sheet of aluminum foil is wrapped over the exposed sample material. A non-contributing/nonsubtractive tape is wrapped completely around the joint areas where the plastic caps meet the outer wall of the brass tube. No preservative other than cold storage is used on samples captured in sample containers of this type.

Sample Handling Procedures

Solid sample material is captured by advancing the liner into the soil. This may be done by pushing the liner into soft soils or by containing the liner in a drive shoe which can be advanced and then retracted by means of a slide hammer. The open ends of the sample liner are covered with aluminum foil and plastic end caps. Excess aluminum foil is removed and the edge of the plastic end cap is tightly sealed against the outer surface of the brass liner with an unbroken wrap made with a tape which has been tested to confirm that it does not contribute compounds that would be detected in the type of analyses intended for the sample contained inside of the brass liner. The brass liner is then labeled with the appropriate identification numbers which specify the sampling activity designation number, sample collection area, depth etc. that apply to that particular sample. The sample liner is then placed in an ice chest which contains pre-frozen blocks of an inert ice substitute such as Blue Ice or Super Ice.

Water samples are collected in any of several appropriate devices such as bailers, Coliwasas, Middleburg sampling pumps, etc., which are described in detail only as warranted by their employment at a given site. Sample liquid is decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA procedures for handling volatile organic and semi-volatile compounds. Only two variations from the EPA methods are generally employed. First, preservative is added to the sample container prior to addition of the sample liquid. This method was pioneered by Stoner Laboratories in 1982 and subsequently adopted by laboratories and environmental consulting firms as a practical means of reducing the time that a liquid is allowed to aerate prior to closure of the sampling container. Second, because tests have shown that the preservative readily mixes with sample liquid, glass stirring rods are not used to agitate the sample/preservative mixture.

Sample Designations

All sample containers are identified with both a sampling event number and a discrete sample identification number. Please note that the sampling event number is the number that appears on our chain of custody. It is roughly equivalent to a job number, but applies only to work done on a particular day of the year rather than spanning several days as jobs and projects often do. This is followed by the sample I.D. number which is usually a simple number such as #1, #2, #3.

Chain of Custody

Samples are continuously maintained in either a chilled ice chest, refrigerator, or freezer from the time of collection until acceptance by the State certified Hazardous Materials Testing Laboratory selected to perform the analytical procedures. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Laboratory Identification Numbers

Following receipt of the samples and completion of the Chain of Custody form, the laboratory then assigns their own identification numbers to the samples. Different laboratories use different numbering systems and, according to their own internal conventions, may or may not assign sequential numbers to samples which are placed on temporary "hold", pending the results of other analyses. Laboratory identification numbers (if assigned and available) are included in the TABLE, and will be found on the certified analytical report by the analytical laboratory.

Certified Analytical Report

The certified analytical report (CAR) generated by the laboratory is the official document in which they issue their findings. The Results of Analyses section of the TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS should correspond exactly with the laboratory's CAR. Any discrepancy between analytical values should be decided in favor of the CAR, for while it may, itself, be in error with regard to a particular number, the CAR remains the recognized document until such time as it is amended with a corrected report.

The certified analytical report should also be reviewed when samples are taken from below waste oil tanks as <u>any</u> detection of the EPA halogenated and purgeable aromatic compounds may be grounds for requiring further action. Also the TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS is insufficiently spacious to allow anything more than a simple listing of the detected compounds. The TABLE does not include such information as the detection limits at which other compounds were not detected. The full text of the laboratory report will be found in the Analytical Appendix.

Reportage

Submission to the Regional Water Quality Control Board and the local implementing agency should include copies of the sampling report, the chain of custody, and the certified analytical report issued by the Hazardous Materials Testing Laboratory. The property owner should attach a cover letter and submit all documents together in a package.

The following addresses have been listed here for your convenience:

Water Quality Control Board
San Francisco Bay Region
1800 Harrison Street
Room 700
Oakland, CA 94612
ATTN: Lester Feldman

Alameda County Health Agency
Hazardous Materials Management
80 Swan Way, Room 200
Oakland, CA 94621
ATTN: Scott Seery

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/dmp

ANALYTICAL APPENDIX

Supporting documents

CHAIN OF CUSTODY FORMS
CERTIFIED ANALYTICAL REPORTS
TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS

BLAINE
TECH SERVICES INC.

1370 TULLY ROAD., SUITE 505
SAN JOSE, CA 95122
(408) 995 5535

CHAIN OF CUSTODY 901002-V-1

CLIENT CHEVRON

SITE 5269 CROW CANYON
Castro Valley, CA
Station # 95607

C = COMPOSITE ALL CONTAINERS

CONDUCT ANALYSIS TO DETECT

LAB Sequoia DHS # 1216

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

☐ EPA ☒ RWQCB REGION 2
☒ LIA
☐ OTHER

SPECIAL INSTRUCTIONS

24 hours

SAMPLE I.D.	MATRIX S = SOIL W = H2O	CONTAINERS TOTAL		C	TPH GAS	BTEX	ORGANIC LEAD	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
#1	S	1	BRASS		✓	✓	✓		24 hrs		
#2	S	1	"		✓	✓	✓		"		
#3	S	1	"		✓	✓			"		
#4	S	1	"		✓	✓			"		
#5	S	1	"		✓	✓			"		
#6	S	1	"		✓	✓			"		
#7	S	1	"		✓	✓			"		
#8	S	1	"		✓	✓			"		
#9 APCD	S	4	"	✓	✓	✓			"		

SAMPLING COMPLETED	DATE	TIME
	10-2-90	1730

SAMPLING PERFORMED BY F.A. VANDENBROECK

RESULTS NEEDED NO LATER THAN

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
F.A. VandenBroeck	10-2-90	1820			
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
				10/2/90	1820
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #	

BLAINE TECH SERVICES INC

1370 TULLY ROAD., SUITE 505
SAN JOSE, CA 95122
(408) 995 5535

CHAIN OF CUSTODY 901002-V-1

CLIENT CHEVRON

SITE 5261 CROW CANYON
Castro Valley, CA
Station # 95607

SAMPLE I.D.	MATRIX S = SOIL W = H2O	CONTAINERS TOTAL		C = COMPOSITE ALL CONTAINERS	TPH GAS	BTEX	ORGANIC LEAD	Added 10/5/90 TPH (DIESEL) 8015 5220 E&P	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
#1	S	1	BRASS		✓	✓	✓	X	24hrs	24 hrs		
#2	S	1	"		✓	✓	✓	X	24hrs	"		
#3	S	1	"		✓	✓				"		
#4	S	1	"		✓	✓				"		
#5	S	1	"		✓	✓				"		
#6	S	1	"		✓	✓				"		
#7	S	1	"		✓	✓				"		
#8	S	1	"		✓	✓						
#9 ABCD	S	4	"	✓	✓	✓						

CONDUCT ANALYSIS TO DETECT

LAB Sequoia DHS # 1210

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

☐ EPA
☒ LIA
☐ OTHER
☒ RWQCB REGION II

SPECIAL INSTRUCTIONS

24 hours

SAMPLING COMPLETED	DATE	TIME
	10-2-90	1730

SAMPLING PERFORMED BY FA, VAN DEN BROECK

RESULTS N NO LATER

	DATE	TIME	
RELEASED BY FA Van den Broeck	10-2-90	1820	RECEIVED BY
RELEASED BY	DATE	TIME	RECEIVED BY
RELEASED BY	DATE	TIME	RECEIVED BY

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #

NOTE ADDITIONAL LAB:
requested 10/5/90 by C. Wong (regulator ordered this)
Samples #1 & #2 for Diesel & O&G
24 hrs

SEQUOIA ANALYTICAL

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

Blaine Tech Services	Client Project ID:	Chevron #901002-V-1	Sampled:	Oct 2, 1990
1370 Tully Rd., Suite 505	Matrix Descript:	Soil	Relogged:	Oct 5, 1990
San Jose, CA 95122	Analysis Method:	EPA 3550/8015	Extracted:	Oct 5, 1990
Attention: Richard Blaine	First Sample #:	010-0282	Analyzed:	Oct 7, 1990
			Reported:	Oct 8, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
010-0282	#1	N.D.
010-0283	#2	N.D.

Detection Limits:	**1.0**

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Project Manager

SEQUOIA ANALYTICAL

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

Blaine Tech Services	Client Project ID:	Chevron #901002-V-1	Sampled:	Oct 2, 1990
1370 Tully Rd., Suite 505	Matrix Descript:	Soil	Relogged:	Oct 5, 1990
San Jose, CA 95122	Analysis Method:	SM 503 D&E (Gravimetric)		
Attention: Richard Blaine	First Sample #:	010-0282	Analyzed:	Oct 5, 1990
			Reported:	Oct 8, 1990

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
010-0282	#1	N.D.
010-0283	#2	N.D.

Detection Limits:	**30**

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Project Manager

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

Blaine Tech Services
1370 Tully Rd., Suite 505
San Jose, CA 95122
Attention: Richard Blaine

Client Project ID: Chevron #901002-V-1

QC Sample Group: 010-0282

Reported: Oct 8, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Diesel	Total Oil & Grease
Method:	EPA 8015	SM503D&E
Analyst:	K.Mitchell	S. G.
Reporting Units:	mg/kg	mg/L
Date Analyzed:	Oct 7, 1990	Oct 5, 1990
QC Sample #:	BLK10590	010-0602
Sample Conc.:	N.D.	340
Spike Conc. Added:	15	5,600
Conc. Matrix Spike:	15	4,200
Matrix Spike % Recovery:	100	69
Conc. Matrix Spike Dup.:	13	4,000
Matrix Spike Duplicate % Recovery:	87	65
Relative % Difference:	14	5.4

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

SEQUOIA ANALYTICAL

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

Blaine Tech Services	Client Project ID:	#901002-V-1, Chevron	Sampled:	Oct 2, 1990
1370 Tully Rd., Suite 505	Sample Descript:	Soil	Received:	Oct 2, 1990
San Jose, CA 95122	Analysis Method:	California LUFT Manual, 12/87		
Attention: Richard Blaine	First Sample #:	010-0282	Analyzed:	Oct 3, 1990
			Reported:	Oct 4, 1990

ORGANIC LEAD

Sample Number	Sample Description	Sample Results mg/kg (ppm)
010-0282	#1	N.D.
010-0283	#2	N.D.

Detection Limits:	0.050

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Project Manager

SEQUOIA ANALYTICAL

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

Blaine Tech Services	Client Project ID:	#901002-V-1, Chevron	Sampled:	Oct 2, 1990
1370 Tully Rd., Suite 505	Matrix Descript:	Soil	Received:	Oct 2, 1990
San Jose, CA 95122	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Oct 3, 1990
Attention: Richard Blaine	First Sample #:	010-0282	Reported:	Oct 4, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
010-0282	#1	N.D.	0.020	0.023	0.0078	0.019
010-0283	#2	2.8	0.37	N.D.	0.010	0.17
010-0284	#3	440	3.9	2.0	11	42
010-0285	#4	2.2	0.20	0.0058	0.017	0.042
010-0286	#5	N.D.	N.D.	N.D.	N.D.	N.D.
010-0287	#6	N.D.	N.D.	N.D.	N.D.	N.D.
010-0288	#7	N.D.	N.D.	N.D.	N.D.	N.D.
010-0289	#8	N.D.	N.D.	N.D.	N.D.	0.0097
0100292 A-D	Composite, #9	110	0.17	0.75	1.2	6.2
Detection Limits:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.0050**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Project Manager

SEQUOIA ANALYTICAL

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

Blaine Tech Services
1370 Tully Rd., Suite 505
San Jose, CA 95122
Attention: Richard Blaine

Client Project ID: #901002-V-1, Chevron

QC Sample Group: 0100282 - 0100290

Reported: Oct 4, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Organic Lead	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	LUFT	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020
Analyst:	S. Foster	µg/L	µg/L	µg/L	µg/L
Reporting Units:	mg/kg	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Oct 3, 1990	Oct 3, 1990	Oct 3, 1990	Oct 3, 1990	Oct 3, 1990
QC Sample #:	010-0283	010-0290	010-0290	010-0290	010-0290
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	0.10	0.20	0.20	0.20	0.60
Conc. Matrix Spike:	0.084	0.21	0.21	0.21	0.63
Matrix Spike % Recovery:	84	110	110	110	110
Conc. Matrix Spike Dup.:	0.091	0.18	0.19	0.19	0.56
Matrix Spike Duplicate % Recovery:	91	90	95	95	93
Relative % Difference:	7.8	15	10	10	12

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Project Manager

% Recovery: $\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$

Relative % Difference: $\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}} \times 100$

BLAINE
TECH SERVICES INC

1370 TULLY ROAD., SUITE 505
SAN JOSE, CA 95122
(408) 995 5535

CHAIN OF CUSTODY 901005-H-5

CLIENT Chevron

SITE Chevron Station # 95607
5629 Crow Canyon Rd.
Castro Valley CA.

LAB Sequoia DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA
☐ LIA
☐ OTHER
☒ RWQCB REGION 2

SPECIAL INSTRUCTIONS

C = COMPOSITE ALL CONTAINERS

CONDUCT ANALYSIS TO DETECT

SAMPLE I.D		MATRIX S = SOIL W = H2O	CONTAINERS TOTAL	TPH (Gas)	BTEX	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
#1	10-5-90	S	1	X	X		24 hr		
#2			1	X	X				
#3			1	X	X				
#4			1	X	X				

SAMPLING COMPLETED DATE 10-5-90 TIME 18:00
SAMPLING PERFORMED BY Thuy B Rupp

RESULTS NEEDED NO LATER THAN

RELEASED BY Thuy B Rupp AB — DATE 10-5-90 — TIME 1755 — RECEIVED BY Beth Stange — DATE 10/5/90 — TIME 1855

RELEASED BY — DATE — TIME — RECEIVED BY — DATE — TIME

RELEASED BY — DATE — TIME — RECEIVED BY — DATE — TIME

SHIPPED VIA — DATE SENT — TIME SENT — COOLER # —

SEQUOIA ANALYTICAL

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

Blaine Tech Services	Client Project ID:	#901005-H-5, Chevron Sta. #95607	Sampled:	Oct 5, 1990
1370 Tully Rd., Suite 505	Matrix Descript:	Soil	Received:	Oct 5, 1990
San Jose, CA 95122	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Oct 5, 1990
Attention: Richard Blaine	First Sample #:	010-1003	Reported:	Oct 8, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
010-1003	#1	75	0.73	0.58	2.6	12
010-1004	#2	240	1.5	9.5	7.0	34
010-1005	#3	55	0.30	0.80	1.5	8.0
010-1006	#4	2.0	0.026	0.053	0.068	0.33
Detection Limits:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.0050**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Project Manager

SEQUOIA ANALYTICAL

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

Blaine Tech Services
1370 Tully Rd., Suite 505
San Jose, CA 95122
Attention: Richard Blaine

Client Project ID: #901005-H-5, Chevron Sta. #95607

QC Sample Group: 010-1003

Reported: Oct 8, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J.Dinsay	J.Dinsay	J.Dinsay	J.Dinsay
Reporting Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date Analyzed:	Oct 5, 1990	Oct 5, 1990	Oct 5, 1990	Oct 5, 1990
QC Sample #:	010-0779	010-0779	010-0779	010-0779
Sample Conc.:	N.D.	0.0075	0.014	0.12
Spike Conc. Added:	0.20	0.20	0.20	0.60
Conc. Matrix Spike:	0.24	0.20	0.21	0.61
Matrix Spike % Recovery:	120	80	95	75
Conc. Matrix Spike Dup.:	0.24	0.20	0.19	0.61
Matrix Spike Duplicate % Recovery:	120	80	80	75
Relative % Difference:	0.0	0.0	17	0.0

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

BLAINE TECH SERVICES INC

1370 TULLY ROAD., SUITE 505
SAN JOSE, CA 95122
(408) 995 5535

CHAIN OF CUSTODY 901011-V-1

CLIENT Chevron USA

SITE 5629 Crow Canyon
Castro Valley
CA

CONDUCT ANALYSIS TO DETECT

LAB Sequoia DHS # 12 C

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

☐ EPA ☒ RWQCB REGION II
☒ LIA
☐ OTHER

SPECIAL INSTRUCTIONS
Bill To Blaine Tech Services.

24 hrs Turn Around

SAMPLE I.D.	MATRIX S = SOIL W = H2O	CONTAINERS TOTAL	CONTAINERS Brass	C = COMPOSITE ALL CONTAINERS	TPH GAS, BTEX	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
#1	S	1	"		✓		24 hrs		
#2	S	1	"		✓		"		
#3 A-D	S	4	"	✓	✓		"		
#4 A-D	S	4	"	✓	✓		"		
#5 A-D	S	4	"	✓	✓		"		
#6 A-D	S	4	"	✓	✓		"		
#7	S	1	"		✓		"		
#8 A-D	S	4	"	✓	✓		"		
#9 A-D	S	4	"	✓	✓		"		

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN
	10/11/90	1730	FA. VANDEN BERGH	

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	10/11/90	1825	[signature]	10/11/90	1825
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #	

SEQUOIA ANALYTICAL

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

Blaine Tech Services	Client Project ID:	#901011-V-1, Chevron	Sampled:	Oct 11, 1990
1370 Tully Rd., Suite 505	Matrix Descript:	Soil	Received:	Oct 11, 1990
San Jose, CA 95122	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Oct 11, 1990
Attention: Richard Blaine	First Sample #:	010-1741	Reported:	Oct 13, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
010-1741	#1	11	0.27	0.074	0.27	1.1
010-1742	#2	1,300	5.2	37	28	140
0101743 A-D	#3	140	29	7.9	2.3	14
0101744 A-D	#4	3.4	N.D.	N.D.	N.D.	N.D.
0101745 A-D	#5	17	N.D.	N.D.	0.0055	0.22
0101746 A-D	#6	N.D.	N.D.	N.D.	N.D.	N.D.
010-1747	#7	N.D.	N.D.	N.D.	N.D.	N.D.
0101748 A-D	#8	12	0.056	0.15	0.13	0.69
0101749 A-D	#9	33	0.13	0.73	0.58	3.5
Detection Limits:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.0050**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Project Manager

Please Note:
Amended report on 10/17/90.

SEQUOIA ANALYTICAL

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

Blaine Tech Services
1370 Tully Rd., Suite 505
San Jose, CA 95122
Attention: Richard Blaine

Client Project ID: #901011-V-1, Chevron

QC Sample Group: 0101741 - 0101749

Reported: Oct 13, 1990

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Method:	EPA 8020/8015	EPA 8020/8015	EPA 8020/8015	EPA 8020/8015
Analyst:	G.Meyer	G.Meyer	G.Meyer	G.Meyer
Reporting Units:	mg/kg	mg/kg	mg/kg	mg/kg
Date Analyzed:	Oct 11, 1990	Oct 11, 1990	Oct 11, 1990	Oct 11, 1990
QC Sample #:	BLK0101190	BLK0101190	BLK0101190	BLK0101190
Sample Conc.:	0.0063	0.0065	N.D.	0.0057
Spike Conc. Added:	0.20	0.20	0.20	0.60
Conc. Matrix Spike:	0.22	0.19	0.21	0.63
Matrix Spike % Recovery:	110	92	110	100
Conc. Matrix Spike Dup.:	0.22	0.21	0.22	0.66
Matrix Spike Duplicate % Recovery:	110	100	110	110
Relative % Difference:	0.0	15	4.7	4.7

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

BLAINE TECH SERVICES INC

1370 TULLY ROAD., SUITE 505
SAN JOSE, CA 95122
(408) 995 5535

CHAIN OF CUSTODY 901022-V-2

CLIENT CHEVRON USA

SITE 5269 CROSS CANYON RD
CASTRO VALLEY, CA

CONDUCT ANALYSIS TO DETECT

LAB SEQUOIA DHS # 17.10

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

☐ EPA ☒ RWQCB REGION II
☒ LIA
☐ OTHER

SPECIAL INSTRUCTIONS

Bill to BTS

24 hrs Rush

SAMPLE I.D.	MATRIX S = SOIL W = H2O	CONTAINERS TOTAL	Brass	C = COMPOSITE ALL CONTAINERS	TPH GAS	BTEX	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
1A-D	S	4	Brass	✓	✓	✓		24 hrs		

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED NO LATER THAN
	10/22/90	1045	F.A. VANDENBROEK	

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
F.A. van den Brek	10-22-90	1150		10/22/90	1150
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #	

SEQUOIA ANALYTICAL

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

Blaine Tech Services	Client Project ID:	901022-V-2, Chevron #95607	Sampled:	Oct 22, 1990
1370 Tully Rd., Suite 505	Sample Descript.:	Soil, 1A-D	Received:	Oct 22, 1990
San Jose, CA 95122	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Oct 22, 1990
Attention: Richard Blaine	Lab Number:	010-3006	Reported:	Oct 22, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS WITH BTEX DISTINCTION (EPA 8015/8020)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Low to Medium Boiling Point Hydrocarbons	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes	0.0050	N.D.

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Elizabeth W. Hackl
Project Manager

.MPLING LOCATIONS AND ANALYTICAL RESULTS

NOTE: Analytical results are reported in Parts Per Million or Parts Per Billion

SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TPH AS GAS	PPM BEN-ZENE	PPM TOL-UENE	PPM ETHYL BEN-ZENE	PPM XY-LENES
SOIL	10/02/90	901002-V-1	#2	SEQUOIA	010-0283	2.8	0.37	ND	0.010	0.17
SOIL	10/11/90	901011-V-1	#7	SEQUOIA	010-1747	ND	ND	ND	ND	ND
SOIL	10/02/90	901002-V-1	#1	SEQUOIA	010-0282	ND	0.020	0.023	0.0078	0.019
SOIL	10/02/90	901002-V-1	#6	SEQUOIA	010-0287	ND	ND	ND	ND	ND
SOIL	10/02/90	901002-V-1	#3	SEQUOIA	010-0284	440	3.9	2.0	11	42
SOIL	10/05/90	901005-H-5	#1	SEQUOIA	010-1003	75	0.73	0.58	2.6	12
SOIL	10/02/90	901002-V-1	#5	SEQUOIA	010-0286	ND	ND	ND	ND	ND
SOIL	10/11/90	901011-V-1	#1	SEQUOIA	010-1741	11	0.27	0.074	0.27	1.1
SOIL	10/02/90	901002-V-1	#4	SEQUOIA	010-0285	2.2	0.20	0.0058	0.017	0.042
SOIL	10/05/90	901005-H-5	#2	SEQUOIA	010-1004	240	1.5	9.5	7.0	34
SOIL	10/11/90	901011-V-1	#2	SEQUOIA	010-1742	1,300	5.2	37	28	140
SOIL	10/02/90	901002-V-1	#9A-D	SEQUOIA	0100292 A-D	110	0.17	0.75	1.2	6.2
SOIL	10/11/90	901011-V-1	#3A-D	SEQUOIA	0101743 A-D	140	29	7.9	2.3	14
SOIL	10/11/90	901011-V-1	#4A-D	SEQUOIA	0101744 A-D	3.4	ND	ND	ND	ND
SOIL	10/11/90	901011-V-1	#5A-D	SEQUOIA	0101745 A-D	17	ND	ND	0.0055	0.22
SOIL	10/11/90	901011-V-1	#6A-D	SEQUOIA	0101746 A-D	ND	ND	ND	ND	ND
SOIL	10/11/90	901011-V-1	#8A-D	SEQUOIA	0101748 A-D	12	0.056	0.15	0.13	0.69
SOIL	10/11/90	901011-V-1	#9A-D	SEQUOIA	0101749 A-D	33	0.13	0.73	0.58	3.5
SOIL	10/22/90	901022-V-2	#1A-D	SEQUOIA	010-3006	ND	ND	ND	ND	ND
SOIL	10/02/90	901002-V-1	#7	SEQUOIA	010-0288	ND	ND	ND	ND	ND
SOIL	10/02/90	901002-V-1	#8	SEQUOIA	010-0289	ND	ND	ND	ND	0.0097
SOIL	10/05/90	901005-H-5	#3	SEQUOIA	010-1005	55	0.30	0.80	1.5	8.0
SOIL	10/15/90	901005-H-5	#4	SEQUOIA	010-1006	2.0	0.026	0.053	0.068	0.33

SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TPH-HBF DIESEL	PPM TOTAL OIL & GREASE	PPM ORGANIC LEAD
SOIL	10/02/90	901002-V-1	#2	SEQUOIA	010-0283	ND	ND	ND
SOIL	10/02/90	901002-V-1	#1	SEQUOIA	010-0282	ND	ND	ND

established (professional or regulatory) definitions for the type of sample being collected.
interface sample.

ency inspector chose a sampling location that was different from a standard (pre-defined) location.

taken to comply with regulatory requirements, but to obtain information. Sampling locations
erty owner, the contractor, a consultant, etc. The samples may or may not be analyzed.