BLAINE
TECH SERVICES INC.

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March 7, 1990

COPY

S.S. ND for HVOCs, SVOCs

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

Attn: Lucia Chou

SITE:
Chevron Service Station No. 5542
7007 San Ramon Road
Dublin, California

PROJECT:
Full service station demolition
with removal of all above ground
and subsurface installations

MULTIPLE EVENT SAMPLING REPORT 900214-K-1

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 two different sampling events that were completed during the station demolition 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.

In addition to the work performed by our personnel, this report contains information about sampling performed by other parties, and work performed on days when our personnel were not present.

The primary vendor of laboratory services for this project was Western Environmental Science & Technology (W.E.S.T.), of Davis California. WEST brought their mobile laboratory to the site. Having the mobile laboratory available provided Chevron USA Inc. with the opportunity to run samples at many different points in the project. Making efficient use of the mobile laboratory encouraged sampling whenever a GC became available to analyze more samples. To maintain a productive flow of samples, W.E.S.T. personnel both collected and analyzed samples on several occasions. For example, W.E.S.T. mobile laboratory personnel performed the sampling of product line trenches on February 8, 1990. Our personnel were not involved in that work, but the activity was described in documents supplied to the Chevron engineer by W.E.S.T.. Those documents (cover letter, site sketch, analytical results, etc.) comprise a complete report which we have included, in its entirety, in APPENDIX ONE of this report.

W.E.S.T. personnel were also involved in the collection of stockpile samples at the end of the day on February 13, 1990. No W.E.S.T. report was issued on the sampling portion of their work. However, because we had a representative present at the site who was able to observe some portions of the work being performed by the W.E.S.T. and Chevron personnel, we have included a general description of those sampling activities in our report. Precise sampling locations and depth information was not provided to us, but our representative felt that the information (such as it was) was adequate to indicate the approximate locations at which sampling was performed.

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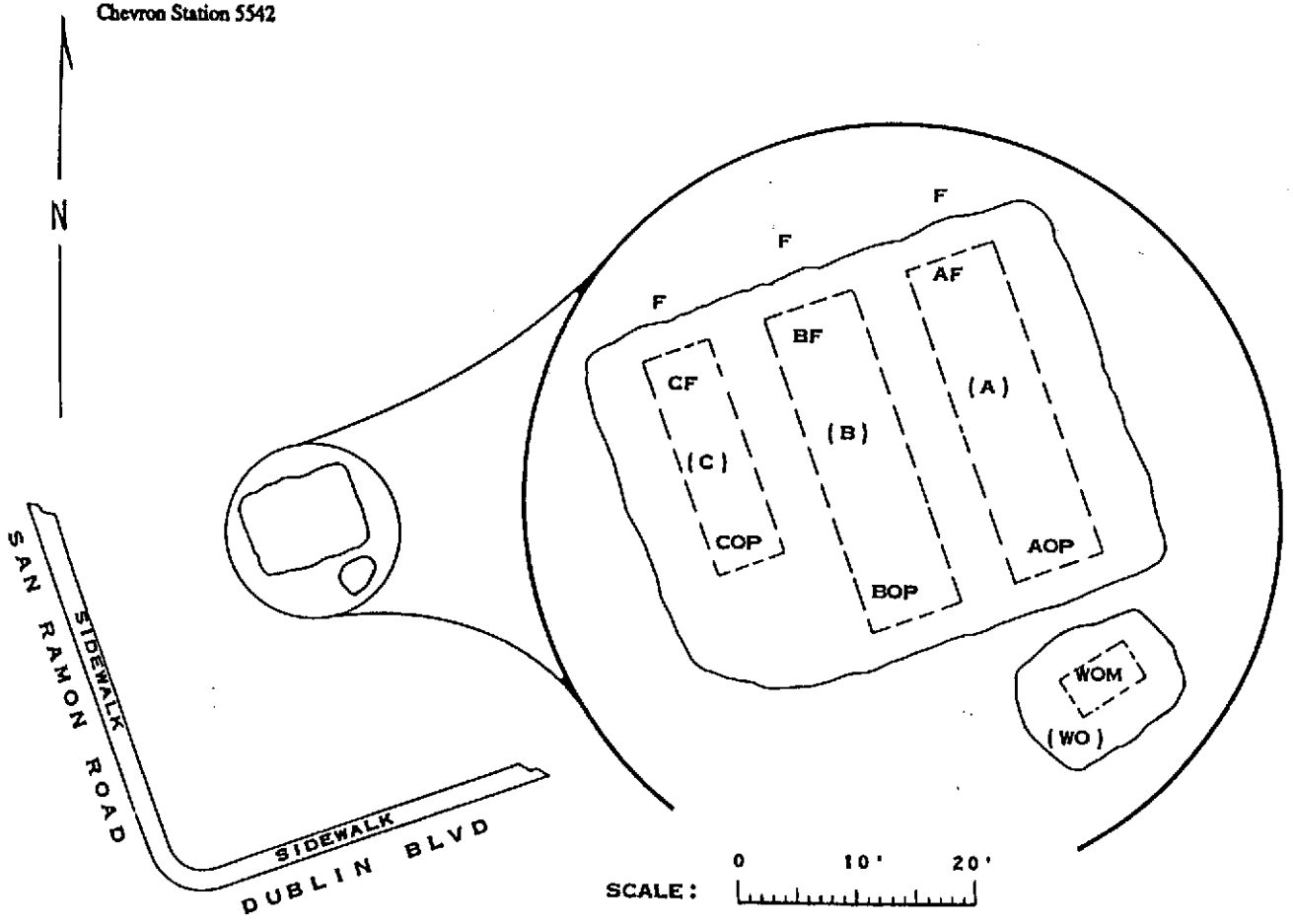
Chevron Station 5542

MASTER SITE DIAGRAM

Chevron Station 5542



SCALE: 0 25' 50' 75'

MAP REF: THOMAS BROS.
ALAMEDA COUNTY
P. 35 D-3

LEGEND: F = FILL END
OP= OPPOSITE THE FILL END.
M = MIDDLE

ENLARGEMENT OF GASOLINE STORAGE TANK AND WASTE OIL TANK PITS

TANK (A)	10,000 GALLON GASOLINE TANK
TANK (B)	10,000 GALLON GASOLINE TANK
TANK (C)	4,000 GALLON GASOLINE TANK
TANK (WO)	500 GALLON WASTE OIL TANK

TANK REMOVAL SAMPLING

February 13, 1990 / 900213-K-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 that would be immediately turned over to an on-site mobile laboratory for analysis. This mobile laboratory would be brought to the site by Western Environmental Science and Technology (W.E.S.T.) of Davis, California.

Our personnel would collect 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, the Regional Water Quality Control Board, and the specific directions of the Local Implementing Agency (LIA) inspector.

EXECUTION OF THE WORK PERFORMED ON FEBRUARY 13, 1990

Our personnel arrived at the site at 0845 hours on the morning of February 13, 1990.

We understood that the geographical location of the site placed it within the jurisdiction of the California Regional Water Quality Control Board -- San Francisco Bay Region. The responsibility for initial inspection and evaluation of the site was, however, exercised by the local implementing agency (LIA), which was the Alameda County Health Agency.

The Dougherty Regional Fire Authority was also interested in the tank removal. Accordingly, both agencies sent representatives to the site. The Alameda County Health Agency was represented by Mr. Gil Wistar, and the Dougherty Regional Fire Authority was represented by Mr. Tom Hathcox. Both representatives were present to observe the tank removal and sampling.

Mr. LaRay Bryant, Air Quality Inspector II, of the Bay Area Air Quality Management District was also present.

While waiting for Tank B and Tank C to reach an acceptable level of inertness (defined by Fire Marshall Hathcox as 10% LEL), Tank A was okayed for removal. A two foot by two foot (2.0' x 2.0') patch was found on the top middle of the tank which was believed to be an access hole through which workers had entered the tank and repaired a hole in the bottom of the tank directly below the fill pipe that was attributed to a dropped dipstick.

Tank B and Tank C continued to resist efforts to render them acceptably inert. Eventually, the tanks were moved to the side and soil samples were taken while the tanks remained in the pit. The tanks were not removed until after 1500 hours in the afternoon.

In accordance with local regulations and the field judgment of the LIA representative, a detailed inspection was conducted on each of the tanks immediately following their excavation. In this inspection, the tanks were visually inspected and any likely failure points were probed with small pointed metal examination tools. Pits were noted in the areas adjacent to the welds, but no holes were found in Tank B or Tank C.

TANK I.D.	SIZE IN GALLONS	TANK CONTENT	MATERIAL OF CONSTRUCTION	INSPECTION FOUND
A	10,000	GASOLINE	STEEL	PATCH
B	10,000	GASOLINE	STEEL	NO HOLES
C	4,000	GASOLINE	STEEL	NO HOLES
WO	500	WASTE OIL	STEEL	NO HOLES

Standard RWQCB Interface samples were taken of the native soil at points corresponding to both ends of each gasoline tank and at a point corresponding to the middle of the waste oil tank. The Standard RWQCB Interface sampling was performed in accordance with the direction of the LIA representative, Mr. Wistar.

Following the collection of the interface samples, the pit was deepened to an overall depth of fifteen to sixteen feet (15.0' - 16.0') below grade. Deeper exploratory samples were taken at the same locations as the standard interface samples. Three exploratory sidewall samples were obtained from the western wall of the gasoline tank pit. Stockpile samples were obtained from the material generated from the gasoline tank pit and waste oil tank pit. The deeper exploratory, sidewall and stockpile sampling was performed in accordance with the direction of Ms. Chou.

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 fill pipe end of Tank A (AF) at a depth of eleven and a half feet (11.5') below grade.

Sample #2 was a standard interface sample taken at the end of Tank A (Aop) which was opposite the fill pipe. It was collected from soil that was bucketed up from a depth of eleven feet (11.0') below grade.

Sample #3 was a standard interface sample taken at the fill pipe end of Tank B (BF) at a depth of eleven feet (11.0') below grade.

Sample #4 was a standard interface sample taken at the end of Tank B (Bop) that was opposite the fill pipe. It was taken at a depth of eleven and a half feet (11.5') below grade.

Sample #5 was a standard interface sample taken at the fill pipe end of Tank C (CF) at a depth of eleven feet (11.0') below grade.

Sample #6 was a standard interface sample taken at the end opposite the fill pipe of Tank C (Cop) at a depth of twelve feet (12.0') below grade.

Sample #7 was a standard interface sample taken from the center of the waste oil tank (WoM). The sample material was obtained at a depth of eight feet (8.0') below grade.

Sample #8 was a deeper exploratory sample taken below sample #7 (WoM) at a depth of ten a half feet (10.5') below grade.

Sample #9 was a stockpile sample collected from the material generated from the waste oil tank pit.

Sample #10 was a deeper exploratory sample taken below sample #5 (CF) at a depth of fifteen feet (15.0') below grade.

Sample #11 was a deeper exploratory sample taken below sample #3 (BF) at a depth of sixteen feet (16.0') below grade.

Sample #12 was a deeper exploratory sample taken below sample #1 (AF) at a depth of sixteen feet (16.0') below grade.

Sample #13 was a deeper exploratory sample taken below sample #2 (Aop) at a depth of fifteen and a half feet (15.5') below grade.

Sample #14 was a deeper exploratory sample taken below sample #4 (Bop) at a depth of sixteen feet (16.0') below grade.

Sample #15 was a deeper exploratory sample taken below sample #6 (Cop) at a depth of sixteen feet (16.0') below grade.

Sidewall Sample #1 was obtained along the northwest wall of the gasoline tank pit adjacent to the fill pipe end of Tank C. The soil was brought up in the backhoe bucket at the direction of Ms. Lucia Chou who noted that the bulk of the soil was collected at a depth of thirteen and a half feet (13.5) below grade.

Sidewall Sample #2 was obtained along the southwest corner of the gasoline tank pit at a reported depth of eight and a quarter feet (8.25') below grade.

Sidewall Sample #3 was obtained along the western wall between Sidewall Sample #1 and Sidewall Sample #2. Ms. Chou directed the backhoe operator in the bucket movements that obtained the soil from the sidewall of the pit. When our representative arrived with a brass sample container to collect the sample, he was informed that the bulk of the soil in the bucket was brought up from a depth of seven and a half feet (7.5') below grade.

Stockpile samples (Stockpile #1 through Stockpile #20) were collected by W.E.S.T. mobile laboratory personnel. The reported approximate locations at which these samples were collected is depicted on Diagram Two on page nine.

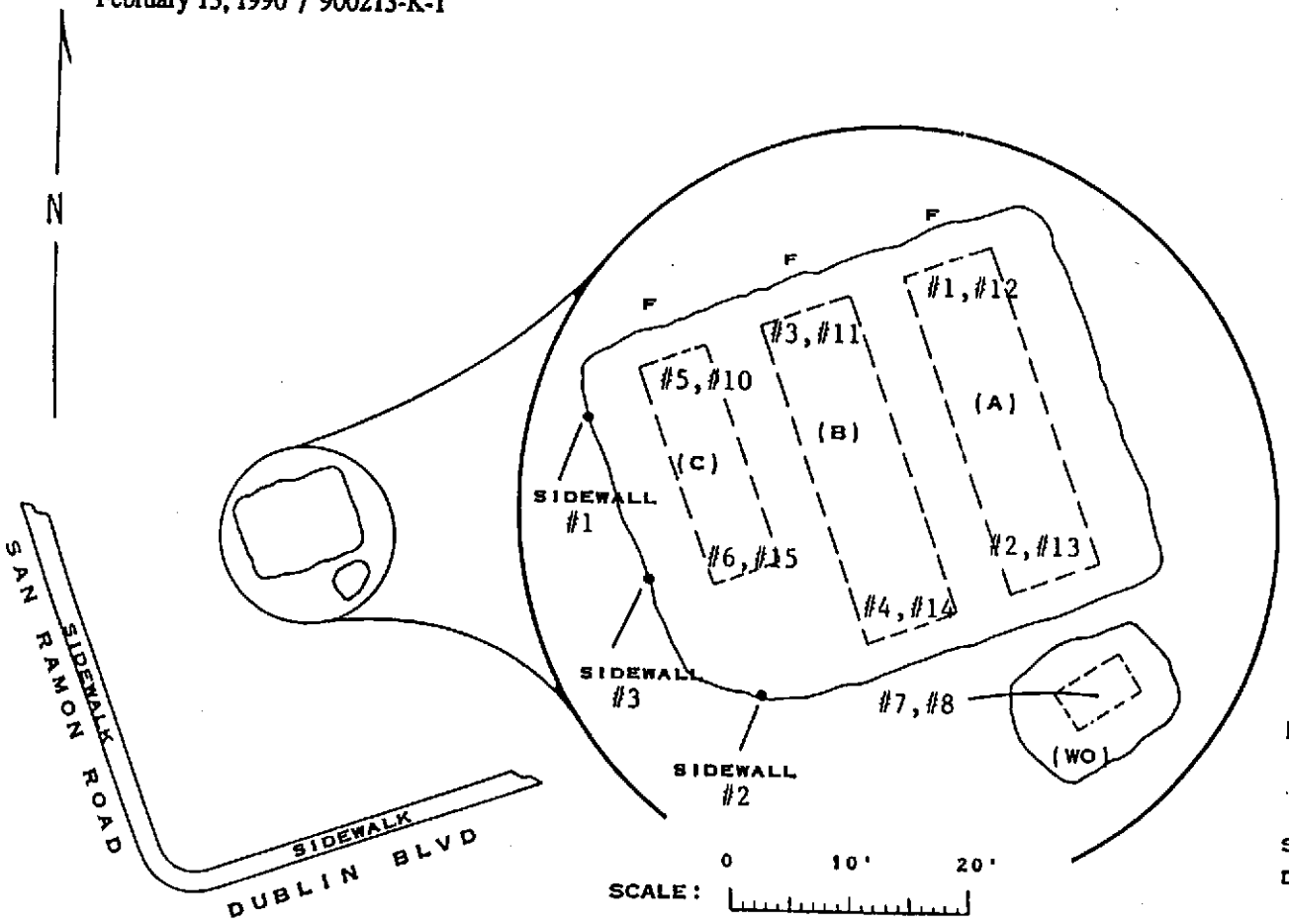
The samples were received and processed by the W.E.S.T. personnel operating the mobile laboratory. The W.E.S.T. mobile laboratory has been issued California Department of Health Services (DHS) Hazardous Materials Testing Laboratory #340. It was requested that the analytical procedures used for these 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.

Some of the samples from this project were turned over to other laboratories to conduct analyses which W.E.S.T. would not be able to perform. GTEL Environmental Laboratories, Inc. in Concord, California was used in this capacity. It is also a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #194.

TANK REMOVAL DIAGRAM

February 13, 1990 / 900213-K-1

DIAGRAM ONE



SCALE: 0 25' 50' 75'

MAP REF: THOMAS BROS. ALAMEDA COUNTY P.35 D-3

LEGEND: F = FILL END

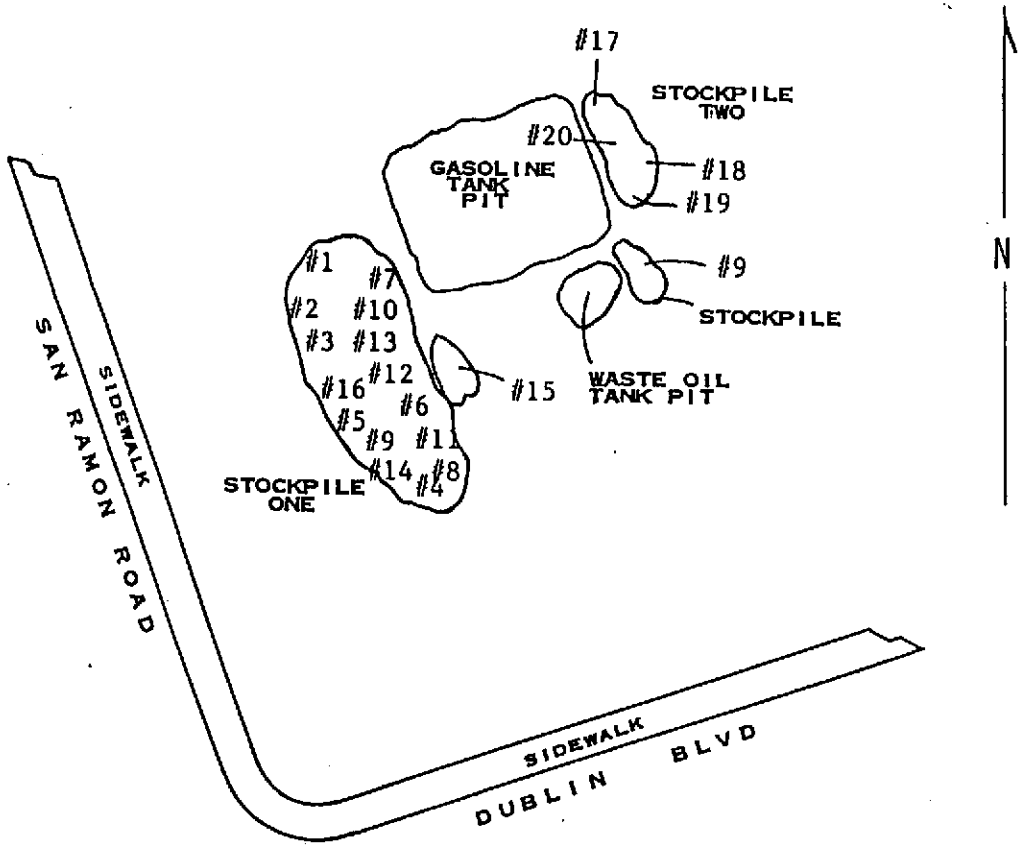
ENLARGEMENT OF GASOLINE STORAGE TANK AND WASTE OIL TANK PITS

SAMPLING PERFORMED BY JOHN KOMAN
DIAGRAM PREPARED BY BRENT ADAMS

TANK REMOVAL DIAGRAM

February 13, 1990 / 900213-K-1

DIAGRAM TWO



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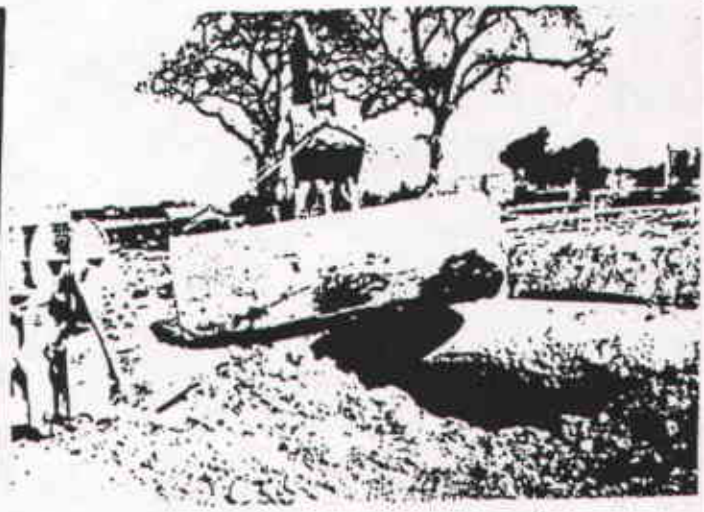
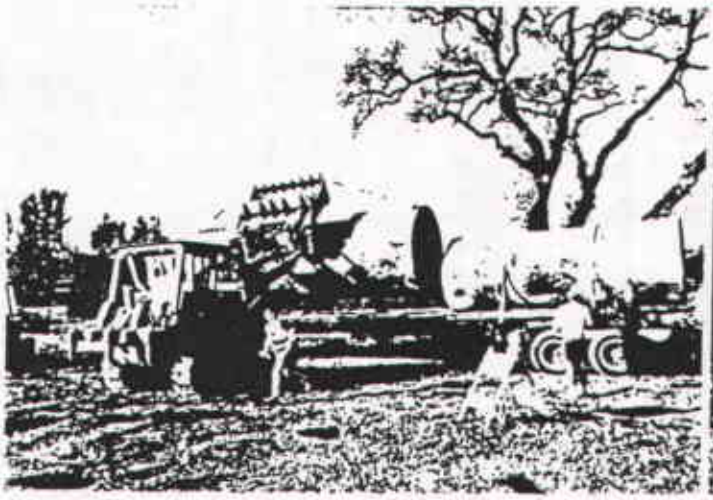
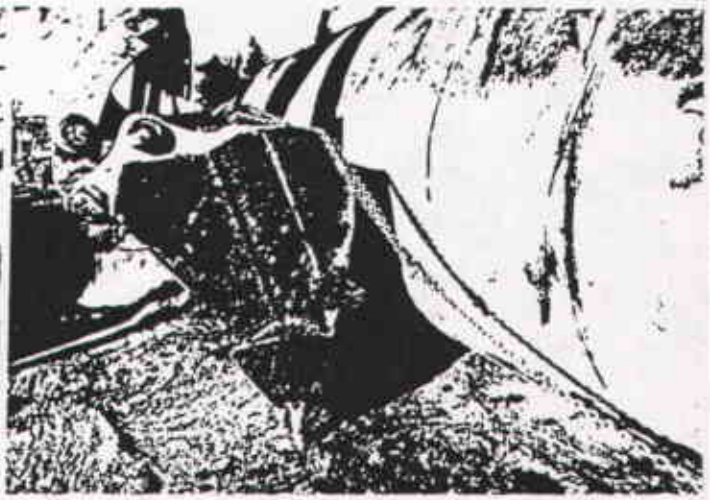
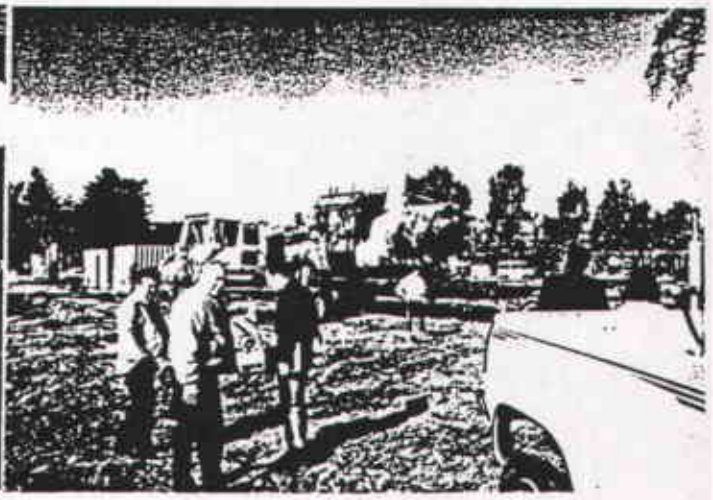
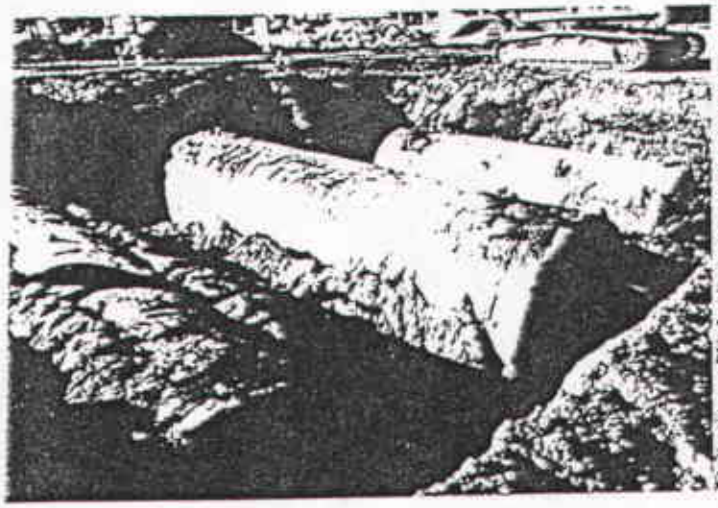
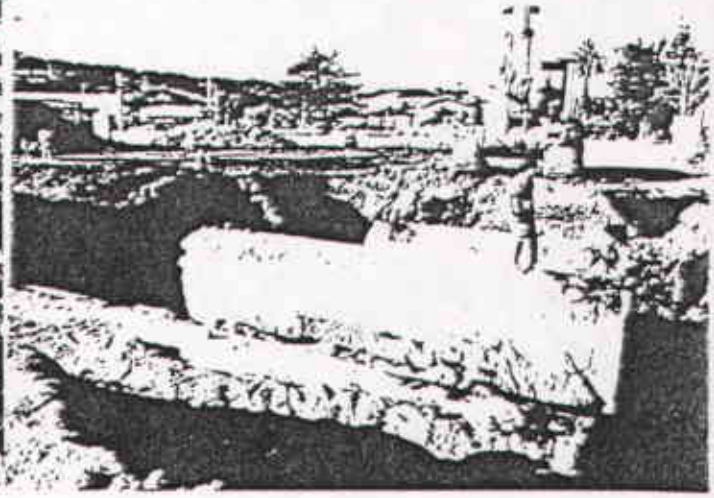
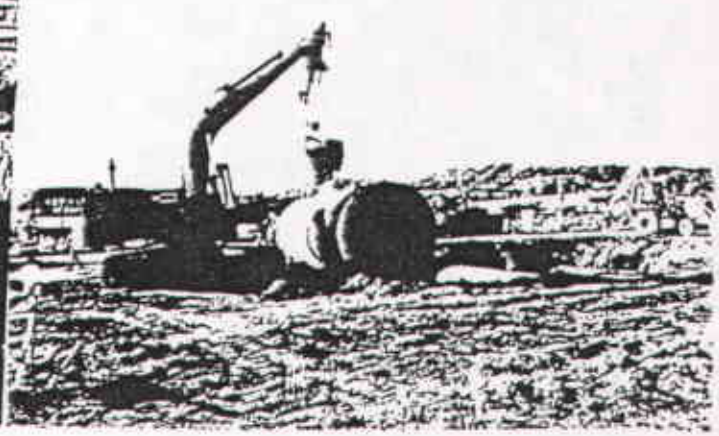
MAP REF: THOMAS BROS. ALAMEDA COUNTY P. 35 D-3

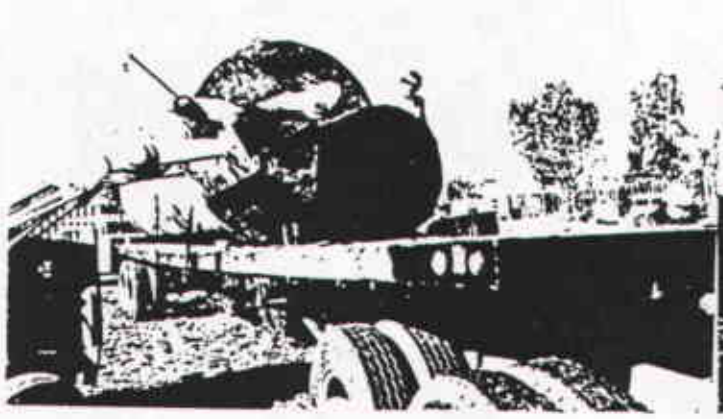





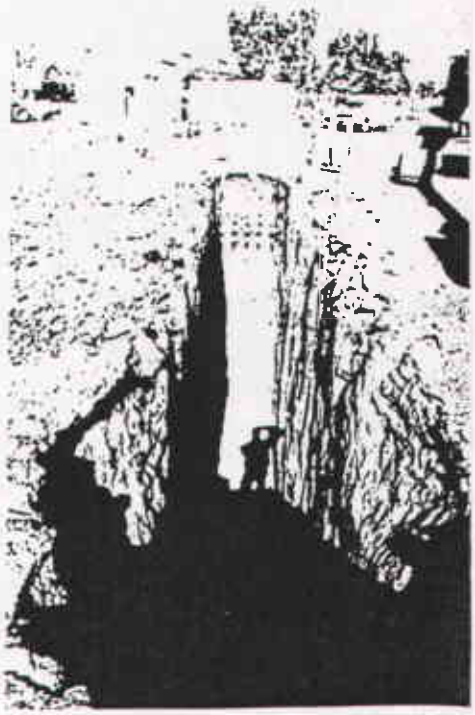












ADDITIONAL EXCAVATION SAMPLING

February 14, 1990 / 900214-K-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 FEBRUARY 14, 1990

Personnel from our office returned to the site on Wednesday, February 14, 1990 to perform sampling following the additional excavation work. Ms. Lucia Chou was present to observe and direct the sampling activity. Three confirming soil samples were obtained from the bottom of the gasoline tank pit at a depth of twenty-two feet (22.0') below grade. The numbering of these samples continued the system used on the previous day in which tank pit samples had reached #15. Accordingly, the additional excavation samples were identified as samples #16, #17, and #18.

The material generated by the additional excavation work was stockpiled to the west of the gasoline tank pit. Four sampling points were selected, and four sample containers of soil were collected. The numbering of these samples continued the system used on the previous day in which stockpile samples had reached Stockpile Sample #20. Accordingly, the samples taken from the stockpile of material generated by the additional excavation were identified as samples #21, #22, #23, and #24.

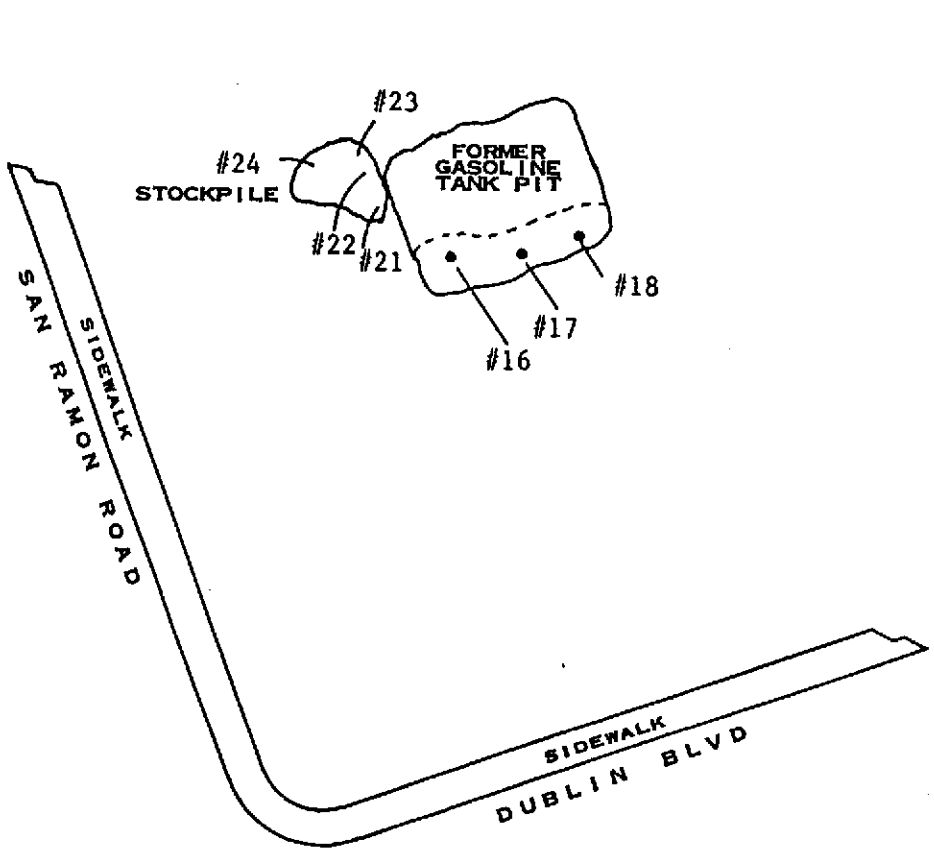
After being properly sealed and labeled the four stockpile sample containers were placed in cold storage for transportation to the laboratory. Special instructions were written out that directed the laboratory to take material from each of the four individual sample containers and composite that material prior to conducting a single analysis on the resulting mixture.

After completion of the field work, the sample containers were delivered to GTEL Environmental Laboratories, Inc. in Concord, California. GTEL Environmental Laboratories, Inc. is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #194.

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

February 14, 1990 / 900214-K-1



SCALE: 0 25' 50' 75'

MAP REF: THOMAS BROS.
ALAMEDA COUNTY
P. 35 D-3

SAMPLING PERFORMED BY JOHN KOMAN
DIAGRAM PREPARED BY BRENT ADAMS

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 RMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TPH AS GAS	PPM BENZENE	PPM TOLUENE	PPM ETHYL BENZENE	PPM XYLENES
AF	11.5	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#1	WEST	#1	3100	1.8	50	51	360
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#12	WEST	#12	190	0.26	2.5	2.5	15
Aop	11.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#2	WEST	#2	5000	2.0	210	120	780
	15.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#13	WEST	#13	5100	30	360	110	680
	22.0	ELECTIVE	CONFIRM	SOIL	02/14/90	900214-K-1	#18	GTEL	03	3100	60.0	219	69	355
BF	11.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#3	WEST	#3	5.9	0.19	0.060	0.15	0.34
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#11	WEST	#11	8.6	0.046	0.40	0.13	1.2
Bop	11.5	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#4	WEST	#4	4800	8.8	430	130	690
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#14	WEST	#14	2900	23	150	45	240
	22.0	ELECTIVE	CONFIRM	SOIL	02/14/90	900214-K-1	#17	GTEL	02	1300	20	98	33	160
CF	11.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#5	WEST	#5	2.4	0.017	0.068	0.045	0.12
	15.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#10	WEST	#10	12	0.12	0.40	0.11	1.1
Cop	12.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#6	WEST	#6	2900	2.2	120	51	300
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#15	WEST	--	--	--	--	--	--
	22.0	ELECTIVE	CONFIRM	SOIL	02/14/90	900214-K-1	#16	GTEL	01	18	3.0	5.0	0.5	3.0
STOCKPILES														
#1-#4	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#1-#4	WEST	COMPO-SITE 1 #1-#4	1400	4.2	82	33	200
#5-#8	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#5-#8	WEST	COMPO-SITE 2 #5-#8	1100	3.0	68	24	160
#9-#12	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#9-#12	WEST	COMPO-SITE 3 #9-#12	500	0.39	6.3	8.0	58
#13-#16	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#13-#16	WEST	COMPO-SITE 4 #13, 15, 16	1100	1.1	26	20	150
#17-#20	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#17-#20	WEST	COMPO-SITE 4 #17-#20	420	0.38	1.1	3.6	29
#21-#24	12"	STANDARD	BAAQMD-M	SOIL	02/14/90	900214-K-1	#21-24	GTEL	COMPO-SITE #21-#24	950	6.0	73	21	160

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.

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 BENZENE	PPM TOLUENE	PPM ETHYL BENZENE	PPM XYLENES
SIDE-WALL #1	13.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	SIDE-WALL #1	WEST	SIDE-WALL #1	1.1	0.022	0.013	0.023	0.070
SIDE-WALL #2	8.25	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	SIDE-WALL #2	WEST	SIDE-WALL 2	<0.5	<0.005	<0.005	<0.005	0.0068
SIDE-WALL #3	7.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	SIDE-WALL #3	WEST	SIDE-WALL 3	18	0.27	0.89	0.40	2.8
WoM	8.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#7	WEST	#7	0.55	0.0046	0.019	<0.005	0.49
	10.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#8	WEST	#8	<0.5	<0.005	<0.005	<0.005	0.020
WoSTK	12"	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#9	WEST	#9 *	<0.5	<0.005	<0.005	<0.005	0.0091

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 TOTAL OIL & GREASE	PPB EPA 8240 COMPOUNDS	PPB EPA 8270 COMPOUNDS
WoM	8.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#7	GTEL	01	12	ND	ND
	10.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#8	GTEL	02	12	ND	ND
WoSTK	12"	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#9	--	--	--	--	--

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 PRIORITY POLLUTANT METALS
WoM	8.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#7	GTEL	01	SEE LAB REPORT
	10.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#8	GTEL	02	SEE LAB REPORT
WoSTK	12"	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#9	--	--	--

* Note: Waste oil stockpile sample #9, taken on 02/13/90, was analyzed at WEST for TPH-G and BTEX. WEST then forwarded the sample to a subcontractor laboratory for further analysis. The sample was inadvertantly destroyed. Apparently, GTEL obtained and analyzed additional waste oil stockpile material on February 23, 1990. See Appendix Three for the GTEL analytical report.

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.

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 EMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TPH AS GAS	PPM BENZENE	PPM TOLUENE	PPM ETHYL BENZENE	PPM XYLENES
AF	11.5	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#1	WEST	#1	3100	1.8	50	51	360
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#12	WEST	#12	190	0.26	2.5	2.5	15
Aop	11.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#2	WEST	#2	5000	2.0	210	120	780
	15.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#13	WEST	#13	5100	30	360	110	680
	22.0	ELECTIVE	CONFIRM	SOIL	02/14/90	900214-K-1	#18	GTEL	03	3100	60.0	219	69	355
BF	11.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#3	WEST	#3	5.9	0.19	0.060	0.15	0.34
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#11	WEST	#11	8.6	0.046	0.40	0.13	1.2
Bop	11.5	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#4	WEST	#4	4800	8.8	430	130	690
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#14	WEST	#14	2900	23	150	45	240
	22.0	ELECTIVE	CONFIRM	SOIL	02/14/90	900214-K-1	#17	GTEL	02	1300	20	98	33	160
CF	11.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#5	WEST	#5	2.4	0.017	0.068	0.045	0.12
	15.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#10	WEST	#10	12	0.12	0.40	0.11	1.1
Cop	12.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#6	WEST	#6	2900	2.2	120	51	300
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#15	WEST	--	--	--	--	--	--
	22.0	ELECTIVE	CONFIRM	SOIL	02/14/90	900214-K-1	#16	GTEL	01	18	3.0	5.0	0.5	3.0
STOCKPILES														
#1-#4	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#1-#4	WEST	COMPO-SITE 1 #1-#4	1400	4.2	82	33	200
#5-#8	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#5-#8	WEST	COMPO-SITE 2 #5-#8	1100	3.0	68	24	160
#9-#12	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#9-#12	WEST	COMPO-SITE 3 #9-#12	500	0.39	6.3	8.0	58
#13-#16	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#13-#16	WEST	COMPO-SITE 4 #13, 15, 16	1100	1.1	26	20	150
#17-#20	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#17-#20	WEST	COMPO-SITE 4 #17-#20	420	0.38	1.1	3.6	29
#21-#24	12"	STANDARD	BAAQMD-M	SOIL	02/14/90	900214-K-1	#21-24	GTEL	COMPO-SITE #21-#24	950	6.0	73	21	160

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.

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.

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.

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 dimin-

ishes 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 caps 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 a 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 that 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
Division of Hazardous Materials
80 Swan Way, Room 200
Oakland, CA 94621
ATTN: Gil Wistar

Dougherty Regional Fire Authority
9399 Fircrest Lane
San Ramon, CA 94583
ATTN: Tom Hathcox

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/dmp

ANALYTICAL APPENDIX

Supporting documents

APPENDIX ONE -- W.E.S.T. SAMPLING AND ANALYTICAL REPORT

APPENDIX TWO -- BLAINE TECH SERVICES, INC. SAMPLING

CHAIN OF CUSTODY FORMS FOR 02/13/90
CERTIFIED ANALYTICAL REPORTS FOR 02/13/90

CHAIN OF CUSTODY FORMS FOR 02/14/90
CERTIFIED ANALYTICAL REPORTS FOR 02/14/90

APPENDIX THREE -- GTEL ANALYTICAL REPORT

TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS

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 BENZENE	PPM TOLUENE	PPM ETHYL BENZENE	PPM XYLENES
AF	11.5	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#1	WEST	#1	3100	1.8	50	51	360
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#12	WEST	#12	190	0.26	2.5	2.5	15
Aop	11.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#2	WEST	#2	5000	2.0	210	120	780
	15.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#13	WEST	#13	5100	30	360	110	680
	22.0	ELECTIVE	CONFIRM	SOIL	02/14/90	900214-K-1	#18	GTEL	03	3100	60.0	219	69	355
BF	11.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#3	WEST	#3	5.9	0.19	0.060	0.15	0.34
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#11	WEST	#11	8.6	0.046	0.40	0.13	1.2
Bop	11.5	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#4	WEST	#4	4800	8.8	430	130	690
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#14	WEST	#14	2900	23	150	45	240
	22.0	ELECTIVE	CONFIRM	SOIL	02/14/90	900214-K-1	#17	GTEL	02	1300	20	98	33	160
CF	11.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#5	WEST	#5	2.4	0.017	0.068	0.045	0.12
	15.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#10	WEST	#10	12	0.12	0.40	0.11	1.1
Cop	12.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#6	WEST	#6	2900	2.2	120	51	300
	16.0	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#15	WEST	--	—	—	--	--	--
	22.0	ELECTIVE	CONFIRM	SOIL	02/14/90	900214-K-1	#16	GTEL	01	18	3.0	5.0	0.5	3.0
STOCKPILES														
#1-#4	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#1-#4	WEST	COMPO-SITE 1 #1-#4	1400	4.2	82	33	200
#5-#8	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#5-#8	WEST	COMPO-SITE 2 #5-#8	1100	3.0	68	24	160
#9-#12	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#9-#12	WEST	COMPO-SITE 3 #9-#12	500	0.39	6.3	8.0	58
#13-#16	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#13-#16	WEST	COMPO-SITE 4 #13, 15, 16	1100	1.1	26	20	150
#17-#20	--	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#17-#20	WEST	COMPO-SITE 4 #17-#20	420	0.38	1.1	3.6	29
#21-#24	12"	STANDARD	BAAQMD-M	SOIL	02/14/90	900214-K-1	#21-24	GTEL	COMPO-SITE #21-#24	950	6.0	73	21	160

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.

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 EMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TPH AS GAS	PPM BENZENE	PPM TOLUENE	PPM ETHYL BENZENE	PPM XYLENES
SIDE-WALL #1	13.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	SIDE-WALL #1	WEST	SIDE-WALL #1	1.1	0.022	0.013	0.023	0.070
SIDE-WALL #2	8.25	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	SIDE-WALL #2	WEST	SIDE-WALL 2	<0.5	<0.005	<0.005	<0.005	0.0068
SIDE-WALL #3	7.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	SIDE-WALL #3	WEST	SIDE-WALL 3	18	0.27	0.89	0.40	2.8
WoM	8.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#7	WEST	#7	0.55	0.0046	0.019	<0.005	0.49
	10.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#8	WEST	#8	<0.5	<0.005	<0.005	<0.005	0.020
WoSTK	12"	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#9	WEST	#9 *	<0.5	<0.005	<0.005	<0.005	0.0091

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 EMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TOTAL OIL & GREASE	PPB EPA 8240 COMPOUNDS	PPB EPA 8270 COMPOUNDS
WoM	8.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#7	GTEL	01	12	ND	ND
	10.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#8	GTEL	02	12	ND	ND
WoSTK	12"	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#9	—	--	--	--	--

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 EMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM PRIORITY POLLUTANT METALS
WoM	8.0	STANDARD	INTRFACE	SOIL	02/13/90	900213-K-1	#7	GTEL	01	SEE LAB REPORT
	10.5	ELECTIVE	EXPLOR	SOIL	02/13/90	900213-K-1	#8	GTEL	02	SEE LAB REPORT
WoSTK	12"	STANDARD	BAAQMD-M	SOIL	02/13/90	900213-K-1	#9	—	--	--

* Note: Waste oil stockpile sample #9, taken on 02/13/90, was analyzed at WEST for TPH-G and BTEX. WEST then forwarded the sample to a subcontractor laboratory for further analysis. The sample was inadvertantly destroyed. Apparently, GTEL obtained and analyzed additional waste oil stockpile material on February 23, 1990. See Appendix Three for the GTEL analytical report.

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.

February 9, 1990
Sample Log 1313

Lucia Chou
Chevron U.S.A.
[redacted] Ramon
San Ramon, CA 94583-0804

10:20 am
2/9

Subject: Analytical Results for 7 Soil Sample(s)
Identified as: Chevron Facility at 7007 San Ramon Rd, Dublin
Received: February 8, 1990

Dear Ms. Chou:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on February 9, 1990 and describes procedures used to analyze the samples.

Samples were received in brass sleeves that were sealed with aluminum foil and plastic endcaps. Each sample was transported and received under documented chain of custody and stored at 4 degrees C until analysis was performed.

Sample(s) were analyzed for the following:

"BTEX" (EPA Method 8020/Purge-and-Trap)
"TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)

Please refer to the following table(s) for summarized analytical results and contact us if you have questions regarding procedures or results. The chain-of-custody document is enclosed.

Submitted by:

Joel Kiff
Project Chemist

Approved by:

Robert G. Smith, Ph.D.
Laboratory Director

Western Environmental
Science & Technology
1046 Olive Drive, Suite H
Davis, CA 95616
916 753-9[illegible]

February 9, 1990
Sample Log 1313

Table 1: 'BTEX' Results for 7 Soil Sample(s) Identified as Chevron Facility at 7007 San Ramon Rd, Dublin
Received February 8, 1990

--all concentrations are units of mg/kg--

Sample	0.1 Benz.	10 Tol.	68 Eth.Benz.	175 Xyl.
PL1	.85	.017	.20	1.2
PL2	<.005	<.005	<.005	.012
PL3	.0095	.011	.16	.15
PL4	<.005	<.005	.16	.072
Composite 1	.36	1.7	1.1	8.7.
1A				
1B				
1C				
1D				
Composite 2	.22	.58	.75	5.7
2A				
2B				
Composite 3	2.1	4.7	1.6	8.0
3A				
3B				
(Reporting Limit	.005	.005	.005	.005)

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1046 Olive Drive, Suite 3
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916 753-9500

February 9, 1990
Sample Log 1313

Table 2: Gasoline Results for 7 Soil Sample(s) Identified as Chevron Facility at 7007 San Ramon Rd, Dublin
Received February 8, 1990

--all concentrations are units of mg/kg--

Sample	TPH as Gasoline
PL1	9.0
PL2	<.5
PL3	3.9
PL4	2.8
Composite 1	200
1A	
1B	
1C	
1D	
Composite 2	58
2A	
2B	
Composite 3	61
3A	
3B	
(Reporting Limit	.5)

100 ppm

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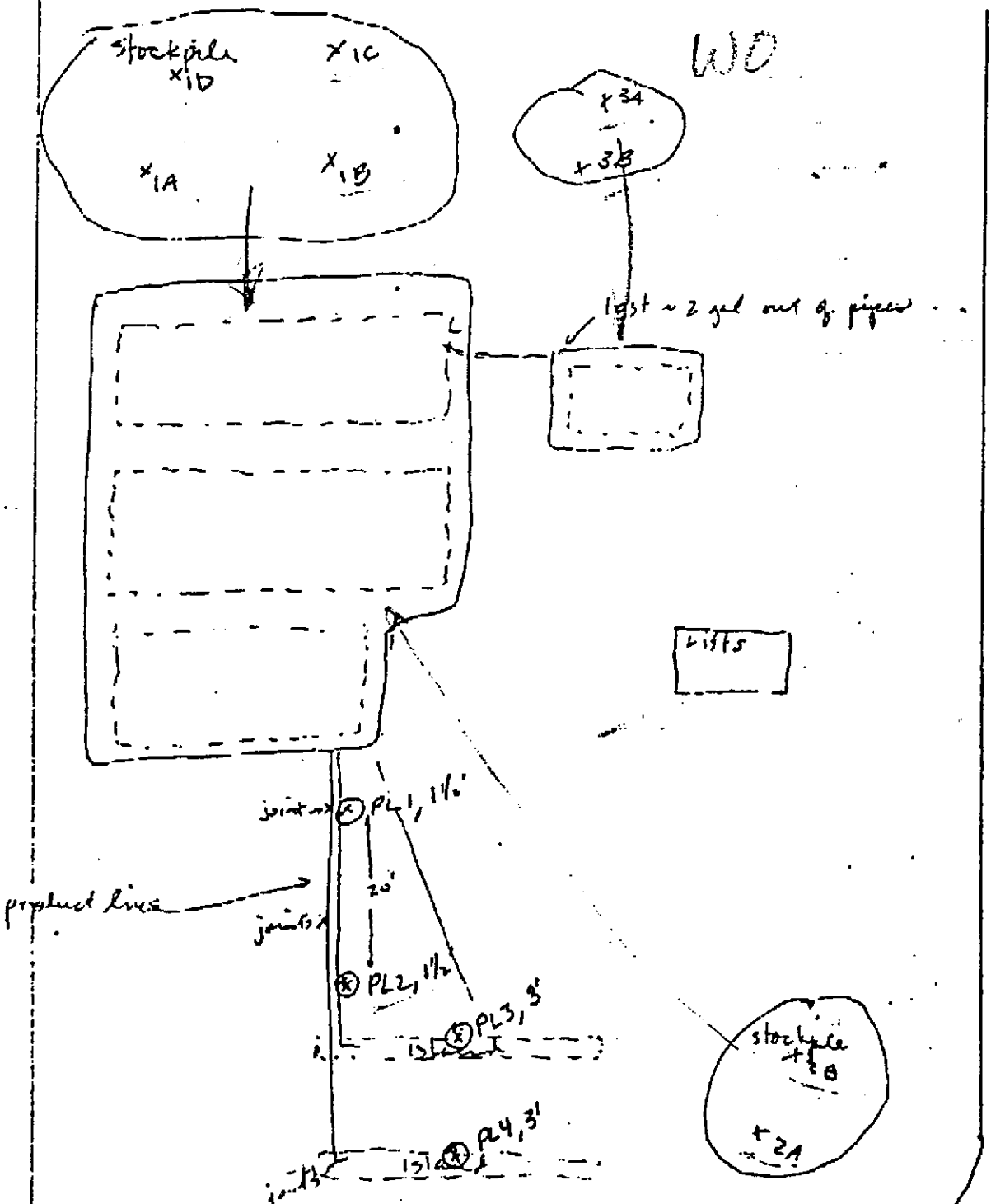
Tank Closure at 7007 San Ramon Rd (Chevron Sta)
Sampling & Map by Joel Kiff - W.E.S.T.



BLAINE
TECH SERVICES INC.

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

CHAIN OF CUSTODY # 900213 K1

SITE SPECIFICATION Chevron
Lincoln (Hwy 65)

( ) Bill BLAINE TECH SERVICES, Inc.
( ) Bill

SPECIAL INSTRUCTIONS
to MAGIC LAB

	SAMPLE I.D.	QUANTITY	TYPE OF	ANALYSIS TO DETECT	STATUS	RESULTS	LAB NUMBER
11:25	#1 AHm	1	Soil	TPH BTXE			
11:25	#2 AHm	1	Soil	TPH BTXE			
11:25	#7 AHm	1	Soil	Oil & Grease			
11:5	#3 AHm	1	"	TPH BTXE			
11:5	#4 AHm	1	"	TPH BTXE			
12:-	#5 AHm	1	"	TPH BTXE Gas			
-3	#6 AHm	1	"	TPH BTXE Gas			
2:2	#8 AHm	1	Soil	Diesel			
2:	#9 AHm	1	"	TPH			
	#10 AHm	1	Soil	TPH			
6:	#11 AHm	1	Soil				
"	#12 AHm	1	"				
"	#13 AHm	1	"				
"	#5 Duplicate	1	"				

Field sampling was performed by John Kramer

Sampling was completed at 6:00 AM/PM 12-13-1990

RELEASE OF SAMPLES FROM (name,time,date) ——>>>>> INTO THE CUSTODY OF (name,time,date)

from Kramer @ 7:?? AM/PM 12-13-90 -> to Gordon K Davis @ 14:30 AM/PM ____-90

from _____ @ ____ AM/PM ____-90 -> to _____ @ ____ AM/PM ____-90

from _____ @ ____ AM/PM ____-90 -> to _____ @ ____ AM/PM ____-90

The laboratory designated to perform these analyses is: WESTT DHS ELAP # ____
NOTE: Procedures and detection limits must confrom to RWQCB Region 5 specifications.
Please include chain of custody number and site specification on reports and invoices.

BLAINE TECH SERVICES INC.

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

CHAIN OF CUSTODY # 9213K1

SITE SPECIFICATION [illegible]

( ) Bill BLAINE TECH SERVICES, Inc.
( ) Bill

SPECIAL INSTRUCTIONS

SAMPLE I.D.	QUANTITY	TYPE	OK	ANALYSIS TO DETECT	STATUS	RESULTS	LAB NUMBER
#14	1	S		BTEX TPH			
#15	1	S		"			
#16							
#17							
#18							
#19							
#20							
Stock 1-16 (composite)							
Sidewall 1							
Sidewall 2							
Sidewall 3							

Field sampling was performed by [illegible]

Sampling was completed at 7:00 AM/PM 12-13-1990

RELEASE OF SAMPLES FROM (name,time,date) ——>>>>> INTO THE CUSTODY OF (name,time,date)

from [illegible] @ 7:30 AM/PM 12-13-90 -> to [illegible] @ 7:30 AM/PM -90

from @ : AM/PM -90 -> to @ : AM/PM -90

from @ : AM/PM -90 -> to @ : AM/PM -90

The laboratory designated to perform these analyses is: WESTF DHS #HTL # 3

NOTE: Procedures and detection limits must confrom to RWQCB Region 2 specifications.
Please include chain of custody number and site specification on reports and invoices.

March 21, 1990
Sample Log 1322

Lucia Chou
Chevron U.S.A.
2410 Camino Ramon
San Ramon, CA 94583-0804

Subject: Analytical Results for 22 Soil Sample(s)
Identified as: Chevron Facility at 7007 San Ramon Rd, Dublin
Received: February 13, 1990
Purchase Order: 3154191

Dear Ms. Chou:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on February 14, 1990 and describes procedures used to analyze the samples.

Sample(s) were received in brass sleeves that were sealed with aluminum foil and plastic endcaps. Each sample was transported and received under documented chain of custody and stored at 4 degrees C until analysis was performed.

Each sample was transported and received under documented chain of custody, assigned a consecutive log number and stored at 4 degrees Celsius until analysis commenced.

Sample(s) were analyzed using the following method(s):

"BTEX" (EPA Method 8020/Purge-and-Trap)
"TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)
"TPH as Diesel/Oil" (Modified EPA Method 8015/Extraction)

Please refer to the following table(s) for summarized analytical results and contact us if you have questions regarding procedures or results. The chain-of-custody document is enclosed.

Submitted by:

Joel Kiff
Project Chemist

Approved by:

Robert G. Smith, Ph.D.
Laboratory Director

Woodburn Environmental
Science & Technology
146 Olive Drive, Suite 3
Davis, CA 95616
916 753-9500

March 21, 1990
Sample Log 1322

Table 1: 'BTEX' Results for 22 Soil Sample(s) Identified as Chevron Facility at 7007 San Ramon Rd, Dublin
Received February 13, 1990

--all concentrations are units of mg/kg--

Sample	Benz.	Tol.	Eth.Benz.	Xyl.
#1	1.8	50	51	360
#2	2.0	210	120	780
#3	.19	.060	.15	.34
#4	8.8	430	130	690
#5	.017	.068	.045	.12
#6	2.2	120	51	300
#7	.0046	.019	<.005	.049
#8	<.005	<.005	<.005	.020
#9	<.005	<.005	<.005	.0091
#10	.12	.40	.11	1.1
#11	.046	.40	.13	1.2
#12	.26	2.5	2.5	15
#13	30	360	110	680
#14	23	150	45	240
Sidewall #1	.022	.013	.023	.070
Sidewall 2	<.005	<.005	<.005	.0068
Sidewall 3	.27	.89	.40	2.8
(Reporting Limit	.005	.005	.005	.005)

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Science & Technology
648 Olive Drive, Suite 3
Davis, CA 95616
916 753-0101

March 22, 1990
Sample Log 1322

B T E X Continued

--all concentrations are units of mg/kg--

Sample	Benz.	Tol.	Eth.Benz.	Xyl.
Composite 1 Stock 1 Stock 2 STock 3 Stock 4	4.2	82	33	200
Composite 2 Stock 5 Stock 6 Stock 7 Stock 8	3.0	68	24	180
Composite 3 Stock 9 Stock 10 Stock 11 Stock 12	.39	6.3	8.0	58
Composite 4 Stock 13 Stock 15 Stock 16	1.1	26	20	150
Composite 5 #17 #18 #19 #20	.38	1.1	3.6	29
(Reporting Limit	.005	.005	.005	.005)

Western Environmental
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(916) 753-4800

March 21, 1990
Sample Log 1322

Table 2: TPH Results for 22 Soil Sample(s) Identified as Chevron Facility at 7007 San Ramon Rd, Dublin
Received February 13, 1990

--all concentrations are units of mg/kg--

Sample	TPH as Gasoline	TPH (Extractable)
#1	3100	
#2	5000	
#3	5.9	
#4	4800	
#5	2.4	
#6	2900	
#7	.55	
#8	<.5	<10
#9	<.5	<10
#10	12	
#11	8.6	
#12	190	
#13	5100	
#14	2900	
Sidewall #1	1.1	
Sidewall 2	<.5	
Sidewall 3	18	
(Reporting Limit	.5	10)

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Science & Technology
46 Olive Drive, Suite 3
Vis, CA 95618
916 758-[illegible]

March 22, 1990
Sample Log 1322

TPH as Gasoline & Diesel Continued

--all concentrations are units of mg/kg--

Sample	TPH as Gasoline	TPH (Extractable)
Composite 1	1400	
Stock 1		
Stock 2		
STock 3		
Stock 4		
Composite 2	1100	
Stock 5		
Stock 6		
Stock 7		
Stock 8		
Composite 3	500	
Stock 9		
Stock 10		
Stock 11		
Stock 12		
Composite 4	1100	
Stock 13		
Stock 15		
Stock 16		
Composite 5	420	
#17		
#18		
#19		
#20		
(Reporting Limit	.5	10)

Woodward Environmental
Science & Technology
648 Olive Drive, Suite 3
Davis CA 95616
916 753-9500

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Western Region
4080-C Pike Ln., Concord, CA 94520
(415) 685-7852
In CA: (800) 544-3422
Outside CA: (800) 423-7143

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002436
Report Issue Date: February 20, 1990

UC
Tank Farm

T 9260

LUCIA CHOU
CHEVRON U.S.A INC.
P.O. BOX 5004
SAN RAMON, CA 94583

DEAR MS. CHOU:

Attached please find the analytical results for the samples received by GTEL on February 16, 1990.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,
GTEL Environmental Laboratories, Inc.

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002436
Report Issue Date: February 20, 1990

Table 1

ANALYTICAL RESULTS

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date Sampled		02/13/90	02/13/90		
Date Analyzed		02/16/90	02/16/90		
Client Identification		1322-7	1322-8		
GTEL Sample Number		01	02		
Analyte	Detection Limit, ug/Kg	Concentration, ug/Kg			
Chloromethane	500	<500	<500		
Bromomethane	500	<500	<500		
Vinyl Chloride	500	<500	<500		
Chloroethane	500	<500	<500		
Methylene Chloride	250	<250	<250		
Acetone	5000	<5000	<5000		
Carbon Disulfide	250	<250	<250		
1,1-Dichloroethene	250	<250	<250		
1,1-Dichloroethane	250	<250	<250		
trans-1,2-Dichloroethene	250	<250	<250		
Chloroform	250	<250	<250		
1,2-Dichloroethane	250	<250	<250		
2-Butanone	5000	<5000	<5000		
1,1,1-Trichloroethane	250	<250	<250		
Carbon Tetrachloride	250	<250	<250		
Vinyl Acetate	2500	<2500	<2500		
Bromodichloromethane	250	<250	<250		
1,2-Dichloropropane	250	<250	<250		
cis-1,3-Dichloropropene	250	<250	<250		
Trichloroethene	250	<250	<250		
Dibromochloromethane	250	<250	<250		
1,1,2-Trichloroethane	250	<250	<250		
Benzene	250	<250	<250		
trans-1,3-Dichloropropene	250	<250	<250		
2-Chloroethylvinylether	500	<500	<500		

Table 1 continued on page 3

GTEL ENVIRONMENTAL LABORATORIES, INC.

Table 1 con't

ANALYTICAL RESULTS

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date Sampled		02/13/90	02/13/90		
Date Analyzed		02/16/90	02/16/90		
Client Identification		1322-7	1322-8		
GTEL Sample Number		01	02		
Analyte	Detection Limit,ug/Kg	Concentration, ug/Kg			
Bromoform	250	<250	<250		
4-Methyl-2-Pentanone	2500	<2500	<2500		
2-Hexanone	2500	<2500	<2500		
Tetrachloroethene	250	<250	<250		
1,1,2,2-Tetrachloroethane	250	<250	<250		
Toluene	250	<250	<250		
Chlorobenzene	250	<250	<250		
Ethylbenzene	250	<250	<250		
Styrene	250	<250	<250		
1,2-Dichlorobenzene	250	<250	<250		
1,3-Dichlorobenzene	250	<250	<250		
1,4-Dichlorobenzene	250	<250	<250		
Xylene (total)	250	<250	<250		
Trichlorofluoromethane	250	<250	<250		

QA Conformance Summary

Purgeable Hydrocarbons in Soil
EPA Method 8240

1.0 Blanks

Four of 39 target compounds found in Reagent water blank and MeOH blank as shown in Tables 2 and 2a.

2.0 Independent QC Check Sample

The control limits were met for 8 of 8 QC check compounds in the aqueous QC check sample as shown in Table 3.

3.0 Surrogate Compound Recoveries

Recovery limits were met for all three surrogate compounds for all samples as shown in Tables 4a, 4b, and 4c.

4.0 Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Accuracy and Precision

4.1 Accuracy:

Percent recovery limits were met for 10 of 10 compounds in the MS and MSD as shown in Table 5.

4.2 Precision:

Relative Percent Difference (RPD) criteria were met for 5 of 5 compounds in the MS and MSD as shown in Table 5.

5.0 Sample Handling

5.1 Sample handling and holding time criteria were met for all samples.

5.2 There were no exceptional conditions requiring dilution of samples.

Table 2

REAGENT WATER BLANK DATA

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date of Analysis: 02/16/90

Analyte	Observed Result, ug/Kg
Chloromethane	ND
Bromomethane	ND
Vinyl Chloride	ND
Chloroethane	ND
Methylene Chloride	ND
Acetone	ND
Carbon Disulfide	ND
1,1-Dichloroethene	ND
1,1-Dichloroethane	ND
trans-1,2-Dichloroethene	ND
Chloroform	ND
1,2-Dichloroethane	ND
2-Butanone	ND
1,1,1-Trichloroethane	ND
Carbon Tetrachloride	ND
Vinyl Acetate	ND
Bromodichloromethane	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
Trichloroethene	ND
Dibromochloromethane	ND
1,1,2-Trichloroethane	ND
Benzene	ND
trans-1,3-Dichloropropene	ND
2-Chloroethylvinylether	ND

Table 2 continued on page 6

Table 2 con't

REAGENT WATER BLANK DATA

Purgeable Hydrocarbons in Soil
EPA Method 8240

Analyte	Observed Result, ug/Kg
Bromoform	ND
4-Methyl-2-Pentanone	ND
2-Hexanone	ND
Tetrachloroethene	ND
1,1,2,2-Tetrachloroethane	ND
Toluene	ND
Chlorobenzene	ND
Ethylbenzene	ND
Styrene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Xylene (total)	ND
Trichlorofluoromethane	ND

ND = Not detected above the statistical detection limit.

Table 2a

REAGENT MEOH BLANK DATA

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date of Analysis: 02/16/90

Analyte	Observed Result, ug/Kg
Chloromethane	ND
Bromomethane	ND
Vinyl Chloride	ND
Chloroethane	ND
Methylene Chloride	ND
Acetone	600
Carbon Disulfide	ND
1,1-Dichloroethene	ND
1,1-Dichloroethane	ND
trans-1,2-Dichloroethene	ND
Chloroform	ND
1,2-Dichloroethane	ND
2-Butanone	ND
1,1,1-Trichloroethane	ND
Carbon Tetrachloride	ND
Vinyl Acetate	ND
Bromodichloromethane	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
Trichloroethene	ND
Dibromochloromethane	ND
1,1,2-Trichloroethane	ND
Benzene	ND
trans-1,3-Dichloropropene	ND
2-Chloroethylvinylether	ND

Table 2a continued on page 8

Table 2a con't

REAGENT MEOH BLANK DATA

Purgeable Hydrocarbons in Soil
EPA Method 8240

Analyte	Observed Result, ug/Kg
Bromoform	ND
4-Methyl-2-Pentanone	ND
2-Hexanone	ND
Tetrachloroethene	ND
1,1,2,2-Tetrachloroethane	ND
Toluene	165
Chlorobenzene	ND
Ethylbenzene	185
Styrene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Xylene (total)	815
Trichlorofluoromethane	ND

ND = Not detected above the statistical detection limit.

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002436
Report Issue Date: February 20, 1990

Table 3

INDEPENDENT QC CHECK SAMPLE RESULTS

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date of Analysis: 02/06/90

Analyte	Expected Result, ug/L	Observed Result, ug/L	Recovery, %	Acceptability Limits, %
Trichloroethylene	50	52	104	60-140
Carbon Tetrachloride	50	51	102	80-120
1,1,1-Trichloroethane	50	52	104	60-140
1,1,2-Trichloroethane	50	57	114	60-140
Vinyl Chloride	50	45	90	60-140
Benzene	50	52	104	60-140
1,1-Dichloroethylene	50	49	98	60-140
1,2-Dichlorobenzene	50	55	110	60-140

Table 3a

INDEPENDENT QC CHECK SAMPLE SOURCE

Purgeable Hydrocarbons in Soil
EPA Method 8240

Analyte	Lot Number	Source
Trichloroethylene	LA19682	PURGEABLE A SUPELCO
Carbon Tetrachloride	LA19682	PURGEABLE A SUPELCO
1,1,1-Trichloroethane	LA18769	PURGEABLE B SUPELCO
1,1,2-Trichloroethane	LA18769	PURGEABLE B SUPELCO
Vinyl Chloride	LA20078	PURGEABLE C SUPELCO
Benzene	LA18769	PURGEABLE B SUPELCO
1,1-Dichloroethylene	LA19682	PURGEABLE A SUPELCO
1,2-Dichlorobenzene	LA19682	PURGEABLE A SUPELCO

Table 4a

SURROGATE COMPOUND RECOVERY

d8-Toluene

Purgeable Hydrocarbons in Soil
EPA Method 8240

Recovery Acceptability Limits[1]: 81 - 117 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Water Blank	50	50	100
MeOH Blank	50	50	100
01	50	50	100
02	50	50	100
MS	50	50	100
MSD	50	51	102

MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002436
Report Issue Date: February 20, 1990

Table 4b

SURROGATE COMPOUND RECOVERY

Bromofluorobenzene

Purgeable Hydrocarbons in Soil
EPA Method 8240

Recovery Acceptability Limits[1]: 74 - 121 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Water Blank	50	50	100
MeOH Blank	50	50	100
01	50	50	100
02	50	50	100
MS	50	50	100
MSD	50	51	102

MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Table 4c

SURROGATE COMPOUND RECOVERY

d4-1,2-Dichloroethane

Purgeable Hydrocarbons in Soil
EPA Method 8240

Recovery Acceptability Limits[1]: 70 - 121 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Water Blank	50	54	108
MeOH Blank	50	56	112
01	50	56	112
02	50	57	114
MS	50	57	114
MSD	50	56	112

MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002436
Report Issue Date: February 20, 1990

Table 5

MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)
RECOVERY AND RELATIVE PERCENT DEVIATION (RPD)
REPORT

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date of Analysis: 02/16/90
Sample Spiked: 01

Client ID: 1322-7
Units: ug/Kg

Analyte	Sample Result	Amount Added	MS Result	MSD Result
1,1-Dichloroethene	ND	2500	2050	2000
Trichloroethene	ND	2500	2000	2000
Benzene	ND	2500	1950	1950
Toluene	ND	2500	2000	2050
Chlorobenzene	ND	2500	2200	2200

Analyte	MS, % Recovery	MSD, % Recovery	RPD, %	Acceptability Limits[1]	
				Maximum RPD, %	% Recovery
1,1-Dichloroethene	82	80	2	22	59-172
Trichloroethene	80	80	0	24	62-137
Benzene	78	78	0	21	66-142
Toluene	80	82	2	21	59-139
Chlorobenzene	88	88	0	21	60-133

ND = Not Detected above the statistical detection limit
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Western Region
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(415) 685-7852
In CA: (800) 544-3422
Outside CA: (800) 423-7143

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002438
Report Issue Date: February 21, 1990

Lucia Chou
Chevron U.S.A. Inc.
P.O. Box 5004
San Ramon, CA 94583

Dear Ms. Chou,

Attached please find the analytical results for the samples received by GTEL on February 16, 1990. The samples were received and analyzed as indicated on chain of custody, which is attached.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,
GTEL Environmental Laboratories, Inc.

Emma P. Popek

Emma P. Popek,
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002438
Report Issue Date: February 21, 1990

Table 1

ANALYTICAL RESULTS

Priority Pollutant Metals in Soil[1]

GTEL Sample Number		01	02		
Client Identification		1322-7	1322-8		
Date Sampled		02/13/90	02/13/90		
Date Extracted		02/16/90	02/16/90		
Date Analyzed		02/16/90	02/16/90		
Analyte	Detection Limit, mg/Kg	Concentration, mg/Kg			
Antimony	25	<25	<25		
Arsenic	25	140	85		
Beryllium	1	<1	<1		
Cadmium	3	<3	<3		
Chromium	5	8	5		
Copper	5	21	16		
Lead	10	15	12		
Mercury	0.02	0.02	<0.02		
Nickel	5	23	16		
Selenium	50	<50	<50		
Silver	5	<5	<5		
Thallium	13	25	20		
Zinc	5	19	17		

1 = Mercury analyzed by EPA Method 7470; all others analyzed by EPA Method 3005/6010.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002438
Report Issue Date: February 21, 1990

QA Conformance Summary

Priority Pollutant Metals in Soil

1.0 Blanks

The method blank was below the detection limit for all analytes as shown in Table 2.

2.0 Initial Instrument Calibration

The concentrations of the initial instrument calibration for all analytes are shown in Table 3.

3.0 Calibration Verification Standards

3.1 The control limits were met for all analytes in the initial calibration verification standard (ICVS) as shown in Table 4.

3.2 The control limits were met for all analytes in the continuing calibration verification standard (CCVS) as shown in Table 5.

4.0 Matrix Spike (MS) Accuracy

Recovery limits were met for all analytes in the MS as shown in Table 6.

5.0 Sample Duplicate Precision

Relative percent difference criteria were met for the sample duplicate as shown in Table 7.

6.0 Sample Handling

6.1 Sample handling and holding time criteria were met for all samples.

6.2 There were no exceptional conditions requiring dilution of samples.

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002438
Report Issue Date: February 21, 1990

Table 2

REAGENT BLANK DATA

Priority Pollutant Metals in Soil

Date of Analysis: 02/16/90

Analyte	Concentration, mg/Kg
Antimony	<25
Arsenic	<25
Beryllium	<1
Cadmium	<3
Chromium	<5
Copper	<5
Lead	<10
Mercury	<0.02
Nickel	<5
Selenium	<50
Silver	<5
Thallium	<13
Zinc	<5

<# = Not detected at the indicated detection limit.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Table 3

INITIAL CALIBRATION STANDARDS DATA

Priority Pollutant Metals in Soil

Standard ID	CAL	CAL	CAL	CAL	
Date of Analysis	02/16/90	02/16/90	02/16/90	02/16/90	
Analyte	Standard Concentration, mg/L				
Antimony	0	10			
Arsenic	0	10			
Beryllium	0	10			
Cadmium	0	10			
Chromium	0	10			
Copper	0	10			
Lead	0	10			
Mercury	0	0.1	0.2	0.5	
Nickel	0	10			
Selenium	0	10			
Silver	0	10			
Thallium	0	10			
Zinc	0	10			

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SF8-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002438
Report Issue Date: February 21, 1990

Table 4

INITIAL CALIBRATION VERIFICATION STANDARDS RESULTS

Priority Pollutant Metals in Soil

Date of Analysis: 02/16/90

Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %[1]
Antimony	4	3.8	95	80 - 120
Arsenic	4	4.2	105	80 - 120
Beryllium	0.4	0.41	103	80 - 120
Cadmium	4	4.1	103	80 - 120
Chromium	4	4.2	105	80 - 120
Copper	4	4.2	105	80 - 120
Lead	4	4.2	105	80 - 120
Mercury	0.2	0.2	100	80 - 120
Nickel	4	4.2	105	80 - 120
Selenium	4	4.4	110	80 - 120
Silver	4	4.1	103	80 - 120
Thallium	4	4.2	105	80 - 120
Zinc	4	4.1	103	80 - 120

1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Table 4a

INITIAL CALIBRATION VERIFICATION STANDARDS SOURCE

Priority Pollutant Metals in Soil

Analyte	Lot Number	Source
Antimony	LN89-022B	LEEMAN
Arsenic	LN89-022B	LEEMAN
Beryllium	LN89-022B	LEEMAN
Cadmium	LN89-022B	LEEMAN
Chromium	LN89-022B	LEEMAN
Copper	LN89-022B	LEEMAN
Lead	LN89-022B	LEEMAN
Mercury	8013	PERKIN ELMER
Nickel	LN89-022B	LEEMAN
Selenium	LN89-022B	LEEMAN
Silver	LN89-022B	LEEMAN
Thallium	LN89-022B	LEEMAN
Zinc	LN89-022B	LEEMAN

Table 5

CONTINUING CALIBRATION VERIFICATION STANDARDS RESULTS

Priority Pollutant Metals in Soil

Date of Analysis: 02/16/90

Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %[1]
Antimony	10	8.6	86	80 - 120
Arsenic	10	9.6	96	80 - 120
Beryllium	1	1.0	100	80 - 120
Cadmium	10	9.7	97	80 - 120
Chromium	10	10	100	80 - 120
Copper	10	10	100	80 - 120
Lead	10	9.8	98	80 - 120
Mercury	0.2	0.2	100	80 - 120
Nickel	10	10.1	101	80 - 120
Selenium	10	9.9	99	80 - 120
Silver	10	9.7	97	80 - 120
Thallium	10	9.4	94	80 - 120
Zinc	10	9.8	98	80 - 120

1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

Table 5a

CONTINUING CALIBRATION VERIFICATION STANDARDS SOURCE

Priority Pollutant Metals in Soil

Analyte	Lot Number	Source
Antimony	LN89-077A	LEEMAN
Arsenic	LN89-077A	LEEMAN
Beryllium	LN89-077A	LEEMAN
Cadmium	LN89-077A	LEEMAN
Chromium	LN89-077A	LEEMAN
Copper	LN89-077A	LEEMAN
Lead	LN89-077A	LEEMAN
Mercury	SPX-1-75-LP	SPX
Nickel	LN89-077A	LEEMAN
Selenium	LN89-077A	LEEMAN
Silver	LN89-077A	LEEMAN
Thallium	LN89-077A	LEEMAN
Zinc	LN89-077A	LEEMAN

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002438
Report Issue Date: February 21, 1990

Table 6

MATRIX SPIKE (MS) RESULTS

Priority Pollutant Metals in Soil

Date of Analysis: 02/16/90
Sample Used: 01

Client ID: 1322-7
Units: mg/Kg

Analyte	MS Result	Sample Result	Amount Recovered	Amount Added	MS Recovery, %	Acceptability Limits, %[1]
Antimony	400	<25	400	500	80	80 - 120
Arsenic	541	140	401	500	80	80 - 120
Beryllium	48	1	47	50	94	80 - 120
Cadmium	440	<3	440	500	88	80 - 120
Chromium	450	8	442	500	88	80 - 120
Copper	450	21	429	500	86	80 - 120
Lead	450	15	435	500	87	80 - 120
Mercury	0.325	0.025	0.3	0.3	100	80 - 120
Nickel	470	23	447	500	89	80 - 120
Selenium	430	<50	430	500	86	80 - 120
Silver	440	<5	440	500	88	80 - 120
Thallium	450	25	425	500	85	80 - 120
Zinc	450	19	430	500	86	80 - 120

1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002438
Report Issue Date: February 21, 1990

Table 7

LABORATORY DUPLICATE SAMPLE RESULTS
AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Priority Pollutant Metals in Soil

Date of Analysis: 02/16/90
Sample Used: 01

Client ID: 1322-7
Units: mg/Kg

Analyte	Sample Result	Duplicate Result	RPD, %	Maximum RPD, %
Antimony	<25	<25	NA	20
Arsenic	140	170	19	20
Beryllium	<1	<1	NA	20
Cadmium	<3	<3	NA	20
Chromium	8	10	2	5*
Copper	21	20	1	5*
Lead	15	18	3	10*
Mercury	0.02	0.03	0.01	0.02*
Nickel	23	29	24	20
Selenium	<50	<50	NA	20
Silver	<5	<5	NA	20
Thallium	25	23	2	13*
Zinc	19	22	3	5*

NA = Not applicable
* A control limit of ± the specified detection limit is used for acceptable performance in duplicate sample values less than five times the detection limits.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Western Region
4080-C Pike Ln., Concord, CA 94520
(415) 685-7852
In CA: (800) 544-3422
Outside CA: (800) 423-7143

Project Number: SFB-175-0204.72
Consultant Project Number: 900213k1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002439
Report Issue Date: February 22, 1990

LUCIA CHOU
CHEVRON U.S.A INC.
P.O. BOX 5004
SAN RAMON, CA 94583

DEAR MS. CHOU:

Attached please find the analytical results for the samples received by GTEL on February 16, 1990.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,
GTEL Environmental Laboratories, Inc.

Emma P. Popek

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: 900213k1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002439
Report Issue Date: February 22, 1990

Table 1

ANALYTICAL RESULTS

Petroleum Hydrocarbons in Soil by Infrared
Modified EPA Method 418.1

Sample Identification		Date Sampled	Date Extracted	Date Analyzed	Concentration, mg/Kg[1]
GTEL No.	Client ID				
01	1322-7	02/13/90	02/16/90	02/16/90	12
02	1322-8	02/13/90	02/16/90	02/16/90	12

1 = Method detection limit = 5.0 mg/Kg; analyte below this level would not be detected.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 900213k1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002439
Report Issue Date: February 22, 1990

QA Conformance Summary

Petroleum Hydrocarbons in Soil by Infrared
Modified EPA Method 418.1

1.0 Blanks

The method blank was below the detection limit as shown in Table 2.

2.0 Initial Instrument Calibration

The range of concentrations of the initial instrument calibration are shown in Table 3.

3.0 Calibration Verification Standards

3.1 The control limits were met for the initial calibration verification standard (ICVS) as shown in Table 4.

3.2 The control limits were met for the continuing calibration verification standard (CCVS) as shown in Table 4.

4.0 Matrix Spike (MS) Accuracy

The control limits were met for the reference oil in the MS as shown in Table 5.

5.0 Sample Duplicate Precision

Relative percent difference (RPD) criterion was met for the sample duplicate as shown in Table 6.

Project Number: SF8-175-0204.72
Consultant Project Number: 900213k1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002439
Report Issue Date: February 22, 1990

Table 2

METHOD BLANK DATA

Petroleum Hydrocarbons in Soil by Infrared
Modified EPA Method 418.1

Date of Analysis: 02/16/90

Analyte	Concentration, mg/Kg
Petroleum Hydrocarbons	<5

<# = Not detected at the indicated detection limit.

Table 3

INITIAL CALIBRATION STANDARDS DATA

Petroleum Hydrocarbons in Soil by Infrared
Modified EPA Method 418.1

Date of Analysis: 02/16/90

Standard Number	Concentration, mg/L
1	1.0
2	5.0
3	10.1
4	50.0
5	100.6

Project Number: SFB-175-0204.72
Consultant Project Number: 900213k1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002439
Report Issue Date: February 22, 1990

Table 4

INITIAL AND CONTINUING CALIBRATION
VERIFICATION STANDARDS RESULTS

Petroleum Hydrocarbons in Soil by Infrared
Modified EPA Method 418.1

Date of Analysis: 02/16/90

Initial Calibration Verification Standard				
Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %[1]
Petroleum Hydrocarbons	5.0	5.2	104	80 - 120
Continuing Calibration Verification Standard				
Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %[1]
Petroleum Hydrocarbons	5.0	5.9	118	80 - 120

1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

Table 4a

INITIAL AND CONTINUING CALIBRATION
VERIFICATION STANDARDS SOURCE

Petroleum Hydrocarbons in Soil by Infrared
Modified EPA Method 418.1

Initial Calibration Verification Standard		
Analyte	Lot Number	Source
Petroleum Hydrocarbons	R05/STK 26	GTEL
Continuing Calibration Verification Standard		
Analyte	Lot Number	Source
Petroleum Hydrocarbons	R04/STK 18	GTEL

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 900213k1
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002439
Report Issue Date: February 22, 1990

Table 5

MATRIX SPIKE (MS) RECOVERY REPORT

Petroleum Hydrocarbons in Soil by Infrared
Modified EPA Method 418.1

Date of Analysis: 02/16/90
Sample Spiked: 02
Client ID: 1322-8
Units: mg/Kg

Analyte	MS Result	Sample Result	Amount Recovered	Amount Added	MS, % Recovery	Acceptability Limits, %[1]
Petroleum Hydrocarbons	57.2	11.6	45.6	49.1	93	70 - 130

1 = Arbitrary limits, pending experimental determination.

Table 6

LABORATORY DUPLICATE SAMPLE RESULTS
AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Petroleum Hydrocarbons in Soil by Infrared
Modified EPA Method 418.1

Date of Analysis: 02/16/90
Sample Used: 02
Client ID: 1322-8
Units: mg/Kg

Analyte	Sample Result	Duplicate Result	RPD, %	Maximum RPD, %
Petroleum Hydrocarbons	11.4	11.8	3.5	20

GTEL
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Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 from inside California
(800) 423-7143 from outside California

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002437
Report Issue Date: February 26, 1990

Lucia Chou
Chevron U.S.A Inc.
P.O. Box 5004
San Ramon, CA 94583

T 6079

Dear Ms. Chou,

Attached please find the analytical results for the samples received by GTEL on February 16, 1990.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,
GTEL Environmental Laboratories, Inc.

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002437
Report Issue Date: February 26, 1990

Table 1

ANALYTICAL RESULTS

Semi-Volatile Organics in Soil
EPA Method 8270

GTEL Sample Number		01	02		
Client Identification		1322-7	1322-8		
Date Sampled		02/13/90	02/13/90		
Date Extracted		02/20/90	02/20/90		
Date Analyzed		02/21/90	02/21/90		
Analyte	Detection Limit, ug/Kg	Concentration, ug/Kg			
Phenol	660	<660	<660		
bis(2-Chloroethyl) Ether	660	<660	<660		
2-Chlorophenol	660	<660	<660		
1,3-Dichlorobenzene	660	<660	<660		
1,4-Dichlorobenzene	660	<660	<660		
Benzyl Alcohol	1300	<1300	<1300		
1,2-Dichlorobenzene	660	<660	<660		
2-Methylphenol	660	<660	<660		
bis(2-Chloroisopropyl) Ether	660	<660	<660		
4-Methylphenol	660	<660	<660		
N-Nitroso-di-n-propylamine	660	<660	<660		
Hexachloroethane	660	<660	<660		
Nitrobenzene	660	<660	<660		
Isophorone	660	<660	<660		
2-Nitrophenol	660	<660	<660		
2,4-Dimethylphenol	660	<660	<660		
Benzoic Acid	3300	<3300	<3300		
bis(2-Chlorethoxy)methane	660	<660	<660		
2,4-Dichlorophenol	660	<660	<660		
1,2,4-Trichlorobenzene	660	<660	<660		
Naphthalene	660	<660	<660		
4-Chloroanaline	660	<660	<660		
Hexachlorobutadiene	660	<660	<660		
4-Chloro-3-methylphenol	1300	<1300	<1300		
2-Methylnaphthalene	660	<660	<660		

Table 1 (Continued)

ANALYTICAL RESULTS

Semi-Volatile Organics in Soil
EPA Method 8270

GTEL Sample Number		01	02		
Client Identification		1322-7	1322-8		
Date Sampled		02/13/90	02/13/90		
Date Extracted		02/20/90	02/20/90		
Date Analyzed		02/21/90	02/21/90		
Analyte	Detection Limit, ug/Kg	Concentration, ug/Kg			
Hexachlorocyclopentadiene	660	<660	<660		
2,4,6-Trichlorophenol	660	<660	<660		
2,4,5-Trichlorophenol	660	<660	<660		
2-Chloronaphthalene	660	<660	<660		
2-Nitroanaliline	3300	<3300	<3300		
Dimethylphthalate	660	<660	<660		
Acenaphthylene	660	<660	<660		
3-Nitroanaline	3300	<3300	<3300		
Acenaphthene	660	<660	<660		
2,4-Dinitrophenol	3300	<3300	<3300		
4-Nitrophenol	3300	<3300	<3300		
Dibenzofuran	660	<660	<660		
2,4-Dinitrotoluene	660	<660	<660		
2,6-Dinitrotoluene	660	<660	<660		
Diethylphthalate	660	<660	<660		
4-Chlorophenyl-phenyl Ether	660	<660	<660		
Fluorene	660	<660	<660		
4-Nitroanaline	3300	<3300	<3300		
4,6-Dinitro-2-methylphenol	3300	<3300	<3300		
N-Nitrosodiphenylamine[1]	660	<660	<660		
4-Bromophenyl Ether	660	<660	<660		
Hexachlorobenzene	660	<660	<660		
Pentachlorophenol	3300	<3300	<3300		
Phenanthrene	660	<660	<660		
Anthracene	660	<660	<660		

1 = Cannot be separated from diphenylamine.

Table 1 (Continued)

ANALYTICAL RESULTS

Semi-Volatile Organics in Soil
EPA Method 8270

GTEL Sample Number		01	02		
Client Identification		1322-7	1322-8		
Date Sampled		02/13/90	02/13/90		
Date Extracted		02/20/90	02/20/90		
Date Analyzed		02/21/90	02/21/90		
Analyte	Detection Limit, ug/Kg	Concentration, ug/Kg			
Di-n-butylphthalate	660	<660	<660		
Fluoranthene	660	<660	<660		
Pyrene	660	<660	<660		
Butylbenzylphthalate	660	<660	<660		
3,3'-Dichlorobenzidine	660	<660	<660		
Benzo[a]anthracene	660	<660	<660		
bis(2-Ethylhexyl)phthalate	660	<660	<660		
Chrysene	660	<660	<660		
Di-n-octylphthalate	660	<660	<660		
Benzo[b]fluoranthene	660	<660	<660		
Benzo[k]fluoranthene	660	<660	<660		
Benzo[a]pyrene	660	<660	<660		
Indeno[1,2,3-cd]pyrene	660	<660	<660		
Dibenz[a,h]anthracene	660	<660	<660		
Benzo[g,h,i]perylene	660	<660	<660		
Benzidine	3300	<3300	<3300		

QA Conformance Summary

Semi-Volatile Organics in Soil
EPA Method 8270

1.0 Blanks

One of 66 target compounds found in Reagent blank as shown in Table 2.

2.0 Surrogate Compound Recoveries

Recovery limits were met for at least 5 of 6 surrogate compounds for all samples as shown in Tables 3a, 3b, 3c, 3d, 3e and 3f.

3.0 Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Accuracy and Precision

3.1 Accuracy:

Percent recovery limits were met for 16 of 22 compounds in the MS and MSD as shown in Table 4.

3.2 Precision:

Relative percent difference (RPD) criteria were met for 11 of 11 compounds in the MS and MSD as shown in Table 4.

4.0 Sample Handling

4.1 Sample handling and holding time criteria were met for all samples.

4.2 There were no exceptional conditions requiring dilution of samples.

Table 2

REAGENT BLANK DATA

Semi-Volatile Organics in Soil
EPA Method 8270

Date of Analysis: 02/21/90

Analyte	Observed Result, ug/Kg
Phenol	ND
bis(2-Chloroethyl) Ether	ND
2-Chlorophenol	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Benzyl Alcohol	ND
1,2-Dichlorobenzene	ND
2-Methylphenol	ND
bis(2-Chloroisopropyl) Ether	ND
4-Methylphenol	ND
N-Nitroso-di-n-propylamine	ND
Hexachloroethane	ND
Nitrobenzene	ND
Isophorone	ND
2-Nitrophenol	ND
2,4-Dimethylphenol	ND
Benzoic Acid	ND
bis(2-Chlorethoxy)methane	ND
2,4-Dichlorophenol	ND
1,2,4-Trichlorobenzene	ND
Naphthalene	ND
4-Chloroanaline	ND
Hexachlorobutadiene	ND
4-Chloro-3-methylphenol	ND
2-Methylnaphthalene	ND

ND = Not detected above the statistical detection limit.

Table 2 (Continued)

REAGENT BLANK DATA

Semi-Volatile Organics in Soil
EPA Method 8270

Analyte	Observed Result, ug/Kg
Hexachlorocyclopentadiene	ND
2,4,6-Trichlorophenol	ND
2,4,5-Trichlorophenol	ND
2-Chloronaphthalene	ND
2-Nitroanaliline	ND
Dimethylphthalate	ND
Acenaphthylene	ND
3-Nitroanaline	ND
Acenaphthene	ND
2,4-Dinitrophenol	ND
4-Nitrophenol	ND
Dibenzofuran	ND
2,4-Dinitrotoluene	ND
2,6-Dinitrotoluene	ND
Diethylphthalate	ND
4-Chlorophenyl-phenyl Ether	ND
Fluorene	ND
4-Nitroanaline	ND
4,6-Dinitro-2-methylphenol	ND
N-Nitrosodiphenylamine	ND
4-Bromophenyl Ether	ND
Hexachlorobenzene	ND
Pentachlorophenol	ND
Phenanthrene	ND
Anthracene	ND

ND = Not detected above the statistical detection limit.

Table 2 (Continued)

REAGENT BLANK DATA

Semi-Volatile Organics in Soil
EPA Method 8270

Analyte	Observed Result, ug/Kg
Di-n-butylphthalate	4800
Fluoranthene	ND
Pyrene	ND
Butylbenzylphthalate	ND
3,3'-Dichlorobenzidine	ND
Benzo[a]anthracene	ND
bis(2-Ethylhexyl)phthalate	ND
Chrysene	ND
Di-n-octylphthalate	ND
Benzo[b]fluoranthene	ND
Benzo[k]fluoranthene	ND
Benzo[a]pyrene	ND
Indeno[1,2,3-cd]pyrene	ND
Dibenz[a,h]anthracene	ND
Benzo[g,h,i]perylene	ND
Benzidine	ND

ND = Not detected above the statistical detection limit.

Table 3a

SURROGATE COMPOUND RECOVERY

d5-Nitrobenzene

Semi-Volatile Organics in Soil
EPA Method 8270

Recovery Acceptability Limits[1]: 23 - 120 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	50	33	66
01	50	32	64
02	50	28	56
MS	50	36	72
MSD	50	37	74

MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

Table 3b

SURROGATE COMPOUND RECOVERY

2-Fluorobiphenyl

Semi-Volatile Organics in Soil
EPA Method 8270

Recovery Acceptability Limits[1]: 30 - 115 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	50	32	64
01	50	31	62
02	50	31	62
MS	50	34	68
MSD	50	35	70

MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Table 3c

SURROGATE COMPOUND RECOVERY

d14-Terphenyl

Semi-Volatile Organics in Soil
EPA Method 8270

Recovery Acceptability Limits[1]: 18 - 137 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	50	35	70
01	50	33	67
02	50	34	69
MS	50	36	73
MSD	50	34	69

MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

Table 3d

SURROGATE COMPOUND RECOVERY

d5-Phenol

Semi-Volatile Organics in Soil
EPA Method 8270

Recovery Acceptability Limits[1]: 24 - 113 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	100	65	65
01	100	53	53
02	100	44	44
MS	100	78	78
MSD	100	82	82

MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

Table 3e

SURROGATE COMPOUND RECOVERY

2-Fluorophenol

Semi-Volatile Organics in Soil
EPA Method 8270

Recovery Acceptability Limits[1]: 25 - 121 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	100	35	35
01	100	24	24
02	100	20	24
MS	100	25	25
MSD	100	ND	ND

ND = Not detected
MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Table 3f

SURROGATE COMPOUND RECOVERY

2,4,6-Tribromophenol

Semi-Volatile Organics in Soil
EPA Method 8270

Recovery Acceptability Limits[1]: 19 - 122 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	100	70	70
01	100	58	58
02	100	55	55
MS	100	75	75
MSD	100	75	75

MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

Project Number: SFB-175-0204.72
Consultant Project Number: 900213K1
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002437
Report Issue Date: February 26, 1990

Table 4

MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)
RECOVERY AND RELATIVE PERCENT DEVIATION (RPD)
REPORT

Semi-Volatile Organics in Soil
EPA Method 8270

Date of Analysis: 02/21/90
Sample Spiked: 01
Client ID: 1322-7
Units: ug/Kg

Analyte	Sample Result	Amount Added	MS Result	MSD Result
Phenol	ND	100	96	103
2-Chlorophenol	ND	100	92	98
4-Chloro-3-methylphenol	ND	100	87	92
4-Nitrophenol	ND	100	105	102
Pentachlorophenol	ND	100	182	192
1,4-Dichlorobenzene	ND	50	41	40
N-Nitroso-di-n-propylamine	ND	50	71	80
1,2,4-Trichlorobenzene	ND	50	39	38
2,4-Dinitrotoluene	ND	50	37	38
Acenaphthene	ND	50	52	54
Pyrene	ND	50	51	50

Analyte	MS, % Recovery	MSD, % Recovery	RPD, %	Acceptability Limits[1]	
				Maximum RPD, %	% Recovery
Phenol	96	103	7	35	26- 90
2-Chlorophenol	92	98	6	50	25-102
4-Chloro-3-methylphenol	87	92	6	33	26-103
4-Nitrophenol	105	102	3	50	11-114
Pentachlorophenol	182	192	5	47	17-109
1,4-Dichlorobenzene	82	80	2	27	28-104
N-Nitroso-di-n-propylamine	142	160	11	38	41-126
1,2,4-Trichlorobenzene	78	76	3	23	38-107
2,4-Dinitrotoluene	74	76	3	47	28- 89
Acenaphthene	102	104	4	19	31-137
Pyrene	102	100	2	36	35-142

ND = Not Detected above the statistical detection limit
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

BLAINE
TECH SERVICES INC

1170 TILLY ROAD SUITE 505
SAN JOSE, CA 95122
(408) 995-5535

CHAIN OF CUSTODY # 900214K1

SITE SPECIFICATION Chevron Station 5372
7007 San Ramon Rd
Dublin, CA

( ) Bill BLAINE TECH SERVICES, Inc.
(✓) Bill CHEVRON

SPECIAL INSTRUCTIONS

SAMPLE I.D.	QUANTITY	TYPE	OK	ANALYSIS TO DETECT	STATUS	RESULTS	LAB NUMBER
#16	1	S		TPH (GAS) BTXE	24hr		
#17	1	S		TPH (GAS) BTXE	24hr		
#18	1	S		TPH (GAS) BTXE	24hr		
one Composite #21, 22, 23, 24		S		TPH (GAS) BTXE	24hr		

Field sampling was performed by John Kroan

Sampling was completed at 12:10 AM/(PM) 02-14-1990

RELEASE OF SAMPLES FROM (name, time, date) ---->>>>> INTO THE CUSTODY OF (name, time, date)

from John Kroan @ 1 20 AM/(PM) 02 14-90 -> to Fed Ex @ 1 :22 AM/PM 2/14/90

from _____ @ : AM/PM -90 -> to _____ @ : AM/PM -90

from _____ @ : AM/PM -90 -> to _____ @ : AM/PM -90

The laboratory designated to perform these analyses is: GTEL DHS #194
NOTE: Procedures and detection limits must confrom to RWQCB Region 2 specifications.
Please include chain of custody number and site specification on reports and invoices.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Western Region
4080-C Pike Ln., Concord, CA 94520
(415) 685-7852
In CA: (800) 544-3422
Outside CA: (800) 423-7143

Project Number: SF8-175-0204.72
Consultant Project Number: 900214K1
Contract Number: N46CWC0244-9-X
Facility Number: 5542
Work Order Number: D002351
Report Issue Date: February 20, 1990

JOHN KOMAN
BLAINE TECH. SERVICES, INC.
1370 TULLY RD, SUITE 505
SAN JOSE, CA 95122

DEAR: MR. KOMAN:

Attached please find the analytical results for the samples received by GTEL on February 14, 1990.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,
GTEL Environmental Laboratories, Inc.

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: 900214K1
Contract Number: N46CWC0244-9-X
Facility Number: 5542
Work Order Number: D002351
Report Issue Date: February 20, 1990

Table 1

ANALYTICAL RESULTS

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8020/8015[1]

GTEL Sample Number		01	02	03	04
Client Identification		#16	#17	#18	*
Date Sampled		02/14/90	02/14/90	02/14/90	02/14/90
Date Extracted		02/14/90	02/14/90	02/14/90	02/14/90
Date Analyzed		02/14/90	02/14/90	02/14/90	02/14/90
Analyte	Detection Limit, mg/Kg	Concentration, mg/Kg			
Benzene	0.005	3	20	60	6
Toluene	0.005	5	98	219	73
Ethylbenzene	0.005	0.5	33	69	21
Xylene (total)	0.015	3	160	355	160
TPH as Gasoline	10	18	1300	3100	950

1 = Extraction by EPA Method 5030
* Composite of #21-24.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 900214K1
Contract Number: N46CWC0244-9-X
Facility Number: 5542
Work Order Number: D002351
Report Issue Date: February 20, 1990

QA Conformance Summary

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8020/8015

1.0 Blanks

Five of 5 target compounds were below detection limits in the reagent water blank and reagent methanol blank as shown in Tables 2a and 2b.

2.0 Independent QC Check Sample

The control limits were met for 4 out of 4 QC check compounds as shown in Table 3.

3.0 Surrogate Compound Recoveries

Percent recovery limits were met for the surrogate compound (naphthalene) for all samples as shown in Table 4.

4.0 Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Accuracy and Precision

4.1 Percent recovery limits were met for 4 of 4 compounds in the MS and MSD as shown in Table 5.

4.2 Relative percent difference (RPD) criteria was met for 4 of 4 analytes in the MS and MSD as shown in Table 5.

5.0 Sample Handling

5.1 Sample handling and holding time criteria were met for all samples.

5.2 There were no exceptional conditions requiring dilution of samples.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 900214K1
Contract Number: N46CWC0244-9-X
Facility Number: 5542
Work Order Number: D002351
Report Issue Date: February 20, 1990

Table 2a

REAGENT WATER BLANK DATA

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8020/8015

Date of Analysis: 02/14/90

Analyte	Concentration, ug/L
Benzene	<0.3
Toluene	<0.3
Ethylbenzene	<0.3
Xylene (total)	<0.6
Gasoline	<50

Table 2b

REAGENT METHANOL BLANK DATA

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8020/8015

Date of Analysis: 02/14/90
MeOH Lot No: AW044

Analyte	Concentration, mg/Kg
Benzene	<0.005
Toluene	<0.005
Ethylbenzene	<0.005
Xylene (total)	<0.015
Gasoline	<10

Project Number: SFB-175-0204.72
Consultant Project Number: 900214K1
Contract Number: N46CWC0244-9-X
Facility Number: 5542
Work Order Number: D002351
Report Issue Date: February 20, 1990

Table 3

INDEPENDENT QC CHECK SAMPLE RESULTS

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8020/8015

Date of Analysis: 02/13/90

Analyte	Expected Result, ug/L	Observed Result, ug/L	Recovery, %	Acceptability Limits, %
Benzene	50	48	96	85-115
Toluene	50	47	94	85-115
Ethylbenzene	50	47	94	85-115
Xylene (total)	150	142	95	85-115

Table 3a

INDEPENDENT QC CHECK SAMPLE SOURCE

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8020/8015

Analyte	Lot Number	Source
Benzene	LA18042	SUPELCO
Toluene	LA18042	SUPELCO
Ethylbenzene	LA18042	SUPELCO
Xylene (total)	LA18042	SUPELCO

Project Number: SFB-175-0204.72
Consultant Project Number: 900214K1
Contract Number: N46CWC0244-9-X
Facility Number: 5542
Work Order Number: D002351
Report Issue Date: February 20, 1990

Table 4

SURROGATE COMPOUND RECOVERY

Naphthalene

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8020/8015

Acceptability Limits[1]: 60 - 130 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Water Blank	200	192	96
MeOH Blank	200	178	89
01	200	146	73
02	200	242	121
03	200	256	128
04	200	124	62
MS	200	170	85
MSD	200	222	111

MS = Matrix Spike
MSD = Matrix Spike Duplicate
1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 900214K1
Contract Number: N46CWC0244-9-X
Facility Number: 5542
Work Order Number: D002351
Report Issue Date: February 20, 1990

Table 5

MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) RECOVERY
AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8020/8015

Date of Analysis: 02/14/90
Sample Used: D002237-02
Units: mg/Kg

Analyte	Sample Result	Concentration Added	MS Result	MS, % Recovery	MSD Result	MSD, % Recovery
Benzene	ND	2.86	2.22	78	2.29	80
Toluene	ND	2.86	2.21	77	2.32	81
Ethylbenzene	ND	2.86	2.30	80	2.40	84
Xylene (total)	ND	8.58	6.88	80	7.26	85

Analyte	RPD, %	Acceptability Limits[1]	
		Maximum RPD, %	% Recovery
Benzene	3	30	53 - 114
Toluene	5	30	56 - 110
Ethylbenzene	5	30	57 - 112
Xylene (total)	6	30	57 - 112

ND = Not Detected above the statistical detection limit
1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.
Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 from inside California
(800) 423-7143 from outside California

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002611
Report Issue Date: February 26, 1990

Lucia Chou
Chevron U.S.A Inc.
P.O. Box 5004
San Ramon, CA 94583

Dear Ms. Chou:

Attached please find the analytical results for the samples received by GTEL on February 23, 1990.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,

GTEL Environmental Laboratories, Inc.

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002611
Report Issue Date: February 26, 1990

Table 1

ANALYTICAL RESULTS

Total Threshold Limit Concentration in Soil[1]

GTEL Sample Number		01			
Client Identification		2-23-1A,B*			
Date Sampled		02/23/90			
Date Extracted		02/23/90			
Date Analyzed		02/23/90			
Analyte	Detection Limit, mg/Kg	Concentration, mg/Kg			
Cadmium	3	<3			
Chromium	5	16			
Lead	10	69			
Zinc	5	65			

1 = EPA Method 3050/6010.
* Composite of 2-23-1A and 2-23-1B.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002611
Report Issue Date: February 26, 1990

QA Conformance Summary

Total Threshold Limit Concentration in Soil

1.0 Blanks

The method blank was below the detection limit for all analytes as shown in Table 2.

2.0 Laboratory Control Sample (LCS)

The control limits were met for all analytes in the aqueous LCS as shown in Table 3.

3.0 Calibration Verification Standards

The control limits were met for all analytes in the initial calibration verification standard (ICVS) as shown in Table 5.

4.0 Matrix Spike (MS) Accuracy

Percent recovery limits were met for all analytes in the MS as shown in Table 6.

5.0 Sample Duplicate Precision

Relative percent difference criteria were met for the sample duplicate as shown in Table 7.

6.0 Sample Handling

6.1 Sample handling and holding time criteria were met for all samples.

6.2 There were no exceptional conditions requiring dilution of samples.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002611
Report Issue Date: February 26, 1990

Table 2

REAGENT BLANK DATA

Total Threshold Limit Concentration in Soil

Date of Analysis: 02/23/90

Analyte	Concentration, mg/Kg
Cadmium	ND
Chromium	ND
Lead	ND
Zinc	ND

ND = Not detected above the detection limit.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002611
Report Issue Date: February 26, 1990

Table 3

LABORATORY CONTROL SAMPLE RESULTS

Total Threshold Limit Concentration in Soil

Date of Analysis: 02/23/90

Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %
Cadmium	3.0	3.05	102	80 - 120
Chromium	3.0	2.98	99	80 - 120
Lead	10.0	9.77	98	80 - 120
Zinc	3.0	3.01	100	80 - 120

Table 3a

LABORATORY CONTROL SAMPLE SOURCE

Total Threshold Limit Concentration in Soil

Analyte	Lot Number	Source
Cadmium	EP-20071-1	EMS
Chromium	EP-20071-1	EMS
Lead	EP-20071-1	EMS
Zinc	EP-20071-1	EMS

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002611
Report Issue Date: February 26, 1990

Table 4

INITIAL CALIBRATION STANDARDS DATA

Total Threshold Limit Concentration in Soil

Standard ID	SPEX 3-83-VSA				
Date of Analysis	02/23/90				
Analyte	Standard Concentration, mg/L				
Cadmium	0	10			
Chromium	0	10			
Lead	0	10			
Zinc	0	10			

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002611
Report Issue Date: February 26, 1990

Table 5

INITIAL CALIBRATION VERIFICATION STANDARDS RESULTS

Total Threshold Limit Concentration in Soil

Date of Analysis: 02/23/90

Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %
Cadmium	4.0	4.09	102	80 - 120
Chromium	4.0	4.15	104	80 - 120
Lead	4.0	4.13	103	80 - 120
Zinc	4.0	4.08	102	80 - 120

Table 5a

INITIAL CALIBRATION VERIFICATION STANDARDS SOURCE

Total Threshold Limit Concentration in Soil

Analyte	Lot Number	Source
Cadmium	3-83-VS-B	Spex
Chromium	3-83-VS-B	Spex
Lead	3-83-VS-B	Spex
Zinc	3-83-VS-B	Spex

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002611
Report Issue Date: February 26, 1990

Table 6

MATRIX SPIKE (MS) RECOVERY REPORT

Total Threshold Limit Concentration in Soil

Date of Analysis: 02/23/90
Sample Spiked: 01

Client ID: 2-23-1A,B
Units: mg/Kg

Analyte	MS Result	Sample Result	Recovered	Expected	MS, % Recovery	Acceptability Limits, %
Cadmium	486	<3	486	500	97	80 - 120
Chromium	503	16	487	500	97	80 - 120
Lead	553	69	484	500	97	80 - 120
Zinc	557	65	492	500	98	80 - 120

<# = Not detected at the indicated detection limit.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002611
Report Issue Date: February 26, 1990

Table 7

LABORATORY DUPLICATE SAMPLE RESULTS
AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Total Threshold Limit Concentration in Soil

Date of Analysis: 02/23/90
Sample Used: 01

Client ID: 2-23-1A,B
Units: mg/Kg

Analyte	Sample Result	Duplicate Result	RPD, %	Maximum RPD, %
Cadmium	<3	<3	NA	20
Chromium	14	17	19	20
Lead	66	73	10	20
Zinc	63	67	6	20

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.
Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 from inside California
(800) 423-7143 from outside California

Project Number: SFB-175-0204.72
Consultant Project Number: NONE GIVEN
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002610
Report Issue Date: March 1, 1990

Lucia Chou
Chevron USA, Inc.
P.O. Box 5004
San Ramon, CA 94583

Dear Ms. Chou,

Attached please find the analytical results for the samples received by GTEL on February 23, 1990.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,
GTEL Environmental Laboratories, Inc.

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: NONE GIVEN
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002610
Report Issue Date: March 1, 1990

Table 1

ANALYTICAL RESULTS

Recoverable Oil and Grease in Soil by Gravimetric Analysis
MODIFIED EPA Method 413.1

Sample Identification		Date Sampled	Date Extracted	Date Analyzed	Concentration, mg/Kg[1]
GTEL No.	Client ID				
01	2-23-1A,B*	02/23/90	02/26/90	02/26/90	4300

1 = Method detection limit = 50 mg/Kg; analyte below this level would not be detected.

* = Composite of 2-23-1A and 2-23-1B

GTEL ENVIRONMENTAL LABORATORIES, INC

Project Number: SFB-175-0204.72
Consultant Project Number: NONE GIVEN
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002610
Report Issue Date: March 1, 1990

QA Conformance Summary

Recoverable Oil and Grease in Soil by Gravimetric Analysis
MODIFIED EPA Method 413.1

1.0 Blanks

The method blank was below the detection limit as shown in Table 2.

2.0 Balance Calibration Check

The balance calibration check criteria were met as shown in Table 3.

3.0 Blank Spike (BS) Accuracy

The control limits were met for hexadecane in the BS (Freon) as shown in Table 4.

4.0 Sample Duplicate Precision

Relative percent difference (RPD) criterion was met for the sample duplicate as shown in Table 5.

Project Number: SFB-175-0204.72
Consultant Project Number: NONE GIVEN
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002610
Report Issue Date: March 1, 1990

Table 2

METHOD BLANK DATA

Recoverable Oil and Grease in Soil by Gravimetric Analysis
MODIFIED EPA Method 413.1

Date of Analysis: 02/26/90

Analyte	Concentration, mg/Kg
Recoverable Oil and Grease	<50

<# = Not detected at the indicated detection limit.

Table 3

LABORATORY BALANCE CALIBRATION CHECK

Recoverable Oil and Grease in Soil by Gravimetric Analysis
MODIFIED EPA Method 413.1

True Mass	Observed Mass	Acceptability Limits
1.0 mg	0.0010 g	± 0.1 mg
50.0041 g	50.0029 g	±0.0002 g

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: NONE GIVEN
Contract Number: N46CWC0244-9-X
Facility Number: NONE GIVEN
Work Order Number: D002610
Report Issue Date: March 1, 1990

Table 4

BLANK SPIKE (BS) RECOVERY REPORT

Recoverable Oil and Grease in Soil by Gravimetric Analysis
MODIFIED EPA Method 413.1

Date of Analysis: 02/26/90

Units: mg

Analyte	BS Result	Amount Added	BS, % Recovery	Acceptability Limits, %[1]
Recoverable Oil and Grease	100.9	101.6	99	70 - 130

1 = Arbitrary limits, pending experimental determination.

Table 5

LABORATORY DUPLICATE SAMPLE RESULTS
AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Recoverable Oil and Grease in Soil by Gravimetric Analysis
MODIFIED EPA Method 413.1

Date of Analysis: 02/26/90
Client ID: 2-23-1A,B
Sample Used: 01
Units: mg/Kg

Analyte	Sample Result	Duplicate Result	RPD, %	Maximum RPD, %
Recoverable Oil and Grease	4185	4322	3	20

GTEL ENVIRONMENTAL LABORATORIES, INC

GTEL
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LABORATORIES, INC.

Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 from inside California
(800) 423-7143 from outside California

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002609
Report Issue Date: February 28, 1990

Lucia Chou
Chevron U.S.A Inc.
P.O. Box 5004
San Ramon, CA 94583

Dear Ms. Chou:

Attached please find the analytical results for the samples received by GTEL on February 23, 1990.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,
GTEL Environmental Laboratories, Inc.

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002609
Report Issue Date: February 28, 1990

Table 1

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Diesel in Soil
Modified EPA Method 8015[1]

Sample Identification		Date Sampled	Date Extracted	Date Analyzed	Concentration, mg/Kg[2]
GTEL No.	Client ID				
01	2-23-1A,B*	02/23/90	02/23/90	02/23/90	<10

1 = Extraction by EPA Method 3550
2 = Method detection limit = 10 mg/Kg; analyte below this level would not be detected.

* Composite of 2-23-1A and 2-23-1B.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002609
Report Issue Date: February 28, 1990

QA Conformance Summary

Total Petroleum Hydrocarbons as Diesel in Soil
Modified EPA Method 8015

1.0 Blanks

The Reagent blank was below the detection limit as shown in Table 2.

2.0 Independent QC Check Sample

The control limits were met for diesel in the aqueous independent QC check sample as shown in Table 3.

3.0 Surrogate Compound Recoveries

Percent recovery limits were met for the surrogate compound (Octadecane) for all samples as shown in Table 4.

4.0 Matrix Spike (MS) Accuracy

Percent recovery limits were met for diesel in the MS as shown in Table 5.

5.0 Matrix Spike Duplicate (MSD) Precision

Relative percent difference (RPD) criterion was met for diesel in the MSD as shown in Table 6.

6.0 Sample Handling

6.1 Sample handling and holding time criteria were met for all samples.

6.2 There were no exceptional conditions requiring dilution of samples.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002609
Report Issue Date: February 28, 1990

Table 2

REAGENT BLANK DATA

Total Petroleum Hydrocarbons as Diesel in Soil
Modified EPA Method 8015

Date of Analysis: 02/23/90

Analyte	Concentration, mg/Kg
Diesel	<10

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002609
Report Issue Date: February 28, 1990

Table 3

INDEPENDENT QC CHECK SAMPLE RESULTS

Total Petroleum Hydrocarbons as Diesel in Soil
Modified EPA Method 8015

Date of Analysis: 02/22/90

Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %[1]
Diesel	1294	1163	90	80-120

1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

Table 3a

INDEPENDENT QC CHECK SAMPLE SOURCE

Total Petroleum Hydrocarbons as Diesel in Soil
Modified EPA Method 8015

Analyte	Source
Diesel	SHELL

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002609
Report Issue Date: February 28, 1990

Table 4

SURROGATE COMPOUND RECOVERY

Octadecane

Total Petroleum Hydrocarbons as Diesel in Soil
Modified EPA Method 8015

Acceptability Limits[1]: 70 - 130 %

GTEL No.	Expected Result, mg/Kg	Surrogate Result, mg/Kg	Surrogate Recovery, %
Blank	100	89	89
01	100	88	88
MS	100	115	115
MSD	100	117	117

MS = Matrix Spike
MSD = Matrix Spike Duplicate
1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002609
Report Issue Date: February 28, 1990

Table 5

MATRIX SPIKE (MS) RECOVERY REPORT

Total Petroleum Hydrocarbons as Diesel in Soil
Modified EPA Method 8015

Date of Analysis: 02/23/90
Sample Spiked: D002486-01 Units: mg/Kg

Analyte	Sample Result	Concentration Added	MS Result	MS, % Recovery	Acceptability Limits, %[1]
Diesel	<10	500	462	92	70 -130

1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.
<# = Not detected at the indicated detection limit.

Table 6

MATRIX SPIKE DUPLICATE (MSD) RESULTS
AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Total Petroleum Hydrocarbons as Diesel in Soil
Modified EPA Method 8015

Date of Analysis: 02/23/90
Sample Used: D002486-01 Units: mg/Kg

Analyte	MS Result	MSD Result	RPD, %	Maximum RPD, %
Diesel	462	460	0.4	30

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL
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Northwest Region
4080 Pike Lane
Concord, CA 94520
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(800) 544-3422 from inside California
(800) 423-7143 from outside California

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002612
Report Issue Date: February 26, 1990

Lucia Chou
Chevron U.S.A Inc.
P.O. Box 5004
San Ramon, CA 94583

Dear Ms. Chou:

Attached please find the analytical results for the samples received by GTEL on February 23, 1990.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,
GTEL Environmental Laboratories, Inc.

Emma P. Popek
Laboratory Director

Project Number: SF8-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002612
Report Issue Date: February 26, 1990

Table 1

ANALYTICAL RESULTS

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date Sampled		02/23/90			
Date Analyzed		02/23/90			
Client Identification		2-23-1A,B*			
GTEL Sample Number		01			
Analyte	Detection Limit, ug/Kg	Concentration, ug/Kg			
Chloromethane	500	<500			
Bromomethane	500	<500			
Vinyl Chloride	500	<500			
Chloroethane	500	<500			
Methylene Chloride	250	<250			
Acetone	5000	<5000			
Carbon Disulfide	250	<250			
1,1-Dichloroethene	250	<250			
1,1-Dichloroethane	250	<250			
trans-1,2-Dichloroethene	250	<250			
Chloroform	250	<250			
1,2-Dichloroethane	250	<250			
2-Butanone	5000	<5000			
1,1,1-Trichloroethane	250	<250			
Carbon Tetrachloride	250	<250			
Vinyl Acetate	2500	<2500			
Bromodichloromethane	250	<250			
1,2-Dichloropropane	250	<250			
cis-1,3-Dichloropropene	250	<250			
Trichloroethene	250	<250			
Dibromochloromethane	250	<250			
1,1,2-Trichloroethane	250	<250			
Benzene	250	<250			
trans-1,3-Dichloropropene	250	<250			
2-Chloroethylvinylether	500	<500			

* Composite of 2-23-1A and 2-23-1B.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002612
Report Issue Date: February 26, 1990

Table 1 (Continued)

ANALYTICAL RESULTS

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date Sampled		02/23/90			
Date Analyzed		02/23/90			
Client Identification		2-23-1A,B*			
GTEL Sample Number		01			
Analyte	Detection Limit,ug/Kg	Concentration, ug/Kg			
Bromoform	250	<250			
4-Methyl-2-Pentanone	2500	<2500			
2-Hexanone	2500	<2500			
Tetrachloroethene	250	<250			
1,1,2,2-Tetrachloroethane	250	<250			
Toluene	250	<250			
Chlorobenzene	250	<250			
Ethylbenzene	250	<250			
Styrene	250	<250			
1,2-Dichlorobenzene	250	<250			
1,3-Dichlorobenzene	250	<250			
1,4-Dichlorobenzene	250	<250			
Xylene (total)	250	1100			
Trichlorofluoromethane	250	<250			

* Composite of 2-23-1A and 2-23-1B.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002612
Report Issue Date: February 26, 1990

QA Conformance Summary

Purgeable Hydrocarbons in Soil
EPA Method 8240

1.0 Blanks

Zero of 39 target compounds found in Reagent water blank and MeOH blank as shown in Tables 2 and 2a.

2.0 Independent QC Check Sample

The control limits were met for 8 of 8 QC check compounds in the aqueous QC check sample as shown in Table 3.

3.0 Surrogate Compound Recoveries

Recovery limits were met for all three surrogate compounds for all samples as shown in Tables 4a, 4b, and 4c.

4.0 Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Accuracy and Precision

4.1 Accuracy:

Percent recovery limits were not met for the MS and MSD as shown in Table 5 due to matrix effects.

4.2 Precision:

Relative Percent Difference (RPD) criteria were met for 5 of 5 compounds in the MS and MSD as shown in Table 5.

5.0 Sample Handling

5.1 Sample handling and holding time criteria were met for all samples.

5.2 There were no exceptional conditions requiring dilution of samples.

Table 2

REAGENT WATER BLANK DATA

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date of Analysis: 02/23/90

Analyte	Observed Result, ug/Kg
Chloromethane	ND
Bromomethane	ND
Vinyl Chloride	ND
Chloroethane	ND
Methylene Chloride	ND
Acetone	ND
Carbon Disulfide	ND
1,1-Dichloroethene	ND
1,1-Dichloroethane	ND
trans-1,2-Dichloroethene	ND
Chloroform	ND
1,2-Dichloroethane	ND
2-Butanone	ND
1,1,1-Trichloroethane	ND
Carbon Tetrachloride	ND
Vinyl Acetate	ND
Bromodichloromethane	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
Trichloroethene	ND
Dibromochloromethane	ND
1,1,2-Trichloroethane	ND
Benzene	ND
trans-1,3-Dichloropropene	ND
2-Chloroethylvinylether	ND

Table 2 (Continued)

REAGENT WATER BLANK DATA

Purgeable Hydrocarbons in Soil
EPA Method 8240

Analyte	Observed Result, ug/Kg
Bromoform	ND
4-Methyl-2-Pentanone	ND
2-Hexanone	ND
Tetrachloroethene	ND
1,1,2,2-Tetrachloroethane	ND
Toluene	ND
Chlorobenzene	ND
Ethylbenzene	ND
Styrene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Xylene (total)	ND
Trichlorofluoromethane	ND

ND = Not detected above the statistical detection limit.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002612
Report Issue Date: February 26, 1990

Table 2a

REAGENT MEOH BLANK DATA

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date of Analysis: 02/23/90

Analyte	Observed Result, ug/Kg
Chloromethane	ND
Bromomethane	ND
Vinyl Chloride	ND
Chloroethane	ND
Methylene Chloride	ND
Acetone	ND
Carbon Disulfide	ND
1,1-Dichloroethene	ND
1,1-Dichloroethane	ND
trans-1,2-Dichloroethene	ND
Chloroform	ND
1,2-Dichloroethane	ND
2-Butanone	ND
1,1,1-Trichloroethane	ND
Carbon Tetrachloride	ND
Vinyl Acetate	ND
Bromodichloromethane	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
Trichloroethene	ND
Dibromochloromethane	ND
1,1,2-Trichloroethane	ND
Benzene	ND
trans-1,3-Dichloropropene	ND
2-Chloroethylvinylether	ND

Table 2a (Continued)

REAGENT MEOH BLANK DATA

Purgeable Hydrocarbons in Soil
EPA Method 8240

Analyte	Observed Result, ug/Kg
Bromoform	ND
4-Methyl-2-Pentanone	ND
2-Hexanone	ND
Tetrachloroethene	ND
1,1,2,2-Tetrachloroethane	ND
Toluene	ND
Chlorobenzene	ND
Ethylbenzene	ND
Styrene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Xylene (total)	ND
Trichlorofluoromethane	ND

ND = Not detected above the statistical detection limit.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002612
Report Issue Date: February 26, 1990

Table 3

INDEPENDENT QC CHECK SAMPLE RESULTS

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date of Analysis: 12/06/89

Analyte	Expected Result, ug/L	Observed Result, ug/L	Recovery, %	Acceptability Limits, %
Trichloroethylene	50	47	94	60-140
Carbon Tetrachloride	50	45	90	80-120
1,1,1-Trichloroethane	50	44	88	60-140
1,1,2-Trichloroethane	50	50	100	60-140
Vinyl Chloride	50	47	94	60-140
Benzene	50	47	94	60-140
1,1-Dichloroethylene	50	45	90	60-140
1,2-Dichlorobenzene	50	53	106	60-140

Table 3a

INDEPENDENT QC CHECK SAMPLE SOURCE

Purgeable Hydrocarbons in Soil
EPA Method 8240

Analyte	Lot Number	Source
Trichloroethylene	LA19682	PURGEABLE A SUPELCO
Carbon Tetrachloride	LA19682	PURGEABLE A SUPELCO
1,1,1-Trichloroethane	LA18769	PURGEABLE B SUPELCO
1,1,2-Trichloroethane	LA18769	PURGEABLE B SUPELCO
Vinyl Chloride	LA20078	PURGEABLE C SUPELCO
Benzene	LA18769	PURGEABLE B SUPELCO
1,1-Dichloroethylene	LA19682	PURGEABLE A SUPELCO
1,2-Dichlorobenzene	LA19682	PURGEABLE A SUPELCO

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002612
Report Issue Date: February 26, 1990

Table 4a

SURROGATE COMPOUND RECOVERY

d8-Toluene

Purgeable Hydrocarbons in Soil
EPA Method 8240

Recovery Acceptability Limits[1]: 81 - 117 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Water Blank	50	47	94
MeOH Blank	50	48	96
01	50	49	98
MS	50	48	96
MSD	50	48	96

MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002612
Report Issue Date: February 26, 1990

Table 4b

SURROGATE COMPOUND RECOVERY

Bromofluorobenzene

Purgeable Hydrocarbons in Soil
EPA Method 8240

Recovery Acceptability Limits[1]: 74 - 121 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Water Blank	50	49	98
MeOH Blank	50	47	94
01	50	50	100
MS	50	50	100
MSD	50	50	100

MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

Table 4c

SURROGATE COMPOUND RECOVERY

d4-1,2-Dichloroethane

Purgeable Hydrocarbons in Soil
EPA Method 8240

Recovery Acceptability Limits[1]: 70 - 121 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Water Blank	50	59	118
MeOH Blank	50	51	102
01	50	47	94
MS	50	45	90
MSD	50	49	98

MS = Matrix spike sample
MSD = Matrix spike duplicate sample
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: None Given
Contract Number: N46CWC0244-9-X
Facility Number: None Given
Work Order Number: D002612
Report Issue Date: February 26, 1990

Table 5

MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)
RECOVERY AND RELATIVE PERCENT DEVIATION (RPD)
REPORT

Purgeable Hydrocarbons in Soil
EPA Method 8240

Date of Analysis: 02/23/90
Sample Spiked: 01
Client ID: 2-23-1A,B
Units: ug/Kg

Analyte	Sample Result	Amount Added	MS Result	MSD Result
1,1-Dichloroethene	ND	2500	1300	1450
Trichloroethene	ND	2500	1300	1350
Benzene	ND	2500	1300	1400
Toluene	ND	2500	1200	1300
Chlorobenzene	ND	2500	1300	1400

Analyte	MS, % Recovery	MSD, % Recovery	RPD, %	Acceptability Limits[1]	
				Maximum RPD, %	% Recovery
1,1-Dichloroethene	52	58	10	22	59-172
Trichloroethene	52	54	4	24	62-137
Benzene	52	56	7	21	66-142
Toluene	48	52	8	21	59-139
Chlorobenzene	52	56	7	21	60-133

ND = Not Detected above the statistical detection limit
1 = Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements.

WEST
Western Environmental Science & Technology

1046 Olive Drive, Suite 3
Davis, CA 95616

916-753-9500
FAX #: 916-753-6091

D0026012

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Lucia Chou Chevron

Phone #: 415-842-9500

Address:

FAX #:

Project Number: SFB-175.0204.72

Project Name:

Project Location: 7007 San Ramon Blvd, Dublin Ca.

Sampler Signature: Arthur Muir

Sample ID	Lab # (Lab use only)	# CONTAINERS	Volume/Amount	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO3	ICE	NONE	OTHER	Sampling: DATE	TIME
2-23-1A Comp.	01	1			/						/			1-23-90	8:36
2-23-1B		1			/						/			2-23-90	8:39

ANALYSIS REQUEST

BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel (8015 or 8270)	TPH as Jetfuel (8015 or 8270)	Total Oil & Grease (413.1)	Total Oil & Grease (413.2)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 608/8080-PCBs Only	EPA 624/8240	EPA 625/8270	CAM - 17 Metals	EPTOX - 8 Metals	EPA - Priority Pollutant Metals	LEAD(7420/7421/239.2)	ORGANIC LEAD
		/															
		/															

OTHER: Waste Oil Metals (Cd, Cr, Zn, Pb) - 6c ms

SPECIAL HANDLING: EXPEDITED SERVICE (48 hr) or (1 wk) /

Relinquished by: Arthur Muir — Date — Time

Received by:

Relinquished by — Date — Time

Received by:

Relinquished by — Date 2/27/90 — Time

Received by Laboratory:

Remarks: Composite 1A, 1B

48 hour T.A.T. if possible

- if not 3 day T.A.T.