TERRA VAC
1651 Alvarado Street, San Leandro, CA 94577-2636
Tel (510) 351-8900 ❑ Fax (510) 351-0221

INTERIM SOIL BORING INSTALLATION REPORT
FORMER CHEVRON STATION 9-4587
609 OAK STREET
OAKLAND, CALIFORNIA
PROJECT #30-0219

AS wells SP6 + SP7, aka DVSP-6 + DVSP-7.
2-28-96 rpt date

2/28/96

INTERIM SOIL BORING INSTALLATION REPORT
FORMER CHEVRON STATION 9-4587
609 OAK STREET
OAKLAND, CALIFORNIA

Prepared For

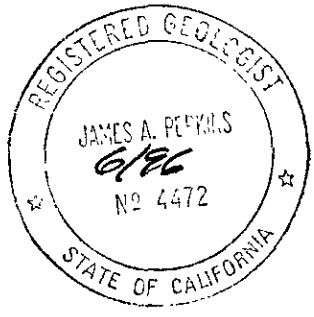
Chevron U.S.A. Products Company
6001 Bollinger Canyon Road
San Ramon, California 94583

Prepared By

Terra Vac Corporation
San Leandro, California

Mark P. Frye
Project Manager

James A. Perkins, R.G.
Division Manager



February 28, 1996

INTERIM SOIL BORING INSTALLATION REPORT
FORMER CHEVRON STATION 9-4587
609 OAK STREET
OAKLAND, CALIFORNIA

1.0 INTRODUCTION

The site, located at 609 Oak Street in Oakland, California, was formerly a Chevron Service Station (No. 9-4587). Underground storage tanks (USTs) and associated piping have been removed from the site. Previous environmental investigations conducted at the site confirmed the presence of petroleum hydrocarbons in the soil and groundwater beneath the service station site. A groundwater pump and treat system was operated at the site prior to the start of work by Terra Vac in September 1995. Terra Vac is currently operating a dual vapor extraction (DVE)/air sparging system that remediates impacted soil and groundwater. The site is fenced and occupied by the former service station building and a remediation equipment compound. Prior to this drilling event, three groundwater monitoring wells, one groundwater recovery well, ten vapor extraction wells, and five air sparging wells were installed on-site (Figure 1).

This report presents the results of interim soil boring work that was performed in accordance with the remediation work plan approved for the site. Interim soil borings were installed to assess remediation system effectiveness and to expand coverage of impacted areas of the site. The soil borings were positioned to provide extended sparge coverage of the south corner of the site.

2.0 FIELD INVESTIGATION

On December 20, 1995, West Hazmat Drilling Corporation, under the direction of Terra Vac, drilled and completed two air sparging wells (SP-6 and SP-7). A CME 75 truck mounted drill rig using 8-inch diameter hollow-stem augers was used to drill the borings. The total depth and screen interval of each well was determined in the field based on subjective evaluation of petroleum hydrocarbon concentrations, photo-ionization detector (PID) measurements, lithologies, and groundwater levels.

Soil samples were collected at five-foot intervals from each boring using a modified split-spoon sampler. The sampler was driven eighteen inches ahead of the augers using a standard 140 pound hammer repetitively dropped 30 inches. A minimum of three samples per boring were collected for lithology classification and volatile screening analysis. PID screening of soil sample head spaces were performed on each sample. The Unified Soils Classification System was used in the field to describe the physical properties of the soil.

Each boring was completed as a two inch air sparging well. The wells were constructed of Schedule 40 PVC well screen and riser. A slot size of 0.02 inches was selected based on the targeted lithology (poorly graded fine silty sand) at the site. The filter pack for each well consists of Lone Star #3 silica sand. A ten-feet thick bentonite seal was placed between the filter pack and the neat cement grout annular seal. Well logs containing well construction information are presented in Appendix A.

Decontamination procedures for onsite equipment were followed to prevent cross contamination between borings. Prior to use, the soil sampler was cleaned using an Alconox wash and rinsed with potable water. Upon well completion, auger flights, the auger bit, and other pieces of intrusive equipment were steam cleaned to prevent cross contamination between borings.

3.0 ANALYTICAL RESULTS

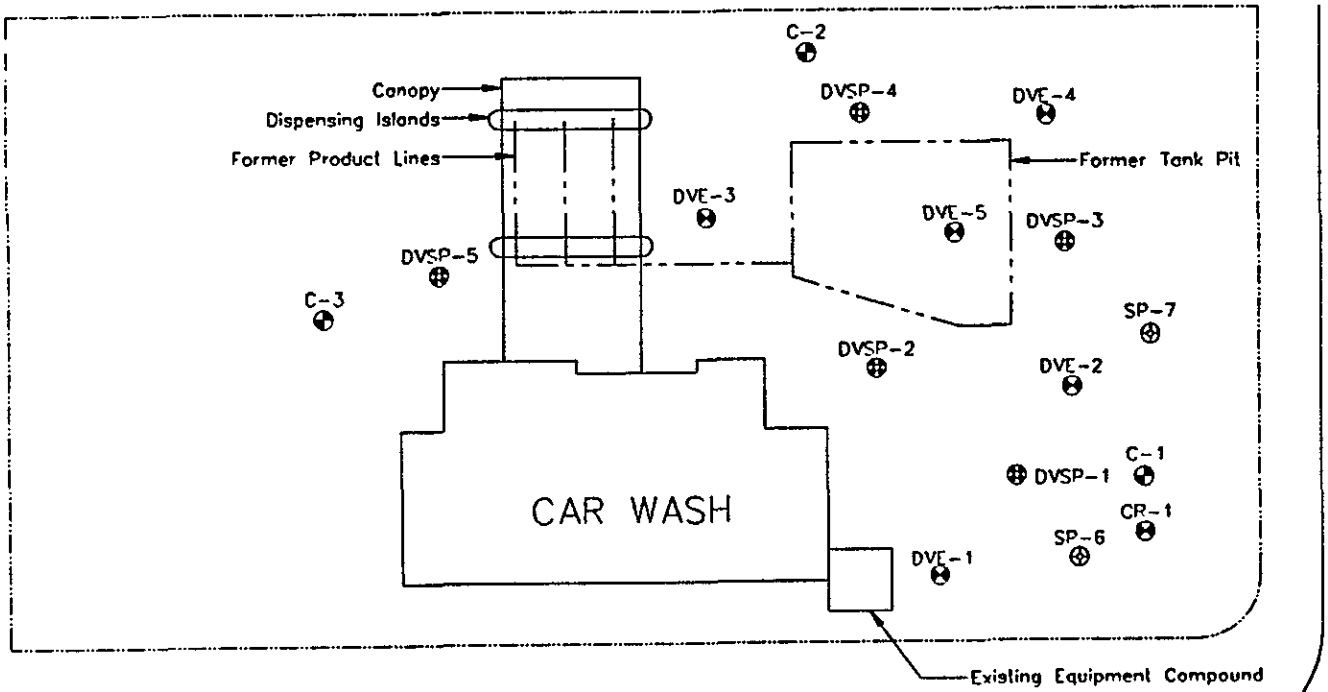
Selected soil samples collected during drilling were submitted for analytical testing. Upon return of the split-spoon, selected samples were capped, labeled and stored on ice until transported to the laboratory. A chain of custody form was initiated by the sampling personnel and completed during subsequent handling of the samples. Analytical testing was conducted by Sequoia Analytical Laboratories (a State of California certified laboratory) of Redwood City, California, using modified EPA method 8015 for total petroleum hydrocarbons as gasoline (TPHg) and EPA method 8020 for benzene, toluene, ethylbenzene and total xylenes (BTEX). Copies of laboratory analytical reports are included in Appendix B. Elevated concentrations of petroleum hydrocarbons were found to be present in the soil sample collected from SP-6 at an approximate depth of 10 feet below grade, which coincides with the depth to groundwater. A summary of these results is presented in Table 1.

4.0 FINDINGS

Lithology in soil borings SP-6 and SP-7 is characterized by a clayey silt from the surface to a depth ranging from 7 to 9 feet, overlaying a poorly sorted fine silty sand to 27 feet, the total depth drilled. Brick fragments and concrete rubble found at a depth of 10 feet below grade indicate the presence of fill. Groundwater was observed at a depth of approximately 10 feet.

PID screening results and subjective evaluation of samples collected during drilling indicate that vadose zone soils beneath the site are not significantly impacted by hydrocarbons. Capillary fringe and saturated soils in the area of boring SP-7 do not appear to be impacted. All soil samples analyzed from this boring met the remediation goal of less than 100 parts per million (ppm) TPHg and less than 1 ppm benzene, with the exception of the sample collected from a depth of 14 feet which had a concentration 1.2 ppm benzene. Significant concentrations of TPHg were detected in the soil sample collected at the capillary fringe of SP-6. TPHg concentrations in soil dropped off rapidly with depth in this boring.

The lack of observed hydrocarbon impact in the area of boring SP-7 indicates that either this area of the site was not originally impacted, or that DVE/air sparging operations in wells DVSP-3 and DVE-2 have been effective in removing hydrocarbons that may have been present. The extent of significant amounts of hydrocarbons in the area of SP-6 appear to be limited to the capillary fringe. The two new sparge wells have been connected to the sparging system and are currently operating in conjunction with the five previously installed sparge wells. Prior to interim boring installation, the DVE system had been operated for approximately 71 days. The DVE system was operated in wells CR-1, DVE-1, DVE-2, DVSP-1 and DVSP-3 for an additional 39 days following interim boring installation.



C-1 = Monitoring Well

DVE-1 = Vapor Extraction Well

SP-7 = Sparge Well

DVSP-1 = Dual Completed Well, (entrainment extraction & sparging)

Site Map
Former Chevron Station 9-4587
609 Oak Street
Oakland, California

Project	30-0219	Drawn	JLN
Date	2/7/96	Revision	
Scale	1" = 30'	Checked	

TERRA VAC
14798 Wicks Boulevard
San Leandro, CA 94577
(510) 351-8900 Fax: -0221

Figure 1

12-20-95

TABLE 1
SUMMARY OF ANALYTICAL RESULTS

Sample No.	TPH-g	Benzene	Toluene	Ethylbenzene	Xylene
SP6-9.7	11,000	160	1,300	300	1,600
SP6-14.7	4.4	0.81	0.22	0.24	0.56
SP7-4.7	<1.0	<0.005	<0.005	<0.005	<0.005
SP7-9.3	1.2	<0.005	0.038	0.009	0.032
SP7-14.3	3.1	1.2	0.068	0.19	0.18
SP7-19.3	<1.0	<0.005	0.0086	<0.005	0.067
SP7-24.3	<1.0	<0.005	<0.005	<0.005	0.0052

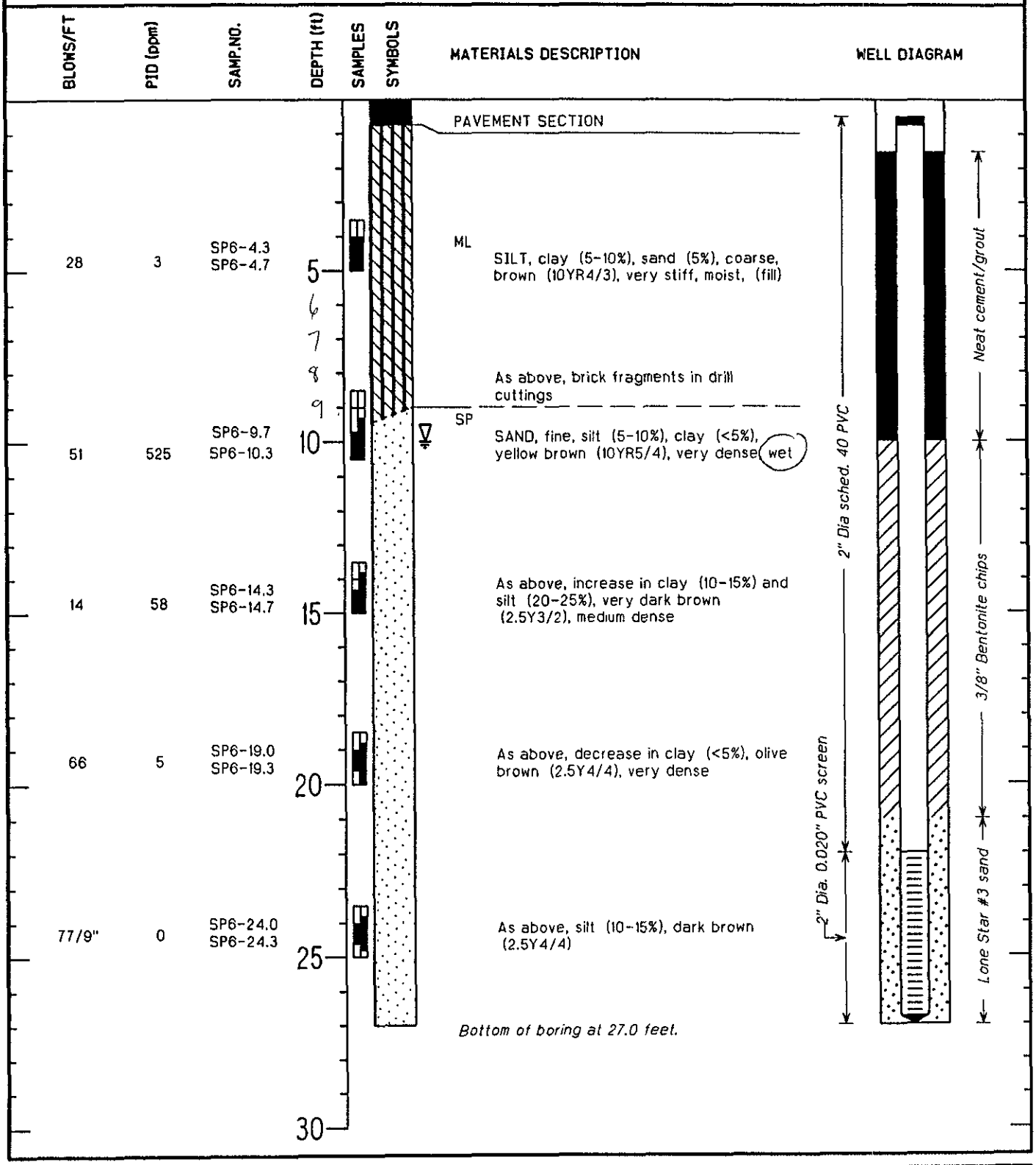
Analytical results in mg/kg (ppm).
<Value = None detected above the specified detection limit.

APPENDIX A

BORING/WELL LOGS

TERRA VAC CORPORATION
14798 Wicks Boulevard, San Leandro, CA 94577

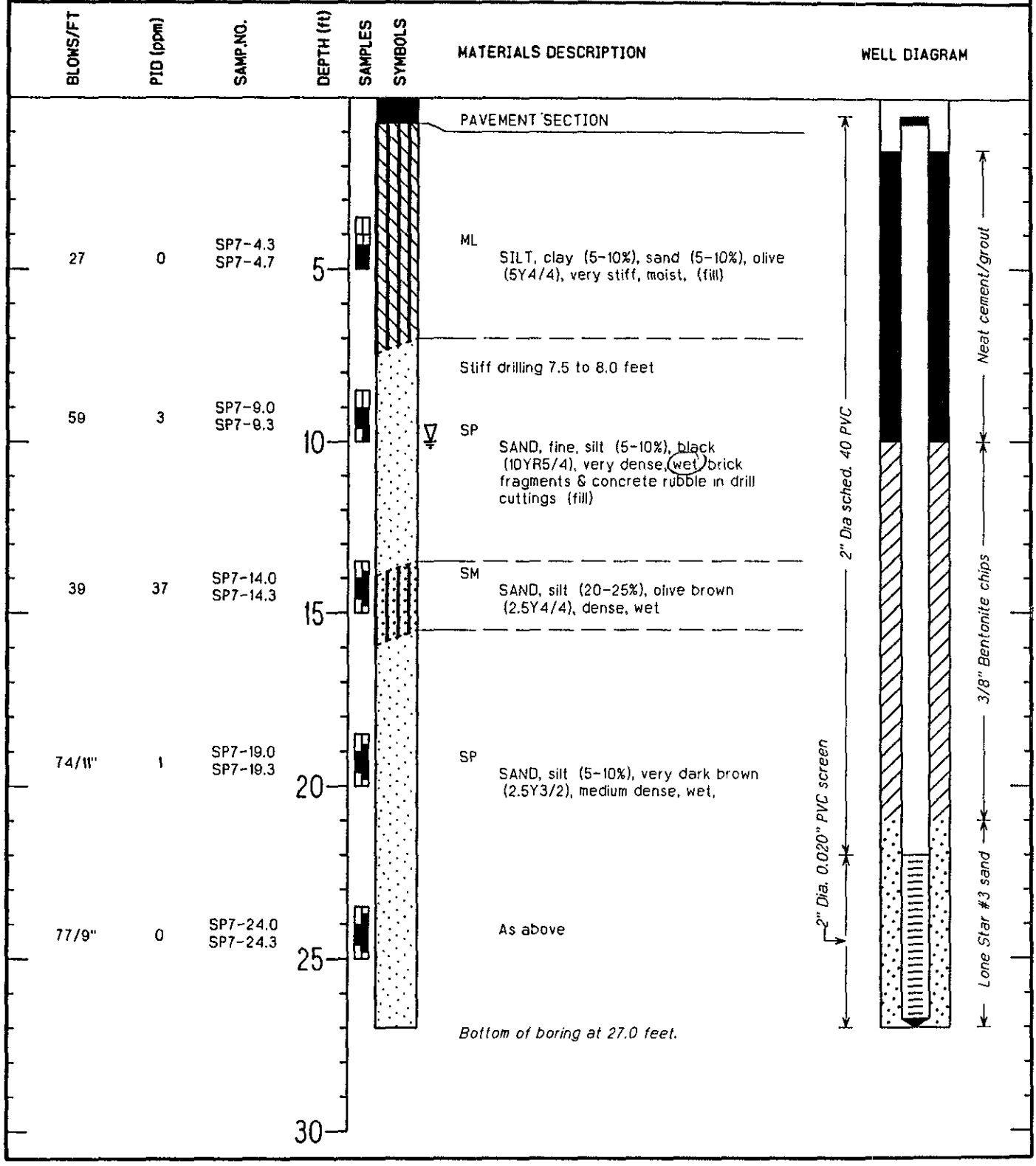
LOG OF AIR SPARGE WELL SP-6



PROJECT Chevron	DRILLING COMPANY West Hazmat Drilling Co.
LOCATION 609 Oak Street, Oakland	DATE DRILLED 12/20/95
JOB NUMBER 30-0219	SURFACE ELEVATION Not surveyed
GEOLOGIST Karel L. Detterman, R.G.	TOTAL DEPTH OF HOLE 27.0 Feet
BORING DIAMETER 8 in. dia	FIRST OBSERVED GW 10.0 Feet

TERRA VAC CORPORATION
14798 Wicks Boulevard, San Leandro, CA 94577

LOG OF AIR SPARGE WELL SP-7



PROJECT Chevron	DRILLING COMPANY West Hazmat Drilling Co.
LOCATION 609 Oak Street, Oakland	DATE DRILLED 12/20/95
JOB NUMBER 30-0219	SURFACE ELEVATION Not surveyed
GEOLOGIST Karel L. Detterman, R.G.	TOTAL DEPTH OF HOLE 27.0 Feet
BORING DIAMETER 8 in. dia	FIRST OBSERVED GW 10.0 Feet

APPENDIX B

ANALYTICAL RESULTS

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Terra Vac
14798 Wicks Blvd
San Leandro, CA 94577

Attention: Karel Detterman

Client Proj. ID: Chevron 9-4587/30-0219
Sample Descript: SP-6 9.7
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9512H26-01

Sampled: 12/20/95
Received: 12/22/95
Extracted: 12/27/95
Analyzed: 12/27/95
Reported: 12/28/95

QC Batch Number: GC122795BTEXEXA
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	3000	11000
Benzene	15	160
Toluene	15	1300
Ethyl Benzene	15	300
Xylenes (Total)	15	1600
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	127

RECEIVED
JAN 02 1996
Ans'd.....

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Terra Vac
14798 Wicks Blvd
San Leandro, CA 94577

Attention: Karel Detterman

Client Proj. ID: Chevron 9-4587/30-0219
Sample Descript: SP-6 14.7
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9512H26-02

Sampled: 12/20/95
Received: 12/22/95
Extracted: 12/27/95
Analyzed: 12/27/95
Reported: 12/28/95

QC Batch Number: GC122795BTEXEXA
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	4.4
Benzene	0.0050	0.81
Toluene	0.0050	0.22
Ethyl Benzene	0.0050	0.24
Xylenes (Total)	0.0050	0.56
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	117

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Terra Vac
14798 Wicks Blvd
San Leandro, CA 94577
Attention: Karel Detterman

Client Proj. ID: Chevron 9-4587/30-0219
Lab Proj. ID: 9512H26

Received: 12/22/95
Reported: 12/28/95

LABORATORY NARRATIVE

TPPH Note: Sample 9512H26-01 was diluted 3000-fold.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

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Terra Vac
14798 Wicks Blvd.
San Leandro, CA 94577
Attention: Karel Detterman

Client Project ID: Chevron 9-4587/30-0219
Matrix: Solid
Work Order #: 9512H26 -01-02
Reported: Dec 29, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC122795BTEXEXA	GC122795BTEXEXA	GC122795BTEXEXA	GC122795BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Padilla	J. Padilla	J. Padilla	J. Padilla
MS/MSD #:	9512B0605	9512B0605	9512B0605	9512B0605
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/27/95	12/27/95	12/27/95	12/27/95
Analyzed Date:	12/27/95	12/27/95	12/27/95	12/27/95
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.20	0.20	0.20	0.60
MS % Recovery:	100	100	100	100
Dup. Result:	0.20	0.20	0.20	0.60
MSD % Recov.:	100	100	100	100
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK122795	BLK122795	BLK122795	BLK122795
Prepared Date:	12/27/95	12/27/95	12/27/95	12/27/95
Analyzed Date:	12/27/95	12/27/95	12/27/95	12/27/95
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
LCS Result:	0.19	0.20	0.20	0.59
LCS % Recov.:	95	100	100	98
MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No

SP6 1 OF 2

Chain-of-Custody-Record

P.2

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number 01-4587
Facility Address 609 Oak St. Oakland CA
Consultant Project Number 30-9219
Consultant Name Tetra Tech
Address 1479 Doolittle Dr San Leandro CA
Project Contact (Name) Karel DeHeinen
(Phone) 510 351-8900 (Fax Number) -0221

Chevron Contact (Name) Mike Miller
(Phone) 510 842-8134
Laboratory Name Sequoia Analytical
Laboratory Release Number 2172490
Samples Collected by (Name) Karel DeHeinen
Collection Date 12/20/95
Signature Karel DeHeinen

Analyses To Be Performed 5512H26

Sample Number	Lab Sample Number	Number of Containers	Matrix (W = Water, S = Soil, A = Air, Other)	Type (C = Comp, G = Grab, D = Discrete)	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals CAM, Pb, Zn, Ni (6010 or AA)					Remarks
✓ SP6 4.3		1	S	D	0879	None	Y													Need full TPH
✓ 4.7																				analysis on
1 ✓ 9.7					887			X												12/26/95 from
✓ 10.3																				Tetra Tech
✓ 14.3					900															
2 ✓ 14.7								X												
✓ 19.0					904															
✓ 19.3																				
✓ 24.0					909															
✓ 24.3		↓	↓	↓		↓	↓													
											MPF - 12.26.95									

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Karel DeHeinen	Tetra Tech	12/22/95	S Kwok	SEQ	12/22/95 11:20
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted

COC-3 Rev. 03/94

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Terra Vac	Client Proj. ID: Chevron 9-4587/30-0219	Sampled: 12/20/95
14798 Wicks Blvd	Sample Descript: SP7-9.3	Received: 12/22/95
San Leandro, CA 94577	Matrix: LIQUID	Extracted: 12/27/95
	Analysis Method: 8015Mod/8020	Analyzed: 12/27/95
Attention: Karel Detterman	Lab Number: 9512H25-01	Reported: 12/28/95

QC Batch Number: GC122795BTEXEXA
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**1.2**
Benzene	0.0050	N.D.
Toluene	**0.0050**	**0.038**
Ethyl Benzene	**0.0050**	**0.0090**
Xylenes (Total)	**0.0050**	**0.032**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	111

RECEIVED
JAN 02 1996
Ans'd.....

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Terra Vac
14798 Wicks Blvd
San Leandro, CA 94577

Attention: Karel Detterman

Client Proj. ID: Chevron 9-4587/30-0219
Sample Descript: SP7-14.3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9512H25-02

Sampled: 12/20/95
Received: 12/22/95
Extracted: 12/27/95
Analyzed: 12/27/95
Reported: 12/28/95

QC Batch Number: GC122795BTEXEXA
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	3.1
Benzene	0.0050	1.2
Toluene	0.0050	0.068
Ethyl Benzene	0.0050	0.19
Xylenes (Total)	0.0050	0.18
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	111

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
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Terra Vac
14798 Wicks Blvd.
San Leandro, CA 94577
Attention: Karel Detterman

Client Project ID: Chevron 9-4587/30-0219
Matrix: Solid
Work Order #: 9512H25 -01-02
Reported: Dec 29, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC122795BTEXEXA	GC122795BTEXEXA	GC122795BTEXEXA	GC122795BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Padilla	J. Padilla	J. Padilla	J. Padilla
MS/MSD #:	9512B0605	9512B0605	9512B0605	9512B0605
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/27/95	12/27/95	12/27/95	12/27/95
Analyzed Date:	12/27/95	12/27/95	12/27/95	12/27/95
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.20	0.20	0.20	0.60
MS % Recovery:	100	100	100	100
Dup. Result:	0.20	0.20	0.20	0.60
MSD % Recov.:	100	100	100	100
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK122795	BLK122795	BLK122795	BLK122795
Prepared Date:	12/27/95	12/27/95	12/27/95	12/27/95
Analyzed Date:	12/27/95	12/27/95	12/27/95	12/27/95
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
LCS Result:	0.19	0.20	0.20	0.59
LCS % Recov.:	95	100	100	98
MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

P.2

587 2OF2

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No

Chain-of-Custody-Record

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number: 9-4587
Facility Address: 609 Oak St Oakland CA
Consultant Project Number: 30-0719
Consultant Name: Terra Vac
Address: 14798 Wicks Blvd San Leandro
Project Contact (Name): Karel Detterman
(Phone): 510 351-8900 (Fax Number): -0221

Chevron Contact (Name): Mark Miller
(Phone): 510 842-8134
Laboratory Name: Sequoia
Laboratory Release Number: 2172490
Samples Collected by (Name): Karel Detterman
Collection Date: 12/20/95
Signature: Karel Detterman

Analyses To Be Performed: 9512H25

	Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)						Remarks
✓	587 4.3		1	S	D	1134	None	Y														Hold till further
✓	4.7																					instructions on
✓	9.0					1140																12/26/95 from
1 ✓	9.3								X													Terra Vac
✓	14.0					1145																
2 ✓	14.3								X													
✓	19.0					1152																
✓	19.3																					
✓	24.0					1200																
✓	24.3																					↓

MPF-12-26-95

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Karel Detterman	Terra Vac	12/22/95 1100	S Ross	SEQ	12/22/95 11:20
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time

Turn Around Time (Circle Choice)
24 Hrs.
(48 Hrs.)
5 Days
(10 Days)
As Contracted

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Terra Vac
14798 Wicks Blvd
San Leandro, CA 94577

Attention: Karel Detterman

Client Proj. ID: Chevron 9-4587/30-0219
Sample Descript: SP-7 (4.7)
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9512J51-01

Sampled: 12/20/95
Received: 12/28/95
Extracted: 12/29/95
Analyzed: 12/29/95
Reported: 01/03/96

QC Batch Number: GC122995BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Terra Vac
14798 Wicks Blvd
San Leandro, CA 94577

Attention: Karel Detterman

Client Proj. ID: Chevron 9-4587/30-0219
Sample Descript: SP-7 (19.3)
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9512J51-02

Sampled: 12/20/95
Received: 12/28/95
Extracted: 12/29/95
Analyzed: 12/29/95
Reported: 01/03/96

QC Batch Number: GC122995BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	**0.0050**	**0.0086**
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	**0.0050**	**0.067**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	99

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Terra Vac
14798 Wicks Blvd
San Leandro, CA 94577

Attention: Karel Detterman

Client Proj. ID: Chevron 9-4587/30-0219
Sample Descript: SP-7 (24.3)
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9512J51-03

Sampled: 12/20/95
Received: 12/28/95
Extracted: 12/29/95
Analyzed: 12/29/95
Reported: 01/03/96

QC Batch Number: GC122995BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	**0.0050**	**0.0052**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	104

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Terra Vac
14798 Wicks Blvd
San Leandro, CA 94577
Attention: Karel Detterman

Client Proj. ID: Chevron 9-4587/30-0219
Lab Proj. ID: 9512J51

Received: 12/28/95
Reported: 01/03/96

LABORATORY NARRATIVE

No issues.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Terra Vac
14798 Wicks Blvd.
San Leandro, CA 94577
Attention: Karel Detterman

Client Project ID: Chevron 9-4587/30-0219
Matrix: Solid
Work Order #: 9512J51 -01-03
Reported: Jan 4, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC122995BTEXEXA	GC122995BTEXEXA	GC122995BTEXEXA	GC122995BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Padilla	J. Padilla	J. Padilla	J. Padilla
MS/MSD #:	9512B0609	9512B0609	9512B0609	9512B0609
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	12/29/95	12/29/95	12/29/95	12/29/95
Analyzed Date:	12/29/95	12/29/95	12/29/95	12/29/95
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.17	0.17	0.17	0.52
MS % Recovery:	85	85	85	87
Dup. Result:	0.17	0.17	0.17	0.52
MSD % Recov.:	85	85	85	87
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK122995	BLK122995	BLK122995	BLK122995
Prepared Date:	12/29/95	12/29/95	12/29/95	12/29/95
Analyzed Date:	12/29/95	12/29/95	12/29/95	12/29/95
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
LCS Result:	0.18	0.18	0.18	0.54
LCS % Recov.:	90	90	90	90
MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

SG7 2OF2

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No

Chain-of-Custody-Record

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number: 9-4587
Facility Address: 609 Oak St Oakland CA
Consultant Project Number: 30-0719
Consultant Name: Terra Vac
Address: 14798 Wicks Blvd San Leandro
Project Contact (Name): Karel Detterman
(Phone) 510 351-8900 (Fax Number) -0221

Chevron Contact (Name): Mark Miller
(Phone) 510 842-8134
Laboratory Name: Sequoia
Laboratory Release Number: 2P72490
Samples Collected by (Name): Karel Detterman
Collection Date: 12/20/95
Signature: Karel Detter

Analyses To Be Performed

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Remarks
SG7 4.3		1	S	D	1134	None	Y	no/no								Hold till further
4.7	01 A							✓ yes								instructions on
9.0					1140											12/20/95 from
9.3								X								Terra Vac.
14.0					1145											
14.3								X								
19.0					1152											
19.3	02							✓								
24.0					1200											
24.3	03							✓								

9512J51

MPF-12-26-95
KXD-12/28/95

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Karel Detter	Terra Vac	12/22/95 1130	S Ross	SEQ	12/22/95 11:20
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time

Turn Around Time (Circle Choice): 24 Hrs. / (48 Hrs.) / 5 Days / 10 Days / As Contracted — 12/28/95 KXD

12/28/95 16:50 ☎510 351 0221 TERRA VAC No Cal ☑003