

February 4, 1999

Mr. Scott Seery Alameda County Health Care Services Department of Environmental health 1130 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Re: Former Chevron Service Station #9-8139

16304 Foothill Blvd. San Leandro, California 6001 Bollinger Canyon Road Building L, Room 1110 PO Box 6004 San Ramon, CA 94583-0904

**Chevron Products Company** 

Philip R. Briggs
Project Manager
Site Assessment & Remediation
Phone 925 842-9136
Fax 925 842-8370

99 FEB - 8 PH L: II

Dear Mr. Seery:

Enclosed is the UST Removal and Sampling Report, dated January 19, 1999, that was prepared by our consultant Touchstone Developments for the above noted facility. This report summarizes the removal of the underground storage tanks (UST's) and associated product piping along with the sampling activities performed at this site.

Four single-walled fiberglass UST's were removed on October 26, 1998 and was witnessed by Mr. Scott Seery Alameda County Health Care Services, Mr. Jeff Monroe, Touchstone and Mr. Phil Briggs and Larry Wallace of Chevron. No holes were observed in the four UST's, however, some staining was observed around the sides of the used oil tank.

Groundwater was encountered in the UST excavation at a depth of approximately 12 feet below grade, however, it was not determined if the water observed in the tank excavation was true groundwater or from recent rains and therefore, no samples were taken. The site is also presently being monitored. A sheen was detected on the water surface and on November 2, 1998, approximately 2500 gallons of water was pumped out of the excavation prior to backfilling.

Six soil samples were collected from beneath the ends of the former UST's located at a depth of about 14 feet. Six soil samples were also collected beneath the product dispensers and piping at depths of approximately 2 to 3 feet. The samples were analyzed for TPH-g, BTEX, MtBE and Total lead constituents. The highest benzene concentrations detected in the UST excavation and beneath the product dispensers/piping were <1.000 mg/Kg (ppm) and <1.000 mg/Kg (ppm) respectively.



February 4, 1999 Mr. Scott Seery Former Chevron Service Station #9-8139 Page 2

## Note that the analytical results shown in Tables A, B, C and D are in ug/Kg (ppb) unless noted otherwise. The analytical results as reported by the lab are in ug/Kg, refer to Appendix B.

The highest concentration of TPH-g detected in the UST excavation was <200 mg/Kg (ppm) and in the dispenser/piping areas was 1,560 mg/Kg (ppm), while the highest MtBE concentration in the UST excavation was 12.700 mg/Kg (ppm) and 8.610 mg/Kg (ppm) in the dispenser/piping area. The highest Total Lead concentration detected in the UST excavation was 5.1 ppm and in the dispenser/piping area was 11 ppm.

Three hoists and one clarifier (oil/water separator) were removed from inside the service station building and soil samples collected at a depth of approximately 8 feet below grade for the hoists and 6 feet for the clarifier. The soil sample for the clarifier was analyzed for TOG (total oil/grease), TPH-g, TPH-d, BTEX, MtBE, VOC's (8010), SVOC's (8270) and five metals, while the soil samples for the hoists were analyzed for TPH-d. Refer to Table B for the results.

Two-soil samples were collected from beneath the removed used oil tank at a depth of approximately 9 feet below grade. The samples was analyzed for Total Oil & Grease, TPH-d, TPH-g, BTEX, MtBE, Volatile Organic Compounds (VOC's), Semi-Volatile Compounds (SVOC's) and Metals (EPA 6010). Refer to Table B for the results. On November 2, 1998, two feet of standing water was observed in the used tank excavation and approximately 500 gallons was pumped out prior to backfilling. An additional soil sample was collected at 11 feet below grade, refer to Table B for results.

On November 2, 1998, additional overexcavation was performed in the former piping trenches. The trenches were widened to approximately 6 feet and excavated vertically to about 4 feet below surface grade. Four soil samples were collected and analyzed for TPH-g, BTEX and MtBE constituents. The highest benzene concentration detected was 0.0881 mg/Kg (ppm). Refer to Table C for the other results.

Soils generated during the construction activities at the site were stockpiled and sampled for disposal. Approximately 100 cubic yards was generated from uncovering the UST's and composed primarily of pea gravel and was reused on site as fill material. This material was designated as stockpile SP-1 (a-d). Refer to Table D for the analytical results. Approximately 40 cubic yards of soil each were generated from the former used oil tank excavation and the piping trench and are designated as stockpile UOSP-1 (a-d)and stockpile SP-2 (a-d). Refer to Table D for the analytical results. Both of these stockpiles were profiled and transported for disposal at BFI in Livermore by Allwaste Transportation and Remediation.

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The point sources that have impacted the site in the past have been removed and any further impact from petroleum hydrocarbons will be minimal. Existing monitoing wells located at the site will continue to be sampled and analyzed for petroleum hydrocarbon constituents, which are expected to decline over time due to the removal of the point sources.

If you have any questions or comments, call me at (925) 842-9136.

Sincerely,

CHEVRON PRODUCTS COMPANY

Philip R. Briggs

Site Assessment and Remediation Project Manager

Enclosure

CC. Mr. Bill Scudder, Chevron

Mr. Chuck Headlee RWQCB-San Francisco Bay Region 2101 Webster St., Suite 500 Oakland, CA 94612

Mr. Harv Dhaliwal, P.E. President Dhaliwal & Asociates, Inc. 4430 Deerfield Way Danville, CA 94506



## **UST Removal and Sampling Report**

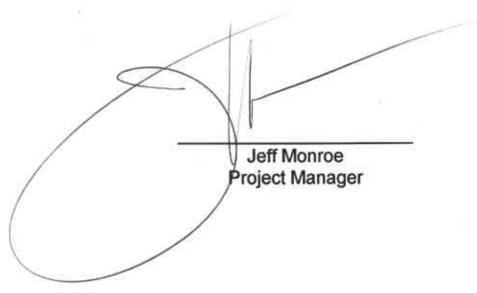
Former Chevron Station No. 9-8139 16304 Foothill Boulvard San Leandro, California

prepared for

Chevron Products Company 6001 Bollinger Canyon Road San Ramon, California 94583

prepared by

## **Touchstone Developments**



**January 19, 1999** 

#### INTRODUCTION

This report summarizes the field and sampling activities performed at former Chevron Service Station number 9-8139 located at 16304 Foothill Boulevard, San Leandro, California (Figure 1) during recent station demolition. Activities consisted of the removal of a used oil tank, hoists, clarifier, gasoline Underground Storage Tanks (USTs) and associated piping. UST and associated piping removal and excavation activities were performed by Musco Excavating of Santa Rosa, California. Touchstone Developments was present onsite to observe the UST removal, and obtain soil samples from the tank excavation, piping trenches, and associated soil stockpiles. The soil excavation and sampling activities described in this report were performed October 26 and November 2, 1998 to comply with the current Regional Water Quality Control Board and Alameda County Water District Guidelines.

#### SITE DESCRIPTION

The site had been occupied by a Chevron station that was demolished during October 1998. The site is adjacent to commercial properties. The former gasoline UST complex was located south of the station building (Figure 1), and consisted of three 10,000 gallon single-walled fiberglass tanks containing gasoline products. The former 1000 gallon single-walled fiberglass used oil tank was located near the northeastern corner of the former station building, and three hoists and one clarifier were inside the former building in the service bays (Figure 1). Both single-wall steel and fiberglass product pipes were observed in the piping trenches. The USTs and piping appeared to be in good condition.

#### FIELD EXCAVATION ACTIVITIES

Tank/piping, hoist and clarifier removals and initial compliance sampling was performed on October 26, 1998. On November 2, 1998, additional over-excavation was performed in the dispenser area. Removals and initial compliance sampling was witnessed by Scott Seery, representing Alameda County Environmental Health Department (ACEHD), see attached inspection sheets in Appendix A. Also present were Phil Briggs and Larry Wallace representing Chevron Products Company.

Groundwater was encountered in the fuel excavation at approximately 12 feet below grade surface (bgs) before USTs were removed.

#### SOIL SAMPLING

Samples were collected under the direction of Scott Seery. Soil samples were collected from the excavator bucket by removing the top few inches of soil then pushing a clean, three-inch-long brass tube (2" in diameter) into the soil until full. Tubes were covered at both ends with aluminum foil and sealed with plastic end caps. The soil samples were then labeled, recorded on a Chain-of-Custody form, put in a cooler with crushed ice and transported to Sequoia Analytical, Inc. located in Petaluma, California.

## UST Excavation Sampling

After removal of the gasoline USTs. Soil samples designated AN, AS, BN, BS, CN and CS were collected from beneath the former fuel tanks in native soils at approximately 14 feet below grade surface (bgs) as requested by Scott Seery. It was not yet determined if the water in the excavation was true groundwater or not. The approximate sample locations are shown on Figure 2. Sample analytical summaries and depths are found in Table A.

## Product Line Sampling

Product lines were excavated and removed on October 26, 1998. The product transfer lines extended from the fuel UST complex to the dispenser islands. Soil samples P1 through P6 were collected after piping was removed, at approximate depths of 2 to 3 feet bgs (Figure 2). Samples were collected from the trench bottom, beneath the former piping and dispensers. Sample depths are listed in Table A with the chemical analytical summary.

## Used Oil Tank Sampling

A 1000 gallon used oil tank was also removed on October 26, 1998. Two soil samples, designated UO1 and UO2, were initially collected from the bottom of the excavation at approximately 9 feet bgs (Figure 2). No holes were observed in the tank, however, some staining and odors were observed where UO1 was collected. The half of the represented initially by UO1 was then overexcavated vertically to 11 feet bgs and an additional sample designated UO1X was collected (Figure 3). Sample analytical results and depths are summarized in Table B.

## Hoist/Clarifier Sampling

Three hydraulic hoists and one oil water separator (clarifier) were removed during the station demolition.

Samples designated H1, H2 and H3 were collected beneath each of the former hoists at approximately 8 feet bgs. The sample designated CLR was collected beneath the former clarifier at approximately 6 feet bgs. Sample locations are shown on Figure 2 and analytical summaries are found in Table B.

## Product Piping Overexcavation

On November 2, 1998, additional overexcavation was performed in the former product piping trenches. Trenches were widened to approximately 6 feet and excavated vertically down to approximately 4 feet bgs. Four samples designated PX1, PX3, PX4 and PX6 were collected from the bottom of the overexcavated trenches, cooresponding to the initial piping samples P1, P3, P4 and P6. Overexcavation limits and sample locations are shown in Figure 3. Sample analytical summaries are found in Table C.

On November 2, 1998, two feet of standing water was observed in the used oil tank excavation. This was vacuumed out (approximately 500 gallons) using a vacuum truck supplied by Allwaste. Additionally, approximately 2500 gallons was also pumped out of the former gasoline UST excavation prior to backfilling.

## Stockpile Sampling

Soils generated during the fuel UST and product piping removal activities were stockpiled and sampled discretely approximately every 5 to 25 cubic yards (cy). Samples designated SP-1(a-d) were collected from the stockpile generated from uncovering the fuel USTs and represent approximately 100 cubic yards (cy). Samples UOSP-1(a-d) were collected from approximately 40 cy of soil generated from the used oil tank removal, and samples SP-2(a-d) were collected from approximately 40 cy generated from the product line trench and excavation activities. Stockpile locations are shown in Figure 3.

One sample was collected for approximately every 5 to 25 cy of soil stockpiled. The four samples were then composited in the laboratory and analyzed as one sample to represent each stockpile. Stockpile soil samples were collected by removing the top 8 to 14 inches of soil, pushing a clean 3" long (2" diameter) brass tube into the stockpile until completely filled, then removed, sealed and handled as described previously. Analytical results are summarized in Table D.

Upon receipt of chemical analytical data, stockpiles represented by SP-2(a-d) and UOSP-1(a-d) were profiled and

transported for disposal at Browning-Ferris Industries (BFI) located in Livermore, California. Transportation was performed November 3, 1998 by Allwaste Transportation and Remediation located in San Martin, California. Stockpile SP-1(a-d) consisting primarily of pea-gravel, was reused onsite as fill material.

#### ANALYTICAL RESULTS

Summaries of the soil sample analytical results presented in Tables A, B, C and D. The fuel UST excavation, trench and stockpile samples were analyzed for Petroleum Hydrocarbons calculated as gasoline (TPH-Gas) by EPA Method 8015 (Modified), Methyl t-Butyl Ether (MTBE), and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) by EPA Method 8020 and Total Lead by EPA Method 6010. Select samples were additionally analyzed for MTBE by EPA Method 8260. Samples from the used oil tank and clarifier removal activities were additionally analyzed for TPH-diesel by EPA Method 8015 (Modified), Total Oil and Grease by EPA Method 5520, Volatile Organic Compounds by EPA Method 8010, Semi-Volatile Compounds by EPA Method 8270 and Metals by EPA Method 6010.

Copies of the Certified Analytical Reports (CARs) from the Laboratory and Chain-of-Custody forms are attached in Appendix B.

#### LIST OF ATTACHMENTS

Figure 1: Former Facility Site Map

Figure 2: Compliance Sample Locations Map

Figure 3: Over-excavation/Stockpile and Sample Location Map

Table A: UST and Product Line Sample Summary

Table B: Used Oil Tank, Hoists and Clarifier Summary

Table C: Over-excavation Sample Summary

Table D: Stockpile Sample Summary

Appendix A: Copies of Alameda County Inspection Sheets Appendix B: Analytical Reports and Chain-of-Custody Forms

## TABLE A Sample Analytical Summary Results in µg/Kg (ppb) unless noted

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Sample ID	Depth in Feet	TPH as Gasoline	В	<b>T</b>		X	МТВЕ	Total Pb
AN	14	ND < 200,000	ND<1,000	ND < 1,000	ND < 1,000	ND < 2,000	8,900	3.9 ppm
AS	14	28,800	ND < 100	ND < 100	ND < 100	726	12,700	3.6 ppm
BN	14	154,000	ND < 100	ND < 100	875	9,860	1,410	4.3 ppm
BS	14	ND < 20,000	ND < 100	ND < 100	ND < 100	ND < 200	7,690	3.2 ppm
CN	14	ND < 1,000	ND<5	ND < 5	6.22	17.7	ND<25	5.1 ppm
CS	14	ND < 20,000	ND<100	ND < 100	ND < 100	ND < 200	7,510	4.6 ppm
Product Piping	Samples (Date	Sampled 10/26/99) (998					e andresina a mortue e La como la Marco Castra e dos escolos e	
P1	2	11,400	434	359	268	1,290	3,470	8.5 ppm
P2	2	ND < 2,000	ND<10	ND<10	ND < 10	ND < 20	778	6.7 ppm
P3	2	ND < 200,000	ND<1,000	ND<1,000	ND < 1,000	ND < 2,000	8,610	6.4 ppm
P4	2	1,560,000	ND<1,000	5,240	30,600	8460	ND < 5,000	11 ppm
P5	3	1,060	28.0	ND<5	7.49	ND < 10	283	6.7 ppm
P6	3	13,300	372	90.0	248	1,150	2,260	5.5 ppm

ND =Not detected at or above laboratory detection limits

TPH =Total petroleum hydrocarbons
B =Benzene

T =Toluene
E =Ethylbenzene
X =Xylenes

MTBE =methyl tert butyl ether

Pb =Lead

ppm =parts per million or mg/Kg ppb =parts per billion or µg/Kg

## TABLE B Sample Analytical Summary Results in $\mu g/Kg$ (ppb) unless noted

Sample ID	Depth in Feet	TPH as Gasoline	В	T	Е	X	МТВЕ	TPH as Diesel	TOG 5520	8010	8270	Metals
H1	8	NA	NA	NA	NA	NA	NA	59 ppm	NA	NA	NA	
H2	8	NA	NA	NA	NA	NA	NA	ND<1 ppm	NA	NA	NA	
Н3	8	NA	NA	NA	NA	NA	NA	ND < 1 ppm	NA	NA	NA	See CAR's for Results
CLR	6	4,720	ND<10	ND<10	ND<10	ND<20	ND<50	7.3 ppm	44.3 ppm	ND	924*	100 2100 4110
.nor	9	3,900	ND<5	ND<5	ND<5	ND < 10	ND<25	410 ppm	3,460 ppm	ND	**	
UO2	9	ND<1,000	ND<5	ND<5	ND<5	ND<10	ND < 25	ND<1	ND<33.3	ND	ND	
UOIX	11	ND < 1,000	ND<5	ND<5	ND<5	ND < 10	ND < 25	38 ррт	476 ppm	ND	***	

NA =Not analyzed

ND =Not detected at or above laboratory detection limits

TPH =Total petroleum hydrocarbons

В =Benzene T =Toluene E X =Ethylbenzene =Xylenes

MTBE =Methyl tert butyl ether =Total oil and grease TOG

=Certified Analytical Reports (Appendix B) CAR's

=Bis (2-ethylhexyl phthalate)

\*\* =533 ppb Bis (2-ethylhexyl phthalate

379 ppb Fluorene

\*\*\*

= 3420 ppb Bis (2-ethylhexyl phthalate = parts per million or mg/Kg = parts per billion or \(\mu g/Kg\) ppm ppb

# TABLE C Sample Analytical Summary Results in µg/Kg (ppb) unless noted

Sample ID	Depth in Feet	TPH as Gasoline	В	T	Е	X	MTBE
PX1	4	2,490	88.1	ND<10	49.4	166	2,900
PX3	4	1,030	ND<5	ND<5	8.51	ND<10	1,300
PX4	4	ND<1,000	ND<5	ND<5	ND<5	ND<10	40.7
PX6	4	ND<1,000	ND<5	ND<5	ND<5	ND<10	555

ND =Not detected at or above laboratory detection limits

TPH =Total petroleum hydrocarbons

B =Benzene

T =Toluene

E =Ethylbenzene

X =Xylenes

MTBE =Methyl tert butyl ether ppb =parts per billion or μg/Kg

## TABLE D

## Sample Analytical Summary Results in $\mu$ g/Kg (ppb) unless noted

Used Oil Stockpile Samples (Date Sampled 10/26/98)												
Sample ID	Depth in Feet	TPH as Gasoline	В	Т	E	х	мтве	TPH as Diesel	TOG 5520	8010	8270	
UOSP-1 (a-d)	Stockpile	ND<1,000	ND<5	ND<5	ND<5	ND<10	ND<25	30 ppm	128 ррт	6.3 ★	**	

ND =Not detected at or above laboratory detection limits

TPH =Total petroleum hydrocarbons

B =Benzene
T =Toluene
E =Ethylbenzene
X =Xylenes

MTBE =Methyl tert butyl ether TOG =Total oil and grease

CAR's = Certified Analytical Reports (Appendix B)

★ =Methylene Chloride

\*\* =See CAR's for positive results
ppm =parts per million or mg/Kg
ppb =parts per billion or μg/Kg

UST & Piping Sto	UST & Piping Stockpile Samples (Date Sampled 10/26/98)											
Sample ID	Depth in Feet	TPH as Gasoline	В	Т	E	х	MTBE	8010	Total Lead			
SP-1 (a-d)	Stockpile	ND<1,000	ND<5	ND<5	ND<5	ND<10	87.9	NA	3.7 ppm			
SP-2 (a-d)	Stockpile	342,000	ND<100	1,300	3,780	11,100	ND<500	ND	12 ppm			

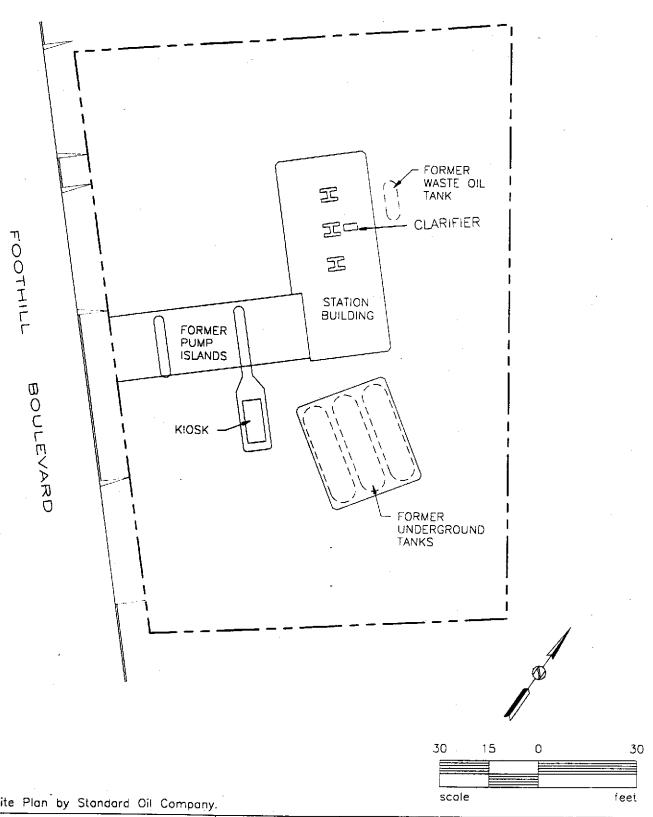
ND =Not detected at or above laboratory detection limits

NA =Not analyzed

TPH =Total petroleum hydrocarbons

B =Benzene
T =Toluene
E =Ethylbenzene
X =Xytenes

MTBE =Methyl tert butyl ether ppm =parts per million or mg/Kg ppb =parts per billion or μg/Kg



Reference: Site Plan by Standard Oil Company.



Touchstone Developments

Environmental Management

Job. No: 98-8139

Appr:

CD Drwn:

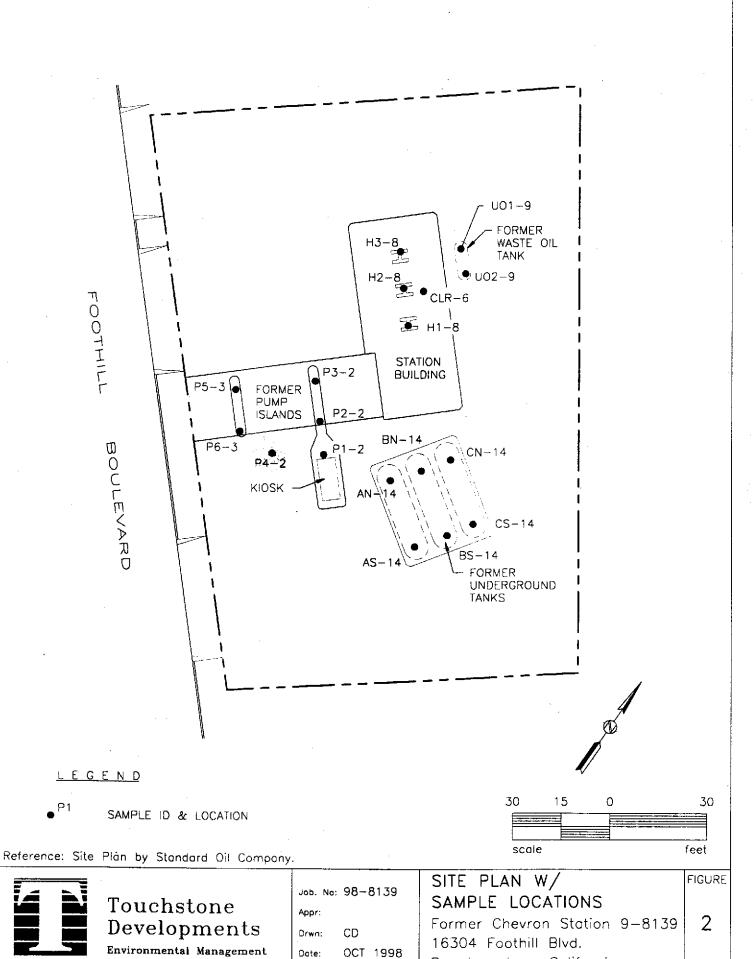
OCT 1998 Date:

SITE PLAN

Former Chevron Station 9-8139 16304 Foothill Blvd.

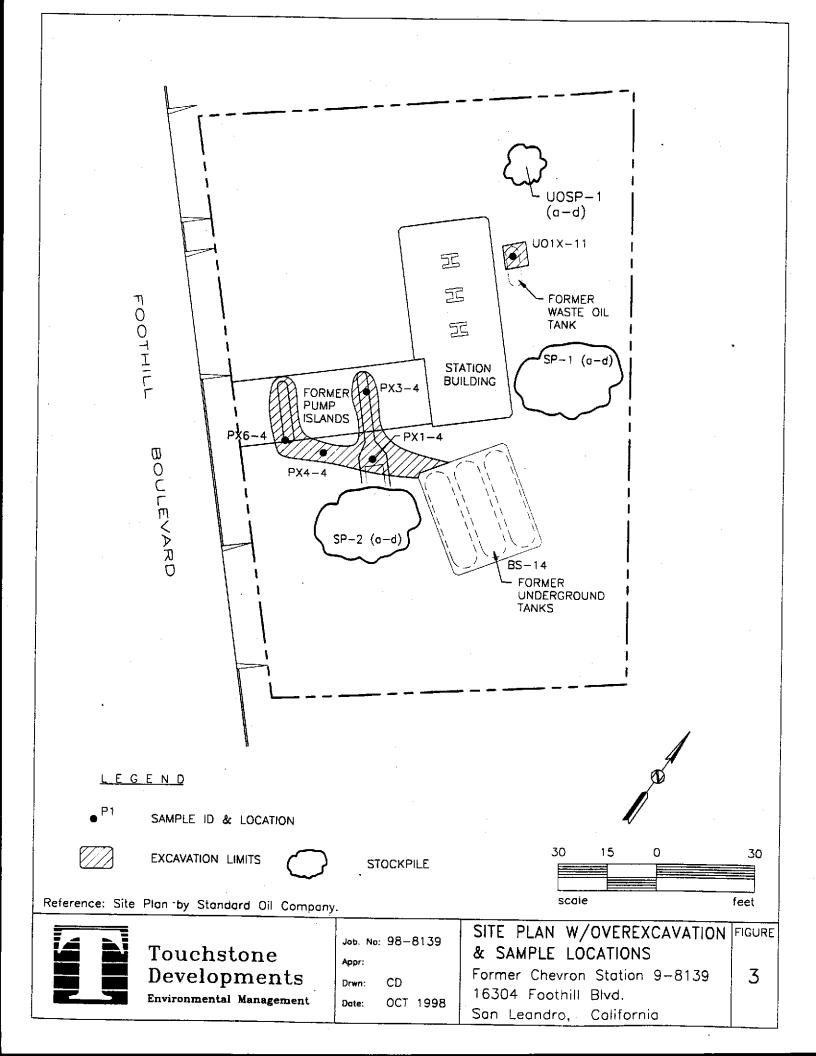
Son Leandro, California FIGURE

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Son Leandro,

California



## **APPENDIX A**

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## ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

**Hazardous Materials Inspection Form** 

1131 Harbor Bay Pkwy, Suite 250 Alameda, CA 94502-6577 (510) 567-6700

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5000	<del></del>		Site # 1801 Site Name Cheuron 8/39 Today's 126/88
II.A	BUSINESS PLANS (Title 19)		
À	1. Immediate Reporting     2. Bus. Plan Stas.     3. RR Cars > 30 days     4. Inventory information     5. Inventory Complete     6. Emergency Response	2703 25503(b) 25503.7 25504(a) 2730 25504(b)	Site Address 16304 Foothill Bl.  City Som Ceandre Zip 91578 Phone
	7. Training 8. Deficiency 9. Modification	25504(c) 25505(a) 25505(b)	MAX AMT stored > 500 lbs. 55 gal., 200 cft.?
ii.B	ACUTELY HAZ. MATLS  10. Registration form Filed 11. Form Complete 12. RMPP Contents 13. Implement Sch. Regid? (Y/N) 14. Offsite Corseq. Assess. 15. Probabile Risk Assessment 16. Persons Responsible	25533(c) 25533(b) 25534(c) 25524(c) 25534(d) 25534(g)	Inspection Categories:  I. Haz. Mat/Waste GENERATOR/TRANSPORTER  Business Plans, Acute Hazardous Materials  III. Underground Tanks  Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)
	17. Certification 18. Exemption Request? (Y/N) 19. Trade Secret Requested?	25534(f) 25536(b) 25538	comments: On site to witness nemoval of 3 fevel and and was to
III.	UNDERGROUND TANKS (Title	23)	oil UST. The Fare Dept was not present so
General		25284 (H&S) 25292 (H&S) 2712 2651	I checked Oz/LEC%. "OK" was quento pull fuel UST as % LEC was < 3%. Oz was
	5. Closure Plans	2670	< 18% in each tank.
an ks			Fuel tank are comprised of FRP and are single-
Monitoring for Existing Tank	One firme sols 5) Cally inventory Annual tank testing Cont pipe lack det Vadose/gradwater man, 6) Daily inventory		pit from bock fill on water present in the tank invert at the loss of the excavation
polloc	, Annual tank testing Controlpe leak dist 7) Weeldy Tank Gauge	(E)	Center UST - condition as above
ž	Annual tank titing  8) Annual Tank Testing  Daily Inventory	$\widetilde{\mathfrak{B}}$	East UST- condition a above
	9) Other	• .	
	Date:8. Inventory Rec.	2643 (14) 2644	Wast oil UST. LEL/Oz was not awasered as the only
	Y. Soil learing .	2646 2647	Costech was taken from the site by one of The ECI
Tanks	12 Access, Secure	2632 2634	diwers. Attempt to reach him by plione were unsuccessful
New J	Date:	2711 2635	"OK" was given to remove takk as: 1) it was a waste oil tank
Rav (	Dera:	ļ	2) it had been pressure washed afto being worded and 31
		į	a reported 30 lbs of dryice was added for the 1000 gallon
	Contact: J	24f W	capacity, twice the required amount.
	Title:	ouch sto	one swelvement Inspector: Steel
ţ	Signature:		Signature:

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## ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

## Hazardous Materials Inspection Form

80 Swan Way, #200 Oakland, CA 94621 (415) 271-4320

11,111

			Site # 1801 Site Name Charan #8139 Joday's 26,76
II.A	BUSINESS PLANS (Title 19)		
	1. Immediate Reporting 2. Bus. Plan Stas.	2703 25503(b)	Site Address 16304 Footbill Bl.
	3. RR Cars > 30 days 4. inventory information 5. inventory Complete	25503.7 25504(a) 2730	City 5. Ceandro Zip 94578 Phone
	6. Emergency Response 7. Training	25504(b) 25504(c)	
	8. Deficiency 9. Modification	25505(a) 25505(b)	MAX AMF (cored > 500 lbs. 55 gal., 200 cff.?
	ACUTELY HAZ. MATLS		Inspection_Categories:I. Haz. Mat/Waste GENERATOR/TRANSPORTER
41.0	10. Registration form filed	25533(a)	II. Business Pians; Acute Hazardous Materials
	11, Form Complete 12, RMPP Contents	25533(b) 25534(c)	✓ III. Underground Tanks
	13, implement Sch. Regid? (Y/Ni 14, OffSite Conseq. Assess. 15. Probable Risk Assessment	25524(c) 25534(d)	Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)
	16. Persons Responsible	25534(g) 25534(f)	
	16. Exemption Request? (Y/N) 19. Trade Secret Requested?	25536(b) 25538	Comments:
	• • • • • • • • • • • • • • • • • • •		
III.	UNDERGROUND TANKS (Title	23) (4	waste all UST (con't.). Tank was untact. Some
Ē	1, Permit Application 2, Pipeline Leak Detection	25284 (H&S) 25292 (H&S)	oil staining was seen spilling down the artside
9		2712 2651	of tank due to apparent overfilling. (See photo)
_	6. Method	2670	
	) Monthly Test 2) Daily Vaciose		Sampling: 24 hr tornaround
	Semi-annual gnalwater One time sals 3) Daily Vaxiose		
2	One time nois Annual funk test	ℯ	booste oil - approvent row water bad infiltrated the tent
<b>1</b>	4) Monthly Gnowater One time sale		pit. Samples were collected initially from both ands of the
Existing	Daily inventory     Annual tank testing     Cont pibe leak det		pit. The north end was very odorous and stained - the
	Vadose/gndwatermon, 6). Daily Inventory		south end relatively clean. The north and was extended
Monitoring for	Annual tank testing Contribbe leak det		to ~11' BC and resampled. It appeared cleaner than
₹	7) Weekly Tank Gauge Annual tank tstra; 6) Annual Tank Testing		
	Daily Inventory 9) Other	_	shallower sample. Analytes : TPH-G/D, BTEX, HUOC, SUCC,
	7. Precis Tank Test	2643	metals 0+G
	B. Inventory Rec.	2644	Fruit tanks- it was very difficult to determine if the
	10. Ground Water.	2646 2647	in pit was GW or from infilkration as a consequence of
Tonke	11.Monifor Plans 12.Access. Secure	2632 2634	the recent rains. A decision was made to sample the p.T
New To	13.Plans Submit Date: 14. As Built	2711	bottom below the ends of ear tank.
	Date:	2635	Piping/dispensers - Samples (6) were called from
Aev	6/88	·	below dispensers and piping rans in various locations
		00	11, 111
	Contact: _	Jett	Munroe
	Title:	Pouchston	a Divelopment Inspector: S. Defer
	Sianature:	\	Signature:

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# ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200 Oakland, CA 94621 (415) 271-4320

## **Hazardous Materials Division Inspection Form**

	Site ID# <u>[80]</u>	Site Nar	no Che	Mon # 8139		Today's	Date (	0 ,26,
	Site Address	16304	Footbill	B1 :		EPA	ID# _	
_	city <u>Sau</u>	Leand	<b>Г</b>	Zip	94578	Phone		
} _	MAX Amt. Stored > 500 Hazardous Waste gener.	ated per mor	nth?		Vaste GENER/ Ins. Acute Ha nd Tanks	ATOR/TRANSPC zardous Materi	als	ca.C
==	ne marked helps tepre	Seill VOIGIIC	ins of the Com	. Administration Code (C	LAC) OF THE F	redim & screty	COOB (II	3aC)
I.A	GENERATOR (Title 22)  1. Waste ID 2. EPA ID 3. > 90 days 4. Label dates 5. Blennical	* 66471 66472 66508 66508 66493	pil wa	ter separater /	laists -	Samp	(e5 W	are
Manifest	6. Records 7. Correct 8. Copy sent 9. Exception 10. Copies Recid	66492 66484 66492 66484 66492	Loist		1	parator s		<u>΄</u>
MISC.	11. Treatment 12. On-site Disp. (H.S.&C.) 13. Ex Haz. Waste	66371 26189.5 66570		samples collected			, ,	valyzed
Prevention	14. Communications 15. Alsie Space 16. Local Authority 17. Maintenance 18. Training	67121 67124 67126 67120 67105	Sepo			cted from		<i>π</i> υ
gency	19. Prepared 20. Name Ust 21. Copies 22. Erng. Coord. Ting.	67140 67141 67141 67144	1 11			and pipu		peusor Ut BE
Containers, Tanks	23. Condition 24. Compatibility 25. Maintenance 26. Inspection 27. Buffer Zone 28. Tonk Inspection 29. Containment 30. Safe Storage 31. Freeboard	67241 67242 67243 67244 67246 67259 67245 67261 67257	Litz From Hotact MM 8260	UST pit to be CBE bit from p anolysis.			:	
l.B	TRANSPORTER (Title 22)32, Applic_/Insurance33, Comp. Cert./CHP Insp34, Contrainers	66428 66448 66465						
Manifest	35. Vehicles 36. EPA ID ≠s 37. Correct 38. HW Delivery 39. Records	66465 66531 66541 66543 66544						<del></del>
Sen 9/	·	60545 66600	Monroe					<u> </u>
	Contact: $\frac{1}{1}$	achetore	T /	ment Inspec	ctor:	J/Seev	/ 4	
	Signature:		<u> </u>	Signat		( to / - )	/	

## **APPENDIX B**

Chemical Analytical Reports and COC Form Analytical Reports and Chain-of-Custody forms



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

November 2, 1998

Mr. Jeff Monroe Touchstone Developments PO Box 2554 Santa Rosa, CA 95405

RE: Chevron/General/P810399

Dear Mr. Jeff Monroe

Enclosed are the results of analyses for sample(s) received by the laboratory on October 27, 1998. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Debbie Leibensberger

Project Manager

CA ELAP Certificate Number 2245

Delbu I M



Redwood City, CA 94063 Wainut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

### **ANALYTICAL REPORT FOR P810399**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
U01-9	P810399-01	Soil	10/26/98
U02-9	P810399-02	Soil	10/26/98
U01X-11	P810399-03	Soil	10/26/98
CLR-6	P810399-04	Soil	10/26/98
AN-14	P810399-08	Soil	10/26/98
AS-14	P810399-09	Soil	10/26/98
BN-14	P810399-10	·Soil	10/26/98
BS-14	P810399-11	Soil	10/26/98
CN-14	P810399-12	Soil	10/26/98
CS-14	P810399-13	Soil	10/26/98
P1-2	P810399-14	Soil	10/26/98
P2-2	P810399-15	Soil	10/26/98
P3-2	P810399-16	Soil	10/26/98
P4-2	P810399-17	Soil	10/26/98
P5-3	P810399-18	Soil	10/26/98
P6-3	P810399-19	Soil	10/26/98
U0SP-1(A-D)	P810399-20	Soil	10/26/98
SP-1(A-D)	P810399-21	Soil	10/26/98
SP-2(A-D)	P810399-22	Soil	10/26/98



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments	Project:	Chevron/General	Sampled:	10/26/98
PO Box 2554	Project Number:	9-8139	Received:	10/27/98
Santa Rosa, CA 95405	Project Manager:	Mr. Jeff Monroe	Reported:	11/2/98

## Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting		•	_
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>U01-9</u>			P81039	99-01			Soil	
Gasoline	8100492	10/28/98	10/28/98		1000	3900	ug/kg	
Benzene	n .		п		5.00	ND	"	
Toluene	n .		и		5.00	ND	п	
Ethylbenzene	n .	n	n		5.00	ND	и	
Xylenes (total)	n .	п	n .		10.0	ND	п	
Methyl tert-butyl ether	n	n	н		25.0	ND	п	
Surrogate: a,a,a-Trifluorotoluene	"	"	····			90.7	%	
Surrogate: 4-Bromofluorobenzene	"	"	H	-		94.3	"	
<u>U02-9</u>			P81039	99-02			<u>Soil</u>	
Gasoline	8100492	10/28/98	10/28/98	<del></del>	1000	ND	ug/kg	
Benzene	11	ii	11		5.00	ND	" 5	
Toluene	п	п	и		5.00	ND	h	
Ethylbenzene	11	н	н		5.00	ND	п	
Xylenes (total)	н	n	11		10.0	ND	п	
Methyl tert-butyl ether	н	li .	11		25.0	36.4	п	
Surrogate: a,a,a-Trifluorotoluene	"		n	-		89.0	%	
Surrogate: 4-Bromofluorobenzene	и	"	11	-		90.0	"	
<u>U01X-11</u>			P81039	99-0 <u>3</u>			Soil	
Gasoline	8100492	10/28/98	10/28/98	<del></del>	1000	ND	ug/kg	
Benzene	11	н	*1		5.00	ND	11	
Toluene	н	n .	*1		5.00	ND	н	
Ethylbenzene	н	ti .	*1		5.00	ND	п	
Xylenes (total)	"	"	*1		10.0	ND	п	
Methyl tert-butyl ether	н	"	*1		25.0	ND	п	
Surrogate: a,a,a-Trifluorotoluene	"	11	п	-		89.7	%	
Surrogate: 4-Bromofluorobenzene	"	"	n	-		90.0	"	
CLR-6			P81039	<del>99-04</del>			<u>Soil</u>	
Gaseline	8100492	10/28/98	10/28/98		2000	4720	ug/kg	
Benzene	+1	н	Ħ		10.0	ND	11	
Toluene	*1	H	**		10.0	ND	и	
Ethylbenzene	+1	'n	**		10.0	ND	и	
Xylenes (total)	11	11	n		20.0	ND	и	
Methyl tert-butyl ether		11	*1		50.0	ND		
Surrogate: a,a,a-Trifluorotoluene	"	"	ji .	-		89.0	%	
Surrogate: 4-Bromofluorobenzene	и	н	И	-		100	н	
<u>AN-14</u>			P81039	99-08			<u>Soil</u>	
Gasoline	8100513	10/28/98	10/28/98		200000	ND	ug/kg	

Sequoia Analytical - Petaluma



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Touchstone Developments	Project:	Chevron/General	Sampled:	10/26/98
PO Box 2554	Project Number:	9-8139	Received:	10/27/98
Santa Rosa, CA 95405	Project Manager:	Mr. Jeff Monroe	Reported:	11/2/98

## Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
							•	
AN-14 (continued)			P81039	<u>99-08</u>			<u>Soil</u>	
Benzene	8100513	10/28/98	10/28/98		1000	ND	ug/kg	
Toluene	н	10	17		1000	ND	ti	
Ethylbenzene	*1	ц	17		1000	ND	н	
Xylenes (total)	*1	11	"		2000	ND	н	
Methyl tert-butyl ether	*1	)I			5000	<b>9</b> 900		
Surrogate: a,a,a-Trifluorotoluene	"	11	"	-		105	%	
Surrogate: 4-Bromofluorobenzene	"	11	"	-		104	п	
AS-14			P81039	99-09			Soil	
## soline	8100513	10/28/98	10/28/98		20000	28800	ug/kg	
Benzene	11	ti .	н		100	ND	"	
Toluene	71	ti .	II		100	ND	н	
Ethylbenzene	*1	17	п		100	ND	н	
Xylenes (total)	**	**	n		200	726	н	
Methyl tert-butyl ether	()		*1		500	12700	н	
Surrogate: a,a,a-Trifluorotoluene	и	т	··· <u>n</u>		to the Artist of the Common of	102	%	
Surrogate: 4-Bromofluorobenzene	H	"	n	-		97.3	11	
BN-14			P81039	99-10			Soil	
Gasoline	8100513	10/28/98	10/28/98	<del></del>	20000	<b>454090</b>	ug/kg	
Benzene	11	17	11		100	ND	"	
Toluene	и	11	**		100	ND	ш	
Ethylbenzene	ш	4	11		100	875	п	
Xylenes (total)	п		1+		200	9860	п	
Methyl tert-butyl ether	п	**	It		500	1410	n	
Surrogate: a,a,a-Trifluorotoluene	и	·····	'n		T	101	%	
Surrogate: 4-Bromofluorobenzene	и	n	u	-		99.3	n	
BS-14			P81039	99-11			<u>Soil</u>	
Gasoline	8100513	10/28/98	10/28/98		20000	ND	ug/kg	
Benzene	п	17	11		100	ND	- <del></del>	
Toluene	н	It	*1		100	ND	n	
Ethylbenzene	н	II	11		100	ND	n	
Xylenes (total)	11	It	11		200	ND	n	
Methyl tert-butyl ether	н	н	tı		500	7690	н	
Surrogate: a,a,a-Trifluorotoluene	и			-		104	%	
Surrogate: 4-Bromofluorobenzene	n	п	"	-		97.0	n	
<u>CN-14</u>			P81039	99-12			<u>Sqil</u>	
Gasoline	8100492	10/28/98	10/28/98	<u> </u>	1000	ND	ug/kg	
	0	11	10,20,70		5.00	ND	## AB	

Sequoia Analytical - Petaluma



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Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:11/2/98

### Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting	<u> </u>		
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
								· <u>-</u> -
CN-14 (continued)			P81039	99-1 <u>2</u>			<u>Soil</u>	
Toluene	8100492	10/28/98	10/28/98		5.00	ND	ug/kg	
Ethylbenzene	**	10	· ·		5.00	6.32	n	
Xylenes (total)	*†	u.	**		10.0	17.7	**	
Methyl tert-butyl ether	**	**			25.0	ND	*1	
Surrogate: a,a,a-Trifluorotoluene	"	"	H	-		93.7	%	
Surrogate: 4-Bromofluorobenzene	n	n	"	-		96.3	n	
<u>CS-14</u>			P81039	9 <u>9-13</u>			<u>Soil</u>	
Gasoline	8100513	10/28/98	10/28/98		20000	ND	ug/kg	
Benzene	+1	Ħ			100	ND	*1	
Toluene	0	**	н		100	ND	11	
Ethylbenzene	**	0	н		100	ND	•	
Xylenes (total)	17	11	II		200	ND	or or	-
Methyl tert-butyl ether	17	11	п		500	₩ <b>5</b> 10	#	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	-		100	%	
Surrogate: 4-Bromofluorobenzene	rr .	u .	н	-		96.0	"	
<u>P1-2</u>			P81039	<u>99-14</u>			<u>Soil</u>	
Gasoline	8100492	10/28/98	10/28/98		2000	<sup>₹</sup> 114 <del>00</del>	ug/kg	
Benzene	If	If	11		10.0	434		
Toluene	ц	ır	11		10.0	359		
Ethylbenzene	10	II.	11		10.0	268	**	
Xylenes (total)	ц	п	n		20.0	1290	н	
Methyl tert-butyl ether	μ	II	11		50.0	3470	н	
Surrogate: a,a,a-Trifluorotoluene	п	"	n .	-		88.3	%	
Surrogate: 4-Bromofluorobenzene	"	"	n	-		90.0	"	
-								
<u>P2-2</u>			P81039	<u>99-15</u>			<u>Soil</u>	
Gasoline	8100492	10/28/98	10/28/98		2000	ND	ug/kg	
Benzene	li .	п	+1		10.0	ND		
Toluene	и	II	ti .		10.0	ND	IÈ	
Ethylbenzene	"	п	+1		10.0	ND	ц	
Xylenes (total)	и	п	*1		20.0	ND	**	
Methyl tert-butyl ether	н	н	+1		50.0	778	**	
Surrogate: a,a,a-Trifluorotoluene	- ii	11	n	-		87.0	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	-		91.3	"	
<u>P3-2</u>			P81039	99-1 <u>6</u>			<u>Soil</u>	
Gasoline	8100513	10/28/98	10/28/98		200000	ND	ug/kg	
Benzene	"	н	11		1000	ND	**	
Toluene	"	11	19		1000	ND	п	

Sequoia Analytical - Petaluma



Redwood City, CA 94063 Wainut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

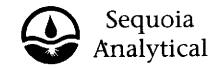
Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:11/2/98

## Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
		•						
P3-2 (continued)			P81039	<u>99-16</u>			<u>Soil</u>	
Ethylbenzene	8100513	10/28/98	10/28/98		1000	ND	ug/kg	
Xylenes (total)	ti .	31	н		2000	ND	n	
Methyl tert-butyl ether	11	11	19		5000	8619	"	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	_		108	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	-		107	n	
<u>P4-2</u>			P81039	99-17			Soil	
Gasoline	8100513	10/28/98	10/28/98	<del></del>	200000	1560000	ug/kg	
Benzene	п	н	91		1000	ND	"	
Toluene	11	TF.	**		1000	5240	tt.	
Ethylbenzene	**	tr .	**		1000	30600	и	
Xylenes (total)	1)	II .	11		2000	8460	и	
Methyl tert-butyl ether	н	n .	**		5000	ND	u	
Surrogate: a,a,a-Trifluorotoluene	"	"	"	-		108	%	
Surrogate: 4-Bromofluorobenzene	"	"	"	-		146	n	1
<u>P5-3</u>			P81039	99-18			Soil	
Gasoline	8100492	10/28/98	10/28/98		1000	1060	ug/kg	
Benzene	10	**	п		5.00	28.0	" " " " " " " " " " " " " " " " " " " "	
Toluene	It	16	п		5.00	ND	11	
Ethylbenzene	IF	It	n		5.00	7.49	1)	
Xylenes (total)	п	11	**		10.0	ND	11	
Methyl tert-butyl ether	п	+1	σ		25.0	283	11	
Surrogate: a,a,a-Trifluorotoluene	11	ii ———————————————————————————————————				84.3	%	
Surrogate: 4-Bromofluorobenzene	n .	"	"	-		85.0	$\theta$	
<u>P6-3</u>			P81039	9-19			Soil	
Gasoline	8100492	10/28/98	10/28/98	<del></del>	2000	13300	ug/kg	
Benzene	11	11	O		10.0	372	"	
Toluene	**	II	(+		10.0	90.0	п	
Ethylbenzene	14	п	It		10.0	248	н	
Xylenes (total)	11	п	If		20.0	1150	н	
Methyl tert-butyl ether	**	n	н		50.0	2260	11	
Surrogate: a,a,a-Trifluorotoluene	n	"		-		87.3	%	
Surrogate: 4-Bromofluorobenzene	"	n	11	-		90.3	"	
<u>U0SP-1(A-D)</u>			P81039	9-20			<u>Soil</u>	
Gasoline	8100492	10/28/98	10/28/98		1000	ND	ug/kg	
Benzene	It	и	14		5.00	ND	"	
Toluene	п	n	11		5.00	ND	11	
Ethylbenzene	п	· ·	н		5.00	ND	17	

<u>.</u>

Sequoia Analytical - Petaluma



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments	Project:	Chevron/General	Sampled:	10/26/98
PO Box 2554	Project Number:	9-8139	Received:	10/27/98
Santa Rosa, CA 95405	Project Manager:	Mr. Jeff Monroe	Reported:	11/2/98

## Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Li <u>mit</u>	Result	Units	Notes*
USED 1(A D) (continued)			DQ1624	00.20			Soil	
UOSP-1(A-D) (continued)	0100403	10/20/00	P81039	<del>99-20</del>	. 10.0	ND		
Xylenes (total)	8100492	10/28/98	10/28/98		10.0		ug/kg	
Methyl tert-butyl ether		 #	<i>"</i>		25.0	ND 04.7		
Surrogate: a,a,a-Trifluorotoluene				-		84.3	%	
Surrogate: 4-Bromofluorobenzene	' "	"	"	-		87.0	JΓ	
SP-1(A-D)			P81039	99-21			<u>Soil</u>	
Gasoline	8100492	10/28/98	10/28/98		1000	ND	ug/kg	
Benzene	п	п			5.00	ND	*1	
Toluene	п	u .			5.00	ND	11	
Ethylbenzene	п	п			5.00	ND	Ð	
Xylenes (total)	11	п	•		10.0	ND	п	
Methyl tert-butyl ether	ıt	ш	**		25.0	87.9	н	
Surrogate: a,a,a-Trifluorotoluene	<u>u</u>			_		82.3	%	
Surrogate: 4-Bromofluorobenzene	и	"	"	-		86.0	IT	
SP-2(A-D)			P81039	99-22			<u>Soil</u>	
Gasoline	8100513	10/28/98	10/28/98		20000	4842000	ug/kg	
Benzene	11	11	н		100	ND	" "	
Toluene	п	ш	н		100	1300	п	
Ethylbenzene	п	II	*1		100	3780	и	
Xylenes (total)	п	п	н		200	11100	п	
Methyl tert-butyl ether	п	ш	ŧŧ		500	ND	и	
Surrogate: a,a,a-Trifluorotoluene	п	II .		_		48.3	%	1
Surrogate: 4-Bromofluorobenzene	**	u	#	-		65.3	rr .	



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

### Volatile Organic Compounds by EPA Method 8010B Sequoia Analytical - Petaluma

· · · ·	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>U01-9</u>			P81039	99-01			Soil	
Bromodichloromethane	8100549	10/27/98	10/27/98		50.0	ND	ug/kg	
Bromoform	н	п	It.		50.0	ND	" ~	
Bromomethane	n	11	"		50.0	ND	п	
Carbon tetrachloride	+1	п	"		50.0	ND	п	
Chlorobenzene	н	n	11		50.0	ND	п	
Chloroethane	п	11	If.		50.0	ND	п	
2-Chloroethylvinyl ether	п	и	11		500	ND	п	
Chloroform	n	н	R		50.0	ND	п	
Chloromethane	n	11	H.		50.0	ND	п	
Dibromochloromethane	п	11	11		50.0	ND	п	
1,2-Dibromoethane (EDB)	n	11			50.0	ND	10	
1,2-Dichlorobenzene	н	11	u .		50.0	ND	н	
1,3-Dichlorobenzene	н	н			50.0	ND	п	
1,4-Dichlorobenzene	п	n	H		50.0	ND	п	
Dichlorodifluoromethane	II	li .	.,		50.0	ND	п	
1,1-Dichloroethane	и	п			50.0	ND	п	
1,2-Dichloroethane	н	п	"		50.0	ND	п	
1,1-Dichloroethene	п	п			50.0	ND	п	
cis-1,2-Dichloroethene	II	n	11		50.0	ND	11	
trans-1,2-Dichloroethene	п	п	II .		50.0	ND	u	
1,2-Dichloropropane	и	n	11		50.0	ND	ц	
cis-1,3-Dichloropropene	н	н	11		50.0	ND	II.	
trans-1,3-Dichloropropene	п	ш	"		50.0	ND	tt.	
Freon 113	п	ш	t <del>t</del>	-	50.0	ND	н	
Methylene chloride	п	п			50.0	ND	н	
1,1,2,2-Tetrachloroethane	п	п	.,	•	50.0	ND	н	
Tetrachloroethene	п	п	t <del>t</del>		50.0	ND	"	
1,1,2-Trichloroethane	п	п	···		50.0	ND	ti .	
1,1,1-Trichloroethane	II .	п	10		50.0	ND	11	
Trichloroethene	п	II	16		50.0	ND	11	
Trichlorofluoromethane	и	н	11		50.0	ND	11	
Vinyl chloride	н	н			50.0	ND	11	
Surrogate: Bromochloromethane	" "		"	-		102	%	
Surrogate: 1,4-Dichlorobutane	n .	11	tr.	_		102	н	

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Redwood City, CA 94063 Wainut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

### Volatile Organic Compounds by EPA Method 8010B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
U02-9			P81039	)Q_A?			<u>Soil</u>	
Bromodichloromethane	8100549	10/27/98	10/27/98	7.7-V4	50.0	ND	ug/kg	
Bromoform	"	10/2//96	10/2//96		50.0	ND ND	ug/kg	
Bromomethane	п	**	II		50.0	ND	†I	
Carbon tetrachloride	н	**	ш		50.0	ND	†1	
Chlorobenzene	į)	**	п		50.0	ND	0	
Chloroethane	11	**	11		50.0	ND	tt.	
2-Chloroethylvinyl ether	"	()	*1		500	ND	11	
Chloroform	+1	1†	11		50.0	ND ND	11	
Chloromethane	11	U	11		50.0	ND	**	
Dibromochloromethane	0	l+	**		50.0	ND	(1	
1,2-Dibromoethane (EDB)	11	10	H		50.0	ND	"	
1,2-Dichlorobenzene	19	it.	н		50.0	ND	11	
1,3-Dichlorobenzene	11	D	н	•	50.0	ND	u ·	
1,4-Dichlorobenzene	17	IF	н		50.0	ND	**	
Dichlorodifluoromethane	10	IF	11		50.0	ND	It	
1,1-Dichloroethane	u.	п	и		50.0	ND	It	
1,2-Dichloroethane	rt .	п	II.		<b>50</b> .0	ND	u	
1,1-Dichloroethene	**	II .	11		50.0	ND	U	
cis-1,2-Dichloroethene	71	п	11		50.0	ND	IF	
trans-1,2-Dichloroethene	н	ш	II.		50.0	ND	п	
1,2-Dichloropropane	н	ш	"		50.0	ND	"	
cis-1,3-Dichloropropene	н	П	**		50.0	ND	II.	
trans-1,3-Dichloropropene	н	П	**		50.0	ND	ut	
Freon 113	11	II	11		50.0	ND	u	
Methylene chloride	11	п	**		50.0	ND	u	
1,1,2,2-Tetrachloroethane	11	П	*1		50.0	ND	II	
Tetrachloroethene	11	II .	†I		50.0	ND	П	
1,1,2-Trichloroethane	11	п	Ħ		50.0	ND	н	
1,1,1-Trichloroethane	11	n	u		50.0	ND	П	
Trichloroethene	tt.	п	II.		50.0	ND	II	
Trichlorofluoromethane	и	tl	"		50.0	ND	И	
Vinyl chloride	и	n	"		50.0	ND	11	
Surrogate: Bromochloromethane	u	"	"	-		103	%	
Surrogate: 1,4-Dichlorobutane	и	"	rt .	-		102	H	



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments PO Box 2554 Santa Rosa, CA 95405

Project Number: Chevron/General
Project Number: 9-8139
Project Manager: Mr. Jeff Monroe

Sampled: 10/26/98 Received: 10/27/98 Reported: 10/30/98

## Volatile Organic Compounds by EPA Method 8010B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
F10.13V 1.1								
U01X-11 Bromodichloromethane	0100540	10/25/00	P81039	<del>99-03</del>			Soil	
Bromoform	8100549	10/27/98	10/27/98		50.0	ND	ug/kg	
Bromomethane			"		50.0	ND	п	
			17		50.0	ND	"	
Carbon tetrachloride Chlorobenzene	,,		11		50.0	ND	n	
			и		50.0	ND	11	
Chloroethane			*1		50.0	ND	0	
2-Chloroethylvinyl ether	"	 H			500	ND	O .	
Chloroform	"	"	H		50.0	ND	11	
Chloromethane	# #	"	11		50.0	ND	м	
Dibromochloromethane			11		50.0	ND	M	
1,2-Dibromoethane (EDB)	19	H	U.		50.0	ND	fi	
1,2-Dichlorobenzene	"	н	tr.		50.0	ND	11	
1,3-Dichlorobenzene	"	H .	II .		50.0	ND	19	
1,4-Dichlorobenzene	11	**	III		50.0	ND	11	
Dichlorodifluoromethane	P	9	II		50.0	ND	t+	
1,1-Dichloroethane	It	**	н		50.0	ND	16	
1,2-Dichloroethane	п	"	II		50.0	ND	н	
1,1-Dichloroethene	II	и	11		50.0	ND	п	
cis-1,2-Dichloroethene	н	п	+1		50.0	ND	п	
trans-1,2-Dichloroethene	п	17	19		50.0	ND	n	
1,2-Dichloropropane	"	**	11		50.0	ND	n	
cis-1,3-Dichloropropene	11	(f	н		50.0	ND	0	
trans-1,3-Dichloropropene	er e	п	n		50.0	ND	11	
Freon 113	11	п	11		50.0	ND	••	
Methylene chloride	14	н	(7		50.0	ND	rt	
1,1,2,2-Tetrachloroethane	11	и	IT	-	50.0	ND	н	
Tetrachloroethene	#1	H	II .		50.0	ND	п	
1,1,2-Trichloroethane	**	O.	ıı		50.0	ND	n	
1,1,1-Trichloroethane	19	11	и		50.0	ND	t)	
Trichloroethene	19	11	ц		50.0	ND	11	
Trichlorofluoromethane	11	27	n		50.0	ND	u ·	
Vinyl chloride	II .	11	n		50.0	ND	II .	
Surrogate: Bromochloromethane	rt	···· •	<i>p</i>			104	%	
Surrogate: 1,4-Dichlorobutane	"	rr .	n	_		98.3	н	

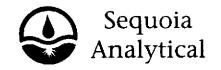


Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

## Volatile Organic Compounds by EPA Method 8010B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
CLR-6			P81039	00_N4			Soil	
Bromodichloromethane	8100549	10/27/98	10/27/98	75-04	50.0	ND	ug/kg	
Bromoform	"	"	#		50.0	ND	ug kg	
Bromomethane	11	11	t <del>t</del>		50.0	ND	n	
Carbon tetrachloride	o o	II.	Iŧ		50.0	ND	п	
Chlorobenzene	11	II.	п		50.0	ND	п	
Chloroethane	16	п	п		50.0	ND	*1	
2-Chloroethylvinyl ether	+1	н	п		500	ND	**	
Chloroform	Ħ	n	71		50.0	ND	1+	
Chloromethane	14	•	•		50.0	ND	**	
Dibromochloromethane	It	н			50.0	ND	*1	
1,2-Dibromoethane (EDB)	ıı	H	n		50.0	ND	19	
1,2-Dichlorobenzene	п	77	**		50.0	ND	11	
1,3-Dichlorobenzene	н	**	++		50.0	ND	D .	
1,4-Dichlorobenzene	*1	14	•		50.0	ND	ц	
Dichlorodifluoromethane	**	I <del>I</del>	t <del>t</del>		50.0	ND	n .	
1,1-Dichloroethane	11	IT	II.		50.0	ND	п	
1,2-Dichloroethane	**	II	н		50.0	ND	11	
1,1-Dichloroethene	+1	и	ш		50.0	ND	11	
cis-1,2-Dichloroethene	H	н	ш		50.0	ND	Ħ	
trans-1,2-Dichloroethene	(†	н	п		50.0	ND	n	
1,2-Dichloropropane	It	11	**		50.0	ND	11	
cis-1,3-Dichloropropene	II	+1	•		50.0	ND	D	
trans-1,3-Dichloropropene	II .	11	ø		50.0	ND	11	
Freon 113	н				50.0	ND	"	
Methylene chloride	н	ır	11		50.0	ND	17	
1,1,2,2-Tetrachloroethane	n	71	++		50.0	ND	II.	
Tetrachloroethene	n	н	H		50.0	NĐ	II.	
1,1,2-Trichloroethane	If .	11	· ·		50.0	ND	п	
I, I, I-Trichloroethane	11	IF	te .		50.0	ND	и	
Trichloroethene	11	н	ц		50.0	ND	п	
Trichlorofluoromethane	#	п	ш		50.0	ND	н	
Vinyl chloride	t <del>f</del>	n	ш		50.0	ND	11	
Surrogate: Bromochloromethane	"	n	n	-		103	%	
Surrogate: 1,4-Dichlorobutane	"	n	n	-		103	. "	



Project Manager:

Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments PO Box 2554

Santa Rosa, CA 95405

Project: Chevron/General Project Number: 9-8139 Sampled: 10/26/98 Received: 10/27/98 Reported: 10/30/98

### Volatile Organic Compounds by EPA Method 8260B Sequoia Analytical - Petaluma

Mr. Jeff Monroe

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
UOSP-1(A-D)			P81039	00_20			Soil	
Acetone	8100510	10/29/98	10/29/98	<del>77-20</del>	20.0	ND	ug/kg	
Benzene	"	"	10/23/30		5.00	ND	ug/kg	
Bromobenzene	tt .	п	11		5.00	ND ND	н	
Bromochloromethane	Į)	п	п		5.00	ND	ıt	
Bromodichloromethane	"	71	н		5.00	ND	и	
Bromoform	и	**	н				н	
Bromomethane	п	.,	*1		5.00	ND ND	н	
2-Butanone	п	1+	rı		5.00	ND	" 11	
	п	16	1)		10.0	ND		
n-Butylbenzene	и		,,		5.00	ND	11	
sec-Butylbenzene	" )ı	и	'' It		5.00	ND		
ert-Butylbenzene	" "	и			5.00	ND		
Carbon disulfide	"	11	11		10.0	ND	11	
Carbon tetrachloride			H		5.00	ND	**	
Chlorobenzene	*1	1#	**		5.00	ND	**	
Chloroethane	н	19	**		5.00	ND	rt .	
2-Chloroethylvinyl ether	**	11	t <del>+</del>		5.00	ND	11	
Chloroform	"	"	f†		5.00	ND	17	
Chloromethane	it.	II	и		5.00	ND	it.	
2-Chlorotoluene	**	п	it.		5.00	ND	lt.	
1-Chlorotoluene		н	ш		5.00	ND	II .	
Dibromochloromethane	,,	п	n		5.00	ND	н	
1,2-Dibromo-3-chloropropane	и	n	н		5.00	ND	ш	
1,2-Dibromoethane (EDB)	41	н	п		5.00	ND	п	
Dibromomethane	**	11	n		5.00	ND	п	
1,2-Dichlorobenzene	t <del>t</del>	o	11		5.00	ND	п	
I,3-Dichlorobenzene	11	17	11	-	5.00	ND	н	
1,4-Dichlorobenzene	It	**	IT		5.00	ND	n	
Dichlorodifluoromethane	и	**	14		5.00	ND	n	
I,1-Dichloroethane	н	11	†1		5.00	ND	n	
1,2-Dichloroethane	и	ti.	11		5.00	ND	0	
,1-Dichloroethene	и	11	0		5.00	ND	O	
eis-1,2-Dichloroethene	и	u	0		5.00	ND -	··	
rans-1,2-Dichloroethene	11	n	(f		5.00	ND ND	v	
,2-Dichloropropane	ij	11	I†			ND ND	o o	
,3-Dichloropropane	"	(+	II.		5.00		17	
,3-Dichloropropane	n .	lt .	ıı.		5.00	ND	17	
,1-Dichloropropane	п				5.00	ND	rt	
			"		5.00	ND	м	
is-1,3-Dichloropropene	**	"	"		5.00	ND		
rans-1,3-Dichloropropene	4	. " . "	,, H		5.00	ND	11	
Ethylbenzene					5.00	ND	11	
Freon 113	I <del>t</del>	п	п		5.00	ND	*1	

Sequoia Analytical - Petaluma



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments	Project:	Chevron/General	Sampled:	10/26/98
PO Box 2554	Project Number:	9-8139	Received:	10/27/98
Santa Rosa, CA 95405	Project Manager:	Mr. Jeff Monroe	Reported:	10/30/98

## Volatile Organic Compounds by EPA Method 8260B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
U0SP-1(A-D) (continued)			P81039	99-20			<u>Soil</u>	
Hexachlorobutadiene	8100510	10/29/98	10/29/98		5.00	ND	ug/kg	
2-Hexanone	п	п	11		10.0	ND	"	
Isopropylbenzene	**	п	II .		5.00	ND	**	
p-Isopropyltoluene	n	п	п		5.00	ND	**	
Methylene chloride	49	п	н		5.00	6.43	*1	2
4-Methyl-2-pentanone	1+	п	н		10.0	ND	*1	
Methyl tert-butyl ether	Je .	H	*1		5.00	ND	n	
Naphthalene	n .	11	41		5.00	ND	ы	
π-Propylbenzene	71	•	*1		5.00	ND	tt.	
Styrene	*1	*1	**		5.00	ND	(r	
1,1,2,2-Tetrachloroethane	**	ч	•		5.00	ND	ft	
1,1,1,2-Tetrachloroethane	19	н	н		5.00	ND	If	
Tetrachloroethene	17	**			5.00	ND	It	
Toluene	11		37		5.00	ND	н	
1,2,3-Trichlorobenzene	it	•	**		5.00	ND	п	
1,2,4-Trichlorobenzene	It	п	*1*		5.00	ND	п	
1,1,2-Trichloroethane	и	"	**		5.00	ND	п	
1,1,1-Trichloroethane	и	*1	н		5.00	ND	п	
Trichloroethene	H	**	н		5.00	ND	н	
Trichlorofluoromethane	П	17	19		5.00	ND	. H	
1,2,3-Trichloropropane	ш	10	10		5.00	ND	+1	
1,3,5-Trimethylbenzene	tl	16			5.00	ND	+1	
1,2,4-Trimethylbenzene	+1	10	lf .		5.00	ND	11	
Vinyl acetate	#1	1f	IF		10.0	ND	**	
Vinyl chloride	*1	n	n .		5.00	ND	+1	
m,p-Xylene	н	н	и		5.00	ND	+	
o-Xylene	н	п	п		5.00	ND	Ħ	
Surrogate: Dibromofluoromethane	<i>"</i>	11	"	80.0-120	· · · · · · · · · · · · · · · · · · ·	96.8	%	
Surrogate: 1,2-Dichloroethane-d4	"	II	"	80.0-120		92.8	"	
Surrogate: Toluene-d8	"	Я	n	81.0-117		86.6	"	
Surrogate: 4-Bromofluorohenzene	"	n	n	74.0-121		88.6	"	



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments	Project: Chevron/General	Sampled: 10/26/98
PO Box 2554	Project Number: 9-8139	Received: 10/27/98
Santa Rosa, CA 95405	Project Manager: Mr. Jeff Monroe	Reported: 10/30/98

## Semivolatile Organic Compounds by EPA Method 8270B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			· · · · · ·
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>U01-9</u>			P81039	90-01			e.a	
Acenaphthene	8100483	10/27/98	10/27/98	<u>27-01</u>	330	ND	<u>Soil</u> ug/kg	
Acenaphthylene	"	10/2//90	10/2//96 H		330	ND ND	ug/kg	
Anthracene	*1	10			330	ND ND	п	
Benzoic acid	**	u.			1670	ND ND	11	
Benzo (a) anthracene	19	Iŧ	II.		330		1)	
Benzo (b) fluoranthene	17	и			330	ND ND	17	
Benzo (k) fluoranthene	11	п	11			ND	1+	
Benzo (g,h,i) perylene	ц	п	н		330	ND	11	
Benzo (g,ti,t) per yiene  Benzo (a) pyrene	н	п	н		330	ND	н	
Benzyl alcohol	и	11	*1		330	ND	*1	
		**	**		660	ND	"	
Bis(2-chloroethoxy)methane	11		" H		330	ND		
Bis(2-chloroethyl)ether	 11		" #		330	ND		
Bis(2-chloroisopropyl)ether					330	ND	17	
Bis(2-ethylhexyl)phthalate	1)	11	14		330	533	17	
4-Bromophenyl phenyl ether		14	**		330	ND	и	
Butyl benzyl phthalate	н	н	Ħ		330	ND	ц	
4-Chloroaniline	19	11	t <del>y</del>		660	ND	н	
4-Chloro-3-methylphenol	"	**	11		660	ND	11	
2-Chloronaphthalene	11	**	ir .		330	ND	п	
2-Chlorophenol	11		10		330	ND	п	
4-Chlorophenyl phenyl ether	11	.,	ц		330	ND	п	
Chrysene	ti .	10	IF		330	ND	71	
Dibenz (a,h) anthracene	m .	п	н		330	ND	11	
Dibenzofuran	Ħ	н	n	•	330	ND	17	
Di-n-butyl phthalate		п	11		330	ND	17	
1,2-Dichlorobenzene	10	n .	**	-	330	ND	27	
1,3-Dichlorobenzene	I f	п	н		330	ND	11	
1,4-Dichlorobenzene	п	п	II.		330	ND	1)	
3,3'-Dichlorobenzidine	н	**	11		660	ND	11*	
2,4-Dichlorophenol	п	19	11		330	ND	1+	
Diethyl phthalate	II	49	*11		330	ND	(+	
2,4-Dimethylphenol	n	1†	11		330	ND ND	н	
Dimethyl phthalate	11	**	u .		330	ND ND	и	
4,6-Dinitro-2-methylphenol	"	H	·				ш	
	11	н	I <del>I</del>		1670	ND		
2,4-Dinitrophenol		11	11		1670	ND	"	
2,4-Dinitrotoluene 2,6-Dinitrotoluene		11	" "		330	ND	"	
	)†	17	" "		330	ND		
Di-n-octyl phthalate	11	"	11		330	ND		
Fluoranthene	11				330	ND		
Fluorene		"			330	379		
Hexachlorobenzene	**	II .	н		330	ND	"	

Sequoia Analytical - Petaluma



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Touchstone Developments	Project:	Chevron/General	Sampled:	10/26/98
PO Box 2554	Project Number:	9-8139	Received:	10/27/98
Santa Rosa, CA 95405	Project Manager:	Mr. Jeff Monroe	Reported:	10/30/98

## Semivolatile Organic Compounds by EPA Method 8270B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
U01-9 (continued)			P81039	99-01			<u>Soil</u>	
Hexachlorobutadiene	8100483	10/27/98	10/27/98		330	ND	ug/kg	
Hexachlorocyclopentadiene	14	11	*		330	ND	"	
Hexachloroethane	11	"	11		330	ND	п	
Indeno (1,2,3-cd) pyrene	Ħ	**	+r		330	ND	И	
Isophorone	н		ti .		330	ND	и	
2-Methylnaphthalene	"	п	(*		330	ND	п	
2-Methylphenol	1+	II	19		330	ND	п	
4-Methylphenol	(t	п.,	R		330	ND	п	
Naphthalene	It	ш	It		330	ND	н	
2-Nitroaniline	и	п	п		1670	ND	**	
3-Nitroaniline	и	и	п		1670	ND	I <del>I</del>	
4-Nitroaniline	н	71	п		1670	ND	н	
Nitrobenzene	11	**	n		330	ND	11	
2-Nitrophenol	#	**	**		330	ND	11	
4-Nitrophenol	11	**	**		1670	ND	tr.	
N-Nitrosodiphenylamine	If .	**	r•		330	ND	11	
N-Nitrosodi-n-propylamine	11	**	18		330	ND	ч	
Pentachlorophenol	**	19	11		1670	ND	п	
Phenanthrene	er	17	11		330	ND	и	
Phenol	•	1e	++		330	ND	п	
Pyrene		п	н		330	ND	н	
1,2,4-Trichlorobenzene	It.	ц	u.		330	ND	п	
2,4,5-Trichlorophenol	п	н	Dr.		330	ND	н	
2,4,6-Trichlorophenol	п	н	III.		330	ND	n	
Surrogate: 2-Fluorophenol	11	<del></del>	#			72.0	%	
Surrogate: Phenol-d6	п	n	11	_		81.4	н	
Surrogate: Nitrobenzene-d5	"	n	rr	-		78.7	n	
Surrogate: 2-Fluorobiphenyl	"	"	II .	_		66.4	n	
Surrogate: 2,4,6-Tribromophenol	n	n	н	_		62.0	"	
Surrogate: Terphenyl-d14	'n	н	11	_		02.0	"	



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Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

### Semivolatile Organic Compounds by EPA Method 8270B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting	····		
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
1103.0								
U02-9	0100403	10/07/02	P81039	<del>99-02</del>	130	ME	<u>Soil</u>	
Acenaphthene	8100483	10/27/98	10/27/98		330	ND	ug/kg	
Acenaphthylene	R	11	"		330	ND	M	
Anthracene		" !!	"		330	ND	11	
Benzoic acid		"			1670	ND	11	
Benzo (a) anthracene	"	"	н		330	ND		
Benzo (b) fluoranthene	"		"		330	ND	11	
Benzo (k) fluoranthene		11	10		330	ND	н	
Benzo (g,h,i) perylene	11	11	11		330	ND	н	
Benzo (a) pyrene	n 	11	**		330	ND	н	
Benzyl alcohol	11	**	11		660	ND	и	
Bis(2-chloroethoxy)methane	н	11	11		330	ND	Ц	
Bis(2-chloroethyl)ether	11	**	†I		330	ND	II .	
Bis(2-chloroisopropyl)ether	н	11	*1		330	ND	Ц	
Bis(2-ethylhexyl)phthalate	*1	"	11		330	ND	п	
4-Bromophenyl phenyl ether	•		17		330	ND	н	
Butyl benzyl phthalate	+1	it.	"		330	ND	н	
4-Chloroaniline	н	**	"		660	ND	н	
4-Chloro-3-methylphenol	**	D.	te .		660	ND	н	
2-Chloronaphthalene	н	п	I <del>f</del>		330	ND	н	
2-Chlorophenol	H	а	lt .		330	ND	п	
4-Chlorophenyl phenyl ether	u•	*1	ц		330	ND	п	
Chrysene	11	U	ш		330	ND	н	
Dibenz (a,h) anthracene	17	11	П		330	ND	tt.	
Dibenzofuran	11	11	н		330	ND	н	
Di-n-butyl phthalate	"	17	н		330	ND	11	
1,2-Dichlorobenzene	**	10	н		330	ND	u .	
1,3-Dichlorobenzene	**	10	п .		330	ND	17	
1,4-Dichlorobenzene	#	11	n		330	ND	**	
3,3'-Dichlorobenzidine	н	ц	n		660	ND	11	
2,4-Dichlorophenol	14	Щ	0		330	ND	н	
Diethyl phthalate	14	н	*1		330	ND	11	
2,4-Dimethylphenol	10	II.	**		330	ND	11	
Dimethyl phthalate	11	п	19		330	ND	**	
4,6-Dinitro-2-methylphenol	II.	п	H		1670	ND	*1	
2,4-Dinitrophenol	II.	n .	11		1670	ND	41	
2,4-Dinitrotoluene	ít.	п	н		330	ND	**	
2,6-Dinitrotoluene	μ	н	11		330	ND	11	
Di-n-octyl phthalate	п	+1	h		330	ND	11 .	
Fluoranthene	п	ŧi	+1		330	ND	11	
Fluorene	и	1)	**		330	ND	o	
Hexachlorobenzene	п	1)	11		330	ND	11	

Sequoia Analytical - Petaluma



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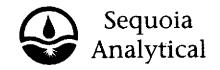
Project: Chevron/General Project Number: 9-8139 Project Manager:

Sampled: 10/26/98 Received: 10/27/98 10/30/98 Reported:

### Semivolatile Organic Compounds by EPA Method 8270B Sequoia Analytical - Petaluma

Mr. Jeff Monroe

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
U02-9 (continued)			P81039	20_02			<u>Soil</u>	
Hexachlorobutadiene	8100483	10/27/98	10/27/98	<del>//-02</del>	330	ND	ug/kg	
Hexachlorocyclopentadiene	11	11	"		330	ND	ug, kg	
Hexachloroethane	**	O	IF.		330	ND	17	
Indeno (1,2,3-cd) pyrene	n	U	ır		330	ND	tr.	
Isophorone		0	If		330	ND	··	
2-Methylnaphthalene	**	D.	ш		330	ND	II.	
2-Methylphenol	tt .	IF.	п		330	ND	tr	
4-Methylphenol	n	IF.	н		330	ND	··	
Naphthalene	t y	IF	н		330	ND	II.	
2-Nitroaniline	t <del>y</del>	IF	н		1670	ND	н	
3-Nitroaniline	#	ш	н		1670	ND	ш	
4-Nitroaniline	n	п	+1		1670	ND	n .	
Nitrobenzene	**	н	41		330	ND	u .	
2-Nitrophenol	19	ш	n		330	ND	н	
4-Nitrophenol	11	ш	*1		1670	ND	IJ	
N-Nitrosodiphenylamine	17	II .	11		330	ND	н	
N-Nitrosodi-n-propylamine	11	II .	79		330	ND	н	
Pentachlorophenol	"	н	T#		1670	ND	n	
Phenanthrene	*1	н	16		330	ND	+1	
Phenol	**	n	**		330	ND	*1	
Pyrene		n	**		330	ND	tt	
1,2,4-Trichlorobenzene	#	n	er		330	ND	**	
2,4,5-Trichlorophenol	10	11	tt.		330	ND	17	
2,4,6-Trichlorophenol	10	17	H		330	ND	17	
Surrogate: 2-Fluorophenol	n	"	н	-		74.6	%	
Surrogate: Phenol-d6	"	"	"	-		78.4	H	
Surrogate: Nitrobenzene-d5	rr	H	"	-		74.8	* <i>n</i>	
Surrogate: 2-Fluorobiphenyl	"	"	"	-		70.6	"	
Surrogate: 2,4,6-Tribromophenol	"	n	rr	-		67.6	n	
Surrogate: Terphenyl-d14	n	u	Tf .	-			rr r	



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Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

### Semivolatile Organic Compounds by EPA Method 8270B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>U01X-11</u>			P81039	99-03			Soil	
Acenaphthene	8100483	10/27/98	10/27/98	<del></del>	330	ND	ug/kg	
Acenaphthylene	**	11	11		330	ND	n J	
Anthracene	**	11	н		330	ND	ш	
Benzoic acid	**	11	н		1670	ND	п	
Benzo (a) anthracene	**	17	п		330	ND	п	
Benzo (b) fluoranthene	11	19	11		330	ND	n	
Benzo (k) fluoranthene	11	14	11		330	ND	n	
Benzo (g,h,i) perylene	11	19	н		330	ND	ш	
Benzo (a) pyrene	17	10	11		330	ND	п	
Benzyl alcohol	11		11		660	ND	п	
Bis(2-chloroethoxy)methane	н	11	*1		330	ND	н	
Bis(2-chloroethyl)ether	11	11	**		330	ND	п	
Bis(2-chloroisopropyl)ether	**	,,	+1		330	ND	n .	
Bis(2-ethylhexyl)phthalate	H	11	**		330	3420	н	
4-Bromophenyl phenyl ether	1t	n-	*11		330	ND	ш	
Butyl benzyl phthalate	11	110	*1		330	ND	п	
4-Chloroaniline	10	14	11		660	ND	п	
4-Chloro-3-methylphenol	10	17	#1		660	ND	п	
2-Chloronaphthalene	10	11	n		330	ND	п	
2-Chlorophenol	19	11	11		330	ND	ш	
4-Chlorophenyl phenyl ether	1+	19	н		330	ND	и	
Chrysene Chrysene	t <del>t</del>	11	11		330	ND ND	и	
Dibenz (a,h) anthracene		1+	+1		330	ND	н	
Dibenzofuran	,,	19	*1	•	330	ND	II	
Di-n-butyl phthalate	**	110	*1		330	ND	ıt	
1,2-Dichlorobenzene	,,	11	ti	-			Ц	
1,3-Dichlorobenzene	•	11	**		330 330	ND ND	ш	
1,4-Dichlorobenzene		19	*1			ND ND	ш	
· ·		10	ti		330		ш	
3,3'-Dichlorobenzidine	•	,,			660	ND	ш	
2,4-Dichlorophenol	,,	"			330	ND	ii	
Diethyl phthalate	.,	,,			330	ND		
2,4-Dimethylphenol	F†	)†	11		330	ND		
Dimethyl phthalate		)† ) <del>)</del>	,, ,,		330	ND	" II	
4,6-Dinitro-2-methylphenol		,,			1670	ND		
2,4-Dinitrophenol	14	,,	17		1670	ND	"	
2,4-Dinitrotoluene	19	11			330	ND	ii	
2,6-Dinitrotoluene	17				330	ND	ii	
Di-n-octyl phthalate		**			330	ND	u u	
Fluoranthene		11	17		330	ND		
Fluorene			19		330	ND	11	
Hexachlorobenzene	14	11	11		330	ND	н	

Sequoia Analytical - Petaluma



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Touchstone Developments PO Box 2554 Santa Rosa, CA 95405

Project: Chevron/General Project Number: 9-8139 Project Manager:

Sampled: 10/26/98 Received: 10/27/98 Reported: 10/30/98

### Semivolatile Organic Compounds by EPA Method 8270B Sequoia Analytical - Petaluma

Mr. Jeff Monroe

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
U01X-11 (continued)			P81039	99-03			<u>Soil</u>	
Hexachlorobutadiene	8100483	10/27/98	10/27/98		330	ND	ug/kg	
Hexachlorocyclopentadiene	H	17	11		330	ND	"	
Hexachloroethane		TI	*1		330	ND	и	
Indeno (1,2,3-cd) pyrene	11	11	**		330	ND	II .	
Isophorone	*1	n	œ		330	ND	п	
2-Methylnaphthalene	17	II.	11		330	ND	н	
2-Methylphenol	.,	II	**		330	ND	н	
4-Methylphenol	If	п	*1		330	ND	+1	
Naphthalene	11	П	19		330	ND	O.	
2-Nitroaniline	II .	н	19		1670	ND	1+	
3-Nitroaniline	п	ti	R		1670	ND	16	
4-Nitroaniline	11	"	II		1670	ND	+1	
Nitrobenzene	н	"	n		330	ND	**	
2-Nitrophenol	11	"	*1		330	ND	(†	
4-Nitrophenol	11	11	•1		1670	ND	If	
N-Nitrosodiphenylamine	*1	**	н		330	ND	П	
N-Nitrosodi-n-propylamine	H	"	19		330	ND	п	
Pentachlorophenol	11	н	10		1670	ND	II	
Phenanthrene	D	п	Hr.		330	ND	н	
Phenol	II .	"	H		330	ND	н	
Pyrene	II .	"	11		330	ND	11	
1,2,4-Trichlorobenzene	n	Ð	IP.		330	ND	11	
2,4,5-Trichlorophenol	п	31	п		330	ND	11	
2,4,6-Trichlorophenol	н	11	п		330	ND	н	
Surrogate: 2-Fluorophenol	"	"	"	-	-	60.6	%	
Surrogate: Phenol-d6	"	"	n	-		<b>66</b> .8	tt.	
Surrogate: Nitrobenzene-d5	"	tt	n	-		63.1	u	
Surrogate: 2-Fluorobiphenyl	"	"	"	-		64.3	и	
Surrogate: 2,4,6-Tribromophenol	"	"	n	-		63.2	11	
Surrogate: Terphenyl-d14	"	и	#	-			н	



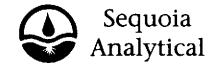
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Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

### Semivolatile Organic Compounds by EPA Method 8270B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Lîmit	Result	Units	Notes*
CLP (			70.400					
CLR-6	0100402	10/27/00	P81039	99-04	330	NO	<u>Soil</u>	
Acenaphthene	8100483	10/27/98	10/27/98		330	ND	ug/kg "	
Acenaphthylene	**		**		330	ND	π	
Anthracene			0		330	ND	'' '†	
Benzoic acid		*1	,, It		1670	ND		
Benzo (a) anthracene	,,	"	10		330	ND		
Benzo (b) fluoranthene	,,				330	ND	**	
Benzo (k) fluoranthene		**			330	ND	H .	
Benzo (g,h,i) perylene	If	11	lf:		330	ND	*1	
Benzo (a) pyrene	11	11	н		330	ND	TP.	
Benzyl alcohol	14	"	"		660	ND	11	
Bis(2-chloroethoxy)methane	It	**	II .		330	ND	11	
Bis(2-chloroethyl)ether	Ц	16	Н		330	ND	17	
Bis(2-chloroisopropyl)ether	II	11	11		330	ND	11	
Bis(2-ethylhexyl)phthalate	II .	11	11		330	924	tt.	
4-Bromophenyl phenyl ether	и	n	*1		330	ND	ш	
Butyl benzyl phthalate	п	+1	**		330	ND	10	
4-Chloroaniline	п	#	Ħ		660	ND	и	
4-Chloro-3-methylphenol	п	н	н		660	ND	ш	
2-Chloronaphthalene	п	o o	н		330	ND	ц	
2-Chlorophenol	#1	11	19		330	ND	ц	
4-Chlorophenyl phenyl ether	11	19	10		330	ND	н	
Chrysene	11	I+	16		330	ND	ш	
Dibenz (a,h) anthracene	*1	IT.	11		330	ND	п	
Dibenzofuran	**	и	11		330	ND	н	
Di-n-butyl phthalate	**	17	f7		330	ND	п	
1,2-Dichlorobenzene	19	ц	17	-	330	ND	ŋ	
1,3-Dichlorobenzene	I <del>†</del>	п	19		330	ND	н	
1,4-Dichlorobenzene	16	п	.,			ND	n	
3,3'-Dichlorobenzidine	10	н	10		330		n	
2,4-Dichlorophenol	*1	н	11		660	ND	†I	
	*1	11			330	ND	11	
Diethyl phthalate	*1	"	" "		330	ND	11	
2,4-Dimethylphenol	н	11			330	ND		
Dimethyl phthalate	н		11		330	ND	11	
4,6-Dinitro-2-methylphenol		*1	)) 		1670	ND		
2,4-Dinitrophenol	"	17			1670	ND	n 	
2,4-Dinitrotoluene			"		330	ND	"	
2,6-Dinitrotoluene	11	14	n		330	ND	н .	
Di-n-octyl phthalate	II	17	11		330	ND	н	
Fluoranthene	II .	**	**		330	ND	FE	
Fluorene	н	ri .	0		330	ND	П	
Hexachlorobenzene	п	n	19		330	ND	11	

Sequoia Analytical - Petaluma

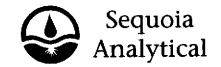


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Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

### Semivolatile Organic Compounds by EPA Method 8270B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			<u>.</u>
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
CLR-6 (continued)			DO1034	00.04			0-11	<del></del>
Hexachlorobutadiene	8100483	10/27/98	<u>P81039</u> 10/27/98	99-04	330	ND	Soil	
Hexachlorocyclopentadiene	0100403	10/2//98	10/2//98		330	ND ND	ug/kg "	
Hexachloroethane		11:			330	ND ND	**	
Indeno (1,2,3-cd) pyrene	**	п	**		330	ND ND	n	
Isophorone	11	п			330	ND ND	,,	
2-Methylnaphthalene	"	н				ND ND	(*	
2-Methylphenol	н	п			330	ND ND	t+	
	11	11			330		19	
4-Methylphenol		11	 II		330	ND	и	
Naphthalene		11	" It		330	ND	ir It	
2-Nitroaniline	ı. It	"	"		1670	ND		
3-Nitroaniline		" "	ır If		1670	ND		
4-Nitroaniline		**			1670	ND		
Nitrobenzene			I) 		330	ND		-
2-Nitrophenol		**	11		330	ND		
4-Nitrophenol	II	19	lt .		1670	ND	11	
N-Nitrosodiphenylamine	п	11	11		330	ND	п	
N-Nitrosodi-n-propylamine	11	**	11		330	ND	μ	
Pentachlorophenol	41	**	11		1670	ND	n	
Phenanthrene	¶1	**	+1		330	ND	II .	
Phenol	*1	н	н .		330	ND	11	
Pyrene	**	**	и		330	ND	11	
1,2,4-Trichlorobenzene	14	н	"		330	ND	**	
2,4,5-Trichlorophenol	10		**		330	ND	n	
2,4,6-Trichlorophenol	11		11		330	ND	н	
Surrogate: 2-Fluorophenol	"	rr .	"	-		55.6	%	
Surrogate: Phenol-d6	"	H	#	-		<i>59.6</i>	"	
Surrogate: Nitrobenzene-d5	"	H	et .	-		56.8	#	
Surrogate: 2-Fluorobiphenyl	"	Ħ	"	-		52.6	"	
Surrogate: 2,4,6-Tribromophenol	"	n .	"	-		58.4	#	
Surrogate: Terphenyl-d14	н .	II	u	-			"	



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Touchstone Developments	Project:	Chevron/General	Sampled:	10/26/98
PO Box 2554	Project Number:	9-8139	Received:	10/27/98
Santa Rosa, CA 95405	Project Manager:	Mr. Jeff Monroe	Reported:	10/30/98

### Semivolatile Organic Compounds by EPA Method 8270B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>U0SP-1(A-D)</u>			P81039	99-20			<u>Soil</u>	·
Acenaphthene	8100483	10/27/98	10/27/98		330	ND	ug/kg	
Acenaphthylene	U	11	11		330	ND	"	
Anthracene	II .	II.	el		330	ND	11	
Benzoic acid	U	11	**		1670	ND	11	
Benzo (a) anthracene	ít	11:	**		330	ND	*1	
Benzo (b) fluoranthene	lf	11	н		330	ND	**	
Benzo (k) fluoranthene	It	· ·	н		330	ND	*1	
Benzo (g,h,i) perylene	It	77	**		330	ND	*1	
Benzo (a) pyrene	It	**	н		330	ND	71	
Benzyl alcohol	п	**			660	ND	*1	
Bis(2-chloroethoxy)methane	R	**	**		330	ND	11	
Bis(2-chloroethyl)ether	R	**	**		330	ND	**	
Bis(2-chloroisopropyl)ether	Д	++	n		330	ND	n	
Bis(2-ethylhexyl)phthalate	п	r <del>t</del>	τ•		330	ND	*1	
4-Bromophenyl phenyl ether	II .	**	**		330	ND	н	
Butyl benzyl phthalate	п	u .	11		330	ND	++	
4-Chloroaniline	п	te	11		660	ND	н	
4-Chloro-3-methylphenol	11	ti	**		660	ND	+1	
2-Chloronaphthalene	11	t#	11		330	ND	+1	
2-Chlorophenol	h	19	**		330	ND	*1	
4-Chlorophenyl phenyl ether	41	н .	11		330	ND	n	
Chrysene	н				330	ND	*1	
Dibenz (a,h) anthracene	п	19	11		330	388	11	
Dibenzofuran	п	н	18		330	ND	11	
Di-n-butyl phthalate	II	0	**		330	ND	11	
1,2-Dichlorobenzene	11	19	**		330	ND	11	
1,3-Dichlorobenzene	11	10	••		330	ND	11	
1,4-Dichlorobenzene	41	U	11		330	ND	#1	
3,3'-Dichlorobenzidine	*1	te.	**		660	ND	+1	
2,4-Dichlorophenol	u	u	11		330	ND	*1	
Diethyl phthalate	•	u	11		330	ND	11	
2,4-Dimethylphenol	а	II.	11		330	ND	11	
Dimethyl phthalate	**	II.	**		330	ND	11	
4,6-Dinitro-2-methylphenol	*1	u .	**		1670	ND	*1	•
2,4-Dinitrophenol	**	II.	11		1670	ND	11	
2,4-Dinitrotoluene	н	R	11		330	ND	11	
2,6-Dinitrotoluene	n	II .	**		330	ND	11	
Di-n-octyl phthalate	n	If	**		330	ND	11	
Fluoranthene	n	II.	11		330	348	11	
Fluorene	н	IF	**		330	ND	п	
Hexachlorobenzene	11	и			330	ND	*11	

Sequoia Analytical - Petaluma



Project Manager:

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Touchstone Developments
PO Box 2554

Santa Rosa, CA 95405

Project: Chevron/General Project Number: 9-8139 Sampled: 10/26/98 Received: 10/27/98 Reported: 10/30/98

### Semivolatile Organic Compounds by EPA Method 8270B Sequoia Analytical - Petaluma

Mr. Jeff Monroe

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
LIACD 1/A DV /								
UOSP-1(A-D) (continued)	0100402	10.000.00	P81039	99-20			Soil	
Hexachlorobutadiene	8100483	- 10/27/98	10/27/98		330	ND	ug/kg	
Hexachlorocyclopentadiene			**		330	ND	17	
Hexachloroethane	н	II .	11		330	ND	74	
Indeno (1,2,3-cd) pyrene	*1	п	•		330	410	10	
Isophorone	n	п	"		330	ND	††	
2-Methylnaphthalene	H	II.	**		330	ND	11	
2-Methylphenol	н	10	10		330	ND	tt.	
4-Methylphenol	19	17	R		330	ND	H	
Naphthalene		19	п		330	ND	IP.	
2-Nitroaniline	11	**	II .		1670	ND	17	
3-Nitroaniline	**	н	п		1670	ND	ш	
4-Nitroaniline	†1	П	11		1670	ND	II	
Nitrobenzene	n	14	*1		330	ND	и	
2-Nitrophenol	"	11	*1		330	ND -	и	
4-Nitrophenol	"	P	15		1670	ND	н	
N-Nitrosodiphenylamine	I <del>†</del>	и	19		330	ND	ji .	
N-Nitrosodi-n-propylamine	10	II.	11		330	ND	ш	
Pentachlorophenol	I†	и	78		1670	ND	н	
Phenanthrene	It	п	**		330	ND	ti .	
Phenol	п	п	**		330	ND	Ħ	
Pvrene	п	п	н		330	459	17	
1,2,4-Trichlorobenzene	п	и	10		330	ND	11	
2,4,5-Trichlorophenol	и	н	11		330	ND	11	
2,4,6-Trichlorophenol	n	н	11:		330	ND	11	
Surrogate: 2-Fluorophenol	"	,,	rr			89.6	%	
Surrogate: Phenol-d6	n	21	·	_		98.6	<i>u</i>	
Surrogate: Nitrobenzene-d5	n	n	ıı	-		89.8	<i>u</i>	
Surrogate: 2-Fluorobiphenyl	"	n	"	-		79.6	"	
Surrogate: 2,4,6-Tribromophenol	"	,,	"	-		65.0	11	
Surrogate: Terphenyl-d14	"	"	11	-		03.0	tt.	
Surrogaie. Terpnenyt-a14			**	-				



Redwood City. CA 94063 Walnut Creek. CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments	Project:	Chevron/General	Sampled:	10/26/98
PO Box 2554	Project Number:	9-8139	Received:	10/27/98
Santa Rosa, CA 95405	Project Manager:	Mr. Jeff Monroe	Reported:	10/30/98

### Conventional Chemistry Parameters by APHA/EPA Methods Sequoia Analytical - Petaluma

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>U01-9</u> TRPH	8100484	10/27/98	<u><b>P8103</b>9</u>	99-01 SM 5520C&F	167	3460	<u>Soil</u> mg/kg	
<u>U02-9</u> TRPH	8100484	10/27/98	<u>P81039</u> 10/28/98	<mark>99-02</mark> SM 5520C&F	33.3	, ND	<u>Soil</u> mg/kg	
<u>U01X-11</u> TRPH	8100484	10/27/98	<u>P81039</u> 10/28/98	99-03 SM 5520C&F	33.3	476	<u>Soil</u> mg/kg	
CLR-6 TRPH	8100484	10/27/98	<b>P8103</b> 9	99-04 SM 5520C&F	33.3	44.3	<u>Soil</u> mg/kg	
U0SP-1(A-D) TRPH	8100484	10/27/98	<u><b>P8103</b>9</u> 10/28/98	99-20 SM 5520C&F	33.3	128	<u>Soil</u> mg/kg	



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PO Box 2554 Project Number: 9-8139	B 1 10/07/00
1. ojovi i aliber. y ciey	Received: 10/27/98
Santa Rosa, CA 95405 Project Manager: Mr. Jeff Monroe	Reported: 10/30/98

# Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit Recov.	RPD RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits %	Limit % Notes*
Potob. 9100403	D. ( D	1 10.00					
Batch: 8100492	Date Prepa		<u>/98</u>		<u>Extrac</u>	tion Method: EPA 5030 soi	<u>lls</u>
Blank	8100492-BI	<u>-K1</u>				•00	
Gasoline Benzene	10/28/98			ND	ug/kg "	200	
Toluene				ND	" )I	1.00	
				ND	" "	1.00	
Ethylbenzene				ND	н	1.00	
Xylenes (total) Methyl tert-butyl ether	H			ND		2.00	
Surrogate: a,a,a-Trifluorotoluene		100		ND	<del>"</del>	5.00	
	 #	300		272	"	90.7	
Surrogate: 4-Bromofluorobenzene	.,	300		283	"	94.3	
LCS	8100492-BS	<u> </u>					
Gasoline	10/28/98	1000		1080	ug/kg	108	
Surrogate: 4-Bromofluorobenzene	"	300		291	,,	97.0	····
Matrix Spike	8100492-M	S1 P8	310399-02				
Gasoline	10/28/98	5000	ND	4750	ug/kg	95.0	
Surrogate: 4-Bromosluorobenzene	"	300		268	"	89.3	
Matrix Spike Dup	8100492-M	SD1 P8	310399-02				
Gasoline	10/28/98	5000	ND	4660	ug/kg	93,2	1.91
Surrogate: 4-Bromofluorobenzene	"	300		260	"	86.7	
Batch: 8100513	Date Prepar	red: 10/28/	/98		Extract	tion Method: EPA 5030 soi	ls MeOH
Blank	8100513-BL				2411		
Gasoline	10/28/98			ND	ug/kg	40000	
Benzene	+1			ND	"	200	
Toluene	н			ND	98	200	
Ethylbenzene	11			ND	**	200	
Xylenes (total)	11			ND	**	400	
Methyl tert-butyl ether	**			ND	н	1000	•
Surrogate: a,a,a-Trifluorotoluene	"	30000		30500	"	102	
Surrogate: 4-Bromofluorobenzene	a a	30000		29600	"	<b>9</b> 8. <i>7</i>	
<u>LCS</u>	8100513-BS	51					
Gasoline	10/28/98	50000		51600	ug/kg	103	
Surrogate: 4-Bromofluorobenzene	"	30000		29500	"	98.3	
Matrix Spike	8100513-MS	S1 P8	10399-10				
Gasoline	10/28/98	50000	154000	293000	ug/kg	278	3
Surrogate: 4-Bromofluorobenzene	11	30000		30500	"	102	

Sequoia Analytical - Petaluma



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FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments	Project:	Chevron/General	Sampled:	10/26/98	$\Box$
PO Box 2554	Project Number:	9-8139	Received:	10/27/98	
Santa Rosa, CA 95405	Project Manager:	Mr. Jeff Monroe	Reported:	10/30/98	
					_

### Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Matrix Spike Dup	8100513-M	ISD1 P	810399-10							
Gasoline	10/28/98	50000	154000	169000	ug/kg		30.0		161	3
Surrogate: 4-Bromofluorobenzene	n	30000		30200	"		101			

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Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

### Volatile Organic Compounds by EPA Method 8010B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 8100549	Data Dua	wod. 10/25	(NO		10 - 4	41_3#_4F 3 PP	4 E000	.91- 87- 0	,,	
Blank	<u>Date Prepa</u> 8100549-BI		98		Extrac	tion Method: EP	<u>a susu so</u>	ous MeO	<u>rt</u>	
Bromodichloromethane	10/27/98	<u> </u>		NT	4	50.0				
Bromoform	10/2//98			ND	ug/kg "	50.0				
Bromomethane	71			ND		50.0				
Carbon tetrachloride	**			ND		50.0				
Chlorobenzene	*1			ND		50.0				
Chloroethane	+1			ND		50.0				
2-Chloroethylvinyl ether	17			ND ND	11	50.0				
Chloroform	11			ND	11	500				
Chloromethane	11			ND	**	50.0				
Dibromochloromethane	tt.			ND	н .	50.0				
	i.			ND		50.0				
1,2-Dibromoethane (EDB)	 It			ND	<del>11</del>	50.0				
1,2-Dichlorobenzene				ND	14	50.0				
1,3-Dichlorobenzene				ND		50.0				
1,4-Dichlorobenzene				ND	11	50.0				
Dichlorodifluoromethane				ND		50.0				
1,1-Dichloroethane	"			ND	10	50.0				
1,2-Dichloroethane				ND	11	50.0				
1,1-Dichloroethene	"			ND	11	50.0				
cis-1,2-Dichloroethene	"			ND	11	50.0				
trans-1,2-Dichloroethene				ND	**	50.0				
1,2-Dichloropropane	п			ND	Ħ	50.0				
cis-1,3-Dichloropropene				ND	θ	50.0				
trans-1,3-Dichloropropene	"			ND	(1	50.0				
Freon 113	*1			ND	ir .	50.0				
Methylene chloride	n			ND	D	50.0				
1,1,2,2-Tetrachloroethane	*1			ND	II	50.0				
Tetrachloroethene	**			ND	II	50.0				
1,1,2-Trichloroethane	14			ND	11	50.0				
1,1,1-Trichloroethane	14			ND	H	50.0				
Trichloroethene	11			ND	н	50.0				
Trichlorofluoromethane	"			ND	11	50.0				
Vinyl chloride	n			ND		50.0				
Surrogate: Bromochloromethane	н	3000		3030	H		101			
Surrogate: 1,4-Dichlorobutane	"	3000		3000	n		100			
LCS	8100549-BS	M								
Chlorobenzene	10/27/98	1000		1020	ug/kg		102			
1,1-Dichloroethene	"	1000		960	"		96.0			
Trichloroethene	II.	1000		1020	11		102			
Surrogate: Bromochloromethane		3000		2850	· <del></del>		95.0			

Sequoia Analytical - Petaluma



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Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

### Volatile Organic Compounds by EPA Method 8010B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	0/0	Limit	%	Notes*
LCS (continued)	8100549-BS	<u>S1</u>								
Surrogate: 1,4-Dichlorobutane	10/27/98	3000		2960	ug/kg		98.7			
Matrix Spike	8100549-M	S1 P	810399-02							
Chlorobenzene	10/27/98	1000	ND	1000	ug/kg		100			
1,1-Dichloroethene	11	1000	ND	941	"		94.1			•
Trichloroethene	**	1000	ND	990	ij		99.0			
Surrogate: Bromochloromethane	n	3000		2620	. "		87.3			
Surrogate: 1,4-Dichlorobutane	u	3000		2780	н		92.7			
Matrix Spike Dup	8100549-M	SD1 P	810399-02							
Chlorobenzene	10/27/98	1000	ND	1010	ug/kg		101		0.995	
1,1-Dichloroethene	H	1000	ND	676	"		67.6		32.8	
Trichloroethene	(+	1000	ND	1090	11		109		9.62	
Surrogate: Bromochloromethane	"	3000		2870	"		95.7			
Surrogate: 1,4-Dichlorobutane	u	3000		2870	#		95.7			



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Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

### Volatile Organic Compounds by EPA Method 8260B/Quality Control Sequoia Analytical - Petaluma

	Date Spike	Sample	QC		Reporting Limit Recov.	RPD	RPD
Analyte	Analyzed Level	Result	Result	Units	Recov. Limits %	Limit	% Notes*
Batch: 8100510	Date Prepared: 10/29	)/98		Extrac	tion Method: EPA 5030 s	oils	
Blank	8100510-BLK2	.,,,,		LAURE	THE STREET	<u>~</u>	
Acetone	10/29/98		ND	ug/kg	20.0		
Benzene			ND	<u>"</u>	5.00		
Bromobenzene	P		ND	11	5.00		
Bromochloromethane	11		ND	11	5.00		
Bromodichloromethane	ır		ND	ø	5.00		
Bromoform	If		ND	11	5.00		
Bromomethane	II .		ND	**	5.00		
2-Butanone	II .		ND	*1	10.0		
n-Butylbenzene	ır		ND	*1	5.00		
sec-Butylbenzene	u		ND	н .	5.00		
tert-Butylbenzene	It .		ND	n	5.00		
Carbon disulfide	If .		ND	*1	10.0		
Carbon disunide  Carbon tetrachloride	It		ND ND	*1	5.00		
Chlorobenzene	и		ND	<del>)</del> [	5.00		
Chloroethane	п		ND	17	5.00		
2-Chloroethylvinyl ether	II .		ND	"	5.00		
Chloroform	R		ND	**	5.00		
Chloromethane	п		ND	**	5.00		
2-Chlorotoluene	II .		ND	*1	5.00		
4-Chlorotoluene	п		ND	*1	5.00		
Dibromochloromethane	п		ND	*1	5.00		
1,2-Dibromo-3-chloropropane	II .		ND	**	5.00		
1,2-Dibromoethane (EDB)	и		ND	*1	5.00		
Dibromomethane	и		ND	*1	5.00		
1,2-Dichlorobenzene	и		ND	н	5.00		
1,3-Dichlorobenzene	11		ND	**	5.00		
1,4-Dichlorobenzene	и		ND	*1	5.00		
Dichlorodifluoromethane	п		ND ND	"	5.00		
	II .		ND ND	*1	5.00		
1,1-Dichloroethane	ıı .			**	5.00		
1,2-Dichloroethane	ш		ND	**	•		
l,l-Dichloroethene			ND ND		5.00 5.00		
cis-1,2-Dichloroethene			ND ND		5.00		
trans-1,2-Dichloroethene			ND	**	5.00		
1,2-Dichloropropane	"		ND ND	**	5.00		
1,3-Dichloropropane	"		ND	" n	5.00		
2,2-Dichloropropane	"		ND	"	5.00		
1,1-Dichloropropene	"		ND	"	5.00		
cis-1,3-Dichloropropene	"		ND	)† )†	5.00		
trans-1,3-Dichloropropene	"		ND	14	5.00		
Ethylbenzene	"		ND	**	5.00		

Sequoia Analytical - Petaluma



Redwood City. CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments	Project:	Chevron/General	Sampled: 10/2	6/98
PO Box 2554	Project Number:	9-8139	Received: 10/2	7/98
Santa Rosa, CA 95405	Project Manager: 1	Mr. Jeff Monroe	Reported: 10/3	0/98

### Volatile Organic Compounds by EPA Method 8260B/Quality Control Sequoia Analytical - Petaluma

- <del></del>	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Blank (continued)	8100510-BI	<u>.K2</u>								
Freon 113	10/29/98	<del>,</del>		ND	ug/kg	5.00				
Hexachlorobutadiene	**			ND	"	5.00				
2-Hexanone	11			ND	ц	10.0				
Isopropylbenzene	**			ND	Д	5.00				
p-Isopropyltoluene	**			ND	ц	5.00				
Methylene chloride	n			ND	и	5.00				
4-Methyl-2-pentanone	11			ND	и	10.0				
Methyl tert-butyl ether	11			ND	11	5.00				
Naphthalene	ч			ND	n	5.00				
n-Propylbenzene	It			ND	n	5.00				
Styrene	и			ND	n .	5.00				
1,1,2,2-Tetrachloroethane	II			ND	**	5.00				
1,1,1,2-Tetrachloroethane	п			ND	**	5.00				
Tetrachloroethene	п			ND	17	5.00				
Toluene	н			ND	10	5.00				
1,2,3-Trichlorobenzene	н			NĐ	it	5.00				
1,2,4-Trichlorobenzene	п			ND	11	5.00				
1,1,2-Trichloroethane	41			ND	**	5.00				
1,1,1-Trichloroethane	7)			ND	0	5.00				
Trichloroethene	U			ND	o	5.00				
Trichlorofluoromethane				ND	tr .	5.00				
1,2,3-Trichloropropane	*			ND	11	5.00				
1,3,5-Trimethylbenzene	71			ND	п	5.00				
1,2,4-Trimethylbenzene	ø			ND	п	5.00				
Vinyl acetate	17			ND	п	10.0				
Vinyl chloride	17			'ND	H	5.00				
m,p-Xylene	17			ND	н	5.00				
o-Xylene	н			ND	11	5.00				
Surrogate: Dibromofluoromethane	"	50.0		44.8		80.0-120	89.6			- ····-·- • •
Surrogate: 1,2-Dichloroethane-d4	u	50.0		42.8	"	80.0-120	85.6			
Surrogate: Toluene-d8	"	50.0		45.5	n	81.0-117	91.0			
Surrogate: 4-Bromofluorobenzene	"	50.0		40.8	n	74.0-121	81.6			
<u>LCS</u>	8100510-BS	2								
Benzene	10/29/98	50.0		50.1	ug/kg	90.0-126	100			
Chlorobenzene	19	50.0		51.0	11	89.0-124	102			
l,l-Dichloroethene	**	50.0		52.6	11	74.0-136	105			
Toluene	it	50.0		50.3	Ð	91.0-126	101			
Trichloroethene	11	50.0		48.3	II.	75.0-119	96.6			
Surrogate: Dibromofluoromethane	<i>"</i>	50.0		46.7	"	80.0-120	93.4		-	
Surrogate: 1,2-Dichloroethane-d4	"	50.0		44.9	"	80.0-120	89.8			

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Sequoia Analytical - Petaluma



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865

FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments

Project: Chevron/General

PO Box 2554

Project Number: 9-8139

Santa Rosa, CA 95405

Project Manager: Mr. Jeff Monroe

Sampled: 10/26/98 Received: 10/27/98 Reported: 10/30/98

### Volatile Organic Compounds by EPA Method 8260B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
LCS (continued)	8100510-BS	<u> 32</u>								
Surrogate: Toluene-d8	10/29/98	50.0		51.2	ug/kg	81.0-117	102			
Surrogate: 4-Bromofluorobenzene	11	50.0		46.6	"	74.0-121	93.2			
Matrix Spike	8100510-M	S1 P	810343-03							
Benzene	10/28/98	50.0	ND	49.4	ug/kg	90.0-126	98.8			
Chlorobenzene	11	50.0	ND	49.6	" _	89.0-124	99.2			
1,1-Dichloroethene	4)	50.0	ND	57.2	If	74.0-136	114			
Toluene	н	50.0	ND	48.5	11	91.0-126	97.0			
Trichloroethene	н	50.0	ND	47.9	)1	75.0-119	95.8			
Surrogate: Dibromofluoromethane	"	50.0		51.2	7,	80.0-120	102			
Surrogate: 1,2-Dichloroethane-d4	"	50.0		51.8	н .	80.0-120	104			
Surrogate: Toluene-d8	"	50.0		49.4	n	81.0-117	98.8			
Surrogate: 4-Bromofluorobenzene	"	50.0		51.6	"	74.0-121	103			
Matrix Spike Dup	8100510-M	SD1 P	<u>310343-03</u>							
Benzene	10/28/98	50.0	ND	51.6	ug/kg	90.0-126	103	20.0	4.16	
Chlorobenzene	10	50.0	ND	50.9	"	89.0-124	102	20.0	2.78	
1,1-Dichloroethene	и	50.0	ND	57.7	н	74.0-136	115	20.0	0.873	
Toluene	п	50.0	ND	50.1	i i	91.0-126	100	20.0	3.05	
Trichloroethene	II	50.0	ND	49.2		75.0-119	98.4	20.0	2.68	
Surrogate: Dibromofluoromethane	"	50.0		52.3	11	80.0-120	105			
Surrogate: 1,2-Dichloroethane-d4	н	50.0		51.9	rt	80.0-120	104			
Surrogate: Toluene-d8	μ	50.0		52.0	H	81.0-117	104			
Surrogate: 4-Bromofluorobenzene	n	50.0		54.6	"	74.0-121	109			

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Touchstone Developments	Project: Chevron/General	Sampled: 10/26/98
PO Box 2554	Project Number: 9-8139	Received: 10/27/98
Santa Rosa, CA 95405	Project Manager: Mr. Jeff Monroe	Reported: 10/30/98

### Semivolatile Organic Compounds by EPA Method 8270B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit		Notes*
D-4-1- 0100402		• • • • • • • • • • • • • • • • • • • •								
Batch: 8100483	Date Prepa		<u>/98</u>		Extract	ion Method: EPA	3550A			
Blank	8100483-BI	<u>_K1</u>								
Acenaphthene	10/28/98			ND	ug/kg	330				
Acenaphthylene				ND	11	330				
Anthracene	t!			ND	1)	330				
Benzoic acid	3†			ND	11	1670				
Benzo (a) anthracene	**			ND	1)	330				
Benzo (b) fluoranthene	71			ND	0	330				
Benzo (k) fluoranthene	10			ND	17	330				
Benzo (g,h,i) perylene	**			ND	19	330				
Benzo (a) pyrene	+1			ND	**	330				
Benzyl alcohol	(I			ND	H ,	660				
Bis(2-chloroethoxy)methane	19			ND	41	330				
Bis(2-chloroethyl)ether	19			ND	*1	330				
Bis(2-chloroisopropyl)ether	10			ND	M .	330				
Bis(2-ethylhexyl)phthalate	11			ND	ti.	330				
4-Bromophenyl phenyl ether	If			ND	11	330				
Butyl benzyl phthalate	11			ND	19	330				
4-Chloroaniline	If			ND	4†	660				
4-Chloro-3-methylphenol	п			ND	It	660				
2-Chloronaphthalene	п			ND	н	330				
2-Chlorophenol	11			ND	и	330				
4-Chlorophenyl phenyl ether	п			ND	II .	330				
Chrysene	11			ND	В	330				
Dibenz (a,h) anthracene	11			ND	11	330				
Dibenzofuran	11			ND	п	330				
Di-n-butyl phthalate	+1			ND	н	330				
1,2-Dichlorobenzene	ti			ND	н	330				
1,3-Dichlorobenzene	ri .			ND	W.	330				
1,4-Dichlorobenzene	11			ND	**	330				
3,3'-Dichlorobenzidine	n .			ND	17	660				
2,4-Dichlorophenol	н			ND	17	330				
Diethyl phthalate	*1			ND	11	330				
2,4-Dimethylphenol	*1			ND	n	330				
Dimethyl phthalate	n			ND	н	330				
4,6-Dinitro-2-methylphenol	**			ND	н	1670				
2,4-Dinitrophenol	11			ND	TT	1670				
2,4-Dinitrotoluene	II.			ND	11	330				
2,6-Dinitrotoluene	It			ND	11	330				
Di-n-octyl phthalate	It			ND	(1	330				
Fluoranthene	и			ND	0	330				
Fluorene	и			ND	10	330				
. 120.0110				ND		330				

Sequoia Analytical - Petaluma



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Touchstone Developments	Ртојест: Chevron/General	Sampled: 10/26/98
PO Box 2554	Project Number: 9-8139	Received: 10/27/98
Santa Rosa, CA 95405	Project Manager: Mr. Jeff Monroe	Reported: 10/30/98

### Semivolatile Organic Compounds by EPA Method 8270B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Aπalyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Blank (continued)	8100483-BI	LK1								
Hexachlorobenzene	10/28/98	<del></del>		ND	ug/kg	330				
Hexachlorobutadiene	"			ND	"	330				
Hexachlorocyclopentadiene	(1			ND	**	330				
Hexachloroethane	н			ND	ęı .	330				
Indeno (1,2,3-cd) pyrene	н			ND	н	330				
Isophorone	н			ND		330				
2-Methylnaphthalene				ND	**	330				
2-Methylphenol	II.			ND	19	330				
4-Methylphenol	II.			ND	II.	330				
Naphthalene	IF.			ND	It	330				
2-Nitroaniline	lt .			ND	It .	1670				
3-Nitroaniline	It			ND	It	1670				
4-Nitroaniline	lt.			ND	It	1670				
Nitrobenzene	It			ND ND	п	330				
2-Nitrophenol	н			ND	ii.	330				
4-Nitrophenol	н			ND	ii	1670				
N-Nitrosodiphenylamine	п			ND	11	330				
N-Nitrosodi-n-propylamine	ч			ND	11	330				
Pentachlorophenol	n .			ND ND	н	1670				
Phenanthrene	11		•	ND	*1	330				
Phenol	•1			ND	*1	330				
Pyrene	н			ND ND	+1	330				
1,2,4-Trichlorobenzene	n			ND ND	н	330				
2,4,5-Trichlorophenol	,			ND ND	н	330				
2,4,6-Trichlorophenol	**			ND ND	.,	330				
Surrogate: 2-Fluorophenol		5000		3360	"	330	67.2			···
Surrogate: Phenol-d6	"	5000		3760	"		75.2			
Surrogate: Nitrobenzene-d5	"	3330		2150	"		64.6			
Surrogate: 2-Fluorobiphenyl	"	3330 3330		2020	"		60.7			
Surrogate: 2-4 tuorooiphenyi Surrogate: 2,4,6-Tribromophenol	n	5000		2890	n		57.8			
Surrogate: Terphenyl-d14	#	2000			"		37.0			
Surroguie. Terpnenyru14				3290						
<u>LCS</u>	8100483-BS	<u>81</u>								
Acenaphthene	10/27/98	3330		2320	ug/kg		69.7			
4-Chloro-3-methylphenol	H .	5000		3740	H		74.8			
2-Chlorophenol	··	5000		2850	19		57.0			
1,4-Dichlorobenzene	tt.	3330		1890	17		56.8			
2,4-Dinitrotoluene	R	3330		2380	re .		71.5			
4-Nitrophenol	IF	5000		3260	I+		65.2			
N-Nitrosodi-n-propylamine	п	3330		2270	R		68.2			
Pentachlorophenol	п	5000		4610	It		92.2			

Sequoia Analytical - Petaluma



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Touchstone Developments	Project:	Chevron/General	Sampled:	10/26/98
PO Box 2554	Project Number:	9-8139	Received:	10/27/98
Santa Rosa, CA 95405	Project Manager:	Mr. Jeff Monroe	Reported:	10/30/98

## Semivolatile Organic Compounds by EPA Method 8270B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit Recov	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits %	Limit	%	Notes*
LCS (continued)	8100483-BS	81							
Phenol	10/27/98	5000		2980	ug/kg	59.6	ı		
Pyrene	"	3330		2300	"	69.1			
1,2,4-Trichlorobenzene	11	3330		1860	fT	55.9			
Surrogate: 2-Fluorophenol		5000		2820	11	56.4			
Surrogate: Phenol-d6	IT	5000		3080	H	61.6			
Surrogate: Nitrobenzene-d5	n	3330		1990	"	59.8			
Surrogate: 2-Fluorobiphenyl	n	3330		1780	"	53.5			
Surrogate: 2,4,6-Tribromophenol	n	5000		3120	11	62.4			
Surrogate: Terphenyl-d14	н			3640	#	92			
Matrix Spike	8100483-M	S1 P8	310399-02						
Acenaphthene	10/27/98	3330	ND	2900	ug/kg	87.1			
4-Chloro-3-methylphenol	#	5000	ND	4720	"	94.4			
2-Chlorophenol	**	5000	ND	4030	11	80.6			
1,4-Dichlorobenzene	*1	3330	ND	2620		78.7			
2,4-Dinitrotoluene	*1	3330	ND	2520	o o	75.7			
4-Nitrophenol	н	5000	ND	3440	tf.	68.8			
N-Nitrosodi-n-propylamine	n	3330	ND	2910	11	87.4			
Pentachlorophenol	Ħ	5000	ND	4710	14	94.2			
Phenol	н	5000	ND	3950	16	79.0			
Pyrene	n	3330	ND	2250	и	67.6			
1,2,4-Trichlorobenzene	14	3330	ND	2600	и	78.1			
Surrogate: 2-Fluorophenol	· · · · · · · · · · · · · · · · · · ·	5000		4060	<del></del>	81.2			
Surrogate: Phenol-d6	"	5000		4190	н	83.8			
Surrogate: Nitrobenzene-d5	"	3330		2760	11	82.9			
Surrogate: 2-Fluorobiphenyl	"	3330		2450	ıı	73.6			
Surrogate: 2,4,6-Tribromophenol	H	5000		3510	If	70.2			
Surrogate: Terphenyl-d14	#			3530	"				
Matrix Spike Dup	8100483-M	SD1 P8	310399-02						
Acenaphthene	10/27/98	3330	ND	2480	ug/kg	74.5		15.6	
4-Chloro-3-methylphenol	ti.	5000	ND	3990	"	79.8		16.8	
2-Chlorophenol	11	5000	ND	2780	*1	55.6		36.7	4
1,4-Dichlorobenzene	u ·	3330	ND	1800	*1	54.1		37.0	4
2,4-Dinitrotoluene	11	3330	ND	2480	**	74.5		1.60	
4-Nitrophenol	11	5000	ND	3390	*1	67.8		1.46	
N-Nitrosodi-n-propylamine	tt.	3330	ND	2280	***	68.5		24.2	
Pentachlorophenol	tt.	5000	ND	4620	e)	92.4		1.93	
Phenol	TP.	5000	ND	2850	17	57.0		32.4	4
Pyrene	II .	3330	ND	2200	*)	66.1		2.24	·
1,2,4-Trichlorobenzene	и	3330	ND	1840	и	55.3		34.2	4

Sequoia Analytical - Petaluma



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Touchstone Developments

PO Box 2554 Santa Rosa, CA 95405 Project: Chevron/General

Project Number: 9-8139

Received:

10/26/98 10/27/98

Project Manager: Mr. Jeff Monroe

Reported: 10/30/98

Sampled:

## Semivolatile Organic Compounds by EPA Method 8270B/Quality Control Sequoia Analytical - Petaluma

Analyte	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Allaryte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	- %	Notes*
Matrix Spike Dup (continued)	8100483-M	SD1 P	810399-02							
Surrogate: 2-Fluorophenol	10/27/98	5000		2810	ug/kg		56.2			
Surrogate: Phenol-d6	"	5000		3060	"		61.2			
Surrogate: Nitrobenzene-d5	"	3330		2020	n		60.7			
Surrogate: 2-Fluorobiphenyl	n	3330		1900	n		57.1			
Surrogate: 2,4,6-Tribromophenol	n	5000		3470	"		69.4			
Surrogate: Terphenyl-d14	rt .			3620	ıı .					

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Redwood City. CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

# Conventional Chemistry Parameters by APHA/EPA Methods/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 8100484 Blank	Date Prepar 8100484-BL		<u>/98</u>		Extract	ion Method: 418	.1 / 5520	C&F Mo	<u>od.</u>	
TRPH	10/28/98	77.		ND	mg/kg	33.3				
<u>LCS</u> TRPH	8100484-BS 10/28/98	<u>l</u> 667		620	mg/kg	80.0-120	93.0			
LCS Dup TRPH	8100484-BS 10/28/98	<u>D1</u> 667		626	mg/kg	80.0-120	93.9	20.0	0.963	
<u>Duplicate</u> TRPH	8100484-DU 10/28/98	<u>P1 P</u> 3	<b>810399-01</b> 3460	2570	mg/kg			20.0	29.5	
Matrix Spike TRPH	8100484-MS 10/28/98	1 P	81 <b>0399-01</b> 3460	3650	mg/kg	75.0-125	28.5			



Redwood City, CA 94063 Wainut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:10/27/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:10/30/98

### **Notes and Definitions**

#	Note
1	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
2	This compound is a common laboratory contaminant.
3	The RPD value for the sample duplicate or MS/MSD was outside if QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
4	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

2

Fax cop	y of l	_ab	Rep	ort	and	COC to	Che	vron	Со	ntac	:t: □	No	)			<u> </u>	<u>hair</u>	1-of-Ci	<u>ustody-Record</u>
Chevron U.S P.O. BOX San Ramon, ( FAX (415)84	5004 CA 94583	Cone	ultant P ultant N	ome	mber	24 Fee Luglove Ex 255 Jelf 5303/8	1.59 1.50 1.11	De	rle El	iejen KES	in 15	-   l	Laborator) Laborator) Samples (	y Name y Releas Collectes Date	• Numi	ber (ame)		سيستسد د مدوده	Monre
Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Characal	Grab Composite Discrete		Sample Preservation		(8020 + 8015)	1	1	carbons	8/	Purpeoble Organica 35 (8240)	l	Sector of AN (CACA-PASTANIA)	Thank	Total Po		( <sup>2</sup> C <sub>3</sub> 1() ≥ <b>9</b> 63 Remarks
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Relinquished By				ganization		Date/Time S. 4	46.	elved B	y (Sign y (Sign	11.7%	of reaction	\	Organizat Organizat	t ·	15/	le/Ilme	' \$' 4';	Turn Arou	nd Time (Circle Cholos)  24 Hrs. 48 Hrs. 5 Doys
Relinquished By	(Signoture)		Ori	ganizatlor	•	Date/Time	Rec	leved F	or Labo	oratory (	By (Signati	ure)			Dat	te/Time			10 Days As Contracted

Fax cop	y of I	Lab	Rep	ort d	and	COC to	Chev	ron	Col	ntac	t: 🗆	No	l			C	<u>hain</u>	<u>-of-</u>	<u>Cust</u>	<u>ody-Record</u>
Chevron U.S P.O. BOX San Ramon, C FAX (415)84	5.A. Inc. 5004 CA 94583	Const Const Const	ron Facili Facilit ultant Pro ultant Na	ty Number by Address oject Num eme	er	9-8 69 F011 81	739 757 -	Sull Del Eni	Ja elleg To e	r La me	enda ets	- Lu - Lu - Su - C	hevron C aboratory amples ( ollection ignature	Name Releas Collected Date	(Phone)	92 per	Lai Segi	184.	12k	vece
Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charbool	Type G = Grab C = Composite 0 = Discrete		Sample Preservation	iced (Yes or No)	BTEX + TPH CAS W/ (8020 + 8015)//	TPH Diesel (8015)	Oil and Grease (5520)	Helocarbons	Purgeable Arymotics (8020)	Organica	Extractable Organics (8270)	CA.CPb.Zn.Ni (ICAP or AX)		CAM 17			Remarks
P1-2		7	5	Б	3pm		Vos	X								$\times$				१६१०३१६ - १५
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R3-2					<u> </u>			<u> </u>	<u> </u>	ļ			ļ		<b> </b>	$\coprod$	-		ļ	16
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15-3		1	<del>    -</del>	<del>        -                              </del>	<del>                                     </del>	-	\ <del>\</del>		<del> </del>				-			17			-	,8
16-3		W	h	$\mathbb{W}_{-}$	╂╂		<u> </u>		<del> </del>		<del> </del>	<u>-</u>	<del>-  </del>		-	<del>  V</del>		-	<del>                                     </del>	19
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SP-16-1	)	4	15	<u> </u>	₩.		1-1	1	<del> </del>	ļ.			<del> </del>	<del> </del>	<del>}</del>	$\Leftrightarrow$	1		_	71
SF-261	<del>)</del> ——	4	15	10	1-40	<del>  </del>	$\mid V \mid$	W_	<del> </del>	<del> </del>			-	ļ	<del>                                     </del>		1			22 V
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Relinquished By	(Signoture)	<u> </u>	Org	anization	J	Date/Time 8.4	O Rec	elved B	y (Sign	oture)	<u> </u>	T,	Drganizat	ion	Dot	e/Time		Turn /	Around Tin	ne (Circle Cholce)
X			l.	11		10-27-9	86	4.E.	4/2	وباويزر)	C7V-		4 se-c	11.1	16	27/5/	5545	•	_	Hre.
Relinquished By	(Signature)		Org	anization		Date/Time	Rec	elved B	y (Sign	oture)		] '	Organizai	tlon	Dat	le/Time			5	Tire. Doys
Relinquished By	(Signature)		Org	anization		Date/Time	Rec	leved F	or Labo	ratory 1	By (Signat	ture)			Dat	le/Time				Days ntracted
																				<del></del>



Redwood City. CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954

valausen esta elektrika iria keesta taan aan a

(650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Sequoia Analytical 1455 N. McDowell Blvd., Ste. D Petaluma, CA. 94954

Client Project ID: Sample Matrix: Analysis Method: P810399 Soil EPA 3550/8015 Mod. Sampled: Received: Reported: Oct 26, 1998 Oct 27, 1998 Oct 30, 1998

Attention: Debbie Leibensberger

First Sample #: 810-2099

SP102798

SP102798 SP102798

QC Batch Number:

SP102798 8015EXA SP102798 8015EXA SP102798 8015EXA

8015EXA 8015EXA

8015EXA

### TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample i.D. 810-2099 P810399-01	Sample I.D. 810-2100 P810399-02	Sample I.D. 810-2101 P810399-03	Sample I.D. 810-2102 P810399-04	Sample I.D. 810-2103 P810399-05	Sample I.D. 810-2104 P810399-06
Extractable Hydrocarbons	1.0	410	N.D.	38	7.3	59	N.D.
Chromatogram Pai	ttern:	Unidentified Hydrocarbons >C16 & < C12		Unidentified Hydrocarbons > C13	Unidentified Hydrocarbons < C13 & > C16	Unidentified Hydrocarbons >C14	

**Quality Control Data** 

Report Limit Multiplication Factor:	10	1.0	. 1.0	1.0	1.0	1.0
Date Extracted:	10/27/98	10/27/98	10/27/98	10/27/98	10/27/98	10/27/98
Date Analyzed:	10/29/98	10/28/98	10/28/98	10/28/98	10/28/98	10/28/98
Instrument Identification:	НР-ЗА	HP-3B	HP-3B	HP-3B	HP-3B	HP-3B
Surrogate Recovery, %: (QC Limits = 50-150%)	**	90	721 *	136	731 *	82

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

SEQUOIA ANALYTICAL, #1271

Dimple Sharma Project Manager Please Note:

- \* Surrogate recovery above control limit due to coelution.
- \*\* Surrogate recovery below detection limit due to dilution.



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954

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Sequoia Analytical 1455 N. McDowell Blvd., Ste. D Petaluma, CA. 94954

Client Project ID: Sample Matrix:

P810399 Soil

Sampled: Received:

Oct 26, 1998 Oct 27, 1998

Attention: Debbie Leibensberger

Analysis Method: First Sample #:

EPA 3550/8015 Mod. 810-2105

Reported: Oct 30, 1998

QC Batch Number:

SP102798

SP102798

8015EXA

#### 8015EXA TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 810-2105 P810399-07	Sample I.D. 810-2118 P810399-20	
Extractable Hydrocarbons	1.0	N.D.	30	
Chromatogram Pa	ttern:		Unidentified Hydrocarbons >C13	

**Quality Control Data** 

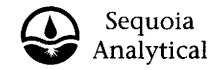
Extractable Hydrocarbons are quantitated against a fresh diesel standard. Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Dimple Sharma Project Manager Please Note:

Surrogate recovery above control limit due to coelution.





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954

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Sequoia Analytical 1455 N. McDowell Blvd., Ste. D

Client Project ID: Sample Matrix:

P810399 Soil

Sampled:

Oct 26, 1998 Oct 27, 1998

Petaluma, CA. 94954 Attention: Debbie Leibensberger

Analysis Method: First Sample #:

EPA 3550/8015 Mod. 810-2103

Received: Reported:

Oct 30, 1998

QC Batch Number:

SP102798

8015EXA

SP102798

SP102798

#### 8015EXA 8015EXA TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS AS : HYDRAULIC FLUID

Analyte	Reporting Limit mg/kg	Sample I.D. 810-2103 P810399-05	Sample I.D. 810-2104 P810399-06	Sample I.D. 810-2105 P810399-07	
Extractable Hydrocarbons	10	220	N.D.	N.D.	
Chromatogram Pat	ttern:	Unidentified Hydrocarbons > C14			

Quality Control Data

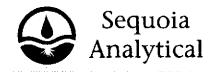
Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	10/27/98	10/27/98	10/27/98
Date Analyzed:	10/28/98	10/28/98	10/28/98
Instrument Identification:	HP-3B	HP-3B	HP-3B
Surrogate Recovery, %: (QC Limits = 50-150%)	731 *	82	95

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

SEQUOIA ANALYTICAL, #1271

Surrogate recovery above control limit due to coelution.

Dimple Sharma Project Manager



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954

(650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865

Sampled:

FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Oct 26, 1998

Sequoia Analytical

1455 N. McDowell Blvd., Ste. D Petaluma, CA. 94954

Attention: Debbie Leibensberger

Client Project ID: P810399 Sample Descript: Soil, P810399-01

Lab Number: 810-2099

Received: Oct 27, 1998 Digested: Oct 28, 1998 Analyzed: Oct 28, 1998 Reported: Oct 30, 1998 

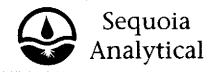
### **LUFT METALS**

Analyte	Detection Limit mg/kg	Sample Results mg/kg	QC Batch Number	Instrument ID
Cadmium	0.50	N.D.	ME1028986010MDA	MV-3
Chromium	0.50	29	ME1028986010MDA	MV-3
Lead	1.0	20	ME1028986010MDA	MV-3
Nickel	1.0	38	ME1028986010MDA	MV-3
Zinc	1.0	51	ME1028986010MDA	MV-3

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

SEQUOIA ANALYTICAL, #1271

Dimple Sharma Project Manager



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954

(650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Sequoia Analytical 1455 N. McDowell Blvd., Ste. D Petaluma, CA. 94954

Sample Descript:

P810399 Client Project ID: Soil, P810399-02

Received: Digested: Analyzed:

Sampled:

Oct 26, 1998 Oct 27, 1998 Oct 28, 1998

Attention: Debbie Leibensberger

Lab Number: 810-2100

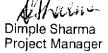
Oct 28, 1998 Reported: Oct 30, 1998

### **LUFT METALS**

Analyte	Detection Limit mg/kg	Sample Results mg/kg	QC Batch Number	Instrument ID
Cadmium	0.50	N.D.	ME1028986010MDA	MV-3
Chromium	0.50	31	ME1028986010MDA	MV-3
Lead	1.0	6.7	ME1028986010MDA	MV-3
Nickel	1.0	30	ME1028986010MDA	MV-3
Zinc	1.0	44	ME1028986010MDA	MV-3

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

SEQUOIA ANALYTICAL, #1271







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Sequoia Analytical 1455 N. McDowell Blvd., Ste. D Petaluma, CA. 94954 Attention: Debbie Leibensberger

Client Project ID: Sample Descript:

Lab Number:

P810399 Soil, P810399-03

Received: Digested: Analyzed:

Sampled:

Oct 27, 1998 Oct 28, 1998

Oct 26, 1998

Rep

Analyzed: Oct 28, 1998 Reported: Oct 30, 1998

#### **LUFT METALS**

810-2101

Analyte	Detection Limit mg/kg	Sample Results mg/kg	QC Batch Number	Instrument ID
Cadmium	0.50	N.D.	ME1028986010MDA	MV-3
Chromium	0.50	73	ME1028986010MDA	MV-3
Lead	1.0	3.5	ME1028986010MDA	MV-3
Nickel	1.0	63	ME1028986010MDA	MV-3
Zinc	1.0	43	ME1028986010MDA	MV-3

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

SEQUOIA ANALYTICAL, #1271

Dimple Sharma Project Manager

*5*73



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954

(650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Sequoia Analytical 1455 N. McDowell Blvd., Ste. D

Petaluma, CA. 94954 Attention: Debbie Leibensberger Client Project ID: P810399 Sample Descript: Soil, P810399-04

Sampled: Oct 26, 1998 Received: Oct 27, 1998 Digested: Oct 28, 1998

Lab Number:

Analyzed: Reported:

Oct 28, 1998 Oct 30, 1998

### **LUFT METALS**

810-2102

Analyte	Detection Limit mg/kg	Sample Results mg/kg	QC Batch Number	Instrument ID
Cadmium	0.50	N.D.	ME1028986010MDA	MV-3
Chromium	0.50	41	ME1028986010MDA	MV-3
Lead	1.0	7.2	ME1028986010MDA	MV-3
Nickel	1.0	37	ME1028986010MDA	MV-3
Zinc	1.0	50	ME1028986010MDA	MV-3

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

SEQUOIA ANALYTICAL, #1271

Dimple Sharma Project Manager



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954

(650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865

FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Sequoia Analytical 1455 N. McDowell Blvd., Ste. D Petaluma, CA. 94954

Client Project ID: Sample Descript:

P810399 Soil, P810399-20

Sampled: Oct 26, 1998 Received: Oct 27, 1998 Digested: Oct 27-28, 1998

Attention: Debbie Leibensberger

Lab Number:

810-2118

Analyzed: Oct 28-29, 1998 Reported: Oct 30, 1998 

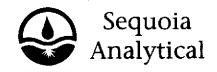
### **CAM 17 METALS**

Analyte	Detection Limit mg/kg	Sample Results mg/kg	QC Batch Number	Instrument ID
Antimony	5.0	N.D.	ME1028986010MDA	MV-4
Arsenic	5.0	11	ME1028986010MDA	MV-4
Barium	0.50	180	ME1028986010MDA	MV-4
Beryllium	0.50	N.D.	ME1028986010MDA	MV-4
Cadmium	0.50	N.D.	ME1028986010MDA	MV-4
Chromium (III)	0.50	25	ME1028986010MDA	MV-4
Cobalt	0.50	9.5	ME1028986010MDA	MV-4
Copper	0.50	37	ME1028986010MDA	MV-4
Lead	1.0	N.D.	ME1028986010MDA	MV-4
Mercury	0.010	0.23	ME1027987471MDB	MV-1
Molybdenum	0.50	N.D.	ME1028986010MDA	MV-4
Nickel	1.0	23	ME1028986010MDA	MV-4
Selenium	5.0	N.D.	ME1028986010MDA	MV-4
Silver	0.50	0.60	ME1028986010MDA	MV-1
Thallium	5.0	N.D.	ME1028986010MDA	MV-4
Vanadium	0.50	45	ME1028986010MDA	MV-4
Zinc	1.0	50	ME1028986010MDA	MV-4

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

SEQUOIA ANALYTICAL, #1271

Project Manager



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954

(650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865

Sampled:

FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Sequoia Analytical 1455 N. McDowell Blvd., Ste. D

Petaluma, CA. 94954 Attention: Debbie Leibensberger Client Project ID: Sample Descript: Analysis for: First Sample #:

P810399 Soil Lead 810-2106

Oct 26, 1998 Oct 27, 1998 Received: Digested: Oct 28, 1998 Analyzed: Oct 28, 1998 Reported: Oct 30, 1998

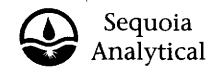
#### LABORATORY ANALYSIS FOR: Lead

Sample Number	Sample Description	<b>Detection Limit</b> mg/kg	Sample Result mg/kg	QC Batch Number	Instrument ID
810-2106	P810399-08	1.0	3.9	ME1028986010MDA	MV-3
810-2107	P810399-09	1.0	3.6	ME1028986010MDA	MV-3
810-2108	P810399-10	1.0	4.3	ME1028986010MDA	MV-3
810-2109	P810399-11	1.0	3.2	ME1028986010MDA	MV-3
810-2110	P810399-12	1.0	5.1	ME1028986010MDA	MV-3
810-2111	P810399-13	1.0	4.6	ME1028986010MDA	MV-3
810-2112	P810399-14	1.0	8.5	ME1028986010MDA	MV-3
810-2113	P810399-15	1.0	6.7	ME1028986010MDA	MV-3
810-2114	P810399-16	1.0	6.4	ME1028986010MDA	MV-3
810-2115	P810399-17	1.0	11	ME1028986010MDA	MV-3
810-2116	P810399-18	1.0	6.7	ME1028986010MDA	MV-3
810-2117	P810399-19	1.0	5.5	ME1028986010MDA	MV-3
810-2119	P810399-21	1.0	3.7	ME1028986010MDA	MV-3
810-2120	P810399-22	1.0	12	ME1028986010MDA	MV-3

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

SEQUOIA ANALYTICAL, #1271

Dimple Sharma Project Manager



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865

FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Sequoia Analytical

1455 N. McDowell Blvd., Ste. D

Petaluma, CA. 94954

Analyte:

Attention: Debbie Leibensberger

Client Project ID: P810399 Matrix: Solid

QC Sample Group: 8102099-120

Reported:

Oct 30, 1998

### **QUALITY CONTROL DATA REPORT**

Analyte:	Cadmium	Chromium	Lead	Nickel	Zinc	Mercury	Diesel
						•	
QC Batch#:	ME102898	ME102898	ME102898	ME102898	ME102898	ME102798	SP102798
	6010MDA	6010MDA	6010MDA	6010MDA	6010MDA	7471MDB	8015EXA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 7471	EPA 8015M.
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050	EPA 3050	EPA 7471	EPA 3550
Analyst:	J. Kelly	J. Kelly	J. Keily	J. Kelly	J. Kelly	T, Le	K. Grubb
MS/MSD #:	8102101	8102101	8102101	8102101	8102101	8102063	8101874
Sample Conc.:	N.D.	73 mg/kg	3.5 mg/kg	63 mg/kg	43 mg/kg	0.014 mg/kg	1.0 mg/kg
Prepared Date:	10/28/98	10/28/98	10/28/98	10/28/98	10/28/98	10/27/98	10/27/98
Analyzed Date:	10/28/98	10/28/98	10/28/98	10/28/98	10/28/98	10/28/98	10/28/98
Instrument I.D.#:	MV-3	MV-3	MV-3	MV-3	MV-3	MV-1	HP-3B
Conc. Spiked:	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	0.10 m <b>g</b> /kg	15 mg/kg
Result:	54	130	56	100	. 91	0.11	11
MS % Recovery:	108	114	105	74	96	96	67
Dup. Result:	55	130	58	110	97	0.12	12
MSD % Recov.:	110	114	109	94	108	106	
		114	109	94	108	100	73
RPD:	1.8	0.0	3.5	9.5	6.4	8.7	8.7
RPD Limit:	0-20	0-20	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS102898	LCS102898	LC\$102898	LCS102898	LCS102898	LCS102798B	LCS102798
Prepared Date:	10/28/98	10/00/00	46 (00 (00		10/00/00	40 (07 107	
Analyzed Date:	10/28/98	10/28/98	10/28/98	10/28/98	10/28/98	10/27/98	10/27/98
Instrument I.D.#;	• •	10/28/98	10/28/98	10/28/98	10/28/98	10/28/98	10/28/98
Conc. Spiked:	MV-3	MV-3	MV-3	MV-3	MV-3	MV-1	HP-3B
conc. apikeu.	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	0.10 mg/kg	15 mg/kg
LCS Result:	56	56	58	57	55	0.10	11
LCS % Recov.:	112	112	116	114	110	100	73
		• • • •	7.10	117	110	100	, ,

SEQUOIA ANALYTICAL, #1271

80-120

Dimple Sharma Project Manager

MS/MSD LCS

**Control Limits** 

Please Note:

80-120

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.

80-120

75-125

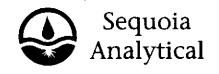
80-120

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

80-120



60-140



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954

(650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865

FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Sequoia Analytical

1455 N. McDowell Blvd., Ste. D

Petaluma, CA. 94954

Attention: Debbie Leibensberger

Client Project ID: P810399 Matrix:

Solid

QC Sample Group: 8102099-120

Reported:

Oct 30, 1998

#### QUALITY CONTROL DATA REPORT

QC Batch#:         ME102898 6010MDA 60	Analyte:	Silver	Cadmium	Chromium	Nickel	Lead	Zinc	
Analy. Method: EPA 7760 EPA 6010 EPA 6010 EPA 6010 EPA 6010 Prep. Method: EPA 7760 EPA 6010 E			•					
Analy. Method:	QC Batch#:	ME102898	ME102898	ME102898	ME102898	ME102898	ME102898	
Prep. Method: EPA 3050		6010MDA	6010MDA	6010MDA	6010MDA	6010MDA	6010MDA	
Prep. Method: EPA 3050		EPA 7760	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010	
MS/MSD #: 8102101		EPA 3050	EPA 3050	EPA 3050	EPA 3050	EPA 3050	EPA 3050	
MS/MSD #: 8102101 Sample Conc.: 1.6 mg/kg Prepared Date: 10/28/98 Analyzed Date: 10/29/98 Instrument I.D.#: MV-1 Conc. Spiked: 50 mg/Kg  Result: 50 MS % Recovery: 97  Dup. Result: 46 MSD % Recov.: 89  RPD : 8.3 RPD Limit: 0-20  LCS #: LCS102898 L		K. Anderson	J. Keliy	J. Kelly	J. Kelly	J. Kelly	J. Kelly	-
Prepared Date: 10/28/98		8102101	-	-	-		•	
Analyzed Date:   10/29/98		1.6 mg/kg	-	-	-	-	•	
Instrument I.D.#:		10/28/98	-	-	•	*	-	
Result:		10/29/98	-	•	•	-	-	
Result:   50	Instrument I.D.#:	MV-1	-	-	-		_	
MS % Recovery:         97         -	Conc. Spiked:	50 mg/Kg	•	-	-	-	-	
MS % Recovery:         97         -								
Dup. Result: 46	Result:	50	-		-			
MSD % Recov.:         89         -	MS % Recovery:	97	-	-	-	-	-	
MSD % Recov.:         89         -								
RPD: 8.3		46	-	-	-	-	•	
RPD Limit:         0-20         -         <	MSD % Recov.:	89	-	•	-	-	•	
RPD Limit:         0-20         -         <	RPD.	83						
LCS #: LCS102898 LCS102898 LCS102898 LCS102898 LCS102898 LCS102798B  Prepared Date: 10/28/98 10/28/98 10/28/98 10/28/98 10/28/98 10/29/98			-	- -	-	-	-	
Prepared Date:         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/29/98         50 mg/Kg		0 20	_	-	-	-	-	
Prepared Date:         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/28/98         10/29/98         50 mg/Kg								
Analyzed Date:         10/29/98	LCS #:	LCS102898	LCS102898	LCS102898	LCS102898	LCS102898	LCS102798B	
Analyzed Date:         10/29/98	Prenared Date:	10/29/00	10/00/00	10/00/00	40.100.100	10/0-/	an inc /	
Instrument I.D.#:         MV-1         MV-4         MV-4 <th></th> <th>, ,</th> <th></th> <th></th> <th></th> <th>•</th> <th></th> <th></th>		, ,				•		
Conc. Spiked:         50 mg/Kg								
LCS Result: 50 51 50 51 49 50 LCS % Recov.: 100 102 100 102 98 100								
LCS % Recov.: 100 102 100 102 98 100	cono. opinea.	30 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	50 mg/kg	
LCS % Recov.: 100 102 100 102 98 100	LCS Result:	50	51	EΛ	<b>5</b> 1	40	EO.	
100					-			
		100	102	100	102	90	100	
I MS/MSD	MS/MSD							·
1.00		80-120	BU-13U	9A 100	00 100	00.400	00.455	Ī
Control Limits 80-120 80-120 80-120 80-120 80-120 80-120		UQ-12U	00-120	au-120	80-120	80-120	80-120	

SEQUOIA ANALYTICAL, #1271

Dimple Sharma 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

### Sequoia Analytical - Petaluma Subcontract Order P810399

Sending Laboratory

1455 N. McDowell Blvd. Suite D

Petaluma, CA 94954

Phone: 707/792-1865 Fax: 707/792-0342

Project Manager: Debbie Leibensberger

Sequoia Analytical - Petaluma Sequoia- Walnut Creek

404 N. Wiget Ln

Walnut Creek, CA 94598

Phone: 925-988-9600

Fax: 925-988-9673

**9810531** 

Receiving Laboratory

**Subcontract Order Comments** 

10/27/98 08:45

Sample/Analysis Information								
Sample Name	Matrix	Sampled/ Expires	Analysis Requested	Due	Lab Number	Container		n Comments
P810399-01	Soil	10/26/98			8102099	В		
		4/24/99	Cd Total ICP 6010A	10/29/98				
	_	4/24/99	Cr Total ICP 6010A	10/29/98				
		4/24/99	Ni Total ICP 6010A	10/29/98				
		4/24/99	Pb Total ICP 6010A	10/29/98				
		11/9/98	TPH-D default	10/29/98			SUB	
		4/24/99	Zn Total ICP 6010A	10/29/98				
P810399-02	Soil	10/26/98			8102100	В		
		4/24/99	Cd Total ICP 6010A	10/29/98				
		4/24/99	Cr Total ICP 6010A	10/29/98				
		4/24/99	Ni Total ICP 6010A	10/29/98				
		4/24/99	Pb Total ICP 6010A	10/29/98				
		11/9/98	TPH-D default	10/29/98			SUB	
		4/24/99	Zn Total ICP 6010A	10/29/98				
P810399-03	Soil	10/26/98			8102101	В	}	
		4/24/99	Cd Total ICP 6010A	10/29/98				
		4/24/99	Cr Total ICP 6010A	10/29/98				
		4/24/99	Ni Total ICP 6010A	10/29/98				
		4/24/99	Pb Total ICP 6010A	10/29/98				
		11/9/98	TPH-D default	10/29/98	-		SUB	
		4/24/99	Zn Total ICP 6010A	10/29/98				
P810399-04	Soil	10/26/98			8102102	В		
		4/24/99	Cd Total ICP 6010A	10/29/98				I
		4/24/99	Cr Total ICP 6010A	10/29/98				
		4/24/99	Ni Total ICP 6010A	10/29/98				
		4/24/99	Pb Total ICP 6010A	10/29/98				
		11/9/98	TPH-D default	10/29/98			SUB	
		4/24/99	Zn Total ICP 6010A	10/29/98				
P810399-05	Soil	10/26/98				В		
		11/9/98	TPH-D/MO+ others	10/29/98	8102103	1/	Diesel and	Hydraulic Oil only
P810399-06	Soil	10/26/98				В		
		11/9/98	TPH-D/MO+ others	10/29/98	8102104		Diesel and	Hydraulic Oil only
P810399-07	Soil	10/26/98			OAVNAV1	В		
		11/9/98	TPH-D/MO+ others	10/29/98	8102105	1 \	Diesel and	Hydraulic Oil only

Leumen Date 10/2 Received By Finil Ten Date 10/2

### Sequoia Analytical - Petaluma Subcontract Order P810399

9810531

Sample Name	Matrix	Sampled/	Analysis Requested	Due	Lab Number	Container		Comments
P810399-08	Soll	Expires 10/26/98		<del>                                     </del>	0400460	В	1	
		4/24/99	Pb Total ICP 6010A	10/29/98	8102106	B	SUB	<del> </del>
P810399-09	Soll	10/26/98	TO TOTAL ICT GOTON	10/29/98	0400469	В	SUB	
		4/24/99	Pb Total ICP 6010A	10/00/00	8102107	В	SUB	<u> </u>
P810399-10	Soil	10/26/98	FD TOTAL ICF GOTOA	10/29/98	0400400	<u> </u>	SUB	
1010377-10	DOLL	4/24/99	Pb Total ICP 6010A	10/00/00	8102108	В	,	<del>-</del>
P810399-11	Soil		PO TOTAL ICP 6010A	10/29/98			SUB	
F 61(3) 79-11	2011	10/26/98			8102109	В		
0040200 45	G - 11	4/24/99	Pb Total ICP 6010A	10/29/98			SUB	
P810399-12	Soil	10/26/98			8102110	В	ļ <u>.</u> .	
		4/24/99	Pb Total ICP 6010A	10/29/98			SUB	
P810399-13	Soil	10/26/98		_	8102111	В		
		4/24/99	Pb Total ICP 6010A	10/29/98	<b>&gt;</b> -		SUB	
P810399-14	Seil	10/26/98			8102112	В		
	ļ	4/24/99	Pb Total ICP 6010A	10/29/98	02022		SUB	
P810399-15	Soil	10/26/98			8102113	В		
		4/24/99	Pb Total ICP 6010A	10/29/98	OTONTTO.		SUB ≞	- T-12
P810399-16	Soil	10/26/98			8102114	В		
		4/24/99	Pb Total ICP 6010A	10/29/98	<del>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</del>		SUB	
P810399-17	Soil	10/26/98			8102115	В		
		4/24/99	Pb Total ICP 6010A	10/29/98	CAUNALU		SUB	
P810399-18	Soil	10/26/98			8102116	В		
		4/24/99	Pb Total ICP 6010A	10/29/98			SUB	-
P810399-19	Soil	10/26/98			8102117	В		
		4/24/99	Pb Total ICP 6010A	10/29/98			SUB	
P810399-20	Soil	10/26/98			8102118	A		)MPOSITE
		11/23/98	Hg Total CVAA*	10/29/98	GIULLIO		SUB TO V	ļ. ————————————————————————————————————
•	<del> </del>	11/23/98	Metals, CAM TTLC ICP	10/29/98			SUB TO V	170000
		11/9/98	TPH-D default	10/29/98		<del> </del>	SUB	
P810399-21	Soil	10/26/98	total asper		8102119			MPOSITE
		4/24/99	Phote ICP 6010A 10127	10/29/98	GIUZIIS_		SUB	
P810399-22	Soil	10/26/98		10/27/70	0400460	A		MPOSITE
		4/24/99	Pb STLC ICP 6010A	10/29/98	<u>8102120</u>		SUB	IMI GOILE
	<u> </u>	4/24/33	I D BTEC ICP OUTUA	10/29/98			90B	

Released By Date Date Received By Date Date Page 2 of 2



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

November 3, 1998

Mr. Jeff Monroe Touchstone Developments PO Box 2554 Santa Rosa, CA 95405

RE: Chevron/General/P811001

Dear Mr. Jeff Monroe

Enclosed are the results of analyses for sample(s) received by the laboratory on November 2, 1998. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Debbie Leibensberger Project Manager

CA ELAP Certificate Number 2245

Allen Total



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments PO Box 2554 Santa Rosa, CA 95405 Project: Chevron/General Project Number: 9-8139 Project Manager: Mr. Jeff Monroe Sampled: 10/26/98 Received: 11/2/98 Reported: 11/3/98

#### **ANALYTICAL REPORT FOR P811001**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
SP-2(A-D)	P811001-01	Soil	10/26/98

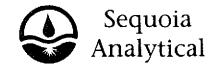


Redwood City, CA 94063 Wainut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments	Project: Che	evron/General	Sampled:	10/26/98
PO Box 2554	Project Number: 9-8	8139	Received:	11/2/98
Santa Rosa, CA 95405	Project Manager: Mr.	r. Jeff Monroe	Reported:	11/3/98

# Volatile Organic Compounds by EPA Method 8010B Sequoia Analytical - Petaluma

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
SP-2(A-D)			P81100	01-01			Soil	
Bromodichloromethane	8100549	11/3/98	11/3/98		5.00	ND	ug/kg	
Bromoform	**	и	"		5.00	ND	11	
Bromomethane	**	п	(+		5.00	ND	•	
Carbon tetrachloride	10	ц	Ħ		5.00	ND	11	
Chlorobenzene	17	н	9		5.00	ND	н	
Chloroethane	н	и	н		5.00	ND	н	
2-Chloroethylvinyl ether	Ħ	IT	11		50.0	ND	n	
Chloroform	11	tr.	11		5.00	ND	Ħ	
Chloromethane	n	11	t•		5.00	ND	п	
Dibromochloromethane	н	+1	,,		5.00	ND	II .	
1,2-Dibromoethane (EDB)	н	11	+1		5.00	ND	п	
1,2-Dichlorobenzene	н	11	n		5.00	ND	и	
1,3-Dichlorobenzene	п	H	*1		5.00	ND	и	
1,4-Dichlorobenzene	16	11	н		5.00	ND	и	
Dichlorodifluoromethane	t <del>t</del>	19	н		5.00	ND	111	
1,1-Dichloroethane	11	Ð	н		5.00	ND	17	
1,2-Dichloroethane	U	+1	п		5.00	ND	17	
1,1-Dichloroethene	+1	+1	п		5.00	ND	17	
cis-1,2-Dichloroethene	11	11	п		5.00	ND	11	
trans-1,2-Dichloroethene	FF	n	п		5.00	ND	11	
1,2-Dichloropropane	34	н	н		5.00	ND	н	
cis-1,3-Dichloropropene	1+	н	u		5.00	ND	**	
trans-1,3-Dichloropropene	t)	н	11		5.00	ND	11	
Freon 113	17	н	14	•	5.00	ND	et .	
Methylene chloride	17	н	17		5.00	ND	17	
1,1,2,2-Tetrachloroethane	ti .	н	l†		5.00	ND	II.	
Tetrachloroethene	+1	н	19		5.00	ND	н	
1,1,2-Trichloroethane	н	n	"		5.00	ND	н	
1,1,1-Trichloroethane	u .	н	0		5.00	ND	n	
Trichloroethene	u	e	a		5.00	ND	п	
Trichlorofluoromethane	u ·	U	*1		5.00	ND	п	
Vinyl chloride	u	u	и		5.00	ND	п	
Surrogate: Bromochloromethane	и	н	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<del>-</del>		90.0	%	
Surrogate: 1,4-Dichlorobutane	n	n	"	-		121	rr e	



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone Developments	Project:	Chevron/General	Sampled:	10/26/98
PO Box 2554	Project Number:	9-8139	Received:	11/2/98
Santa Rosa, CA 95405	Project Manager:	Mr. Jeff Monroe	Reported:	11/3/98

# Volatile Organic Compounds by EPA Method 8010B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
D-4-1- 0100540	D. J. D	1 10/25			17. 4.		A 5020	de Meo	**	
Batch: 8100549	Date Prepa		<u>/98</u>		Extrac	tion Method: EP	A DUSU SO	ms ivieO	п	
Blank Drawn diehlerensethere	8100549-BI	<u> </u>		NITT		<b>50.0</b>				
Bromodichloromethane	10/27/98			ND	ug/kg "	50.0				
Bromoform	#1			ND	**	50.0				
Bromomethane				ND	11	50.0				
Carbon tetrachloride	"			ND	**	50.0				
Chlorobenzene	"			ND	.,	50.0				
Chloroethane	11			ND		50.0				
2-Chloroethylvinyl ether				ND	H	500				
Chloroform	11			ND	н	50.0				
Chloromethane	11			ND	*1	50.0				
Dibromochloromethane	п			ND	" .	50.0				
1,2-Dibromoethane (EDB)	н			ND	11	50.0				
1,2-Dichlorobenzene	11			ND	#1	50.0				
1,3-Dichlorobenzene	П			ND	11	50.0				
1,4-Dichlorobenzene	П			ND	11	50.0				
Dichlorodifluoromethane	11			ND	П	50.0				
1,1-Dichloroethane	II .			ND	II .	50.0				
1,2-Dichloroethane	п			ND	н	50.0				
1,1-Dichloroethene	11			ND	н	50.0				
cis-1,2-Dichloroethene	П			ND	Ш	50.0				
trans-1,2-Dichloroethene	II .			ND	н	50.0				
1,2-Dichloropropane	И			ND	Д	50.0				
cis-1,3-Dichloropropene	II			ND	н	50.0				
trans-1,3-Dichloropropene	11			ND	IF	50.0				
Freon 113	и			ND	н	50.0				
Methylene chloride	ц			ND	н	50.0				
1,1,2,2-Tetrachloroethane	п			ND	ji .	50.0				
Tetrachloroethene	п			ND	II.	50.0				
1,1,2-Trichloroethane	п			ND	11	50.0				
1,1,1-Trichloroethane	п			ND	IF	50.0				
Trichloroethene	и			ND	It	50.0				
Trichlorofluoromethane	п			ND	It	50.0				
Vinyl chloride	R			ND	H.	50.0				
Surrogate: Bromochloromethane		3000		3030			101			
Surrogate: 1,4-Dichlorobutane	#	3000		3000	"		100			
Surroguie. 1,4-Dictionobulane		3000					100			
Blank	8100549-BI	L <u>K2</u>								
Bromodichloromethane	11/3/98			ND	ug/kg	0.500				
Bromoform				ND	"	0.500				
Bromomethane	II			ND	10	0.500				
Carbon tetrachloride	н			ND	H.	0.500				

Sequoia Analytical - Petaluma

\*Refer to end of report for text of notes and definitions.



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:11/2/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:11/3/98

# Volatile Organic Compounds by EPA Method 8010B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Blank (continued)	<u>8100549-BI</u>	<u>_K2</u>								
Chlorobenzene	11/3/98			ND	ug/kg	0.500				
Chloroethane	"			ND	Д	0.500				
2-Chloroethylvinyl ether	"			ND	Д	5.00				
Chloroform	"			ND	11	0.500				
Chloromethane	11			ND	ii	0.500				
Dibromochloromethane	,,			ND	11	0.500				
1,2-Dibromoethane (EDB)	"			ND	Ц	0.500				
1,2-Dichlorobenzene	н			ND	It	0.500				
1,3-Dichlorobenzene	Ц			ND	lt .	0.500				
1,4-Dichlorobenzene	It.			NĐ	11	0.500				
Dichlorodifluoromethane	lf.			ND	" .	0.500				
1,1-Dichloroethane	lt.			ND	(1	0.500				
1,2-Dichloroethane	11			ND	(*	0.500				
1,1-Dichloroethene	11			ND	11	0.500				
cis-1,2-Dichloroethene	11			ND	17	0.500				
trans-1,2-Dichloroethene	fi			ND	17	0.500				
1,2-Dichloropropane	**			ND	**	0.500				
cis-1,3-Dichloropropene	**			ND	11	0.500				
trans-1,3-Dichloropropene	**			ND	Ħ	0.500				
Freon 113	) t			ND	†I	0.500				
Methylene chloride	11			ND	11	0.500				
1,1,2,2-Tetrachloroethane	10			ND	11	0.500				
Tetrachloroethene	I <del>t</del>			. ND	11	0.500				
1,1,2-Trichloroethane	11			ND	11	0.500				
1,1,1-Trichloroethane	"			ND	*1	0.500				
Trichloroethene	H			· ND	+1	0.500				
Trichlorofluoromethane	11			ND	н	0.500				
Vinyl chloride	11			ND	II.	0.500				
Surrogate: Bromochloromethane	7	3000		3200	n		107		•	
Surrogate: 1,4-Dichlorobutane	"	3000		3110	"		104			
LCS	8100549-BS	<u>81</u>								
Chlorobenzene	10/27/98	1000		1020	ug/kg		102			_
1,1-Dichloroethene	+1	1000		960	"		96.0			
Trichloroethene	+1	1000		1020	11		102			
Surrogate: Bromochloromethane	"	3000		2850	<i>n</i>		95.0			
Surrogate: 1,4-Dichlorobutane	n	3000		2960	"		98.7			
LCS	8100549-BS	52								
Chlorobenzene	11/3/98	1000		1010	ug/kg		101			
1,1-Dichloroethene	n	1000		1020	"		102			
•				*						

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Sequoia Analytical - Petaluma

\*Refer to end of report for text of notes and definitions.



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Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:11/2/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:11/3/98

# Volatile Organic Compounds by EPA Method 8010B/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit		RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	- %	Notes*
LCS (continued)	8100549-BS	<b>S2</b>								
Trichloroethene	11/3/98	1000		996	ug/kg		99.6			
Surrogate: Bromochloromethane	"	3000	·	2840	"		94.7			
Surrogate: 1,4-Dichlorobutane	"	3000		2750	"		91.7			
Matrix Spike	8100549-M	<u>S1</u>	P810399-02							
Chlorobenzene	10/27/98	1000	ND	1000	ug/kg		100			
1,1-Dichloroethene	IF .	1000	ND	941	*1		94.1			
Trichloroethene	10	1000	ND	990	11		99.0			
Surrogate: Bromochloromethane	"	3000		2620	rr .		87.3			
Surrogate: 1,4-Dichlorobutane	"	3000		2780	"		92.7			
Matrix Spike Dup	8100549-M	SD1	P810399-02		-					
Chlorobenzene	10/27/98	1000	ND	1010	ug/kg		101		0.995	
1,1-Dichloroethene	34	1000	ND	676	H		67.6		32.8	
Trichloroethene	11	1000	ND	1090	н		109		9.62	
Surrogate: Bromochloromethane	n	3000		2870	"		95.7			
Surrogate: 1,4-Dichlorobutane	n	3000		2870	"		95.7			



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Touchstone DevelopmentsProject:Chevron/GeneralSampled:10/26/98PO Box 2554Project Number:9-8139Received:11/2/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:11/3/98

#### **Notes and Definitions**

# Note

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

Recov. Recovery

RPD Relative Percent Difference

Chevron U.S.A. Inc. P.O. BOX 5004 San Ramon, CA 94583	ultant Project Nur ultant Nome ddrees colect Contact (N	official forth		i e Coy	nats	-	Chevron C	ontact (I ( Name	Name) _		(321) 	1.4.1 1542	(4.Z)	lace
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November 4, 1998

Mr. Jeff Monroe Touchstone Developments PO Box 2554 Santa Rosa, CA 95405

RE: Chevron/General/P811011

Dear Mr. Jeff Monroe

Enclosed are the results of analyses for sample(s) received by the laboratory on November 3, 1998. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Debbie Leibensberger Project Manager

CA ELAP Certificate Number 2245

Deble 1 g



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 Petaluma, CA 94954 (650) 364-9600 (925) 988-9600 (916) 921-9600 (707) 792-1865 FAX (650) 364-9233 FAX (925) 988-9673 FAX (916) 921-0100 FAX (707) 792-0342

Touchstone DevelopmentsProject:Chevron/GeneralSampled:11/2/98PO Box 2554Project Number:8139-2Received:11/3/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:11/4/98

# **ANALYTICAL REPORT FOR P811011**

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
PX1-4	P8J1011-01	Soil	11/2/98
PX3-4	P811011-02	Soil	11/2/98
PX4-4	P811011-03	Soil	11/2/98
PX6-4	P811011-04	Soil	11/2/98

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The results in this report apply to the samples analyzed in accordance with the chain of custody document.

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Touchstone DevelopmentsProject:Chevron/GeneralSampled:11/2/98PO Box 2554Project Number:8139-2Received:11/3/98Santa Rosa, CA 95405Project Manager:Mr. Jeff MonroeReported:11/4/98

### Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M Sequoia Analytical - Petaluma

PX1-4 Gasoline Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene Surrogate: 4-Bromofluorobenzene	8110034 "	11/3/98 " " " "	P8110: 11/3/98 " " " "	Limits	2000 10.0 10.0	2490 88.1 ND	Units  Soil ug/kg	Notes*
Gasoline Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene	11	19 19 19 19	11/3/98	<u>11-01</u>	10.0 10.0	88.1	ug/kg	
Gasoline Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene	11	19 19 19 19	11/3/98	<u>11-U1</u>	10.0 10.0	88.1	ug/kg	
Benzene Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene	11	19 19 19 19	n n n		10.0 10.0	88.1		
Toluene Ethylbenzene Xylenes (total) Methyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene	u u u u	11 19 19	11 11		10.0			
Ethylbenzene Xylenes (total) Methyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene	· · · · · · · · · · · · · · · · · · ·	**	n .				н	
Xylenes (total)  Methyl tert-butyl ether  Surrogate: a,a,a-Trifluorotoluene	··· · · · · · · · · · · · · · · · · ·	"			10.0	49.4	11	
Methyl tert-butyl ether Surrogate: a,a,a-Trifluorotoluene			ш		20.0	166	11	
Surrogate: a,a,a-Trifluorotoluene					50.0	2900	17	
	"		11			108	%	
surrogaie: 4-promojiuoropenzene		n	"	-		93.7	70 #	
		•	**	•		<b>93</b> ./		
PX3-4			P8110	11-02			<u>Soil</u>	
Gasoline	8110034	11/3/98	11/3/98	<del></del>	1000	1030	ug/kg	
Benzene	11	n	tt.		5.00	ND	"	
Toluene	II.	П	(*		5.00	ND	31	
Ethylbenzene	"	п	u.		5.00	8.51	V.	
Xylenes (total)	**	n	н		10.0	ND	17	
Methyl tert-butyl ether	11	II	U		25.0	1300	n	
Surrogate: a,a,a-Trifluorotoluene	н	11	"	-		107	%	
Surrogate: 4-Bromofluorobenzene	"	Ħ	"	-		90.7	"	
PX4-4			P8110	11-03			Soil	
Gasoline	8110034	11/3/98	11/3/98		1000	ND	ug/kg	
Benzene	II II	"	11/3/20		5.00	ND	"	
Toluene	II	ii.	1÷		5.00	ND	н	
Ethylbenzene	n	н	it.	•	5.00	ND	п	
Xylenes (total)	It	н	*		10.0	ND	п	
Methyl tert-butyl ether	It	**	0	=	25.0	40.7	"	
Surrogate: a,a,a-Trifluorotoluene		11				111	%	
Surrogate: 4-Bromofluorobenzene	u	"	n	-		95.0	и	
PX6-4			P8110	11-04			<u>Soil</u>	
Gasoline	8110034	11/3/98	11/3/98	11 47	1000	ND	ug/kg	
Benzene	#	11/3/70	"		5.00	ND	"	
Toluene	0	19	н		5.00	ND	a a	
Ethylbenzene	**	н	н		5.00	ND	11	
Xylenes (total)	II.	Ħ	п		10.0	ND	i i	
Methyl tert-butyl ether	.,	*1	ıı .		25.0	555	н	
Surrogate: a,a,a-Trifluorotoluene	"	"	н			107	%	
Surrogate: 4-Bromofluorobenzene	n	н	II .	-		96.3	"	



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Touchstone Developments	Project: Chevron/General	Sampled: 11/2/98
PO Box 2554	Project Number: 8139-2	Received: 11/3/98
Santa Rosa, CA 95405	Project Manager: Mr. Jeff Monroe	Reported: 11/4/98

# Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M/Quality Control Sequoia Analytical - Petaluma

	Date	Spike	Sample	QC		Reporting Limit	Recov.	RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Notes*
Batch: 8110034	Date Prepa	red: 11/3/9	<u>98</u>		Extract	oils			
<b>Blank</b>	8110034-BI	L <u>K1</u>							
Gasoline	11/3/98			ND	ug/kg	200			
Benzene	н			ND	u	1.00			
Toluene	Ц			ND	11	1.00			
Ethylbenzene	II.			ND	н	1.00			
Xylenes (total)	IF			ND	*1	2.00			
Methyl tert-butyl ether	н			ND	**	5.00			
Surrogate: a,a,a-Trifluorotoluene	"	300		328	"		109		
Surrogate: 4-Bromofluorobenzene	tt .	300		301	"		100		
<u>LCS</u>	8110034-B	<u>S1</u>			-				
Gasoline	11/3/98	1000		1070	ug/kg		107		
Surrogate: 4-Bromofluorobenzene	"	300		299	"		99.7		
Matrix Spike	8110034-M	<u>S1 P</u>	811011-0 <u>3</u>						
Gasoline	11/3/98	5000	ND	4940	ug/kg		98.8		
Surrogate: 4-Bromofluorobenzene	"	300		284	н		94.7		
Matrix Spike Dup	8110034-M	SD1 P	811011-03						
Gasoline	11/3/98	5000	ND	4990	ug/kg		99.8	411	1.01
Surrogate: 4-Bromofluorobenzene	n	300		280	""		93.3		



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Touchstone Developments	Project: Chevron/General	Sampled: 11/2/98
PO Box 2554	Project Number: 8139-2	<b>Received</b> : 11/3/98
Santa Rosa, CA 95405	Project Manager: Mr. Jeff Monroe	Reported: 11/4/98

#### **Notes and Definitions**

#	Note
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
Recov.	Recovery
RPD	Relative Percent Difference

Fax cop	y of	Lab	Rep	ort c	ind (	COC to	Che	vron	Co	ntac	t: 🗀	No	) 		.**	C	<u>nain</u>	<u>-ot-</u>	<u>-Cus</u>	tody-Record
Chevron U.S P.O. BOX 5 San Ramon, C FAX (415)84	.A. Inc. 5004 A 94583	Conet Conet	on Facilit	ky Number y Address pject Num	nber	1-81. Fact h 813 uche 255 4 Tett 588888	S G	Elle English Mos	Dev L		liena Mesa,	S C	hevron C	Name Releas Collected Date	(Phone)		Jh. 125	1444	188	756 mm
Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Ar W = Water C = Charcool	Type G = Grab C = Composite D = Discrete	Tlme	Sample Preservation	load (Yes or No)	(8020 + 10H GAS (L)	TPH Dissel (8015)	Off and Grease (5520)	Purgeable Holocarbons (8010)	Purgeable Aromotics (8020)		Sol Control	Metals C4,C7-Pb.Zn.Ni (ICAP or A)					
PXJ-4 PX4-4 PX6-4		7	<i>S I V</i>	P V	13:4 (3:4 (3:4)	8	V25	V												P811011 - 01   -02   -03   -04
Relinquished By	<u> </u>			anization	/	Date/Time/01/2 /-3-98 Date/Time		icelved I	-				Organiza			e/Time		Turn		11me (Circle Cholos) 24. Hrs. 6 Days 10 Days
Relinquished By	(Signature)		Org	ganization		Date/11me	R	poleved 1	or Lab	oratory	By (Slgna	dure)			Der	le/IIme				Contracted