Note that Curt Price's Evaluation of Intrinsic Bioremediation (Feb 1998) had higher Ferrous Iron w/ high BTEX, thus an indicator of intr. biorem. However, this report shows the opposite. used different data collected at a later date

Chevron

Chevron ENVIRONMENTAL PROTECTION

98 JUL 30 PM 2:07

Chevron Products Company
6001 Bollinger Canyon Road
Building I, Room 1110
PO Box 6004
San Ramon, CA 94583-0904

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

July 28, 1998

Ms. Eva Chu
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

8/12/98
Revised plots replaced inaccurate ones!

Re: Former Chevron Service Station #9-7127
Interstate 580 and Grantline Road
near Tracy, California

Dear Ms. Chu:

As noted in the previously sent Semi-Annual (Second Quarter) Groundwater Monitoring report for 1998, dated July 16, 1998, bio-parameters were taken at each well and this information was to be evaluated to determine the presence of intrinsic bioremediation within the hydrocarbon plume at the above noted site.

The evaluation of indicator parameters across a dissolved contaminant plume can be used in the demonstration of intrinsic bioremediation. One or more trends observed across a dissolved plume with increasing contaminant concentration would suggest the potential occurrence of intrinsic bioremediation.

With increasing BTEX concentrations, the expected trend in indicator parameter concentrations would be:

Relative Decrease In:	Relative Increase In:
Dissolved Oxygen	Dissolved Iron (Ferrous)
Oxidation-Reduction Potential (ORP)	Alkalinity
Nitrate	
Sulfate	

In the attached charts, the sampled wells are presented on the X-axis from the up-gradient wells to the down-gradient wells through the contaminant plume. The resulting order of the wells is MW-4, MW-1, MW-3 and MW-6 through the plume. The sum of the BTEX results for each well and the indicator bio-parameter analytical results for each well are plotted on the Y-axis to create the plots on the attached charts. The plots are than evaluated by observation for apparent trends in the data.

The dissolved oxygen vs. BTEX plot shows that with high BTEX concentrations, dissolved concentrations are lower, which indicates biological activity is occurring within the contaminant plume. The plume is consuming the dissolved oxygen during the conversion of BTEX to carbon dioxide and water. This indicates intrinsic bioremediation is occurring at this site. Yes

The ORP vs. BTEX plot indicates that ORP increases with increasing BTEX values. The expected trend would be a decrease in ORP values with increasing BTEX values. Therefore, this trend would not be a good indicator of the presence of intrinsic bioremediation at this site. No

The nitrate vs. BTEX plot indicates that nitrate is present where BTEX concentrations are low and reduced when BTEX concentrations are elevated. This is an expected trend for nitrate in the presence of BTEX and intrinsic bioremediation. The observed nitrate trend through the BTEX plume suggests the intrinsic bioremediation is occurring in the groundwater at this site. Nitrate is a good indicator of this process. Yes

The sulfate vs. BTEX plot indicates that sulfate is present where BTEX concentrations are low and reduced when BTEX concentrations are elevated. This is an expected trend for sulfate in the presence of BTEX and intrinsic bioremediation. The observed sulfate trend through the BTEX plume suggests that intrinsic bioremediation is occurring in the groundwater at this site. Sulfate is a good indicator of this process. Yes

The alkalinity vs. BTEX plot indicates that the upgradient waters at this site are low in alkalinity and the interior plume waters are higher in alkalinity. An increase in alkalinity across a contaminant plume is a potential indicator of biologic activity. Therefore, the observed trend for alkalinity is consistent with the occurrence of intrinsic bioremediation in the groundwater at this site. Yes

The dissolved iron (ferrous) vs. BTEX plot indicates that dissolved iron decreases with increasing BTEX values. The expected trend would be an increase in dissolved iron. Therefore, this trend would not be a good indicator of the presence of intrinsic bioremediation at this site. No

The plots of the indicator parameters for dissolved oxygen, nitrate, sulfate and alkalinity vs. total BTEX for site wells upgradient, within and downgradient of the plume indicates the presence of intrinsic bioremediation occurring in the groundwater plume associated with this site. A trend in four of the six indicator parameters is acceptable to indicate that intrinsic bioremediation is occurring at a site.

The effect of the intrinsic bioremediation process will be to stabilize the contaminant plume and reduce the size of the plume as the source area concentrations are reduced.

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. John Moody
RWQCB-Central Valley Region
34443 Routier Road
Sacramento, CA 95827-3098

Mr. Ardavan Onsori
29310 Union City Blvd.
Union City, CA 94587

Mr. & Mrs. Joe Jess
Jess Ranch
Route 5, Box 704-A
Tracy, CA 95376

Mr. Ross Tinline
Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Ms. Bette Owen, Chevron

Chevron

Chevron Products Company
6001 Bollinger Canyon Road
Building L
San Ramon, CA 94583
P.O. Box 6004
San Ramon, CA 94583-0904

Marketing – Sales West
Phone 510 842-9500

July 16, 1998

Ms. Eva Chu
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

will ORC work if TPH/BTEX conc. are very high?

Re: Former Chevron Service Station #9-7127
Interstate 580 and Grantline Road
near Tracy , California

Dear Ms. Chu:

Enclosed is the Semi-Annual (Second Quarter) Groundwater Monitoring report for 1998, prepared by our consultant Gettler-Ryan Inc. for the above noted facility. Ground water samples were analyzed for TPH-g, BTEX and MtBE constituents. Monitoring wells MW-2, MW-5, MW-7 and MW-8 are sampled annually in May, the remaining wells are sampled semi-annually in May and November. The water supply well is sampled annually in November.

Monitoring wells MW-2, MW-5, MW-7 and MW-8 were below method detection limits for all constituents. Monitoring well MW-3 showed a decrease in the benzene constituent from the previous sampling event while wells MW-1, MW-4 and MW-6 showed an increase.

As stated in my previous report, **Chevron recommends that an Oxygen Releasing Compound (ORC) be installed in wells MW-1 and MW-3 prior to the next sampling event.** Both wells continue to detect relatively high concentrations of the benzene constituent in relation to the other wells and the installation of (ORC) should accelerate the natural attenuation process. **It also may be appropriate to add ORC to well MW-4,** since the benzene concentration has been increasing in this well.

Groundwater depth varied from 9.81 feet to 27.03 feet below grade, with a direction of flow northeasterly.

For your information, bio-parameters were taken at each well and this information will be used to determine if natural attenuation is occurring at the site. A report of the findings will be submitted within the next ten days.

Chevron will continue to sample the wells based on the sampling program noted above. 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. Ms. Bette Owen, Chevron

Mr. John Moody
RWQCB-Central Valley Region
3443 Routier Road
Sacramento, CA 95827-3098

Mr. Ardavan Onsori
29310 Union City Blvd.
Union City, CA 94587

Mr. & Mrs. Joe Jess
Jess Ranch
Route 5, Box 704-A
Tracy, CA 95376

Mr. Ross Tinline
Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

GETTLER-RYAN INC.

July 8, 1998 Job #5251.80

Mr. Phil Briggs
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94583

Re: Semi-Annual 1998 Groundwater Monitoring & Sampling Report
Former Chevron Service Station #9-7127
Interstate 580 and Grant Line Road
Tracy, California

Dear Mr. Briggs:

This report documents the semi-annual groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R). On May 31, 1998, G-R field personnel were on site to monitor and sample eight wells (MW-1 through MW-8) at the above mentioned site.

Static groundwater levels were measured and all wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were present in one well (MW-1). Static water level data and groundwater elevations are presented in Table 1. Field-measured groundwater parameters are presented in Table 2. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are presented in Tables 1 and 2. The chain of custody document and laboratory analytical reports are attached.

Thank you for allowing Gettler-Ryan Inc. to provide environmental services to Chevron. Please call if you have any questions or comments regarding this report.

Sincerely,

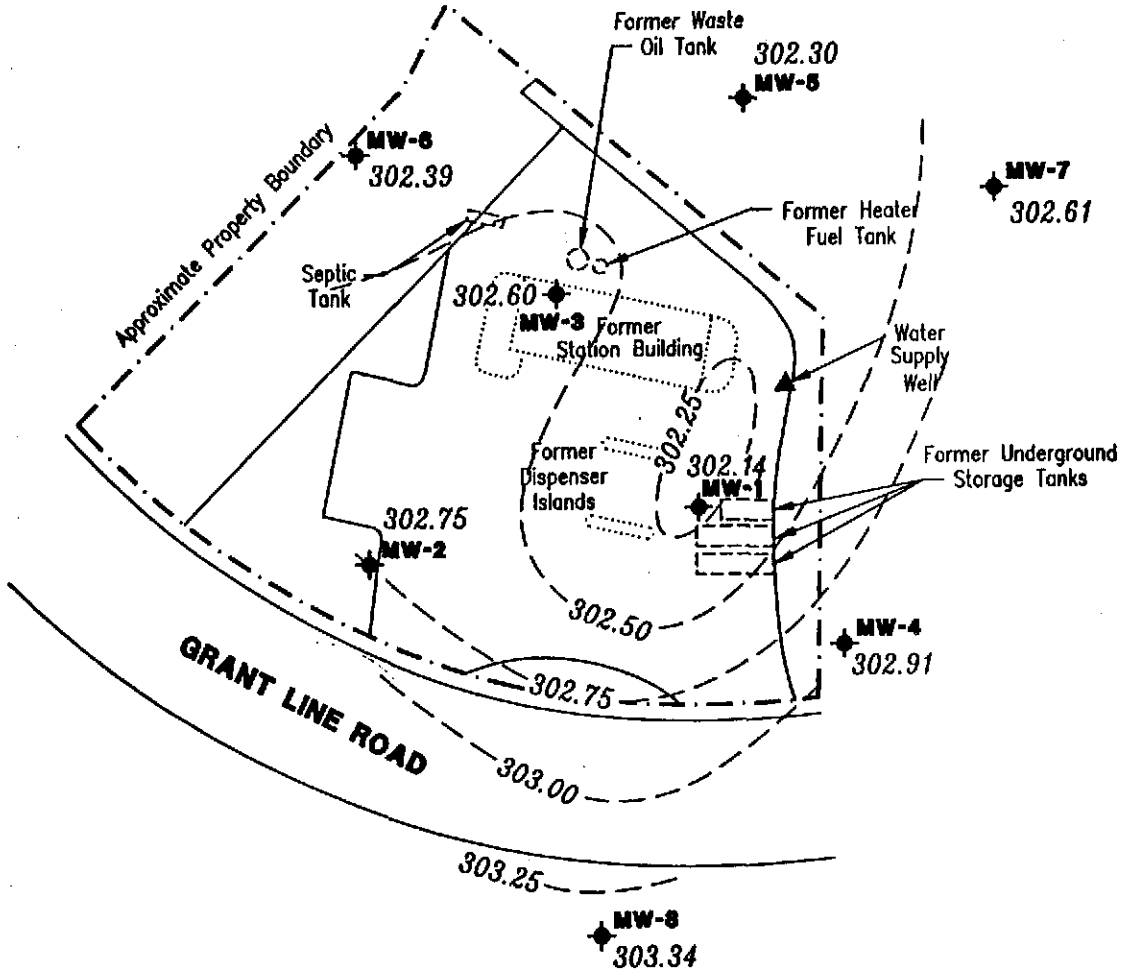
Deanna L. Harding
Project Coordinator

Barbara Sieminski
Project Geologist, R.G. No. 6676

REGISTERED GEOLOGIST
BARBARA SIEMINSKI
No. 6676
STATE OF CALIFORNIA

DLH/SJC/dlh
5251.QML

Figure 1: Potentiometric Map
Table 1: Water Level Data and Groundwater Analytical Results
Table 2: Field Parameters and Groundwater Analytical Results
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports



EXPLANATION

- Groundwater monitoring well
- 303.34 — Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 303.25 — Groundwater elevation contour, dashed where inferred.

Approximate groundwater flow direction at a gradient of 0.009 Ft./Ft.

N

0 60

Scale in Feet

FIGURE 1

Gettler - Ryan Inc.

6747 Sierra Ct., Suite J
Dublin, CA 94568
(510) 551-7555

POTENTIOMETRIC MAP
Former Chevron Service Station No. 9-7127
Interstate 580 and Grant Line Road
Tracy, California

JOB NUMBER 5251

REVIEWED BY

DATE May 31, 1998

REVISED DATE

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<--------		ppb			-------->
MW-1/										
329.17	2/15/94	29.77	299.40	0	99,000	20,000	24,000	2,000	9,800	---
	4/21/94	29.85	299.32	0	---	---	---	---	---	---
	6/1/94	29.92	299.25	0	56,000	12,000	15,000	1,100	5,800	---
	6/28/94	30.15	299.02	0	---	---	---	---	---	---
	7/19/94	20.30	308.87	0	---	---	---	---	---	---
	9/2/94	30.61	298.96[1]	0.5	---	---	---	---	---	---
	9/12/94	31.66	298.04[1]	0.66	---	---	---	---	---	---
	10/12/94	31.70	298.70[1]	1.54	---	---	---	---	---	---
	11/30/94	29.95	299.84[1]	0.77	---	---	---	---	---	---
	3/9/95	29.54	299.88	0.31	---	---	---	---	---	---
	4/18/95	29.01	300.16	0	---	---	---	---	---	---
	5/17/95	29.09	300.08	0	130,000	22,000	30,000	2,000	10,000	---
	6/7/95	29.24	299.93	0	---	---	---	---	---	---
	7/21/95	29.66	299.51	0	---	---	---	---	---	---
	8/15/95	29.87	299.30	0	41,000	9,400	12,000	1,400	7,700	---
	9/7/95	29.85	299.32	0	---	---	---	---	---	---
	10/9/95	30.01	299.16	0	---	---	---	---	---	---
	11/15/95	29.88	299.29	0	68,000	15,000	9,600	1,100	5,500	<2,000
	12/30/95	29.99	299.18	0	---	---	---	---	---	---
	1/29/96	29.32	299.85	Sheen	---	---	---	---	---	---
	2/27/96	28.51	300.66	0	520	48	71	<0.5	27	28
	3/5/96	28.44	300.73	0	---	---	---	---	---	---
	4/23/96	28.20	300.97	0	---	---	---	---	---	---
	5/30/96	28.47	300.70	0	57,000	15,000	11,000	1,100	4,900	<250
	6/19/96	28.43	300.74	0	---	---	---	---	---	---
	7/15/96	28.66	300.51	Sheen	---	---	---	---	---	---
	8/27/96	28.73	300.44	0	74,000	11,000	9,500	790	3,600	<120
	9/9/96	28.85	300.32	0	---	---	---	---	---	---
	10/28/96	28.53	300.64	Sheen	---	---	---	---	---	---
	11/11/96	28.77	300.40	0	69,000	13,000	9,100	810	3,200	<250
	5/6/97	28.12	301.05	0	98,000	23,000	17,000	1,100	5,200	<500
	7/27/97	28.18	300.99	0	---	---	---	---	---	---
	11/18/97	28.73	300.44	0	58,000	19,000	9,700	1,100	4,000	<500
	5/31/98	**27.03**	**302.14**	**0.05[5]**	**180,000**	**25,000**	**25,000**	**1,700**	**9,300**	**19,000/<500[6]**
MW-2/										
327.22	2/15/94	27.09	300.13	0	83	21	6	1	3	---
	4/21/94	27.81	299.41	0	---	---	---	---	---	---
	6/1/94	27.98	299.24	0	<50	1.3	0.5	<0.5	<0.5	---
	6/28/94	28.17	299.05	0	---	---	---	---	---	---
	7/19/94	28.35	298.87	0	---	---	---	---	---	---

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					< ppb >					
MW-2 (cont)	9/12/94	28.56	298.66	0	---	---	---	---	---	---
	10/12/94	28.62	298.60	0	---	---	---	---	---	---
	11/30/94	28.38	298.84	0	<50	3.6	4.5	1.0	4.5	---
	3/9/95	27.41	299.81	0	---	---	---	---	---	---
	4/18/95	26.79	300.43	0	---	---	---	---	---	---
	5/17/95	26.95	300.27	0	<50	<0.5	<0.5	<0.5	<0.5	---
	6/7/95	27.06	300.16	0	---	---	---	---	---	---
	7/21/95	27.47	299.75	0	---	---	---	---	---	---
	8/15/95	27.57	299.65	0	<50	<0.5	<0.5	<0.5	<0.5	---
	9/7/95	28.69	298.53	0	---	---	---	---	---	---
	10/9/95	27.85	299.37	0	---	---	---	---	---	---
	11/15/95	27.91	299.31	0	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	12/30/95	27.60	299.62	0	---	---	---	---	---	---
	1/29/96	27.16	300.06	0	---	---	---	---	---	---
	2/27/96	26.25	300.97	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/5/96	26.70	300.52	0	---	---	---	---	---	---
	4/23/96	25.82	301.40	0	---	---	---	---	---	---
	5/30/96	26.16	301.06	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/19/96	26.27	300.95	0	---	---	---	---	---	---
	7/15/96	26.46	300.76	0	---	---	---	---	---	---
	8/27/96	26.72	300.50	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/6/96	26.80	300.42	0	---	---	---	---	---	---
	10/28/96	26.83	300.39	0	---	---	---	---	---	---
	11/11/96	26.72	300.50	0	---	---	---	---	---	---
	5/6/97	26.01	301.21	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	7/27/97	26.38	300.84	0	---	---	---	---	---	---
	11/18/97	26.50	300.72	0	---	---	---	---	---	---
	5/31/98	**24.47**	**302.75**	**0**	**<50**	**<0.30**	**<0.30**	**<0.30**	**<0.60**	**<10**
MW-3/ 329.28	2/15/94	29.87	299.41	0	23,000	11,000	1,700	540	1,000	---
	4/21/94	29.96	299.32	0	---	---	---	---	---	---
	6/1/94	30.11	299.17	0	27,000	12,000	2,600	600	2,200	---
	6/28/94	30.31	298.97	0	---	---	---	---	---	---
	7/19/94	30.50	298.78	0	---	---	---	---	---	---
	9/2/94	30.61	298.67	0	34,000	16,000	4,100	770	3,000	---
	9/12/94	30.65	298.63	0	---	---	---	---	---	---
	10/12/94	30.74	298.54	0	---	---	---	---	---	---
	11/30/94	30.44	298.84	0	33,000	16,000	3,000	740	2,400	---
	3/9/95	29.53	299.75	0	---	---	---	---	---	---
	4/18/95	28.97	300.31	0	---	---	---	---	---	---
	5/17/95	29.19	300.09	0	27,000	10,000	760	490	1,000	---

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<--------		ppb			-------->
MW-3	6/7/95	29.24	300.04	0	---	---	---	---	---	---
(cont)	7/21/95	29.70	299.58	0	---	---	---	---	---	---
	8/15/95	29.78	299.50	0	39,000[3]	13,000	2,900	700	1,700	---
	9/7/95	29.86	299.42	0	---	---	---	---	---	---
	10/9/95	30.02	299.26	0	---	---	---	---	---	---
	11/15/95	30.06	299.22	0	21,000	8,000	2,900	430	1,500	<1,000
	12/30/95	29.75	299.53	0	---	---	---	---	---	---
	1/29/96	29.22	300.06	0	---	---	---	---	---	---
	2/27/96	28.43	300.85	0	<2,500	5,000	500	220	130	710
	3/5/96	28.35	300.93	0	---	---	---	---	---	---
	4/23/96	28.10	301.18	0	---	---	---	---	---	---
	5/30/96	28.42	300.86	0	37,000	13,000	7,200	870	2,900	<120
	6/19/96	28.51	300.77	0	---	---	---	---	---	---
	7/15/96	28.63	300.65	0	---	---	---	---	---	---
	8/27/96	28.90	300.38	0	50,000	9,500	6,900	740	2,900	<120
	9/6/96	28.98	300.30	0	---	---	---	---	---	---
	10/28/96	28.98	300.30	0	---	---	---	---	---	---
	11/11/96	28.84	300.44	0	52,000	11,000	5,500	780	3,000	<250
	5/6/97	28.22	301.06	0	93,000	23,000	15,000	1,400	6,200	<500
	7/27/97	28.58	300.70	0	---	---	---	---	---	---
	11/18/97	28.70	300.58	0	81,000	29,000	17,000	1,600	6,700	<500
	5/31/98	**26.68**	**302.60**	**0**	**78,000**	**24,000**	**12,000**	**1,200**	**5,800**	**1,300/<500[6]**
MW-4/	5/21/93	---	---	---	<50	12	2	<0.5	1	---
	11/5/93	---	---	---	300	56	10	0.8	3	---
329.44	2/15/94	29.90	299.54	0	260	47	12	2	4	---
	4/21/94	29.99	299.45	0	---	---	---	---	---	---
	6/1/94	30.14	299.30	0	860	200	23	2.8	9.6	---
	6/28/94	30.32	299.12	0	---	---	---	---	---	---
	7/19/94	30.50	298.94	0	---	---	---	---	---	---
	9/2/94	30.62	298.82	0	1,700	250	27	6.4	15	---
	9/12/94	30.69	298.75	0	---	---	---	---	---	---
	10/12/94	30.75	298.69	0	---	---	---	---	---	---
	11/30/94	30.51	298.93	0	830	350	29	8.1	22	---
	3/9/95	29.61	299.83	0	---	---	---	---	---	---
	4/18/95	29.08	300.36	0	---	---	---	---	---	---
	5/17/95	29.22	300.22	0	470	200	2.2	0.9	2.1	---
	6/7/95	29.27	300.17	0	---	---	---	---	---	---
	7/21/95	29.72	299.72	0	---	---	---	---	---	---
	8/15/95	29.77	299.67	0	100	4.2	0.8	<0.5	<0.5	---
	9/7/95	29.85	299.59	0	---	---	---	---	---	---

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<----------ppb---------->					
MW-4	10/9/95	30.02	299.42	0	---	---	---	---	---	---
(cont)	11/15/95	30.05	299.39	0	270	94	9.4	0.77	4.3	27
	12/30/95	29.79	299.65	0	---	---	---	---	---	---
	1/29/96	29.31	300.13	0	---	---	---	---	---	---
	2/27/96	28.58	300.86	0	690	100	15	<0.5	2.0	79
	3/5/96	28.55	300.89	0	---	---	---	---	---	---
	4/23/96	28.15	301.29	0	---	---	---	---	---	---
	5/30/96	28.40	301.04	0	700	240	4.0	0.6	3.9	<5.0
	6/19/96	28.47	300.97	0	---	---	---	---	---	---
	7/15/96	28.62	300.82	0	---	---	---	---	---	---
	8/27/96	28.85	300.59	0	<50	11	<0.5	<0.5	<0.5	<5.0
	9/6/96	28.92	300.52	0	---	---	---	---	---	---
	10/28/96	28.90	300.54	0	---	---	---	---	---	---
	11/11/96	28.78	300.66	0	240	57	1.4	0.7	1.8	<5.0
	5/6/97	28.11	301.33	0	240	74	2.7	<0.5	1.6	<5.0
	7/27/97	28.43	301.01	0	---	---	---	---	---	---
	11/18/97	28.58	300.86	0	270	230	3.5	1.0	1.6	<2.5
	5/31/98	**26.53**	**302.91**	**0**	**1,000**	**450**	**3.4**	**4.5**	**<6.0**	**<20**
MW-5	5/25/93	---	---	---	<50	<0.5	<0.5	<0.5	0.9	---
	11/5/93	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
312.88	2/15/94	25.10	287.78	0	<50	<0.5	1	<0.5	1	---
	4/21/94	13.21	299.67	0	---	---	---	---	---	---
	6/1/94	13.39	299.49	0	<50	<0.5	<0.5	<0.5	<0.5	---
	6/28/94	13.73	299.15	0	---	---	---	---	---	---
	7/19/94	13.80	299.08	0	---	---	---	---	---	---
	9/2/94	14.02	298.86	0	<50	3.2	1.8	<0.5	2.1	---
	9/12/94	14.03	298.85	0	---	---	---	---	---	---
	10/12/94	14.15	298.73	0	---	---	---	---	---	---
	11/30/94	13.91	298.97	0	<50[2]	<0.5[2]	<0.5[2]	<0.5[2]	<0.5[2]	---
	3/9/95	12.97	299.91	0	---	---	---	---	---	---
	4/18/95	12.48	300.40	0	---	---	---	---	---	---
	5/17/95	12.71	300.17	0	150	1.0	<0.5	<0.5	<0.5	---
	6/7/95	12.85	300.03	0	---	---	---	---	---	---
	7/21/95	13.30	299.58	0	---	---	---	---	---	---
	8/15/95	13.41	299.47	0	<50	<0.5	<0.5	<0.5	<0.5	---
	9/7/95	13.42	299.46	0	---	---	---	---	---	---
	10/9/95	13.61	299.27	0	---	---	---	---	---	---
	11/15/95	13.63	299.25	0	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	12/30/95	13.30	299.58	0	---	---	---	---	---	---
	1/29/96	12.75	300.13	0	---	---	---	---	---	---

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<----------ppb---------->					
MW-5	2/27/96	12.02	300.86	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
(cont)	3/5/96	11.96	300.92	0	---	---	---	---	---	---
	4/23/96	11.77	301.11	0	---	---	---	---	---	---
	5/30/96	12.17	300.71	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/19/96	12.25	300.63	0	---	---	---	---	---	---
	7/15/96	12.39	300.49	0	---	---	---	---	---	---
	8/27/96	12.65	300.23	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/6/96	12.68	300.20	0	---	---	---	---	---	---
	10/28/96	12.72	300.16	0	---	---	---	---	---	---
	11/11/96	12.61	300.27	0	---	---	---	---	---	---
	5/6/97	12.06	300.82	0	<50	2.2	2.0	<0.5	1.7	<5.0
	7/27/97	12.39	300.49	0	---	---	---	---	---	---
	11/18/97	12.45	300.43	0	---	---	---	---	---	---
	5/31/98	**10.58**	**302.30**	**0**	**<50**	**<0.30**	**<0.30**	**<0.30**	**<0.60**	**<10**
MW-6										
312.20	12/30/95	13.65	298.55	0	---	---	---	---	---	---
	1/29/96	12.18	300.02	0	---	---	---	---	---	---
	2/27/96	11.45	300.75	0	70	1.1	<0.5	<0.5	<0.5	<5.0
	3/5/96	11.32	300.88	0	---	---	---	---	---	---
	4/23/96	11.12	301.08	0	---	---	---	---	---	---
	5/30/96	11.45	300.75	0	60	1.3	<0.5	<0.5	0.9	<5.0
	6/19/96	11.54	300.66	0	---	---	---	---	---	---
	7/15/96	11.76	300.44	0	---	---	---	---	---	---
	8/27/96	11.95	300.25	0	90	1.6	<0.5	<0.5	<0.5	<5.0
	9/6/96	12.02	300.18	0	---	---	---	---	---	---
	10/28/96	12.01	300.19	0	---	---	---	---	---	---
	11/11/96	11.90	300.30	0	110[4]	<0.5	<0.5	<0.5	<0.5	<5.0
	5/6/97	11.28	300.92	0	170	<0.5	<0.5	<0.5	<0.5	<5.0
	7/27/97	11.68	300.52	0	---	---	---	---	---	---
	11/18/97	11.77	300.43	0	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	5/31/98	**9.81**	**302.39**	**0**	**<50**	**0.89**	**0.65**	**<0.30**	**<0.60**	**<10**
MW-7										
313.36	12/30/95	12.38	300.98	0	---	---	---	---	---	---
	1/29/96	13.14	300.22	0	---	---	---	---	---	---
	2/27/96	12.34	301.02	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/5/96	12.35	301.01	0	---	---	---	---	---	---
	4/23/96	12.13	301.23	0	---	---	---	---	---	---
	5/30/96	12.42	300.94	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/19/96	12.57	300.79	0	---	---	---	---	---	---
	7/15/96	12.70	300.66	0	---	---	---	---	---	---

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<---ppb--->					
MW-7	11/11/96	12.75	300.61	0	---	---	---	---	---	---
(cont)	5/6/97	12.14	301.22	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	7/27/97	12.45	300.91	0	---	---	---	---	---	---
	11/18/97	12.54	300.82	0	---	---	---	---	---	---
	5/31/98	**10.75**	**302.61**	**0**	**<50**	**<0.30**	**<0.30**	**<0.30**	**<0.60**	**<10**
MW-8										
329.91	12/30/95	30.30	299.61	0	---	---	---	---	---	---
	1/29/96	29.56	300.35	0	---	---	---	---	---	---
	2/27/96	28.68	301.23	0	<50	<0.5	<0.5	<0.5	<5.0	<5.0
	3/5/96	28.75	301.16	0	---	---	---	---	---	---
	4/23/96	28.25	301.66	0	---	---	---	---	---	---
	5/30/96	28.44	301.47	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/19/96	28.51	301.40	0	---	---	---	---	---	---
	7/15/96	28.67	301.24	0	---	---	---	---	---	---
	8/27/96	28.92	300.99	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/6/96	28.99	300.92	0	---	---	---	---	---	---
	10/28/96	29.06	300.85	0	---	---	---	---	---	---
	11/11/96	28.98	300.93	0	---	---	---	---	---	---
	5/6/97	28.14	301.77	0	<50	3.6	3.1	0.7	2.5	<5.0
	7/27/97	28.55	301.36	0	---	---	---	---	---	---
	11/18/97	28.80	301.11	0	---	---	---	---	---	---
	5/31/98	**26.57**	**303.34**	**0**	**<50**	**<0.30**	**<0.30**	**<0.30**	**<0.60**	**<10**
Supply Well	11/15/95	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	11/11/96	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	7/27/97	---	---	---	---	---	---	---	---	---
	11/18/97	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	5/31/98	---	---	---	---	---	---	---	---	---
Trip Blank										
TB-LB	2/15/94	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	6/1/94	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	9/2/94	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	11/30/94	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	5/17/95	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	8/15/95	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---
	11/15/95	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	2/27/96	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	5/30/96	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	8/27/96	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	11/11/96	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<----------ppb---------->					
TB-LB (cont)	5/30/96	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	8/27/96	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	11/11/96	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	5/6/97	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	7/27/97	---	---	---	---	---	---	---	---	---
	11/18/97	---	---	---	<50	<0.50	<0.50	<0.50	<0.50	<2.5
	5/31/98	**---**	**---**	**---**	**<50**	**<0.30**	**<0.30**	**<0.30**	**<0.60**	**<10**
Bailer Blank BB	2/15/94	---	---	---	<50	<0.5	<0.5	<0.5	<0.5	---

EXPLANATION:

TOC = Top of casing elevation
(ft) = feet
DTW = Depth to water
GWE = Groundwater elevation
msl = Measurements referenced relative to mean sea level
TPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary-butyl ether
ppb = Parts per billion
--- = Not analyzed/Not applicable

ANALYTICAL METHODS:

TPH(G) = EPA Method 8015/5030
BTEX = EPA Method 8020
MTBE = EPA Method 8020 and 8260

NOTES:

All top of casing elevations were surveyed by Tronoff Land Surveying, Davis, California on November 2, 1993.

Water level elevation data and laboratory analytical results prior to May 17, 1995, were compiled from Quarterly Monitoring Reports prepared for Chevron by Sierra Environmental Services.

1 GWE corrected for the presence of free-phase hydrocarbons using: GWE = [(TOC-DTW) + (0.8)(Product Thickness)]. 0.8 is the assumed specific gravity of free-phase hydrocarbons.

2 Estimated concentration. TFT: surrogate recovery demonstrated sample specific matrix effect. Benzene and Toluene are estimated values due to low recovery of (TFT) surrogate. The (BFB) surrogate had acceptable recovery. Low surrogate recovery can be attributed to sample effervescence (GTEL).

3 Laboratory reported data obtained from multiple dilutions. Dilution factor noted represents the dilution used for majority of results.

4 Laboratory report indicates hydrocarbons in the gasoline range do not match the gasoline standard pattern.

5 Sheen observed during initial water level measurement. 0.05 feet of floating product present in the well after purging 28 gallons of water for sampling.

6 Result by EPA Method 8260.

5251.tqm

Table 2. Field Parameters and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California

Well ID	Date	Time	Volume (gallons)	pH	Conductivity µmhos/cm	Temperature °C	DO (mg/L)	ORP (mV)	Total Alkalinity (ppm)	Nitrate (mg/L)	Sulfate (mg/L)	Phosphate (mg/L)	Ferrous Iron (mg/L)
MW-1	07/27/97	14:46											
		14:51	7.5	7.09	212	20.9	2.37	-5	500				
		14:56	15.0	7.11	212	21.0	2.24	-6	600				
		15:01	22.5	7.11	211	21.1	2.24	-5	550				
		15:03	23.0	7.10	212	20.9	2.25	-6	550	<1.0	14	<100	2.2
	05/31/98	**13:30**											
		13:36	**9.0**	**6.96**	**1331**	**20.6**	**0.15**	**3.2**	**975**				
		13:40	**18.0**	**6.97**	**1239**	**20.2**	**0.40**	**1.3**	**900**				
		13:48	**27.0**	**6.95**	**1199**	**20.5**	**0.66**	**1.3**	**950**				
		13:50	**28.0**	**6.97**	**1201**	**20.4**	**0.60**	**2.0**	**950**	**<1.0**	**4.0**	**<10**	**4.1**
MW-2	07/27/97	14:01											
		14:03	2.0	6.95	206	21.2	9.83	2.1	300				
		14:05	4.0	6.95	206	21.2	9.85	3.0	350				
		14:07	6.0	6.95	205	21.2	9.93	3.0	325				
		14:09	7.0	6.95	205	21.2	9.90	3.0	350	59	68	<10	0.019
	05/31/98	**12:34**											
		12:37	**2.0**	**7.01**	**800**	**21.1**	**2.16**	**-13**	**250**				
		12:40	**4.0**	**7.03**	**800**	**21.1**	**2.55**	**-10**	**300**				
		12:43	**6.0**	**7.01**	**795**	**21.1**	**2.83**	**-11**	**275**				
		12:46	**7.0**	**6.99**	**796**	**21.2**	**2.80**	**-10**	**275**	**54**	**57**	**<10**	**0.11**
MW-3	07/27/97	14:29											
		14:31	2.0	7.11	269	23.0	8.75	-4.3	875				
		14:33	4.0	6.95	264	22.0	6.22	2.8	850				
		14:35	6.0	6.93	261	21.9	6.90	4.3	850				
		14:37	7.0	6.94	262	21.9	6.70	4.3	850	<1.0	<1.0	<10	2.1
	05/31/98	**13:13**											
		13:15	**2.0**	**6.89**	**1266**	**21.1**	**0.45**	**12.3**	**750**				
		13:17	**4.0**	**6.75**	**1155**	**21.0**	**0.40**	**12.2**	**700**				
		13:19	**6.0**	**6.79**	**1200**	**20.9**	**0.38**	**12.1**	**675**				
		13:23	**7.0**	**6.78**	**1199**	**20.9**	**0.35**	**12.1**	**700**	**<1.0**	**4.0**	**<10**	**3.1**
MW-4	07/27/97	14:14											
		14:16	2.0	7.22	244	20.6	8.75	-13	500				
		14:18	4.0	7.21	243	20.6	8.20	-13	550				
		14:20	6.0	7.24	246	20.5	8.55	-13	525				
		14:22	7.0	7.22	245	20.6	8.50	-13	550	80	68	<10	0.15

Table 2. Field Parameters and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID	Date	Time	Volume (gallons)	pH	Conductivity µmhos/cm	Temperature °C	DO (mg/L)	ORP (mV)	Total Alkalinity (ppm)	Nitrate (mg/L)	Sulfate (mg/L)	Phosphate (mg/L)	Ferrous Iron (mg/L)
MW-4 (cont)	**05/31/98**	**12:51**											
		12:54	**3.0**	**7.01**	**1300**	**20.4**	**2.83**	**-10**	**450**				
		12:57	**6.0**	**6.98**	**1290**	**20.4**	**2.82**	**-12**	**400**				
		13:00	**9.0**	**6.90**	**1280**	**20.4**	**2.80**	**-11**	**375**				
		13:03	**10.0**	**6.92**	**1283**	**20.4**	**2.80**	**-12**	**400**	**17**	**30**	**<10**	**7.4**
MW-5	07/27/97	13:15											
		13:18	3.0	7.95	274	19.3	10.45	-55	300				
		13:20	6.0	7.92	273	19.0	10.35	-54	350				
		13:22	9.0	7.90	274	18.9	10.30	-52	300				
		13:24	10.0	7.91	273	19.0	10.31	-53	300	82	100	<10	0.013
	05/31/98	**12:07**											
		12:09	**34.5**	**6.85**	**785**	**18.9**	**3.20**	**-25**	**350**				
		12:11	**69.0**	**7.00**	**980**	**18.9**	**3.27**	**-26**	**400**				
		12:13	**13.5**	**7.01**	**981**	**18.9**	**3.21**	**-28**	**400**				
		12:15	**14.0**	**7.00**	**990**	**18.8**	**3.20**	**-28**	**450**	**35**	**90**	**<10**	**1.9**
MW-6	07/27/97	13:42											
		13:44	3.0	7.54	261	23.2	11.28	-40	400				
		13:46	6.0	7.34	232	19.4	8.10	-18	450				
		13:48	9.0	7.26	227	19.0	8.35	-16	400				
		13:50	10.0	7.2	228	19.1	8.32	-15	400	17	27	<10	0.017
	05/31/98	**11:48**											
		11:51	**3.0**	**6.98**	**966**	**18.7**	**0.72**	**3.20**	**500**				
		11:54	**6.0**	**6.96**	**970**	**18.7**	**0.51**	**3.19**	**450**				
		11.57	**9.0**	**6.95**	**959**	**18.7**	**0.36**	**3.42**	**400**				
		12:00	**10.0**	**6.90**	**960**	**18.6**	**0.40**	**3.40**	**450**	**68**	**51**	**<10**	**3.5**
MW-7	07/27/97	13:02											
		13:04	3.0	7.91	245	19.6	8.95	-52	350				
		13:06	6.0	7.94	264	19.3	9.70	-55	325				
		13:08	9.0	7.95	266	19.3	9.80	-55	350				
		13:10	10.0	7.93	265	19.3	9.79	-55	350	99	100	<10	0.012
	05/31/98	**12:16**											
		12:18	**3.0**	**6.85**	**1020**	**19.6**	**3.60**	**-20**	**350**				
		12:20	**6.0**	**7.25**	**1020**	**18.9**	**3.80**	**-21**	**300**				
		12:22	**9.0**	**7.28**	**1000**	**18.8**	**4.20**	**-21**	**350**				
		12:24	**10.0**	**7.30**	**1001**	**18.9**	**4.40**	**-20**	**325**	**45**	**85**	**<10**	**0.011**

Table 2. Field Parameters and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID	Date	Time	Volume (gallons)	pH	Conductivity µmhos/cm	Temperature °C	DO (mg/L)	ORP (mV)	Total Alkalinity (ppm)	Nitrate (mg/L)	Sulfate (mg/L)	Phosphate (mg/L)	Ferrous Iron (mg/L)
MW-8	07/27/97	12:38											
		12:40	2.2	7.85	141	21.1	9.40	-61.3	100				
		12:42	4.6	7.84	141	20.8	9.30	-48.3	150				
		12:44	6.6	7.83	142	20.9	9.25	-50	100				
		12:46	7.0	7.84	141	20.8	9.25	-50	100	50	24	<10	0.020
	05/31/98	**11:18**											
		11:21	**3.0**	**7.03**	**357**	**21.1**	**6.58**	**-28**	**150**				
		11:24	**6.0**	**7.09**	**381**	**20.5**	**6.50**	**-30**	**200**				
		11:27	**9.0**	**7.08**	**373**	**20.5**	**6.40**	**-31**	**175**				
		11:30	**10.0**	**7.08**	**375**	**20.5**	**6.41**	**-30**	**200**	**35**	**16**	**<1.0**	**0.42**
Supply Well SW	07/27/97	13:40	---	7.85	257	22.7	4.89	-53	200	48	76	<10	1.5

EXPLANATION:

DO = Dissolved Oxygen
ORP = Oxidation-Reduction Potential
mg/L = Miligrams per liter
mV = Millivolts
ppm = Parts per million
µmhos/cm = Micromhos/per centimeter
°C = Degrees Celsius

NOTES:

5251-2.fld

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using a MMC flexi-dip interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using Chevron-designated disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Products Company, the purge water and decontamination water generated during sampling activities is transported by IWM to McKittrick Waste Management located in McKittrick, California.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Chevron Facility # 9-7127 Job#: 5251.80

Address: Grant Line Road & I-580 Date: 5-31-9E

City: Tracy, CA Sampler: F.Cline

Well ID MW- 1 Well Condition: clear

Well Diameter 4" in. Hydrocarbon Thickness: sheen in. Amount Bailed (product/water): 0 (gal.)

Total Depth 40' ft.

Depth to Water 27.03 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

12.97 X VF 0.66 = 8.56 X 3 (case volume) = Estimated Purge Volume: 25.7 (gal.)

Purge Equipment: Disposable Bailer; Bailer; (Stack); Suction; Grundfos; Other:

Sampling Equipment: ~~Disposable Bailer~~; Bailer; (Pressure Bailer); Grab Sample; Other:

Starting Time: 13:30 Weather Conditions:

Sampling Time: 13:50 Water Color: Clear Odor: Strong

Purging Flow Rate: 1.5 gpm. Sediment Description: N/A

Did well de-water? N/C If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
13:36	9	6.96	1331	20.6	0.15	3.2	975
13:42	18	6.97	1234	20.2	0.40	4.3	900
13:48	27	6.95	1199	20.5	0.66	3.3	950
13:50	28	6.97	1201	20.4	0.60	2.0	950

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 1	3 x 40m/VOA	Y	HCL	~~NET/GTEL~~ SEQUOIA	TPH-Gas/BTEX/MTBE

COMMENTS: Sheen upon initial water level when sampling 0.05' of FP showed up Sampled below FP

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WELL MONITORING/SAMPLING
FIELD DATA SHEET

Chevron Facility # 9-7127 Job#: 5251.80

Address: Grant Line Road & I-580 Date: 5-31-9E

City: Tracy, CA Sampler: F. Cline

Well ID MW-2 Well Condition: clear

Well Diameter 2" in Hydrocarbon Thickness: — in Amount Bailed (product/water): — (gal.)

Total Depth 38' ft.

Depth to Water 24.47 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

13.53 X VF 0.17 = 2.3 X 3 (case volume) = Estimated Purge Volume: 6.9 (gal.)

Purge Equipment: Disposable Bailer; Bailer; (Stack); Suction; Grundfos; Other: —

Sampling Equipment: (Disposable Bailer); Bailer; Pressure Bailer; Grab Sample; Other: —

Starting Time: 12:34 Weather Conditions: Clear Warm

Sampling Time: 1249 Water Color: Clear Odor: None

Purging Flow Rate: 1.0 gpm. Sediment Description: None

Did well de-water? NO If yes; Time: — Volume: — (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:37	3	7.01	800	21.1	2.16	-13	250
1240	4	7.03	800	21.1	2.55	-10	300
1243	6	7.01	795	21.1	2.83	-11	275
1246	7	6.99	796	21.2	2.80	-10	275

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-2	3 x 40m/VOA	Y	HCL	~~NET/GTEL~~ SEQUOIA	TPH-Gas/BTEX/MTBE
MW-2	1 x 500ml	Y	None	"	Nitrate Sulfate
MW-2	1 x 500ml	Y	HCl	"	Ferrous Fe

COMMENTS: —

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WELL MONITORING/SAMPLING
FIELD DATA SHEET

Chevron Facility # 9-7127 Job#: 5251.80

Address: Grant Line Road & I-580 Date: 5-31-98

City: Tracy, CA Sampler: F.Cline

Well ID MW- 3 Well Condition: clear

Well Diameter 2" in. Hydrocarbon Thickness: ~~0~~ in. Amount Bailed (product/water): ~~0~~ (gal.)

Total Depth 40' ft.

Depth to Water 26.68 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

13.32 X VF 0.17 = 2.26 X 3 (case volume) = Estimated Purge Volume: 6.78 (gal.)

Purge Equipment:
- Disposable Bailer
- Bailer
- (Stack)
- ~~Suction~~
- Grundfos
- Other: _____

Sampling Equipment:
- (Disposable Bailer)
- ~~Bailer~~
- Pressure Bailer
- Grab Sample
- Other: _____

Starting Time: 13:18 Weather Conditions: _____

Sampling Time: 13:23 Water Color: Clear Odor: Mild

Purging Flow Rate: ~~?~~ gpm. Sediment Description: N/a

Did well de-water? NC If yes; Time: _____ Volume: _____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
13:15	2	6.89	~~1200~~ 1166	21.1	0.45	123	750
1317	4	6.75	~~1153~~	21.0	0.40	12.2	700
1319	6	6.79	1200	20.9	0.38	12.1	695
1323	7	6.78	1199	20.9	0.35	12.1	700

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 3	3 x 40m/VOA	Y	HCL	~~NEL/GTEL~~ SEQUOIA	TPH-Gas/BTEX/MTBE

COMMENTS: _____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Chevron Facility # 9-7127 Job#: 5251.80

Address: Grant Line Road & I-580 Date: 5-31-98

City: Tracy, CA Sampler: E.Cline

Well ID: MW- 4

Well Condition: okay No Plugs caps keep knocking off

Well Diameter: 2" in.

Hydrocarbon Thickness: 0 in.

Amount Bailed (product/water): 0 (gal.)

Total Depth: 40' ft.

Depth to Water: 26.53 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.50	12" = 5.80

13.47 x VF 0.17 = 2.3 X 3 (case volume) = Estimated Purge Volume: 6.9 (gal.)

Purge Equipment: Disposable Bailer, Bailer, ~~Stack~~ (circled), Suction, Grundfos, Other: ____

Sampling Equipment: Disposable Bailer (circled), ~~Bailer~~, Pressure Bailer, Grab Sample, Other: ____

Starting Time: 12:51

Sampling Time: 13C3

Purging Flow Rate: 1.0 gpm.

Did well de-water? No

Weather Conditions: Clear Hot

Water Color: Clear

Odor: None

Sediment Description: None

If yes; Time: ____ Volume: ____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature •C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1254	3	7.01	1300	20.4	2.83	-10	450
1257	6	6.98	1290	20.4	2.82	-12	400
1300	9	6.90	1280	20.4	2.80	-11	375
1303	10	6.92	1283	20.4	2.80	-12	400

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 4	3 x 40m/VOA	Y	HCL	~~NEI/GTEL~~ SEQUOIA	TPH-Gas/BTEX/MTBE

COMMENTS: ____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Chevron Facility # 9-7127 Job#: 5251.80

Address: Grant Line Road & I-580 Date: 5-31-98

City: Tracy, CA Sampler: E.Cline

Well ID: MW-5 Well Condition: okay

Well Diameter: 2 in. Hydrocarbon Thickness: — in. Amount Bailed (product/water): — (gal.)

Total Depth: 38 ft.

Depth to Water: 10.58 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.50	12" = 5.80

27.42 x VF 0.17 = 4.66 X 3 (case volume) = Estimated Purge Volume: 13.9 (gal.)

Purge Equipment: Disposable Bailer, Bailer, **Stack** (circled), Suction, Grundfos, Other: ____

Sampling Equipment: Disposable Bailer, Bailer, **Pressure Bailer** (circled), Grab Sample, Other: ____

Starting Time: 1207 Weather Conditions: Clear Hot

Sampling Time: 1215 Water Color: Clear Odor: No

Purging Flow Rate: 1.5 gpm. Sediment Description: No -

Did well de-water? No If yes; Time: ____ Volume: ____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature •C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:09	3 4.5	6.85	785	18.9	3.20	-25	350
12:11	6.9.0	7.00	980	18.9	3.27	-26	400
12:13	9 13.5	7.01	981	18.9	3.21	-28	400
12:15	10 14.0	7.00	990	18.8	3.20	-28	450

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	3 x 40m/VOA	Y	HCL	~~NEI/GTEL~~ SEQUOIA	TPH-Gas/BTEX/MTBE
MW-5	1x500ml	Y	HCl	"	Ferrous Iron
MW-5	1x500ml	Y	HCl	"	

COMMENTS: ____

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Chevron Facility # 9-7127 Job#: ~~5251.80~~

Address: Grant Line Road & I-580 Date: 5-21-98

City: Tracy, CA Sampler: F.Cline

Well ID MW-6 Well Condition: clear

Well Diameter 2" in. Hydrocarbon Thickness: C in. Amount Bailed (product/water): C (gal.)

Total Depth 29' ft.

Depth to Water ~~20~~ 9.81 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

19.19 X VF ____ = 3.2 X 3 (case volume) = Estimated Purge Volume: 9.7 (gal.)

Purge Equipment: Disposable Bailer; Bailer; (Stack); Suction; Grundfos; Other: ____

Sampling Equipment: ~~Disposable Bailer~~; Bailer; Pressure Bailer; Grab Sample; Other: ____

Starting Time: 1148 Weather Conditions: Clear 1407

Sampling Time: 1200 Water Color: Clear Odor: None

Purging Flow Rate: 1.0 gpm. Sediment Description: NK

Did well de-water? ____ If yes; Time: ____ Volume: ____ (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
1150	3	6.98	966	18.7	0.72	3.20	500
1154	6	6.96	970	18.7	0.51	3.19	450
1157	9	6.97	959	18.7	0.36	3.42	440
1200		6.90	960	18.6	0.40	3.40	450

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	3 x 40m/VOA	Y	HCL	~~NEIGTEL~~ SEQUOIA	TPH-Gas/BTEX/MTBE
MW-6	1 x 500ml		N/A		Nitrate
MW-6	1 x 500ml		HCL		

COMMENTS: ____

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WELL MONITORING/SAMPLING
FIELD DATA SHEET

Chevron Facility # 9-7127 Job#: 5251.80

Address: Grant Line Road & I-580 Date: 5-31-98

City: Tracy, CA Sampler: F.Cline

Well ID MW-7 Well Condition: Okay

Well Diameter 2" ~~2~~ in. Hydrocarbon Thickness: 0 in. Amount Bailed (product/water): 0 (gal.)

Total Depth 28' ft.

Depth to Water 10.75 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

17.25 X VF 0.17 = 2.9 X 3 (case volume) = Estimated Purge Volume: 8.8 (gal.)

Purge Equipment: Disposable Bailer; Bailer; (Stack); Suction; Grundfos; Other:

Sampling Equipment: (Disposable Bailer); ~~Bailer~~; (Pressure Bailer); Grab Sample; Other:

Starting Time: 12:16 Weather Conditions: clear warm

Sampling Time: 12:24 Water Color: clear Odor: Non

Purging Flow Rate: 1.5 gpm. Sediment Description: clear

Did well de-water? NC If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
12:18	3	6.85	1020	19.6	3.60	+20	350
12:20	6	7.25	1020	18.9	3.80	+21	300
12:22	9	7.28	1000	18.8	4.20	+21	300
12:24	10	7.30	1001	18.9	4.40	-25	320

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	3 x 40m/VOA	Y	HCL	~~NET/GTEL~~ SEQUOIA	TPH-Gas/BTEX/MTBE
MW-7	1 x 500ml	Y	HCL	"	Ferrous Iron
MW-7	1 x 500ml	Y	None	"	Nitrate Sulfate

COMMENTS:

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Chevron Facility # 9-7127 Job#: 5251.80

Address: Grant Line Road & I-580 Date: 5-31-96

City: Tracy, CA Sampler: F.Cline

Well ID MW-8 Well Condition: Okay

Well Diameter 2" in. Hydrocarbon Thickness: Okay in. Amount Bailed (product/water): 0 (gal.)

Total Depth 41.9 ft.

Depth to Water 26.57 ft.

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66
	6" = 1.50	12" = 5.80	

15.33 x VF 0.17 = 2.6 X 3 (case volume) = Estimated Purge Volume: 7.8 (gal.)

Purge Equipment: Disposable Bailer / Bailer / (Stack) / Suction / Grundfos / Other:

Sampling Equipment: (Disposable Bailer) / Bailer / Pressure Bailer / Grab Sample / Other:

Starting Time: 11:18 Weather Conditions: Clear 40's

Sampling Time: 1130 Water Color: clear Odor: N/A

Purging Flow Rate: 1.0 gpm. Sediment Description: Mod

Did well de-water? If yes; Time: Volume: (gal.)

Time	Volume (gal.)	pH	Conductivity µmhos/cm	Temperature °C	D.O. (mg/L)	ORP (mV)	Alkalinity (ppm)
11:21	3	7.03	357	21.1	6.58	-28	150
1124	6	7.09	381	20.5	6.50	-30	200
1127	9	7.08	373	20.5	6.40	-31	175
1130	10	7.06	375	20.5	6.41	-32	200

LABORATORY INFORMATION

SAMPLE ID	(#) - CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8	3 x 40m/VOA	Y	HCL	~~NEL/GTEL~~ SEQUOIA	TPH-Gas/BTEX/MTBE

COMMENTS:

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

Chain-of-Custody-Record

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

Chevron Facility Number: #9-7127
Facility Address: I-580 & GRANT LINE ROAD, TRACY
Consultant Project Number: 5251
Consultant Name: Gettler-Ryan
Address: 6747 Sierra Ct, Ste J, Dublin 94568
Project Contact (Name): Deanna Harding
(Phone): 551-7555 (Fax Number): 551-7888

Chevron Contact (Name): MR. PHIL BRIGGS
(Phone): (510) 842-9136
Laboratory Name: SEQUOIA Service Code: ZZ02970
Laboratory Service Order #: 9050840
Samples Collected by (Name): F. Cline
Collection Date: 5-31-98
Signature:

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: TPH Gas + BTEX w/MTBE (8020)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Nitrate & Sulfate & Phosphates	Ferrous Iron	Confirm MTBE by EPA 8260			Remarks
1 TB-43		2	W	TB	—	HCl	Y	X													MW-1 & MW-3 Confirm MTBE by EPA 8260
2 MW-8		5		G	1130	HCl+Na		X								X	X				
3 MW-6		5			1200			X								X	X				
4 MW-5		5			1215			X								X	X				
5 MW-7		5			1227			X								X	X				
6 MW-2		5			1246			X								X	X				
7 MW-4		5			1305			X								X	X				
8 MW-3		6			1223			X								X	X	X			
9 MW-1		6			1330		SI	X								X	X	X			

DO NOT BILL TB-LB ANALYSIS
9806033

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	6/2/98 1725		G-R Inc.	
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time

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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: TB-LB	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 06/08/98
	Analysis Method: 8015Mod/8020	Analyzed: 06/08/98
Attention: Deanna Harding	Lab Number: 9806033-01	Reported: 07/02/98

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	10	N.D.
Benzene	0.30	N.D.
Toluene	0.30	N.D.
Ethyl Benzene	0.30	N.D.
Xylenes (Total)	0.60	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	Q

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

SEQUOIA ANALYTICAL - ELAP #1197

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: MW-1	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 06/08/98
	Analysis Method: 8015Mod/8020	Analyzed: 06/08/98
Attention: Deanna Harding	Lab Number: 9806033-09	Reported: 07/02/98

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**25000**	**180000**
Methyl t-Butyl Ether	**150**	**19000**
Benzene	**150**	**25000**
Toluene	**150**	**25000**
Ethyl Benzene	**150**	**1700**
Xylenes (Total)	**300**	**9300**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	Q

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

SEQUOIA ANALYTICAL - ELAP #1197

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: MW-1	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: EPA 8260	Analyzed: 06/09/98
Attention: Deanna Harding	Lab Number: 9806033-09	Reported: 07/02/98

QC Batch Number: MS060898MTBEH6A
Instrument ID: H6

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	500	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	103

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: MW-2	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 06/08/98
	Analysis Method: 8015Mod/8020	Analyzed: 06/08/98
Attention: Deanna Harding	Lab Number: 9806033-06	Reported: 07/02/98

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	10	N.D.
Benzene	0.30	N.D.
Toluene	0.30	N.D.
Ethyl Benzene	0.30	N.D.
Xylenes (Total)	0.60	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	Q

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

SEQUOIA ANALYTICAL - ELAP #1197

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: MW-3	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 06/09/98
	Analysis Method: 8015Mod/8020	Analyzed: 06/09/98
Attention: Deanna Harding	Lab Number: 9806033-08	Reported: 07/02/98

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**25000**	**78000**
Methyl t-Butyl Ether	**1000**	**1300**
Benzene	**150**	**24000**
Toluene	**150**	**12000**
Ethyl Benzene	**150**	**1200**
Xylenes (Total)	**300**	**5800**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	Q

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

SEQUOIA ANALYTICAL - ELAP #1197

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: MW-3	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: EPA 8260	Analyzed: 06/09/98
Attention: Deanna Harding	Lab Number: 9806033-08	Reported: 07/02/98

QC Batch Number: MS060898MTBEH6A
Instrument ID: H6

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	500	N.D.

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	100

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
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Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: MW-4	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 06/09/98
	Analysis Method: 8015Mod/8020	Analyzed: 06/09/98
Attention: Deanna Harding	Lab Number: 9806033-07	Reported: 07/02/98

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**500**	**1000**
Methyl t-Butyl Ether	20	N.D.
Benzene	**3.0**	**450**
Toluene	**3.0**	**3.4**
Ethyl Benzene	**3.0**	**4.5**
Xylenes (Total)	6.0	N.D.
Chromatogram Pattern:		
Unidentified HC		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	Q

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

SEQUOIA ANALYTICAL - ELAP #1197

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: MW-5	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 06/08/98
	Analysis Method: 8015Mod/8020	Analyzed: 06/08/98
Attention: Deanna Harding	Lab Number: 9806033-04	Reported: 07/08/98

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	10	N.D.
Benzene	0.30	N.D.
Toluene	0.30	N.D.
Ethyl Benzene	0.30	N.D.
Xylenes (Total)	0.60	N.D.
Chromatogram Pattern.		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	Q

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

SEQUOIA ANALYTICAL - ELAP #1197

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: MW-5	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 06/08/98
	Analysis Method: 8015Mod/8020	Analyzed: 06/08/98
Attention: Deanna Harding	Lab Number: 9806033-04	Reported: 07/08/98

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	10	N.D.
Benzene	0.30	N.D.
Toluene	0.30	N.D.
Ethyl Benzene	0.30	N.D.
Xylenes (Total)	0.60	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	Q

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

SEQUOIA ANALYTICAL - ELAP #1197

Mike Gregory
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Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: MW-6	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 06/08/98
	Analysis Method: 8015Mod/8020	Analyzed: 06/08/98
Attention: Deanna Harding	Lab Number: 9806033-03	Reported: 07/02/98

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	10	N.D.
Benzene	**0.30**	**0.89**
Toluene	**0.30**	**0.65**
Ethyl Benzene	0.30	N.D.
Xylenes (Total)	0.60	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	Q

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

SEQUOIA ANALYTICAL - ELAP #1197

Mike Gregory
Project Manager

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: MW-7	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 06/08/98
	Analysis Method: 8015Mod/8020	Analyzed: 06/08/98
Attention: Deanna Harding	Lab Number: 9806033-05	Reported: 07/02/98

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	10	N.D.
Benzene	0.30	N.D.
Toluene	0.30	N.D.
Ethyl Benzene	0.30	N.D.
Xylenes (Total)	0.60	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	Q

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

SEQUOIA ANALYTICAL - ELAP #1197

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Sampled: 05/31/98
6747 Sierra Court Suite J	Sample Descript: MW-8	Received: 06/01/98
Dublin, CA 94568	Matrix: LIQUID	Extracted: 06/08/98
	Analysis Method: 8015Mod/8020	Analyzed: 06/08/98
Attention: Deanna Harding	Lab Number: 9806033-02	Reported: 07/02/98

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	10	N.D.
Benzene	0.30	N.D.
Toluene	0.30	N.D.
Ethyl Benzene	0.30	N.D.
Xylenes (Total)	0.60	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	Q

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

SEQUOIA ANALYTICAL - ELAP #1197

Mike Gregory
Project Manager

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Client Proj. ID: Chevron 9-7127
Lab Proj. ID: 9806033

Sampled: 05/31/98
Received: 06/01/98
Analyzed: see below

Attention: Deanna Harding

Reported: 07/02/98

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9806033-06				
Sample Desc : **LIQUID,MW-2**				
Ferrous Iron	**mg/L**	**06/09/98**	**0.010**	**0.11**
Nitrate as Nitrate	**mg/L**	**06/02/98**	**1.0**	**54**
Phosphate	mg/L	06/02/98	10	N.D.
Sulfate	**mg/L**	**06/02/98**	**1.0**	**57**
Lab No: 9806033-07				
Sample Desc : **LIQUID,MW-4**				
Ferrous Iron	**mg/L**	**06/09/98**	**0.010**	**7.4**
Nitrate as Nitrate	**mg/L**	**06/02/98**	**1.0**	**17**
Phosphate	mg/L	06/02/98	10	N.D.
Sulfate	**mg/L**	**06/02/98**	**1.0**	**30**
Lab No: 9806033-08				
Sample Desc : **LIQUID,MW-3**				
Ferrous Iron	**mg/L**	**06/09/98**	**0.010**	**3.1**
Nitrate as Nitrate	mg/L	06/02/98	1.0	N.D.
Phosphate	mg/L	06/02/98	10	N.D.
Sulfate	**mg/L**	**06/02/98**	**1.0**	**4.0**
Lab No: 9806033-09				
Sample Desc : **LIQUID,MW-1**				
Ferrous Iron	**mg/L**	**06/09/98**	**0.010**	**4.1**
Nitrate as Nitrate	mg/L	06/02/98	1.0	N.D.
Phosphate	mg/L	06/02/98	10	N.D.
Sulfate	**mg/L**	**06/02/98**	**1.0**	**4.0**

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Chevron 9-7127

Lab Proj. ID: 9806033

Sampled: 05/31/98
Received: 06/01/98
Analyzed: see below

Reported: 07/02/98

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9806033-02				
Sample Desc : **LIQUID,MW-8**				
Ferrous Iron	**mg/L**	**06/09/98**	**0.010**	**0.42**
Nitrate as Nitrate	**mg/L**	**06/02/98**	**1.0**	**35**
Phosphate	mg/L	06/02/98	10	N.D.
Sulfate	**mg/L**	**06/02/98**	**1.0**	**16**
Lab No: 9806033-03				
Sample Desc : **LIQUID,MW-6**				
Ferrous Iron	**mg/L**	**06/09/98**	**0.010**	**3.5**
Nitrate as Nitrate	**mg/L**	**06/02/98**	**1.0**	**68**
Phosphate	mg/L	06/02/98	10	N.D.
Sulfate	**mg/L**	**06/02/98**	**1.0**	**51**
Lab No: 9806033-04				
Sample Desc : **LIQUID,MW-5**				
Ferrous Iron	**mg/L**	**06/09/98**	**0.010**	**1.9**
Nitrate as Nitrate	**mg/L**	**06/02/98**	**1.0**	**33**
Phosphate	mg/L	06/02/98	10	N.D.
Sulfate	**mg/L**	**06/02/98**	**1.0**	**90**
Lab No: 9806033-05				
Sample Desc : **LIQUID,MW-7**				
Ferrous Iron	**mg/L**	**06/09/98**	**0.010**	**0.011**
Nitrate as Nitrate	**mg/L**	**06/02/98**	**1.0**	**45**
Phosphate	mg/L	06/02/98	10	N.D.
Sulfate	**mg/L**	**06/02/98**	**1.0**	**85**

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-7127	Received: 06/01/98
6747 Sierra Court Suite J		
Dublin, CA 94568	Lab Proj. ID: 9806033	Reported: 07/02/98
Attention: Deanna Harding		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 19 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SURROGATE USED FOR TPH-GAS/BTEX was 4-BROMOFLUOROBENZENE(4-BFB):
The surrogate recoveries with control limits 80-120 are as follows:

1) 92%
2) 84%
3) 85%
4) 82%
5) 89%
6) 92%
7) 102%
8) 91%
9) 84%

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Project ID:	Chevron 9-7127	
6747 Sierra Court, Ste J	Matrix:	Liquid	
Dublin, CA 94568			
Attention: Deanna Harding	Work Order #:	9806033 -01-09	Reported: Jul 1, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	HF07G11W	HF07G11W	HF07G11W	HF07G11W	HF07G11W
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 8015	EPA 8015	EPA 8015	EPA 8015	EPA 8015
Analyst:	R. McRae	R. McRae	R. McRae	R. McRae	R. McRae
MS/MSD #:	V8051007	V8051007	V8051007	V8051007	V8051007
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	4.3
Prepared Date:	6/7/98	6/7/98	6/7/98	6/7/98	6/7/98
Analyzed Date:	6/7/98	6/7/98	6/7/98	6/7/98	6/7/98
Instrument I.D.#:	-	-	-	-	-
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	220 µg/L
Result:	21	20	21	60	212
MS % Recovery:	105	100	105	100	94
Dup. Result:	22	20	21	61	205
MSD % Recov.:	110	100	105	102	91
RPD:	4.7	0.0	0.0	1.7	3.4
RPD Limit:	0-25	0-25	0-25	0-25	0-30

LCS #:					
Prepared Date:					
Analyzed Date:					
Instrument I.D.#:					
Conc. Spiked:					
LCS Result:					
LCS % Recov.:					

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL
Elap #1855

Mike Gregory
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

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Gettler Ryan/Geostrategies	Client Project ID:	Chevron 9-7127	
6747 Sierra Court, Ste J	Matrix:	Liquid	
Dublin, CA 94568			
Attention: Deanna Harding	Work Order #:	9806033-02-09	Reported: Jul 1, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0609986010MDA	ME0609986010MDA	ME0609986010MDA	ME0609986010MDA
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010
Analyst:	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
MS/MSD #:	980603309	980603309	980603309	980603309
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	6/9/98	6/9/98	6/9/98	6/9/98
Analyzed Date:	6/9/98	6/9/98	6/9/98	6/9/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.1	1.1	1.1	1.0
MS % Recovery:	110	110	110	100
Dup. Result:	1.1	1.0	1.0	1.0
MSD % Recov.:	110	100	100	100
RPD:	0.0	9.5	9.5	0.0
RPD Limit:	0-20	0-20	0-20	0-20
LCS #:	BLK060998	BLK060998	BLK060998	BLK060998
Prepared Date:	6/9/98	6/9/98	6/9/98	6/9/98
Analyzed Date:	6/9/98	6/9/98	6/9/98	6/9/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	0.99	0.98	0.99	0.99
LCS % Recov.:	99	98	99	99
MS/MSD Control Limits	80-120	80-120	80-120	80-120
LCS Control Limits	80-120	80-120	80-120	80-120

SEQUOIA ANALYTICAL

Mike Gregory
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

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies	Client Project ID:	Chevron 9-7127	
6747 Sierra Court, Ste J	Matrix:	Liquid	
Dublin, CA 94568			
Attention: Deanna Harding	Work Order #:	9806033-08, 09	Reported: Jul 1, 1998

QUALITY CONTROL DATA REPORT

Analyte:	MTBE
QC Batch#:	MS060898MTBEH6A
Analy. Method:	EPA 8260
Prep. Method:	N.A.
Analyst:	E. Manual
MS/MSD #:	980629002
Sample Conc.:	13
Prepared Date:	6/8/98
Analyzed Date:	6/8/98
Instrument I.D.#:	H6
Conc. Spiked:	50 µg/L
Result:	65
MS % Recovery:	104
Dup. Result:	64
MSD % Recov.:	102
RPD:	1.6
RPD Limit:	0-25

LCS #:	LCS060998
Prepared Date:	6/9/98
Analyzed Date:	6/9/98
Instrument I.D.#:	H6
Conc. Spiked:	50 µg/L
LCS Result:	57
LCS % Recov.:	114

MS/MSD	60-140
LCS	70-130
Control Limits	

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court, Suite J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Chevron 9-7127

QC Sample Group: 9806033-02-09

Reported: Jun 18, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid						
Method:	EPA 300.0						
Analyst:	G. Fish						
ANALYTE	Fluoride	Chloride	Nitrite	Bromide	Nitrate	Phosphate	Sulfate
QC Batch #:	0602983000ACB						
Sample No.:	9806028-3						
Date Prepared:	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98
Date Analyzed:	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98
Instrument I.D.#:	INAC1	INAC1	INAC1	INAC1	INAC1	INAC1	INAC1
Sample Conc., mg/L:	N.D.	7.1	N.D.	N.D.	N.D.	N.D.	8.9
Conc. Spiked, mg/L:	100	100	100	100	100	100	100
Matrix Spike, mg/L:	100	96	96	91	93	93	99
% Recovery:	100	89	96	91	93	93	90
Matrix Spike Duplicate, mg/L:	100	96	97	92	94	94	99
% Recovery:	100	89	97	92	94	94	90
Relative % Difference:	0.0	0.0	1.0	1.1	1.1	1.1	0.0
RPD Control Limits:							
LCS Batch#:	iN0602983000ACB						
Date Prepared:	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98
Date Analyzed:	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98	6/2/98
Instrument I.D.#:	INAC1	INAC1	INAC1	INAC1	INAC1	INAC1	INAC1
Conc. Spiked, mg/L:	10	10	10	10	10	10	10
LCS Recovery, mg/L:	10	9.1	9.7	9.0	9.2	9.2	9.0
LCS % Recovery:	100	91	97	90	92	92	90
Percent Recovery Control Limits:							
MS/MSD	75-125	75-125	75-125	75-125	75-125	75-125	75-125
LCS	90-110	90-110	90-110	90-110	90-110	90-110	90-110

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

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SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Project ID:	Chevron 9-7127	
6747 Sierra Court, Ste J	Matrix:	Liquid	
Dublin, CA 94568			
Attention: Deanna Harding	Work Order #:	9806033 -01-09	Reported: Jul 1, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	HF07G11W	HF07G11W	HF07G11W	HF07G11W	HF07G11W
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 8015	EPA 8015	EPA 8015	EPA 8015	EPA 8015
Analyst:	R. McRae	R. McRae	R. McRae	R. McRae	R. McRae
MS/MSD #:	V8051007	V8051007	V8051007	V8051007	V8051007
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	4.3
Prepared Date:	6/7/98	6/7/98	6/7/98	6/7/98	6/7/98
Analyzed Date:	6/7/98	6/7/98	6/7/98	6/7/98	6/7/98
Instrument I.D.#:	-	-	-	-	-
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	220 µg/L
Result:	21	20	21	60	212
MS % Recovery:	105	100	105	100	94
Dup. Result:	22	20	21	61	205
MSD % Recov.:	110	100	105	102	91
RPD:	4.7	0.0	0.0	1.7	3.4
RPD Limit:	0-25	0-25	0-25	0-25	0-30

LCS #:					
Prepared Date:					
Analyzed Date:					
Instrument I.D.#:					
Conc. Spiked:					
LCS Result:					
LCS % Recov.:					

MS/MSD	60-140	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130	70-130
Control Limits					

SEQUOIA ANALYTICAL
Elap #1855

Mike Gregory
Project Manager

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