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11:11 am, Jun 07, 2010

Alameda County
Environmental Health

**Aaron Costa** Project Manager Marketing Business Unit Chevron Environmental Management Company 6111 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 543-2961 Fax (925) 543-2324 acosta@chevron.com

December 10, 2008

Mr. Jeff Carson Oro Loma Sanitary District 2600 Grant Avenue San Lorenzo, California 94580

Subject: Former Chevron Service Station No. 9-0260

21995 Foothill Boulevard

Hayward, CA Permit No. 007-03

Dear Mr. Carson:

During the current reporting period, the groundwater treatment and extraction system at the site referenced above operated in compliance with the conditions specified in the Oro Loma Sanitary District Wastewater Discharge Permit No. 007-03.

I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Sincerely,

Aaron Costa Project Manager



5900 Hollis Street, Suite A Emeryville, California 94608 Telephone: (510) 420-0700

Telephone: (510) 420-0700 Fax: (510) 420-9170

http://www.craworld.com

December 10, 2008 Reference No. 311915

Mr. Jeff Carson Oro Loma Sanitary District 2600 Grant Avenue San Lorenzo, California 94580

Re: Monthly Discharge Report - November 2008 Former Chevron Service Station #9-0260 21995 Foothill Boulevard Hayward, California Permit No. 007-03

Dear Mr. Carson:

Conestoga-Rovers & Associates (CRA) prepared this document on behalf of Chevron Environmental Management Company (Chevron). This report was prepared in accordance with the requirements of the wastewater discharge permit. During the current reporting period, the remediation system at the subject site operated in compliance with the conditions specified in the wastewater discharge permit.

#### **SELF-MONITORING REPORT - NOVEMBER 2008**

#### **REPORTING PERIOD ACTIVITIES**

- CRA conducted routine operation and maintenance on October 30, November 4, November 14, November 21, and November 26, 2008.
- CRA conducted monthly compliance sampling on November 4, 2008.
- CRA prepared this document, which includes tabulated operational and sample analytical data (Tables 1, 2, and 3). Laboratory analytical reports are included as Attachment A.

Equal Employment Opportunity Employer



December 10, 2008 Reference No 311915

#### REPORTING PERIOD DATA SUMMARY (10/20/08 TO 11/26/08)

Compliance Sampling Frequency Monthly

Initial Totalizer Reading532,668 gallonsFinal Totalizer Reading619,510 gallonsDischarged Volume86,842 gallons

Average Discharge Flow Rate1.63 gallons per minuteMaximum Discharge Flow Rate2.19 gallons per minute

Discharge Violations or Exceedances None

If you have any questions regarding the contents of this document, please call Jeff Schrupp at (510) 420-3362 or Casey Sanders at (916) 677-3407, extension 118.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

**Casey Sanders** 

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CS/doh/4

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Table 1 Influent and Effluent Fuel Concentrations

Table 2 System Operational DataTable 3 Effluent Compliance Results

Attachment A Laboratory Analytical Reports

cc: Mr. Aaron Costa, Chevron Environmental Management Company

**TABLES** 

#### Table 1: Groundwater Extraction and Treatment System

Influent and Effluent Fuel Concentrations Former Chevron Station # 9-0260 21195 Foothill Boulevard, Hayward, California

			Ir	ıfluent					Mi	idfluent 1					Mi	dfluent 2						Effluent			
Sample	TPHg	Benzene <sup>2</sup>	Toluene	Ethylbenzene	Xylenes	MtBE <sup>4</sup>	TPHg	Benzene <sup>2</sup>	Toluene	Ethylbenzene	Xylenes	MtBE <sup>4</sup>	TPHg	Benzene <sup>2</sup>	Toluene	Ethylbenzene	Xylenes	MtBE <sup>4</sup>	TPHg	Benzene <sup>2</sup>	Toluene	Ethylbenzene	Xylenes	MtBE <sup>4</sup>	pH <sup>3</sup>
Date	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	Conc.	
(mm/dd/yy)	(μg/L)	(μg/L)	(µg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(μg/L)	(µg/L)	(μg/L)	(μg/L)	(μg/L)	(µg/L)	
06/25/07	34,000	2,000	6,400	1,300	6,100	92	NA	NA	NA	NA	NA	NA							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.17
07/17/07	42,000	1,700	1,700	1,400	6,400	57	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.1
07/26/07	57,000	1,800	7,200	1,600	7,000	51	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	NA
08/17/07	65,000	2,800	10,000	1,500	7,000	74	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.2
08/22/07	44,000	2,100	7,900	1,500	7,500	56	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.3
08/29/07	43,000	2,000	7,200	1,400	6,600	53	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	6.89
09/26/07	42,000	1,800	6,400	1,400	6,800	33	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	6.5
10/04/07	34,000	1,500	5,900	800	6,000	40	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.92
10/08/07	45,000	2,400	8,500	920	6,400	45	150	4.1	23	3	25	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.36
10/19/07	42,000	2,300	8,100	950	6,000	38	< 50	1.2	< 0.5	< 0.5	< 1.5	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.3
10/25/07	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS							NS	NS	NS	NS	NS	NS	7.3
12/05/07	46,000	2,400	7,500	920	4,800	42	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	NS
12/06/07	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS							NS	NS	NS	NS	NS	NS	7.5
12/18/07	31,000	1,800	5,100	900	4,400	37	< 50	0.9	3.3	0.6	2.6	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.8
01/03/08	41,000	2,400	8,200	1,200	6,800	35	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.03
01/18/08	36,000	1,000	5,100	700	5,300	35	< 50	< 0.5	< 0.5	< 0.5	< 1.5	0.5							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.8
02/07/08	65,000	2,400	9,500	1,000	7,200	21	< 720	< 29.0	110	3.9	95	< 2.0							< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	6.65
02/14/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS							NS	NS	NS	NS	NS	NS	6.72
03/05/08	40,000	2,100	8,500	1,200	6,700	28	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5							< 50	< 0.5	0.7	< 0.5	< 1.5	< 0.5	8.3
03/13/08	37,000	1,700	7,200	820	5,700	37	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5			Carbon ves	sel added 07/22/08			120	2.2	17	1.2	23	< 0.5	NS
8/1/20085	41,000	1,500	7,400	990	4,300	36	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.25
08/08/08	40,000	1,900	6,900	990	5,400	35	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.01
09/03/08	31,000	970	4,900	800	4,600	33	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.41
09/17/08	32,000	1,300	7,300	710	5,400	22	< 50	< 0.5	< 0.5	< 0.5	< 1.5	0.80	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.47
10/01/08	26,000	980	5,400	350	4,200	28	< 50	< 0.5	< 0.5	< 0.5	< 1.5	0.80	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	6.73
10/16/08	27,000	1,100	6,600	750	4,600	34	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	NS
11/04/08	25,000	670	4,700	320	3,800	24	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.42
11/21/08	87,000	2,700	18,000	1,100	11,000	30	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	6.69
Regulatory Limits (ug/L):																			15,000	ND	ND	ND	ND		5.5-12.5

#### Abbreviations:

Conc. = concentration

 $\mu g/L$  = micrograms per liter

NA = not analyzed

NS = not sampled

TPHg = total petroleum hydrocarbons quantified as gasoline (by EPA Method 8015B)

MtBE = methyl tert-butyl ether (by EPA Method 8260B)

L = liter

 $\mu g/L$  = micrograms per liter

#### Notes:

- 1. = analyzed by EPA Method 8015B
- 2. = analyzed by EPA Method 8020
- 3. = pH readings were obtained onsite by utilizing a portable multimeter
- 4. = analyzed by EPA Method 8260B
- 5. = groundwater was pumped into a vacuum truck. No water was discharged to the sewer.

#### Table 2: Groundwater Extraction and Treatment System

Operational Data Former Chevron Station # 9-0260 21195 Foothill Boulevard, Hayward, California

Date								TPHg			Kenzene			MTBE		4
	Hour	System	Flow Meter	Period	Period Operationa	l Cumulative	ТРНд	Period	Cumulative	Benzene	Benzene Period	Cumulative	MTBE	Period	Cumulative	4 /
Dute	Meter	Uptime	Reading	Volume	Flow Rate	Volume Discharged	Concentration	Removal	Removal	Concentration	Removal	Removal	Concentration	Removal	Removal	Notes
(mm/dd/yy)	(hours)	(percentage)	(gal)	(gal)	(gpm)	(gal)	(μg/L)	(pounds)	(pounds)	(μg/L)	(pounds)	(pounds)	(μg/L)	(pounds)	(pounds)	
06/25/07	NA	NA NA	211	0	0.00	(5)	34,000	0.0	0.0	2,000	0.00	0.00	92	0.00	0.00	
07/16/07	NA	NA	211	0	0.00	0	,,,,,,,	0.0	0.0	,,,,,,	0.00	0.00	·	0.00	0.00	+
07/17/07	NA	NA	7,524	7,313	4.51	7,313	42,000	2.6	2.6	1,700	0.10	0.10	57	0.00	0.00	3
07/26/07	NA	NA	9,422	1,898	1.17	9,211	57,000	0.9	3.5	1,800	0.03	0.13	51	0.00	0.00	
08/03/07	NA	NA	10,947	1,525	0.13	10,736		0.7	4.2		0.02	0.16		0.00	0.00	
08/16/07	NA	NA	12,100	1,153	0.06	11,889	<b>45.000</b>	0.6	4.8	• • • • • • • • • • • • • • • • • • • •	0.03	0.18		0.00	0.01	
08/17/07	NA	NA NA	15,500	3,400	2.36	15,289	65,000	1.8	6.7	2,800	0.08	0.26	74	0.00	0.01	
08/22/07 08/24/07	NA NA	NA NA	18,700 22,800	3,200 4,100	0.44 1.42	18,489 22,589	44,000	1.2 1.5	7.8 9.3	2,100	0.06 0.07	0.32 0.39	56	0.00 0.00	0.01 0.01	<u> </u>
08/29/07	NA NA	NA NA	24,810	2,010	0.28	24,599	43,000	0.7	10.1	2,000	0.07	0.39	53	0.00	0.01	+
09/18/07	NA	NA NA	26,700	1,890	0.07	26,489	40,000	0.7	10.7	2,000	0.03	0.45	55	0.00	0.01	+
09/21/07	NA	NA	29,900	3,200	0.74	29,689		1.1	11.8		0.05	0.50		0.00	0.01	
09/26/07	NA	NA	39,700	9,800	1.36	39,489	42,000	3.4	15.3	1,800	0.15	0.65	33	0.00	0.02	
09/27/07	NA	NA	44,300	4,600	3.19	44,089		1.6	16.9		0.07	0.72		0.00	0.02	
10/04/07	NA	NA	65,765	21,465	2.13	65,554	34,000	6.1	23.0	1,500	0.27	0.98	40	0.01	0.02	
10/08/07	NA	NA	73,526	7,761	1.35	73,315	45,000	2.9	25.9	2,400	0.16	1.14	45	0.00	0.03	
10/19/07	NA	NA NA	97,500	23,974	1.51	97,289	42,000	8.4	34.3	2,300	0.46	1.60	38	0.01	0.04	
10/25/07 12/05/07	NA 2.0	NA NA	117,400 119,284	19,900 1,884	2.30 0.03	117,189 119,073	46,000	7.0 0.7	41.3 42.0	2.400	0.38 0.04	1.98 2.02	42	0.01 0.00	0.04 0.04	2
12/05/07	22.3	84.6%	121,500	2,216	1.54	121,289	40,000	0.7	42.0	∠/ <del>1</del> UU	0.04	2.02	+4	0.00	0.04	1
12/11/07	141.8	99.6%	134,679	13,179	1.83	134,468		5.1	47.9		0.26	2.33		0.00	0.05	
12/18/07	304.9	97.1%	149,033	14,355	1.42	148,822	31,000	3.7	51.6	1,800	0.22	2.54	37	0.00	0.05	+
12/27/07	518.7	99.0%	170,809	21,776	1.68	170,598	,	5.6	57.3	,	0.33	2.87		0.01	0.06	+
01/02/08	648.5	90.1%	183,000	12,191	1.41	182,789		4.2	61.4		0.24	3.11		0.00	0.06	+
01/03/08	666.7	75.8%	185,361	2,361	1.64	185,150	41,000	0.8	62.2	2,400	0.05	3.16	35	0.00	0.06	
01/10/08	690.4	14.1%	189,800	4,439	0.44	189,589		1.5	63.7		0.09	3.25		0.00	0.06	
01/11/08	718.3	100.0%	197,700	7,900	5.49	197,489	2 ( 000	2.7	66.5	1.000	0.16	3.41	25	0.00	0.07	
01/18/08	882.8	97.9%	233,945	36,245	3.60	233,734	36,000	10.9	77.3	1,000	0.30	3.71	35	0.01	0.08	
01/23/08 01/30/08	1004.7 1061.7	100.0% 62.1%	254,185 268,200	20,240 14,015	2.81 1.39	253,974 267,989		6.1 4.2	83.4 87.6		0.17 0.12	3.88 4.00		0.01 0.00	0.08 0.09	<u> </u>
02/07/08	1233.7	89.6%	312,800	44,600	3.87	312,589	65,000	24.2	111.8	2,400	0.12	4.89	21	0.00	0.09	<del> </del>
02/14/08	1399.6	98.7%	341,772	28,972	2.87	341,561	00,000	15.7	127.5	2,400	0.58	5.47	21	0.01	0.10	2
02/26/08	1427.7	9.8%	346,091	4,319	0.25	345,880		2.3	129.9		0.09	5.56		0.00	0.10	4
03/04/08	1428.2	0.3%	346,400	309	0.03	346,189		0.2	130.0		0.01	5.56		0.00	0.10	+
03/05/08	1,428.2	0.0%	346,400	0	0.00	346,189	40,000	0.0	130.0	2,100	0.00	5.56	28	0.00	0.10	
03/13/08	1,617.8	98.7%	379,835	33,435	2.90	379,624	37,000	10.3	140.4	1,700	0.47	6.04	37	0.01	0.11	
08/01/08	1,617.8	0.0%	379,835	1,000	0.00	379,624	41,000	0.3	140.7	1,500	0.01	6.05	36	0.00	0.11	5
08/08/08	1,623.1	3.2%	380,302	467	0.05	380,091	40,000	0.2	140.9	1,900	0.01	6.06	35	0.00	0.11	<b></b> '
08/14/08 08/22/08	1,734.0 1,928.0	77.0% 101.0%	393,425 411,400	13,123 17,975	1.52 1.56	393,214 411,189		4.4 6.0	145.2 151.2		0.21 0.28	6.27 6.55		0.00 0.01	0.12 0.12	+
						· · · · · · · · · · · · · · · · · · ·										+
08/26/08	2,052.0	129.2%	421,400	10,000	1.74	421,189		3.3	154.6		0.16	6.71		0.00	0.12	<b></b> '
08/29/08	2,095.7	60.7%	425,300	3,900	0.90	425,089		1.3	155.9		0.06	6.77		0.00	0.12	<b></b> '
09/03/08	2,218.9	102.7%	436,999	11,699	1.02	436,788	31,000	3.0	158.9	970	0.09	6.87	33	0.00	0.13	<u> </u>
09/10/08	2,384.8	98.8%	453,500	16,501	1.64	453,289		4.3	163.2		0.13	7.00		0.00	0.13	
09/11/08	2,406.8	91.7%	456,388	2,888	2.01	456,177		0.7	163.9		0.02	7.02		0.00	0.13	
09/17/08	2,555.1	103.0%	472,712	16,324	1.89	472,501	32,000	4.2	168.1	1,300	0.13	7.15	22	0.00	0.14	
09/22/08	2,674.4	99.4%	484,718	12,006	1.67	484,507	,	3.1	171.3	,	0.10	7.25		0.00	0.14	<del>                                     </del>
09/25/08	2,743.4	95.8%	491,450	6,732	1.56	491,239		1.7	173.0		0.05	7.31		0.00	0.14	+
				· ·			26,000			000			20			+
10/01/08	2,880.0	94.9%	504,825	13,375	1.55	504,614	26,000	2.9	175.9	980	0.11	7.42	28	0.00	0.15	
10/07/08	3,030.7	104.7%	504,826	1	0.00	504,615		0.0	175.9		0.00	7.42		0.00	0.15	<b></b> '
10/14/08	3,203.0	102.6%	521,800	16,974	1.68	521,589		3.7	179.6		0.14	7.55		0.00	0.15	<u> </u>

#### Table 2: Groundwater Extraction and Treatment System

Operational Data Former Chevron Station # 9-0260 21195 Foothill Boulevard, Hayward, California

10/16/08	3,249.5	96.9%	525,436	3,636	1.26	525,225	27,000	0.8	180.4	1,100	0.03	7.59	34	0.00	0.15	
10/20/08	3,342.5	96.9%	532,668	7,232	1.26	532,457		1.6	182.0		0.07	7.65		0.00	0.15	
10/30/08	3,587.3	102.0%	551,119	18,451	1.28	550,908		4.2	186.2		0.17	7.82		0.01	0.16	
11/04/08	3,710.8	102.9%	566,883	15,764	2.19	566,672	25,000	3.3	189.5	670	0.09	7.91	24.0	0.00	0.16	
11/14/08	3,928.6	90.7%	591,371	24,488	1.70	591,160		5.1	194.6		0.14	8.05		0.00	0.17	
11/21/08	4,100.2	102.1%	609,095	17,724	1.76	608,884	87,000	12.9	207.4	2,700	0.40	8.45	30.0	0.00	0.17	
11/26/08	4,215.2	95.8%	619,510	10,415	1.45	619,299		7.6	215.0		0.23	8.68		0.00	0.17	
	Year to Date Uptime	45.2%		Total Extr	acted Volume (gal):	619,299	Pounds Removed:		215.0	Pounds Removed:		8.68	Pounds Removed:		0.17	
	Month to Date Uptime	96.9%		Average Operation	al Flow Rate (gpm):	0.83	Gallons Removed:		35.3	Gallons Removed:		1.18	Gallons Removed:		0.03	

#### Notes:

- 1. = Hour Meter installed beginning at zero.
- 2. = system shutdown for carbon change out.
- 3. = BISCO unit was reset to zero hours following replacement of PLC
- 4. = system restarted for collecting compliance vapor samples. Upon collection of vapor samples, system was turned off pending carbon changeout.
- 5. = approximately 1,000 gallons of water pumped on 8/1/08 was not discharged to the sewer. Water was hauled offsite by IWM. System
- 6. = System started for full time operation.

#### Formulas and Assumptions:

- $1. \ Mass \ Removed \ During \ the \ Period = Volume \ of \ Water \ Extracted \ (in gallons) \ x \ Concentration \ (ug/L) \ x \ (g/10^6 ug) \ x \ (pound/453.6g) \ x \ (3.785 \ L/gallons) \ x \ (pound/453.6g) \ x \ (po$ When concentration of individual parameters were not detected, the concentration was assumed to half the detection limit for calculation purposes.
- 2. Gallons Removed = Mass (pounds) x (Density)  $(cc/g) \times 453.6$  (g/pound) x (L/1000 cc) x (gal/3.785 L)

Density:

TPHg = 0.73 g/ccBenzene = 0.88 g/cc

MTBE = 0.74 g/cc

3. Average Flow Rate = (Gallons of Extracted Water (gal) / Number of Operational Days) \* (60 min/hr) \* (24 hours/day)

#### Abbreviations:

TPHg = total petroleum hydrocarbons quantified as gasoline (by EPA Method 8015B)

BTEX = benzene, toluene, ethylbenzene, and total xylenes (by EPA Method 8020)

MTBE = methyl tert-butyl ether (by EPA Method 8260B)

L = liter

μg/L = micrograms per liter

gal = gallon

gpm = gallon per minute

lbs = pounds mg #NAME?

g = grams

Blank Cell = indicates not sampled

#### Table 3: Groundwater Extraction and Treatment System

Effluent Compliance Results Former Chevron Station # 9-0260 21195 Foothill Boulevard, Hayward, California

Sampling			Conc	entrations				
Date	TPHg <sup>1</sup>	Benzene <sup>2</sup>	Toluene <sup>2</sup>	Ethlybenzene <sup>2</sup>	Xylenes <sup>2</sup>	MTBE <sup>4</sup>	pH <sup>3</sup>	Notes
(mm/dd/yy)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)	(μg/L)		
06/25/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.17	
07/17/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.1	
07/26/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	NA	
08/17/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.2	
08/22/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.3	
08/29/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	6.89	
09/26/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	6.5	
10/04/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.92	
10/08/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.36	
10/19/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.3	
10/25/07	NS	NS	NS	NS	NS	NS	7.3	
12/05/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	NA	
12/06/07	NS	NS	NS	NS	NS	NS	7.5	
12/18/07	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.8	
01/03/08	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.03	
01/18/08	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.8	
02/07/08	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	6.65	
02/14/08	NS	NS	NS	NS	NS	NS	6.72	
03/05/08	< 50	< 0.5	0.7	< 0.5	< 1.5	< 0.5	8.3	5
03/13/08	120	2.2	17	1.2	23	< 0.5	NA	6
08/01/08	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.25	7
08/08/08	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.01	
09/03/08	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.41	
09/17/08	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.47	
10/01/08	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	6.73	
10/16/08	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	NA	
11/04/08	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	7.42	
11/21/08	< 50	< 0.5	< 0.5	< 0.5	< 1.5	< 0.5	6.69	
Regulatory Limits (ug/L)	15,000	ND	ND	ND	ND		5.5 <l<12.5< th=""><th></th></l<12.5<>	

Abbreviations & Notes:

- 1. = analyzed by EPA Method 8015B
- 2. = analyzed by EPA Method 8020
- 3. = pH readings were obtained onsite by utilizing a portable multimeter
- 4. = analyzed by EPA Method 8260B
- 5. = Effluent Permit Dicharge Limitation of non detect was exeeded. The system was shut down the day the resuts were obtained (3/13/08), confirmation samples were collected and the OLSD was notified persuant to the discharge permit. No violation was issued by the OLSD
- 6. =Confirmation samples results collected prior to system shut down persuant to results of samples collected on 3/5/08. System was shut down pending results and a carbon change out/installation of additional carbon vessel were arranged in series. The results were forwarded to the OLSD persuant to permit requirements and no associated fines were assessed due to the analytical results.
- 7. = Groundwater was pumped into a vacuum truck. No water was discharged to the sewer pending recipt of analytical results.
- $\mu g/L$  = micrograms per liter
- NA = not analyzed
- ND = non detect
- $\boldsymbol{<}$  = not detected at or above laboratory reporting limit indicated
- TPHg = total petroleum hydrocarbons quantified as gasoline
- $\label{eq:BTEX} \textit{BTEX} \textit{ = } \textit{benzene, toluene, ethylbenzene, and total } \textit{xylenes}$
- MTBE = methyl tertiary butyl ether
- OLSD = Oro Loma Sanitation District

# ATTACHMENT A LABORATORY ANALYTICAL REPORTS



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#### ANALYTICAL RESULTS

Prepared for:

ChevronTexaco 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

925-842-8582

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

#### **SAMPLE GROUP**

The sample group for this submittal is 1118689. Samples arrived at the laboratory on Thursday, November 06, 2008. The PO# for this group is 0015025028 and the release number is COSTA.

Client Description	Lancaster Labs Number
INF-W-081104 Grab Water	5520083
MID-1-W-081104 Grab Water	5520084
MID-2-W-081104 Grab Water	5520085
EFF-W-081104 Grab Water	5520086

ELECTRONIC COPY TO	CRA	Attn: Charlotte Evans
ELECTRONIC COPY TO	Chevron	Attn: CRA EDD
ELECTRONIC	Chevron	Attn: C Sanders
COPY TO ELECTRONIC	CRA	Attn: Jeff Schrupp
COPY TO		



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Questions? Contact your Client Services Representative Angela M Miller at (717) 656-2300

Respectfully Submitted,

Sarah Snyder Specialist



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Lancaster Laboratories Sample No. WW5520083

Group No. 1118689

Account Number: 10880

INF-W-081104 Grab Water Facility# 90260 CRAW

**21995 Foothill-Hayward T0600100315 INF** Collected:11/04/2008 17:43 by RM

Submitted: 11/06/2008 10:00 ChevronTexaco

Reported: 11/13/2008 at 11:22 6001 Bollinger Canyon Rd L4310

Discard: 12/14/2008 San Ramon CA 94583

#### HAYIN

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	25,000	1,000	ug/l	20
05879	BTEX					
02161	Benzene	71-43-2	670	10	ug/l	20
02164	Toluene	108-88-3	4,700	10	ug/l	20
02166	Ethylbenzene	100-41-4	320	10	ug/l	20
02171	Total Xylenes	1330-20-7	3,800	30	ug/l	20
02309	MTBE by GC/MS (water)					
02010	Methyl Tertiary Butyl Ether The reporting limits for the GC the level of non-target compound	/MS volatile co	24 ompounds were rai	3 sed due to	ug/l	5

State of California Lab Certification No. 2116
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT		1		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01729	TPH-GRO - Waters	TPH GRO SW-846 8015B mod	1	11/12/2008 10:00	Martha L Seidel	20
05879	BTEX	SW-846 8020A	1	11/12/2008 10:00	Martha L Seidel	20
02309	MTBE by GC/MS (water)	SW-846 8260B	1	11/10/2008 15:38	Ginelle L Feister	5
01146	GC VOA Water Prep	SW-846 5030B	1	11/12/2008 10:00	Martha L Seidel	20
01163	CC/MS VOA Water Dren	SW-846 5030B	1	11/10/2008 15.38	Ginelle I. Feigter	5



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Lancaster Laboratories Sample No. WW5520084

Group No. 1118689

MID-1-W-081104 Grab Water Facility# 90260 CRAW

21995 Foothill-Hayward T0600100315 MID-1

Collected:11/04/2008 17:39 by RM

Submitted: 11/06/2008 10:00

Reported: 11/13/2008 at 11:22

Discard: 12/14/2008

Account Number: 10880

ChevronTexaco

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

#### HAYM1

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	N.D.	50	ug/l	1
05879	BTEX					
02161	Benzene	71-43-2	N.D.	0.5	ug/l	1
02164	Toluene	108-88-3	N.D.	0.5	ug/l	1
02166	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
02171	Total Xylenes	1330-20-7	N.D.	1.5	ug/l	1
02309	MTBE by GC/MS (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT		_		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01729	TPH-GRO - Waters	TPH GRO SW-846 8015B mod	1	11/12/2008 06:53	Martha L Seidel	1
05879	BTEX	SW-846 8020A	1	11/12/2008 06:53	Martha L Seidel	1
02309	MTBE by GC/MS (water)	SW-846 8260B	1	11/10/2008 16:03	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/12/2008 06:53	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/10/2008 16:03	Ginelle L Feister	1



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Lancaster Laboratories Sample No. WW5520085

Group No. 1118689

Account Number: 10880

MID-2-W-081104 Grab Water Facility# 90260 CRAW

21995 Foothill-Hayward T0600100315 MID-2

Collected:11/04/2008 17:35

Submitted: 11/06/2008 10:00

ChevronTexaco

Reported: 11/13/2008 at 11:22 6001 Bollinger Canyon Rd L4310

Discard: 12/14/2008 San Ramon CA 94583

#### HAYM2

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	N.D.	50	ug/l	1
05879	BTEX					
02161	Benzene	71-43-2	N.D.	0.5	ug/l	1
02164	Toluene	108-88-3	N.D.	0.5	ug/l	1
02166	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
02171	Total Xylenes	1330-20-7	N.D.	1.5	ug/l	1
02309	MTBE by GC/MS (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116 Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT		_		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01729	TPH-GRO - Waters	TPH GRO SW-846 8015B mod	1	11/12/2008 07:16	Martha L Seidel	1
05879	BTEX	SW-846 8020A	1	11/12/2008 07:16	Martha L Seidel	1
02309	MTBE by GC/MS (water)	SW-846 8260B	1	11/10/2008 16:28	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/12/2008 07:16	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/10/2008 16:28	Ginelle L Feister	1



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Lancaster Laboratories Sample No. WW5520086

Group No. 1118689

EFF-W-081104 Grab Water Facility# 90260 CRAW

21995 Foothill-Hayward T0600100315 EFF

Collected:11/04/2008 17:31 by RM

Submitted: 11/06/2008 10:00

Reported: 11/13/2008 at 11:22

Discard: 12/14/2008

ChevronTexaco

Account Number: 10880

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

#### HAYEF

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01729	TPH-GRO - Waters					
01730	TPH-GRO - Waters	n.a.	N.D.	50	ug/l	1
05879	BTEX					
02161	Benzene	71-43-2	N.D.	0.5	ug/l	1
02164	Toluene	108-88-3	N.D.	0.5	ug/l	1
02166	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
02171	Total Xylenes	1330-20-7	N.D.	1.5	ug/l	1
02309	MTBE by GC/MS (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT				Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01729	TPH-GRO - Waters	TPH GRO SW-846 8015B mod	1	11/12/2008 07:39	Martha L Seidel	1
05879	BTEX	SW-846 8020A	1	11/12/2008 07:39	Martha L Seidel	1
02309	MTBE by GC/MS (water)	SW-846 8260B	1	11/10/2008 16:52	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/12/2008 07:39	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/10/2008 16:52	Ginelle L Feister	1



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#### Quality Control Summary

Client Name: ChevronTexaco Group Number: 1118689

Reported: 11/13/08 at 11:22 AM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the

#### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: 08316A54A	Sample n	umber(s):	5520083-55	20086				
TPH-GRO - Waters	N.D.	50.	ug/l	127	110	75-135	14	30
Benzene	N.D.	0.5	ug/l	113	118	86-119	5	30
Toluene	N.D.	0.5	ug/l	112	116	82-119	4	30
Ethylbenzene	N.D.	0.5	ug/l	111	115	81-119	3	30
Total Xylenes	N.D.	1.5	ug/l	114	117	82-120	3	30
Batch number: Z083152AA	Sample n	umber(s):	5520083-55	20086				
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	104		73-119		

#### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD %REC	MS/MSD <u>Limits</u>	RPD	MAX	Conc	Conc	RPD	Max
Batch number: 08316A54A TPH-GRO - Waters Benzene Toluene Ethylbenzene Total Xylenes	Sample r. 142 113 113 112 114	number(s)	: 5520083 63-154 78-131 78-129 75-133 84-131	-552008	6 UNSPI	K: P518545,	P518546		
Batch number: Z083152AA Methyl Tertiary Butyl Ether	Sample r	number(s) 110	: 5520083 69-127	-552008 2	6 UNSPI 30	K: P515618			

#### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TPH-GRO - Waters

Batch number: 08316A54A

	Trifluorotoluene-F	Trifluorotoluene-P
5520083	110	105
5520084	108	107
5520085	117	107
5520086	113	107
Blank	113	106

#### \*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



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#### Quality Control Summary

Client Name: ChevronTexaco Group Number: 1118689

Reported: 11/13/08 at 11:22 AM

#### Surrogate Quality Control

LCS 106 116 LCSD 126 108 MS116 106

63-135 69-129

Analysis Name: MTBE by GC/MS (water) Batch number: Z083152AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5520083	87	85	93	84
5520084	90	87	90	82
5520085	93	90	90	82
5520086	91	89	90	83
Blank	88	87	93	82
LCS	90	87	90	89
MS	87	87	91	87
MSD	90	87	90	88
Limits:	80-116	77-113	80-113	78-113

<sup>\*-</sup> Outside of specification

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.

# Chevron California Region Analysis Request/Chain of Custody

	Analyses Re	equested	scr#:  Preservative Codes  H = HCl T = Thiosulfate
	2	on Codes	-
	.   . .=.		$N = HO_3$ $B = NaOH$ $S = H_2SO_4$ $O = Other$
BTEX by 8020 TPHg by 8015 Cyanide (EPA 335.4)	pH (EPA 150.1) 13 Prointly Pollurant Metals (EPA 200) (An, Ar, Be, Ca, Ch, Cu, Pb, M, Ni, Se, Si, T Total Phenols (EPA 420.1)	by 8260B	☐ Must meet lowest detection limits possible for 8260 compounds Comments / Remarks Email results to:  jschrupp@craworld.com and cevans@craworld.com csanders@craworld.com
BTEX to TPHg Cyanide	OH (EP/ 13 Proir An, Ar, E	MTBE by	email edf to: chevronedf@craworld.com
X X X X X X X X X X X X X X X X X X X		X X X X	VOAs with HCl VOAS with HCl VOAS with HCl VOAs with HCl
DE 11/61 11/5/ DE	Date Time  5/08 1556  Date Time	Received by: Secure Location Received by: Co. Salvy Received by: DHR	Date Time 1418 900  Date Time 1554  Date Time 1554  Date Time
-	X X X X X X X X X X X X X X X X X X X	Date Time    Soc   1556   Date   Time	Date Time Received by:    Date   Time   Received by:

#### **Lancaster Laboratories Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
С	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	I	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml

- less than The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than
- parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. ppm For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.
- parts per billion dqq
- Dry weight Results printed under this heading have been adjusted for moisture content. This increases the analyte weight basis concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Α

В

С

D

Ε

J

Ν

Ρ

Organi	กเลา	ifiore
Organi	luai	111612

TIC is a possible aldol-condensation product Analyte was also detected in the blank	B E	Value is <crdl, but="" due="" estimated="" interference<="" th="" to="" ≥idl=""></crdl,>
Pesticide result confirmed by GC/MS	М	Duplicate injection precision not met
Compound quatitated on a diluted sample	N	Spike amount not within control limits
Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
the instrument		for calculation
Estimated value	U	Compound was not detected
Presumptive evidence of a compound (TICs only)	W	Post digestion spike out of control limits
Concentration difference between primary and	*	Duplicate analysis not within control limits

Correlation coefficient for MSA < 0.995

**Inorganic Qualifiers** 

U Compound was not detected

confirmation columns >25%

X,Y,ZDefined in case narrative

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have guestions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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#### ANALYTICAL RESULTS

Prepared for:

ChevronTexaco 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

925-842-8582

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

#### **SAMPLE GROUP**

The sample group for this submittal is 1121527. Samples arrived at the laboratory on Saturday, November 22, 2008. The PO# for this group is 0015025028 and the release number is COSTA.

Client DescriptionLancaster Labs NumberMID-2-W-081121 Grab Water5538546EFF-W-081121 Grab Water5538547

ELECTRONIC CRA Attn: Charlotte Evans COPY TO

ELECTRONIC Chevron Attn: CRA EDD COPY TO

ELECTRONIC CRA Attn: Jeff Schrupp COPY TO

ELECTRONIC Chevron Attn: C Sanders COPY TO



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Questions? Contact your Client Services Representative Angela M Miller at (717) 656-2300

Respectfully Submitted,

Janifa Elfers Jenifer E. Hess

Manager



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Page 1 of 1

Lancaster Laboratories Sample No. WW5538546

Group No. 1121527

Account Number: 10880

MID-2-W-081121 Grab Water Facility# 90260 CRAW

21995 Foothill-Hayward T0600100315 MID-2

Collected:11/21/2008 08:25 by MJ

Submitted: 11/22/2008 10:20

Reported: 12/03/2008 at 14:10

Discard: 01/03/2009

ChevronTexaco

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Na Possivod

MD2--

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01729	TPH-GRO N. CA water C6-C12					
01730	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	ug/l	1
05879	BTEX					
02161	Benzene	71-43-2	N.D.	0.5	ug/l	1
02164	Toluene	108-88-3	N.D.	0.5	ug/l	1
02166	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
02171	Total Xylenes	1330-20-7	N.D.	1.5	ug/l	1
	Benzene is outside the in-house	statistical Q	C limit at 85% (8	6-119) for the LCS	١.	
	The recovery is high enough to recovery is within the QC limits		rse effect on the	data. The LCSD		
02309	MTBE by GC/MS (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116 Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT		-		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01729	TPH-GRO N. CA water C6-C12	TPH GRO SW-846 8015B mod	1	12/01/2008 18:03	Carrie E Youtzy	1
05879	BTEX	SW-846 8020A	1	12/01/2008 12:50	Carrie E Youtzy	1
02309	MTBE by GC/MS (water)	SW-846 8260B	1	12/02/2008 18:19	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/01/2008 18:03	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/02/2008 18:19	Ginelle L Feister	1



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Page 1 of 1

Lancaster Laboratories Sample No. WW5538547

Group No. 1121527

Account Number: 10880

EFF-W-081121 Grab Water Facility# 90260 CRAW

21995 Foothill-Hayward T0600100315 EFF

Collected:11/21/2008 08:20

Submitted: 11/22/2008 10:20

ChevronTexaco Reported: 12/03/2008 at 14:10 6001 Bollinger Canyon Rd L4310

Discard: 01/03/2009 San Ramon CA 94583

EFFHY

				As Received				
CAT			As Received	Method		Dilution		
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor		
01729	TPH-GRO N. CA water C6-C12							
01730	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	ug/l	1		
05879	BTEX							
02161	Benzene	71-43-2	N.D.	0.5	ug/l	1		
02164	Toluene	108-88-3	N.D.	0.5	ug/l	1		
02166	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1		
02171	Total Xylenes	1330-20-7	N.D.	1.5	ug/l	1		
	Benzene is outside the in-house				3.			
	The recovery is high enough to ensure no adverse effect on the data. The LCSD recovery is within the QC limits.							
02309	MTBE by GC/MS (water)							
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1		

State of California Lab Certification No. 2116 Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT				Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01729	TPH-GRO N. CA water C6-C12	TPH GRO SW-846 8015B mod	1	12/01/2008 18:30	Carrie E Youtzy	1
05879	BTEX	SW-846 8020A	1	12/01/2008 13:18	Carrie E Youtzy	1
02309	MTBE by GC/MS (water)	SW-846 8260B	1	12/02/2008 18:10	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/01/2008 18:30	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	12/02/2008 18:10	Ginelle L Feister	1



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Page 1 of 2

#### Quality Control Summary

Client Name: ChevronTexaco Group Number: 1121527

Reported: 12/03/08 at 02:10 PM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the

#### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS %REC	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: 08331A15B Benzene Toluene Ethylbenzene Total Xylenes	Sample num N.D. N.D. N.D. N.D.	nber(s): ! 0.5 0.5 0.5 1.5	5538546-553 ug/l ug/l ug/l ug/l	38547 85* 85 85 85	100 100 100 100	86-119 82-119 81-119 82-120	16 16 16 14	3 0 3 0 3 0 3 0
Batch number: 08336A53A TPH-GRO N. CA water C6-C12	Sample num	mber(s): ! 50.	5538546-553 ug/l	38547 116	128	75-135	10	30
Batch number: D083372AA Methyl Tertiary Butyl Ether	Sample num	mber(s): ! 0.5	5538546 ug/l	97		73-119		
Batch number: Z083372AA Methyl Tertiary Butyl Ether	Sample num	mber(s): ! 0.5	5538547 ug/l	107		73-119		

#### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD <u>Limits</u>	RPD	RPD <u>MAX</u>	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 08331A15B Benzene Toluene Ethylbenzene Total Xylenes	Sample 130 150* 240* 400*	number(s) 45* 39* 0* -67*	: 5538546 78-131 78-129 75-133 84-131	-553854 65* 70* 67* 70*	7 UNSPI 20 30 30 30	K: P537517			
Batch number: 08336A53A TPH-GRO N. CA water C6-C12	Sample 120	number(s)	: 5538546 63-154	-553854	7 UNSPI	K: P540156			
Batch number: D083372AA Methyl Tertiary Butyl Ether	Sample 98	number(s)	: 5538546 69-127	UNSPK:	P54023	3 0			
Batch number: Z083372AA Methyl Tertiary Butyl Ether	Sample 107	number(s)	: 5538547 69-127	UNSPK:	P54013	35			

#### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

#### \*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



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Page 2 of 2

#### Quality Control Summary

Client Name: ChevronTexaco Group Number: 1121527

Reported: 12/03/08 at 02:10 PM

#### Surrogate Quality Control

Analysis Name: BTEX

Batch number: 08331A15B

Trifluorotoluene-P

5538546 83 5538547 Blank LCS LCSD 84 81 MS MSD

Limits: 69-129

Analysis Name: TPH-GRO N. CA water C6-C12 Batch number: 08336A53A Trifluorotoluene-F

5538546 5538547 82 Blank 82 93 LCS 96 95 LCSD 91 95 MS 100 95 Limits: 63-135 69-129

Trifluorotoluene-P

Analysis Name: MTBE by GC/MS (water) Batch number: D083372AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5538546	89	99	95	94
Blank	95	104	98	97
LCS	93	104	97	99
MS	92	102	96	98
MSD	93	108	96	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: MTBE by GC/MS (water)

Batch number: Z083372AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5538547	100	96	108	92
Blank	100	98	106	93
LCS	100	98	106	99
MS	99	98	105	97
MSD	98	96	105	96
Limits:	80-116	77-113	80-113	78-113

#### \*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

# Chevron California Region Analysis Request/Chain of Custody



112/08-12

For Lancaster Laboratories use only

Acct. #: 10880 Group # 1121527 Sample #: 5538546-47

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#### **Lancaster Laboratories Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
С	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	I	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml

- less than The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than
- parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. ppm For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.
- parts per billion dqq
- Dry weight Results printed under this heading have been adjusted for moisture content. This increases the analyte weight basis concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

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TIC is a possible aldol-condensation product Analyte was also detected in the blank	B E	Value is <crdl, but="" due="" estimated="" interference<="" th="" to="" ≥idl=""></crdl,>
Pesticide result confirmed by GC/MS	М	Duplicate injection precision not met
Compound quatitated on a diluted sample	N	Spike amount not within control limits
Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
the instrument		for calculation
Estimated value	U	Compound was not detected
Presumptive evidence of a compound (TICs only)	W	Post digestion spike out of control limits
Concentration difference between primary and	*	Duplicate analysis not within control limits

Correlation coefficient for MSA < 0.995

**Inorganic Qualifiers** 

U Compound was not detected

confirmation columns >25%

X,Y,ZDefined in case narrative

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have guestions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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#### ANALYTICAL RESULTS

Prepared for:

ChevronTexaco 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

925-842-8582

Prepared by:

Lancaster Laboratories 2425 New Holland Pike Lancaster, PA 17605-2425

#### **SAMPLE GROUP**

The sample group for this submittal is 1121526. Samples arrived at the laboratory on Saturday, November 22, 2008. The PO# for this group is 0015025028 and the release number is COSTA.

Client DescriptionLancaster Labs NumberINF-W-081121 Grab Water5538544MID-1-W-081121 Grab Water5538545

ELECTRONIC CRA Attn: Charlotte Evans COPY TO

ELECTRONIC Chevron Attn: CRA EDD COPY TO

ELECTRONIC CRA Attn: Jeff Schrupp

COPY TO

ELECTRONIC Chevron Attn: C Sanders COPY TO



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Questions? Contact your Client Services Representative Angela M Miller at (717) 656-2300

Respectfully Submitted,

Janifa Elfers Jenifer E. Hess

Manager



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Lancaster Laboratories Sample No. WW5538544

Group No. 1121526

Account Number: 10880

INF-W-081121 Grab Water Facility# 90260 CRAW

21995 Foothill-Hayward T0600100315 INF Collected:11/21/2008 08:35

Submitted: 11/22/2008 10:20

Reported: 12/03/2008 at 14:51

Discard: 01/03/2009

was pH = 6.

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

ChevronTexaco

INF--

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01729	TPH-GRO N. CA water C6-C12					
01730	TPH-GRO N. CA water C6-C12	n.a.	87,000	2,500	ug/l	50
05879	BTEX					
02161	Benzene	71-43-2	2,700	10	ug/l	20
02164	Toluene	108-88-3	18,000	25	ug/l	50
02166	Ethylbenzene	100-41-4	1,100	10	ug/l	20
02171	Total Xylenes	1330-20-7	11,000	30	ug/l	20
02309	MTBE by GC/MS (water)					
02010	Methyl Tertiary Butyl Ether Preservation requirements were analysis did not have a pH < 2 volatile nature of the analytes to adjust the pH at the time of	not met. The at the time of , it is not app	analysis. Due to propriate for the	to the laboratory	ug/l	10

The reporting limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.

State of California Lab Certification No. 2116 Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT Analvsis Dilution Trial# Date and Time Factor TPH GRO SW-846 8015B TPH-GRO N. CA water C6-C12 1 12/02/2008 13:41 50 01729 Carrie E Youtzy mod



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Page 2 of 2

Lancaster Laboratories Sample No. WW5538544 Group No. 1121526

INF-W-081121 Grab Water Facility# 90260 CRAW

21995 Foothill-Hayward T0600100315 INF

Collected:11/21/2008 08:35 by MJ Account Number: 10880

Submitted: 11/22/2008 10:20 ChevronTexaco

Reported: 12/03/2008 at 14:51 6001 Bollinger Canyon Rd L4310

Discard: 01/03/2009 San Ramon CA 94583

INF--

05879	BTEX	SW-846 8020A	1	12/01/2008 22:54	Carrie E Youtzy	20
05879	BTEX	SW-846 8020A	1	12/02/2008 13:41	Carrie E Youtzy	50
02309	MTBE by GC/MS (water)	SW-846 8260B	1	11/28/2008 14:36	Ginelle L Feister	10
01146	GC VOA Water Prep	SW-846 5030B	1	12/01/2008 22:54	Carrie E Youtzy	20
01146	GC VOA Water Prep	SW-846 5030B	2	12/02/2008 13:41	Carrie E Youtzy	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/28/2008 14:36	Ginelle L Feister	10



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Lancaster Laboratories Sample No. WW5538545

Group No. 1121526

MID-1-W-081121 Grab Water Facility# 90260 CRAW

21995 Foothill-Hayward T0600100315 MID-1

Collected:11/21/2008 08:30 by MJ Account Number: 10880

Submitted: 11/22/2008 10:20 ChevronTexaco

Reported: 12/03/2008 at 14:51 6001 Bollinger Canyon Rd L4310

Discard: 01/03/2009 San Ramon CA 94583

#### HYMD1

				As Received		
CAT			As Received	Method		Dilution
No.	Analysis Name	CAS Number	Result	Detection Limit	Units	Factor
01729	TPH-GRO N. CA water C6-C12					
01730	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	ug/l	1
05879	BTEX					
02161	Benzene	71-43-2	N.D.	0.5	ug/l	1
02164	Toluene	108-88-3	N.D.	0.5	ug/l	1
02166	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
02171	Total Xylenes	1330-20-7	N.D.	1.5	ug/l	1
02309	MTBE by GC/MS (water)					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT		1		Analysis		Dilution
No.	Analysis Name	Method	Trial#	Date and Time	Analyst	Factor
01729	TPH-GRO N. CA water C6-C12	TPH GRO SW-846 8015B mod	1	12/01/2008 23:21	Carrie E Youtzy	1
05879	BTEX	SW-846 8020A	1	12/02/2008 10:29	Carrie E Youtzy	1
02309	MTBE by GC/MS (water)	SW-846 8260B	1	11/28/2008 15:00	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	12/01/2008 23:21	Carrie E Youtzy	1
01146	GC VOA Water Prep	SW-846 5030B	2	12/02/2008 10:29	Carrie E Youtzy	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/28/2008 15:00	Ginelle L Feister	1



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#### Quality Control Summary

Client Name: ChevronTexaco Group Number: 1121526

Reported: 12/03/08 at 02:51 PM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the

#### Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD Max
Batch number: 08336A53A	Sample n	umber(s):	5538544-55	38545				
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	116	128	75-135	10	30
Benzene	N.D.	0.5	ug/l	118	116	86-119	2	30
Toluene	N.D.	0.5	uq/l	112	111	82-119	2	30
Ethylbenzene	N.D.	0.5	ug/l	107	105	81-119	2	30
Total Xylenes	N.D.	1.5	ug/l	107	105	82-120	1	30
Batch number: D083332AA	Sample n	umber(s):	5538544-55	38545				
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	101		73-119		

#### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS <u>%REC</u>	MSD <u>%REC</u>	MS/MSD <u>Limits</u>	RPD	RPD <u>MAX</u>	Conc	DUP Conc	DUP <u>RPD</u>	Dup RPD  Max
Batch number: 08336A53A TPH-GRO N. CA water C6-C12 Benzene Toluene Ethylbenzene Total Xylenes	Sample 120 119 110 104 100	number(s)	: 5538544 63-154 78-131 78-129 75-133 84-131	-553854	5 UNSP	K: P537515,	P540156		
Batch number: D083332AA Methyl Tertiary Butyl Ether	Sample 113	number(s) 112	: 5538544 69-127	-553854 1	5 UNSP	K: P535326			

#### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TPH-GRO N. CA water C6-C12

Batch number: 08336A53A

	Trifluorotoluene-F	Trifluorotoluene-P
5538544	91	96
5538545	84	94
Blank	82	93
LCS	96	95
LCSD	91	95

#### \*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



78-113

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#### Quality Control Summary

Client Name: ChevronTexaco Group Number: 1121526

77-113

Reported: 12/03/08 at 02:51 PM

80-116

Limits:

Surrogate Quality Control

80-113

		burrogate Q	darity control	
MS	100	95		
Limits:	63-135	69-129		
	Name: MTBE by GC/MS (water) Deer: D083332AA			
	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5538544	106	103	98	102
5538545	109	109	100	104
Blank	108	105	98	102
LCS	110	110	101	107
MS	110	108	100	106
MSD	112	111	101	108

<sup>\*-</sup> Outside of specification

<sup>(1)</sup> The result for one or both determinations was less than five times the LOQ.

<sup>(2)</sup> The unspiked result was more than four times the spike added.

# Chevron California Region Analysis Request/Chain of Custody

43	Lancaster Laboratories
7	Laboratories

1/2/08-11

For Lancaster Laboratories use only Acct. #: 10880 Group # 1 2 1 5 2 (6 Sample #: 5 5 3 8 5 4 4 - 45

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#### **Lancaster Laboratories Explanation of Symbols and Abbreviations**

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	BMQL	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	MPN	Most Probable Number
IU	International Units	CP Units	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	NTU	nephelometric turbidity units
С	degrees Celsius	F	degrees Fahrenheit
Cal	(diet) calories	lb.	pound(s)
meq	milliequivalents	kg	kilogram(s)
g	gram(s)	mg	milligram(s)
ug	microgram(s)	I	liter(s)
ml	milliliter(s)	ul	microliter(s)
m3	cubic meter(s)	fib >5 um/ml	fibers greater than 5 microns in length per ml

- less than The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.
- > greater than
- parts per million One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. ppm For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.
- parts per billion dqq
- Dry weight Results printed under this heading have been adjusted for moisture content. This increases the analyte weight basis concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

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TIC is a possible aldol-condensation product Analyte was also detected in the blank	B E	Value is <crdl, but="" due="" estimated="" interference<="" th="" to="" ≥idl=""></crdl,>
Pesticide result confirmed by GC/MS	М	Duplicate injection precision not met
Compound quatitated on a diluted sample	N	Spike amount not within control limits
Concentration exceeds the calibration range of	S	Method of standard additions (MSA) used
the instrument		for calculation
Estimated value	U	Compound was not detected
Presumptive evidence of a compound (TICs only)	W	Post digestion spike out of control limits
Concentration difference between primary and	*	Duplicate analysis not within control limits

Correlation coefficient for MSA < 0.995

**Inorganic Qualifiers** 

U Compound was not detected

confirmation columns >25%

X,Y,ZDefined in case narrative

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have guestions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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