

# 6627

# **BASELINE**

## ENVIRONMENTAL CONSULTING

5 February 2001  
98381-B0

ENVIRONMENTAL  
PROTECTION  
00 FEB -6 PM 2:58

Ms. Ann E. Johnston  
COBLENTZ, PATCH, DUFFEY & BASS, LLP  
222 Kearny Street, 7<sup>th</sup> Floor  
San Francisco, California 94108-4510

**Subject: Quarterly Groundwater Monitoring Report, 6623 San Pablo Avenue, Oakland, California - January 2001**

Dear Ann:

This report documents the sixth quarterly groundwater sampling activities conducted by BASELINE in January 2001 at 6623 San Pablo Avenue in Oakland (Figure 1). Continued quarterly groundwater monitoring was requested by the Alameda County Environmental Health Services, in a letter dated 17 July 2000.

### **FIELD ACTIVITIES**

On 5 January 2001, groundwater samples were collected from the five monitoring wells on-site (Figure 2). The potential presence of free product was checked and water levels measured in the wells using a dual-interface probe prior to sampling activities. Water levels were measured and recorded to the nearest one-hundredth of a foot. No free product was measured in any of the wells. The probe was decontaminated between wells by washing with a trisodium phosphate (TSP) solution and rinsing with deionized water. Groundwater was then slowly purged from each well using a peristaltic pump and clean disposable polyethylene tubing until each well was pumped dry or the temperature, pH, and electrical conductivity (EC) of the groundwater appeared to have stabilized. The purged groundwater and decontamination rinsate were stored on-site in sealed and labeled 55-gallon drums.

A peristaltic pump and clean polyethylene tubing was used to collect groundwater samples from each well. The samples were collected in VOA bottles directly from the tubing. The sample bottles were labeled, placed in a cooled container, and submitted under chain-of-custody procedures to Curtis and Tompkins, Ltd., of Berkeley, a California-certified laboratory, for analysis. The groundwater samples were submitted for TPH as gasoline (EPA Method 8015M), and BTEX and MTBE analyses (EPA Method 8021B). The groundwater sampling forms, which document the sampling activities, are included in Attachment A.

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Because adequate groundwater could not be collected on 5 January, BASELINE attempted to collect groundwater samples on 12 January from the site's three shallow wells for analysis of TPH as diesel. No purging was performed prior to sampling; identical sampling methods were used as on 5 January. Only well MW-2A contained a sufficient quantity of groundwater (one liter) for the analysis. The sample bottle was labeled, placed in a cooled container, and submitted under chain-of-custody procedures to Curtis & Tompkins. The sample was analyzed for TPH as diesel (EPA Method 8015M) following silica gel cleanup (EPA Method 3520).

## **ANALYTICAL RESULTS**

The analytical results for groundwater samples collected at the site are summarized in Table 1. The laboratory reports for the January 2001 groundwater samples are included in Attachment B. Groundwater from each of the three wells screened in the uppermost water-bearing zone (MW-1A, MW-2A, and MW-3A) was found to contain petroleum hydrocarbons above the laboratory reporting limits (up to 20 mg/L gasoline, 4.0 mg/L benzene, 0.18 mg/L toluene, 0.66 mg/L ethylbenzene, 1.1 mg/L xylenes, and 36 mg/L MTBE) during the January 2001 monitoring event.

The two wells screened in the lower water-bearing zone (MW-1B and MW-3B) did not contain any of the analyzed compounds above laboratory reporting limits, with the exception of 0.0039 mg/L (laboratory reporting limit is 0.002 mg/L) MTBE in MW-1B.

The reported concentration of TPH as diesel in well MW-2A, 0.25 mg/L, confirms the conclusion from previous sampling events that TPH as diesel does not appear to be a contaminant of concern at the project site. During previous monitoring events, TPH as diesel was reported by the laboratory (at less than 1.0 mg/L) in wells MW-1A, MW-2A, and MW-3A; however, review of the chromatograms for the past and current analyses indicates that diesel is not present, and that the "diesel" reported by the laboratory is associated with late-eluting gasoline. The chromatograms for the January 2001 analysis and the diesel standard are included in the laboratory report in Attachment B.

## **GROUNDWATER FLOW DIRECTION**

Groundwater elevation data are summarized in Table 2. The groundwater level data collected on 5 January 2001 from wells MW-1A, MW-2A, and MW-3A were used to calculate the groundwater flow direction and gradient magnitude using a three-point method. The calculated groundwater flow direction was S43°E with a gradient magnitude of 0.03.

## **CONCLUSIONS AND RECOMMENDATIONS**

- Chemical quality of the uppermost water-bearing zone, characterized by samples collected from wells MW-1A, MW-2A, and MW-3A, has been impacted by a gasoline release. Based

# BASELINE

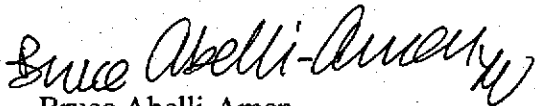
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on monitoring data from November 1999 through January 2001 from MW-1B and MW-3B, no significant impact appears to have occurred within the lower water-bearing zone.

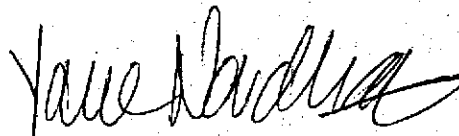
- The shallow groundwater flow direction calculated from the three shallow wells has been consistently to the southeast at magnitudes ranging from 0.004 to 0.02.
- Purge and decontamination water generated during field activities should be disposed of in accordance with applicable local, State, and Federal requirements.
- The next quarterly groundwater monitoring event should be conducted in April 2001. Groundwater samples should be analyzed for TPH as gasoline (EPA 8015M), BTEX, and MTBE (EPA 8021B). We recommend that, if approval is obtained from the County, sampling and analysis of TPH as diesel be discontinued.

If you have any questions or comments, please do not hesitate to contact us.

Sincerely,



Bruce Abelli-Amen  
Project Manager



Yane Nordhav  
Reg. Geologist #4009  
Principal

BAA:YN:km  
Enclosure

cc: Helen Loreto, McDonalds Corporation  
Larry Seto, Alameda County Environmental Health Services

TABLE 1  
**SUMMARY OF ANALYTICAL RESULTS, GROUNDWATER**  
**6623 San Pablo Avenue, Oakland**  
(mg/L)

Sample ID	Date	Diesel <sup>1</sup>	Gasoline <sup>1</sup>	Total Lead <sup>2</sup>	Benzene <sup>3</sup>	Toluene <sup>3</sup>	Ethyl-benzene <sup>3</sup>	Xylenes <sup>3</sup>	MTBE <sup>3</sup>	MTBE Confirmation <sup>4</sup>
<u>Grab Groundwater Samples from Borings:</u>										
KB-8	2/5/97	0.86	0.12	<0.003	0.0013	<0.0005	0.0021	0.001	--	--
KB-9	2/5/97	<0.05	0.47	<0.003	0.0048	<0.0005	0.011	0.0183	--	--
KB-10	2/5/97	3.1	0.45	<0.003	0.03	0.0036	0.013	0.071	--	--
KB-11	2/5/97	0.97	0.82	<0.003	0.1	0.0022	0.028	0.129	--	--
KB-12	2/5/97	0.20	0.096	<0.003	0.02	<0.0005	0.005	0.0122	--	--
<u>Groundwater Samples From Monitoring Wells</u>										
MW-1A	2/8/99 <sup>5</sup>	--	--	--	--	--	--	--	--	--
	5/21/99	0.56 <sup>6</sup>	19	--	6.7	0.12	1.2	3.28	38	--
	8/11/99	0.63 <sup>6</sup>	14	--	3.9	<0.1	0.68	1.65	40	--
	11/8/99	0.36 <sup>6</sup>	15	--	4.3	<0.13	0.78	1.3	42	--
	9/20/00	--	14	--	4.0	0.063	0.45	0.66	47	48
	1/5/01	-- <sup>5</sup>	20	--	4.0	0.054	0.66	1.1	36	-- <sup>8</sup>
MW-1B	2/8/99	<0.049	0.059	--	0.0013	<0.0005	0.0055	0.14	0.033	--
	5/21/99	<0.05	<0.05	--	0.00066	<0.0005	<0.0005	<0.0005	0.0041	--
	8/11/99	<0.05	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--
	11/8/99	<0.05	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--
	9/20/00	--	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0035	0.002
	1/5/01	--	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0005	0.0039	-- <sup>8</sup>
MW-2A	2/8/99	0.53 <sup>7</sup>	3.6	--	0.87	0.079	0.14	0.58	5.1	--
	5/21/99	0.064 <sup>6</sup>	0.91	--	0.62	0.018	0.038	0.078	4.0	--
	8/11/99	0.130 <sup>6</sup>	1.4	--	0.96	0.032	0.065	0.093	4.0	--
	11/8/99	0.116	2.5	--	1.1	0.033	0.081	0.142	4.1	--
	9/20/00	--	2.5	--	0.98	0.033	0.073	0.178	6.6	4.6
	1/5/01	0.25 <sup>6</sup>	3.5	--	0.56	0.022	0.090	0.390	4.1	-- <sup>8</sup>

Table 1 - continued

Sample ID	Date	Diesel <sup>1</sup>	Gasoline <sup>1</sup>	Total Lead <sup>2</sup>	Benzene <sup>3</sup>	Toluene <sup>3</sup>	Ethylbenzene <sup>3</sup>	Xylenes <sup>3</sup>	MTBE <sup>3</sup>	MTBE Confirmation <sup>4</sup>
MW-3A	2/8/99	0.21 <sup>7</sup>	24	--	2.1	3.4	1.5	6.1	<0.05	--
	5/21/99	0.23 <sup>6</sup>	17	--	3.5	3.1	0.85	3.6	0.077	--
	8/11/99	0.80 <sup>6</sup>	68	--	7.4	6.8	2.9	11.6	<0.2	--
	11/8/99	0.47 <sup>6</sup>	55	--	5.8	5.4	2.5	10.4	<0.08	--
	9/20/00	--	1.8	--	0.17	0.13	0.082	3.09	<0.002	0.0019
	1/5/01	-- <sup>5</sup>	1.8	--	0.26	0.18	0.082	0.320	<0.010	--
MW-3B	2/8/99	<0.047	0.08	--	0.0015	0.0048	0.0025	0.0061	0.00455	--
	5/21/99	<0.05	<0.05	--	<0.0005	<0.0005	<0.0005	0.00057	<0.002	--
	8/11/99	<0.05	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--
	11/8/99	<0.05	<0.05	--	<0.0005	<0.0005	0.00059	<0.0005	<0.002	--
	9/20/00	--	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	<0.0005
	1/5/01	--	<0.05	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.002	--

Notes: <x.x = Compound not detected above laboratory reporting limit (e.g., <0.05 indicates that the constituent was not present in the sample above 0.05 mg/L).

x.x = Compound detected at indicated concentration.

-- = Not analyzed.

Groundwater sampling locations are shown on Figure 2.

Laboratory reports for January 2001 sampling event are included in Appendix B.

<sup>1</sup> Analyzed using EPA Method 8015M with silica gel cleanup (EPA Method 3520) for diesel analyses.

<sup>2</sup> Analyzed using EPA Method 6010A.

<sup>3</sup> Analyzed using EPA Method 8020 or 8021B.

<sup>4</sup> Analyzed using EPA Method 8260B.

<sup>5</sup> Insufficient groundwater in well to allow sample collection.

<sup>6</sup> Sample exhibits a fuel pattern which does not resemble standard; lighter hydrocarbons were exhibited than the indicated standard.

<sup>7</sup> The chromatograms for these samples suggest that the concentrations quantified as diesel may be in the gasoline range of hydrocarbons; the laboratory also indicates that the samples exhibit patterns lighter than diesel.

<sup>8</sup> MTBE confirmation by EPA Method 8260B not performed because the September 2000 monitoring event indicated that Method 8021B provided representative results.

TABLE 2  
GROUNDWATER ELEVATIONS AND GRADIENT MAGNITUDES  
6623 San Pablo Avenue, Oakland

Date	MW-1A <sup>1</sup>			MW-1B <sup>2</sup>			MW-2A <sup>3</sup>			MW-3A <sup>4</sup>			MW-3B <sup>5</sup>			Gradient <sup>8</sup> feet/foot
	Time	Depth to Ground-water <sup>6</sup>	Ground-water Elevation <sup>7</sup>	Time	Depth to Ground-water <sup>6</sup>	Ground-water Elevation <sup>7</sup>	Time	Depth to Ground-water <sup>6</sup>	Ground-water Elevation <sup>7</sup>	Time	Depth to Ground-water <sup>6</sup>	Ground-water Elevation <sup>7</sup>	Time	Depth to Ground-water <sup>6</sup>	Ground-water Elevation <sup>7</sup>	
1/15/99	12:44	Dry	--	12:44	21.60	18.35	12:52	7.15	31.77	12:50	7.0	32.76	12:50	22.50	17.29	--
1/19/99	8:11	Dry	--	8:11	9.10	30.85	8:17	7.32	31.60	8:13	7.27	32.49	8:14	8.77	31.02	--
1/19/99	16:58	Dry	--	16:55	26.81 <sup>9</sup>	13.14	17:82	7.05 <sup>9</sup>	31.87	17:08	7.79 <sup>9</sup>	31.97	17:11	26.71 <sup>9</sup>	13.08	--
1/20/99	8:46	Dry	--	8:43	16.76	23.19	8:50	6.94	31.98	8:55	7.18	32.58	8:58	15.40	24.39	--
1/20/99	17:48	Dry	--	17:44	13.48	26.47	17:51	6.89	32.03	17:56	7.04	32.72	17:58	12.50	27.29	--
2/8/99	7:45	Dry	--	7:42	10.74	29.21	7:50	6.80	32.12	6:48	5.45	34.31	6:45	6.82	32.97	--
2/12/99	6:54	9.10	30.86	--	--	--	6:58	6.90	32.02	7:04	5.94	33.82	--	--	--	--
5/18/99	12:05	8.42	31.54	12:24	9.09	30.86	12:25	7.77	31.15	12:02	6.78	32.98	12:03	8.65	31.14	S52°W@0.02
8/9/99	11:09	4.69	35.27	11:10	9.10	30.85	11:18	7.34	31.58	11:14	4.30	35.46	11:13	8.23	31.56	S23°E@0.0038
11/5/99	8:00	5.23	34.73	8:02	9.15	30.80	8:10	7.43	31.49	8:06	5.87	33.89	8:08	8.37	31.42	S40°E@0.042
9/19/00	10:30	5.53	34.43	10:33	9.36	30.59	9:55	8.13	30.79	10:50	7.10	32.66	10:49	9.71	30.08	S53°E@0.026
1/5/01	11:16	6.62	33.34	11:14	9.39	30.56	11:25	8.13	30.79	11:18	7.30	32.46	11:17	8.55	31.24	S43°E@0.03

Notes: Monitoring well locations are shown on Figure 2.

-- = Not collected / Not determined.

The water level data collected on 20 January and 8 and 12 February 1999 indicate that the water levels had not stabilized in either the shallow or deeper wells on the site.

<sup>1</sup> Top of well casing elevation = 39.96 feet above City of Oakland datum.

<sup>2</sup> Top of well casing elevation = 39.95 feet above City of Oakland datum.

<sup>3</sup> Top of well casing elevation = 38.92 feet above City of Oakland datum.

<sup>4</sup> Top of well casing elevation = 39.76 feet above City of Oakland datum.

<sup>5</sup> Top of well casing elevation = 39.79 feet above City of Oakland datum.

<sup>6</sup> Depths are in feet below top of casing.

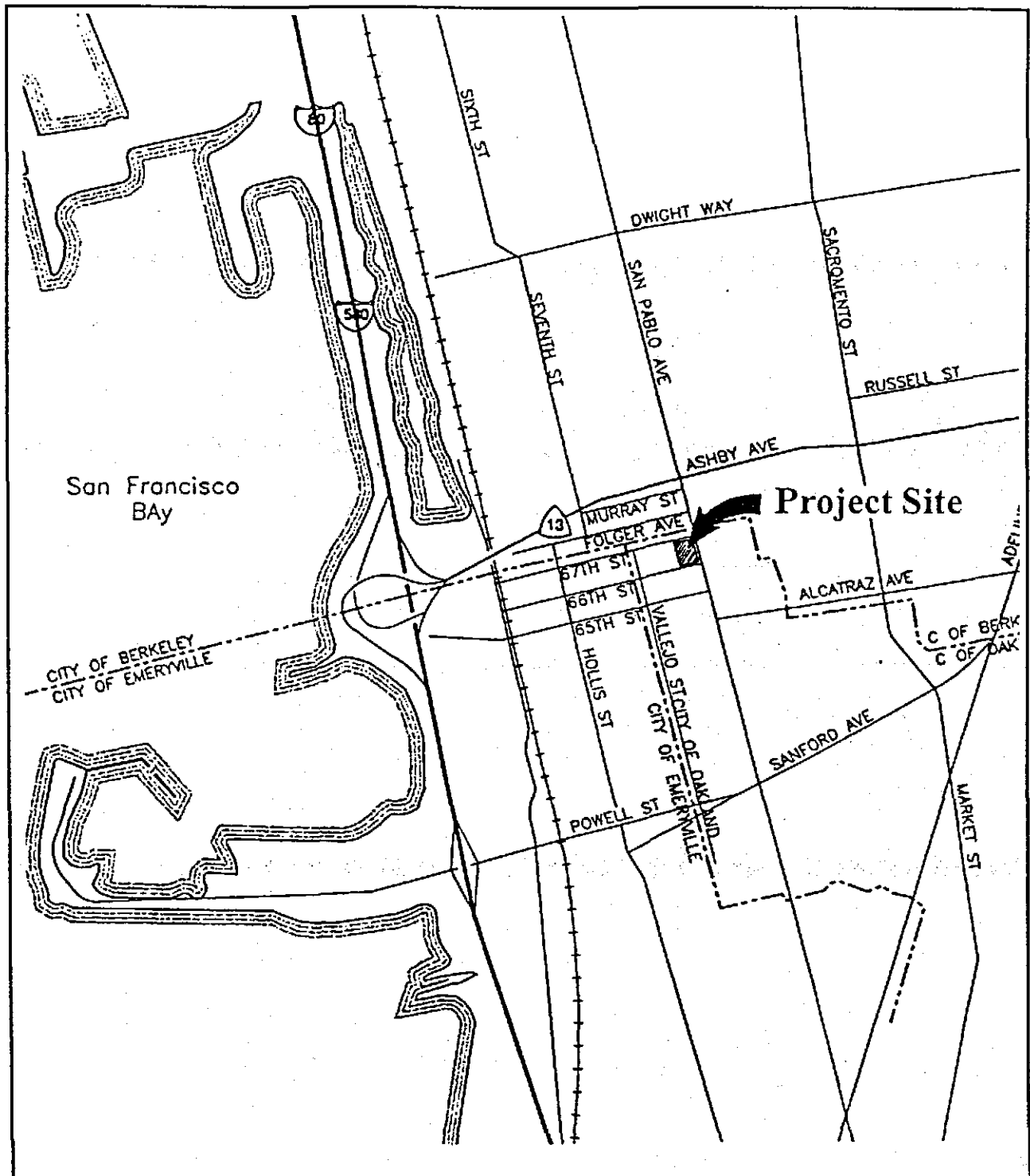
<sup>7</sup> Elevations are in feet above City of Oakland datum.

<sup>8</sup> Gradient direction and magnitude based on MW-1A, MW-2A, MW-3A

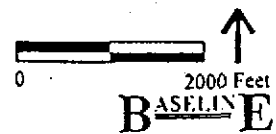
<sup>9</sup> Water level measurements were collected after removal of one well volume on 19 January 1999.

# REGIONAL LOCATION

Figure 1

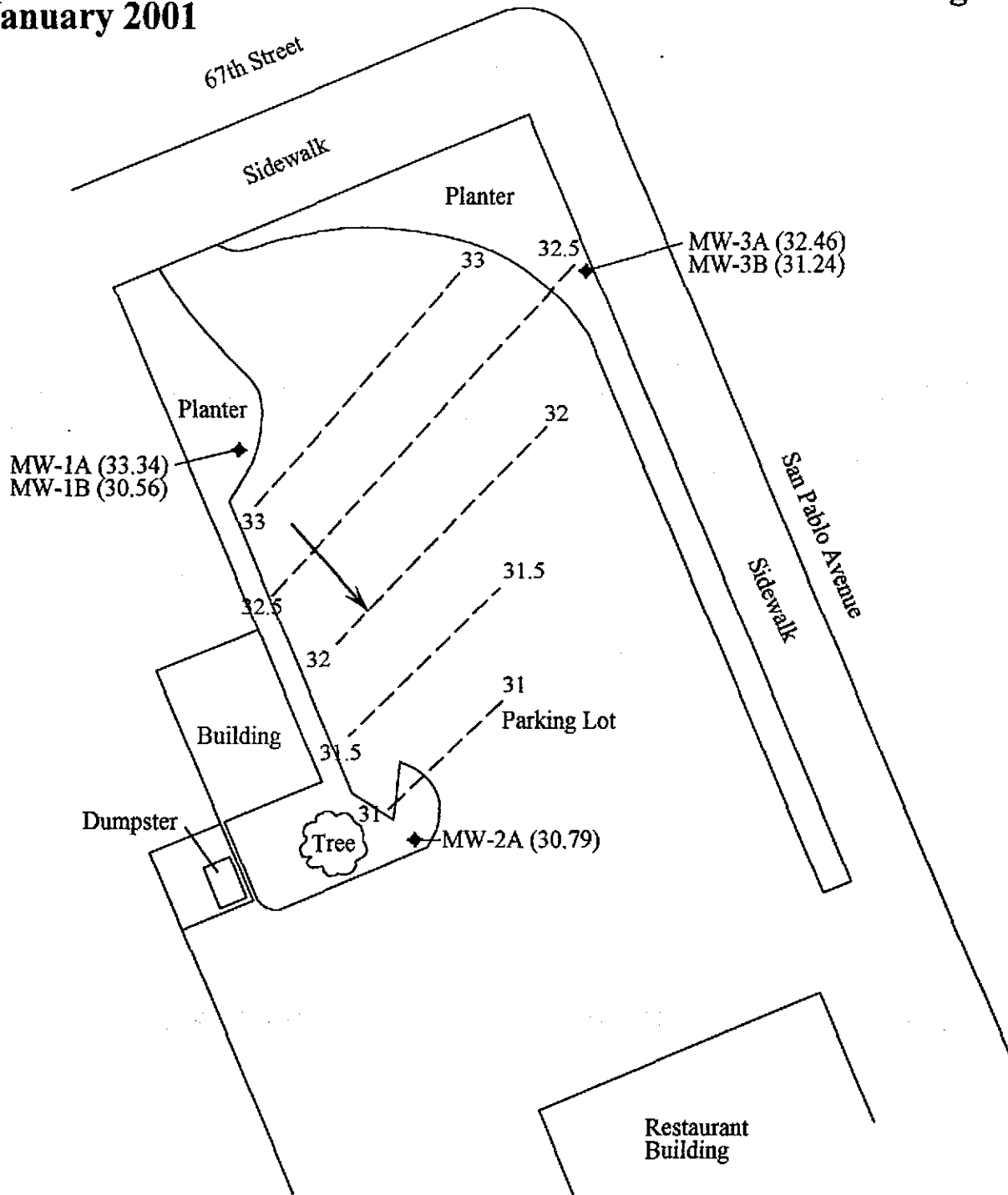


6623 San Pablo Avenue  
Oakland, California



**GROUNDWATER CONTOUR MAP**  
**5 January 2001**

**Figure 2**



**Legend**

- Groundwater Flow Direction, January 2001
- Groundwater Elevation Contour (contour interval = 0.5 feet)
- MW-2A ◆ Monitoring Well Location (BASELINE)
- 30.79 Groundwater Elevation on 01/05/01 in feet above City of Oakland datum

**6623 San Pablo Avenue**  
**Oakland, California**





**ATTACHMENT A**  
**GROUNDWATER SAMPLING FORMS**



# GROUNDWATER SAMPLING

Project no.:	98381	Well no.:	MW-2A	Date:	1/5/01
Project name:	McDonald's	Depth of well from TOC (feet):	14.72		
Location:	6623 San Pablo Ave. Oakland	Well diameter (inch):	1 inch		
Recorded by:	WKS	Screened interval from TOC (feet):	5-10		
Weather:	Cool, sunny	TOC elevation (feet):	38.92		
Precip in past 5 days (inch):	0	Water level from TOC (feet):	8.13	Time:	11:25 (1/5/01)
		Product level from TOC (feet):	None	Time:	11:25 (1/5/01)
		Water level measurement device:	Dual-interface probe		

## CALCULATION OF WELL VOLUME:

$$\begin{array}{rcl}
 [(14.72 \text{ ft}) - (8.13 \text{ ft})] \times (0.042 \text{ ft})^2 \times 3.14 \times 7.48 = & 0.26 & \text{gallons in one well volume} \\
 \text{well depth} \quad \text{water level} \quad \text{well radius} & 1.25 & \text{total gallons removed}
 \end{array}$$

## CALIBRATION

	Time	Temp (° C)	pH	EC (µmho/cm)	NTU
Calibration Standard:	--	--	7.00/10.01	1,000	0/5.0
Before Purging:	11:06	17.6	7.00/10.01	1,000	0/5.0
After Purging:	13:00	18.7	7.06/10.11	1,038	0/5.12

## FIELD MEASUREMENTS:

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance	NTU
12:41	19.7	6.60	1039	0.2	Clear, petroleum odor	2.77
12:48	20.1	6.63	1065	0.75	Clear, petroleum odor	1.49
12:53	20.6	6.63	1066	1.25	Clear, petroleum odor	2.11

Water level after purging prior to sampling (feet):	8.13	Time:	11:05 (1/8/01)
Appearance of sample:	Clear	Time:	11:10 (1/8/01)
Duplicate/blank number:	--	Time:	--
Purge method:	Peristaltic pump and disposable polyethylene tubing		
Sampling equipment:	Peristaltic pump and disposable polyethylene tubing	VOC attachment:	None required
Sample containers:	Three 40 ml VOAs, one 1 L amber		
Sample analyses:	TPHg, BTEX, MTBE, TPHd	Laboratory:	Curtis & Tompkins
Decontamination method:	TSP and water, DI water rinse	Rinsate disposal:	On-site drum

Note: TPH as diesel sample collected on 1/12/01.

98381-gw.J01.wpd-1/11/01

# GROUNDWATER SAMPLING

Project no.:	98381	Well no.:	MW-3A	Date:	1/5/01
Project name:	McDonald's	Depth of well from TOC (feet):	10.02		
Location:	6623 San Pablo Ave. Oakland	Well diameter (inch):	3/4		
Recorded by:	WKS	Screened interval from TOC (feet):	7-10.02		
Weather:	Cool, sunny	TOC elevation (feet):	39.76		
Precip in past 5 days (inch):	0	Water level from TOC (feet):	7.30	Time:	11:18 (1/5/01)
		Product level from TOC (feet):	None	Time:	11:18 (1/5/01)
		Water level measurement device:	Dual-interface probe		

## CALCULATION OF WELL VOLUME:

$$[(10.02 \text{ ft}) - (7.30 \text{ ft})] \times (0.03 \text{ ft})^2 \times 3.14 \times 7.48 = \underline{0.06} \text{ gallons in one well volume}$$

total gallons removed

## CALIBRATION

	Time	Temp (° C)	pH	EC (µmho/cm)	NTU
Calibration Standard:	--	--	7.00/10.01	1,000	0/5.0
Before Purging:	11:06	17.6	7.00/10.01	1,000	0/5.0
After Purging:	13:00	18.7	7.06/10.11	1,038	0/5.12

## FIELD MEASUREMENTS:

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance	NTU
------	------------	----	--------------	----------------------------	------------	-----

No field measurements collected due to presence of abundant white precipitate in purge water. This condition did not clear up before well was pumped dry at the removal of 0.07 gallons.

Water level after purging prior to sampling (feet):	9.02	Time:	10:48 (1/8/01)
Appearance of sample:	Clear - very slightly turbid	Time:	10:50 (1/8/01)
Duplicate/blank number:	--	Time:	--
Purge method:	Peristaltic pump and disposable polyethylene tubing		
Sampling equipment:	Peristaltic pump and disposable polyethylene tubing	VOC attachment:	None required
Sample containers:	Two 40 ml VOAs		
Sample analyses:	TPHg, BTEX, MTBE	Laboratory:	Curtis & Tompkins
Decontamination method:	TSP and water, DI water rinse	Rinsate disposal:	On-site drum

Note: The collection of a sample for TPH as diesel was attempted on 1/12/01, however an insufficient amount of water was present to collect the sample. 98381-gw.J01.wpd-1/11/01

# GROUNDWATER SAMPLING

Project no.:	98381	Well no.:	MW-1B	Date:	1/5/01
Project name:	McDonald's	Depth of well from TOC (feet):	30.32		
Location:	6623 San Pablo Ave.	Well diameter (inch):	3/4		
	Oakland	Screened interval from TOC (feet):	25-30		
Recorded by:	WKS	TOC elevation (feet):	39.95		
Weather:	Cool, sunny	Water level from TOC (feet):	9.39	Time:	11:14 (1/5/01)
Precip in past 5 days (inch):	0	Product level from TOC (feet):	None	Time:	11:14 (1/5/01)
		Water level measurement device:	Dual-interface probe		

## CALCULATION OF WELL VOLUME:

$$[(30.32 \text{ ft}) - (9.39 \text{ ft})] \times (0.03 \text{ ft})^2 \times 3.14 \times 7.48 = \frac{0.4}{1.32} \begin{matrix} \text{gallons in one well volume} \\ \text{total gallons removed} \end{matrix}$$

## CALIBRATION

	Time	Temp (° C)	pH	EC (µmho/cm)	NTU
Calibration Standard:	--	--	7.00/10.01	1,000	0/5.0
Before Purging:	11:06	17.6	7.00/10.01	1,000	0/5.0
After Purging:	13:00	18.7	7.06/10.11	1,038	0/5.12

## FIELD MEASUREMENTS:

Time	Temp (° C)	pH	EC (µmho/cm)	Cumulative Gallons Removed	Appearance	NTU
11:34	19.4	7.12	830	0.26	Clear	1.99
11:43	20.1	6.98	825	0.92	Clear	4.17
11:49	20.4	6.96	830	1.32	Very slightly turbid	36.3
11:50	Well pumped dry		--	--	--	--

Water level after purging prior to sampling (feet):	12.3	Time:	10:25(1/8/01)
Appearance of sample:	Clear	Time:	10:35 (1/8/01)
Duplicate/blank number:	--	Time:	--
Purge method:	Peristaltic pump and disposable polyethylene tubing		
Sampling equipment:	Peristaltic pump and disposable polyethylene tubing	VOC attachment:	None required
Sample containers:	Three 40 ml VOAs		
Sample analyses:	TPHg, BTEX, MTBE	Laboratory:	Curtis & Tompkins
Decontamination method:	TSP and water, DI water rinse	Rinsate disposal:	On-site drum

98381-gw.J01.wpd-1/11/01

# GROUNDWATER SAMPLING

Project no.:	98381	Well no.:	MW-3B	Date:	1/5/01
Project name:	McDonald's	Depth of well from TOC (feet):	31.31		
Location:	6623 San Pablo Ave. Oakland	Well diameter (inch):	3/4		
Recorded by:	WKS	Screened interval from TOC (feet):	26.3-31.3		
Weather:	Cool, sunny	TOC elevation (feet):	39.79	Water level from TOC (feet):	8.55
Precip in past 5 days (inch):	0	Product level from TOC (feet):	None	Time:	11:17 (1/5/01)
		Water level measurement device:	Dual-interface probe	Time:	11:17 (1/5/01)

## CALCULATION OF WELL VOLUME:

$$[(31.31 \text{ ft}) - (8.55 \text{ ft})] \times (0.03 \text{ ft})^2 \times 3.14 \times 7.48 = \frac{0.48}{1.0} \begin{matrix} \text{gallons in one well volume} \\ \text{total gallons removed} \end{matrix}$$

## CALIBRATION

	Time	Temp (° C)	pH	EC (umho/cm)	NTU
Calibration Standard:	--	--	7.00/10.01	1,000	0/5.0
Before Purging:	11:06	17.6	7.00/10.01	1,000	0/5.0
After Purging:	13:00	18.7	7.06/10.11	1,038	0/5.12

## FIELD MEASUREMENTS:

Time	Temp (° C)	pH	EC (umho/cm)	Cumulative Gallons Removed	Appearance	NTU
12:07	19.1	7.31	762	0.26	Clear	1.75
12:11	19.2	7.26	740	0.53	Clear	3.26
12:16	19.0	7.17	737	0.79	Clear	1.84
12:20	19.1	7.17	780	1.0		3.91

Well pumped dry

Water level after purging prior to sampling (feet):	10.03	Time:	10:47 (1/8/01)
Appearance of sample:	Clear	Time:	10:55 (1/8/01)
Duplicate/blank number:	--	Time:	--
Purge method:	Peristaltic pump and disposable polyethylene tubing		
Sampling equipment:	Peristaltic pump and disposable polyethylene tubing	VOC attachment:	None required
Sample containers:	Three 40 ml VOAs		
Sample analyses:	TPHg, BTEX, MTBE	Laboratory:	Curtis & Tompkins
Decontamination method:	TSP and water, DI water rinse	Rinsate disposal:	On-site drum

98381-gw.J01.wpd-1/11/01

**ATTACHMENT B**

**LABORATORY REPORT AND  
CHAIN-OF-CUSTODY FORM**



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L   R E P O R T


Prepared for:

Baseline Environmental  
5900 Hollis Street  
Suite D  
Emeryville, CA 94608


Date: 19-JAN-01  
Lab Job Number: 149546  
Project ID: 98381  
Location: McDonalds, 6623 San Pablo

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by:

  
Project Manager

Reviewed by:

  
Operations Manager

This package may be reproduced only in its entirety.

CA ELAP # 1459

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000001





Laboratory Number: 149546  
Client: Baseline Environmental  
Project Name: McDonald's, 6623 San Pable Ave  
Project #: 98381  
Receipt Date: 01/08/01

### CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for five water samples received from the above referenced project on January 8, 2001. The samples were received at room temperature and intact.

#### TVH/BTXE (EPA 8015M/8021B):

The continuing calibration verification for MTBE failed high for the blank spike and its duplicate for batch #60771 as indicated by the 'b' flag. This high bias does not significantly effect the quality of the sample results, as MTBE was not detected in the associated sample (MW-3A & C&T ID 149546-004) and all other samples were run with different batch QC. No other analytical problems were encountered.

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14754

**BASELINE E**

5900 Hollis Street, Suite D  
Emeryville, CA 94608  
Tel: (510) 420-8686 Fax: (510) 420-1707

**CHAIN OF CUSTODY RECORD**

Turn-around Time

Standard (5-day)

Lab

Curtis & Tompkins

BASELINE Contact Person

Bill ~~Scott~~ Scott

Project No. 98381		Project Name and Location: McDonald's, 6623 San Pablo Ave																
Samplers: (Signature) <i>William E. Scott</i>				Containers														
Sample ID No. Station	Date:	Time:	Media	No.	Type	Preservative					As, Pb, Zn (total)	Pesticides + PCBs (8081) TPH as diesel, as mo, and hyd. fluid (with silica gel cleanup)	PAHs + selected SVOCs (8270 with GPC cleanup)	Moisture Content	TPH as gasoline + BTEX + MTBE 8213	Remarks/ Composite		
						None	HCl	NO <sub>3</sub>	SO <sub>4</sub>	Other:								
1 MW-1A	1-8-01	10:30	Water	3	VOAs		X							X				
2 MW-1B	1-8-01	10:35		2			X							X		received 3 VOAs		
3 MW-2A	1-8-01	11:10		3			X							X		for MW-13		
4 MW-3A	1-8-01	10:50		2			X							X				
5 MW-3B	1-8-01	10:55		3			X							X				
<div style="border: 1px solid black; padding: 5px; display: inline-block;">           Preservation Correct?  <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A         </div>																		
<div style="border: 1px solid black; padding: 5px; display: inline-block;">           Received <input type="checkbox"/> On Ice  <input checked="" type="checkbox"/> Cold <input checked="" type="checkbox"/> Ambient <input checked="" type="checkbox"/> Intact         </div>																		
Relinquished by: (Signature) <i>William E. Scott</i>			Date/Time 1-8-01/11:31		Received by: (Signature) <i>A. Bennett</i>			Date/Time 1-8-01/11:30		Conditions of Samples Upon Arrival at Laboratory:								
Relinquished by: (Signature)			Date/Time		Received by: (Signature)			Date/Time		Remarks: confirm presence of MTB12 with 8260								
Relinquished by: (Signature)			Date/Time		Received by: (Signature)			Date/Time										

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Depth:  
Tubes:

Secured from Temp (B)

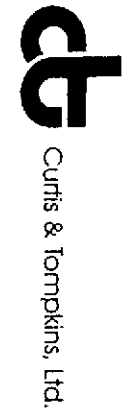
# CURTIS & TOMPKINS, LTD. BERKELEY

# LOGIN CHANGE FORM

Reason for change:  Client Request: By: BILL SCOTT <sup>(BASELINE)</sup> Date/Time: 1-8-01 / 13:00 Initials: PP  
 Login Review  Data Review

Current Lab ID	Previous Lab ID	Client ID	Matrix	Add/Cancel	Analysis	Due date
149546-001	—	MW-1A	WATER	CANCEL	B260 CONFIRMATION FOR MTBE	1/15
-002	—	MW-1B	"	"	"	"
-003	—	MW-2A	"	"	"	"
-004	—	MW-3A	"	"	"	"
-005	—	MW-3B	"	"	"	"

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## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #: 149546 Location: McDonalds, 6623 San Pablo  
 Client: Baseline Environmental Prep: EPA 5030  
 Project#: 98381  
 Matrix: Water Sampled: 01/08/01  
 Units: ug/L Received: 01/08/01

Field ID: MW-1A Lab ID: 149546-001  
 Type: SAMPLE

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	20,000	2,000	40.00	60713	01/12/01	EPA 8015M
MTBE	36,000	200	100.0	60808	01/16/01	EPA 8021B
Benzene	4,000	50	100.0	60808	01/16/01	EPA 8021B
Toluene	54	50	100.0	60808	01/16/01	EPA 8021B
Ethylbenzene	660	50	100.0	60808	01/16/01	EPA 8021B
m,p-Xylenes	820	50	100.0	60808	01/16/01	EPA 8021B
o-Xylene	280	50	100.0	60808	01/16/01	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Trifluorotoluene (FID)	108	59-135	40.00	60713	01/12/01	EPA 8015M
Bromofluorobenzene (FID)	115	60-140	40.00	60713	01/12/01	EPA 8015M
Trifluorotoluene (PID)	106	56-142	100.0	60808	01/16/01	EPA 8021B
Bromofluorobenzene (PID)	104	55-149	100.0	60808	01/16/01	EPA 8021B

Field ID: MW-1B Diln Fac: 1.000  
 Type: SAMPLE Batch#: 60628  
 Lab ID: 149546-002 Analyzed: 01/09/01

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015M
MTBE	3.9	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	111	59-135	EPA 8015M
Bromofluorobenzene (FID)	116	60-140	EPA 8015M
Trifluorotoluene (PID)	113	56-142	EPA 8021B
Bromofluorobenzene (PID)	117	55-149	EPA 8021B

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	149546	Location:	McDonalds, 6623 San Pablo
Client:	Baseline Environmental	Prep:	EPA 5030
Project#:	98381		
Matrix:	Water	Sampled:	01/08/01
Units:	ug/L	Received:	01/08/01

Field ID:	MW-2A	Lab ID:	149546-003
Type:	SAMPLE		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	3,500	50	1.000	60628	01/09/01	EPA 8015M
MTBE	4,100	20	10.00	60808	01/16/01	EPA 8021B
Benzene	560	5.0	10.00	60808	01/16/01	EPA 8021B
Toluene	22	5.0	10.00	60808	01/16/01	EPA 8021B
Ethylbenzene	90	5.0	10.00	60808	01/16/01	EPA 8021B
m, p-Xylenes	280	5.0	10.00	60808	01/16/01	EPA 8021B
o-Xylene	110	5.0	10.00	60808	01/16/01	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Trifluorotoluene (FID)	118	59-135	1.000	60628	01/09/01	EPA 8015M
Bromofluorobenzene (FID)	122	60-140	1.000	60628	01/09/01	EPA 8015M
Trifluorotoluene (PID)	106	56-142	10.00	60808	01/16/01	EPA 8021B
Bromofluorobenzene (PID)	104	55-149	10.00	60808	01/16/01	EPA 8021B

Field ID:	MW-3A	Lab ID:	149546-004
Type:	SAMPLE		

Analyte	Result	RL	Diln Fac	Batch#	Analyzed	Analysis
Gasoline C7-C12	1,800	50	1.000	60628	01/08/01	EPA 8015M
MTBE	ND	10	5.000	60771	01/14/01	EPA 8021B
Benzene	260	2.5	5.000	60771	01/14/01	EPA 8021B
Toluene	180	2.5	5.000	60771	01/14/01	EPA 8021B
Ethylbenzene	82	2.5	5.000	60771	01/14/01	EPA 8021B
m, p-Xylenes	210	2.5	5.000	60771	01/14/01	EPA 8021B
o-Xylene	110	2.5	5.000	60771	01/14/01	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed	Analysis
Trifluorotoluene (FID)	114	59-135	1.000	60628	01/08/01	EPA 8015M
Bromofluorobenzene (FID)	116	60-140	1.000	60628	01/08/01	EPA 8015M
Trifluorotoluene (PID)	101	56-142	5.000	60771	01/14/01	EPA 8021B
Bromofluorobenzene (PID)	103	55-149	5.000	60771	01/14/01	EPA 8021B

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	149546	Location:	McDonalds, 6623 San Pablo
Client:	Baseline Environmental	Prep:	EPA 5030
Project#:	98381		
Matrix:	Water	Sampled:	01/08/01
Units:	ug/L	Received:	01/08/01

Field ID:	MW-3B	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	60628
Lab ID:	149546-005	Analyzed:	01/09/01

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015M
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	108	59-135	EPA 8015M
Bromofluorobenzene (FID)	131	60-140	EPA 8015M
Trifluorotoluene (PID)	114	56-142	EPA 8021B
Bromofluorobenzene (PID)	123	55-149	EPA 8021B

Type:	BLANK	Batch#:	60628
Lab ID:	QC134253	Analyzed:	01/08/01
Diln Fac:	1.000		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015M
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	114	59-135	EPA 8015M
Bromofluorobenzene (FID)	120	60-140	EPA 8015M
Trifluorotoluene (PID)	112	56-142	EPA 8021B
Bromofluorobenzene (PID)	112	55-149	EPA 8021B

Type:	BLANK	Batch#:	60713
Lab ID:	QC134564	Analyzed:	01/12/01
Diln Fac:	1.000	Analysis:	EPA 8015M

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	117	59-135
Bromofluorobenzene (FID)	122	60-140

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Curtis & Tompkins Laboratories Analytical Report

Lab #:	149546	Location:	McDonalds, 6623 San Pablo
Client:	Baseline Environmental	Prep:	EPA 5030
Project#:	98381		
Matrix:	Water	Sampled:	01/08/01
Units:	ug/L	Received:	01/08/01

Type:	BLANK	Batch#:	60771
Lab ID:	QC134782	Analyzed:	01/13/01
Diln Fac:	1.000	Analysis:	EPA 8021B

Analyte	Result	RL
MTBE	ND	2.0
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Trifluorotoluene (PID)	104	56-142
Bromofluorobenzene (PID)	105	55-149

Type:	BLANK	Batch#:	60808
Lab ID:	QC134913	Analyzed:	01/16/01
Diln Fac:	1.000	Analysis:	EPA 8021B

Analyte	Result	RL
MTBE	ND	2.0
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Trifluorotoluene (PID)	106	56-142
Bromofluorobenzene (PID)	102	55-149

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	149546	Location:	McDonalds, 6623 San Pablo
Client:	Baseline Environmental	Prep:	EPA 5030
Project#:	98381	Analysis:	EPA 8015M
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC134254	Batch#:	60628
Matrix:	Water	Analyzed:	01/08/01
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,053	103	73-121
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m, p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		116	59-135
Bromofluorobenzene (FID)		117	60-140
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		



## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	149546	Location:	McDonalds, 6623 San Pablo
Client:	Baseline Environmental	Prep:	EPA 5030
Project#:	98381	Analysis:	EPA 8015M
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC134561	Batch#:	60713
Matrix:	Water	Analyzed:	01/12/01
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	1,777	89	73-121

Surrogate	%REC	Limits
Trifluorotoluene (FID)	117	59-135
Bromofluorobenzene (FID)	117	60-140



## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	149546	Location:	McDonalds, 6623 San Pablo
Client:	Baseline Environmental	Prep:	EPA 5030
Project#:	98381	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	60628
Units:	ug/L	Analyzed:	01/08/01
Diln Fac:	1.000		

Type: BS Lab ID: QC134257

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
MTBE	20.00	17.98	90	51-125
Benzene	20.00	18.67	93	67-117
Toluene	20.00	18.22	91	69-117
Ethylbenzene	20.00	20.16	101	68-124
m,p-Xylenes	40.00	41.54	104	70-125
o-Xylene	20.00	19.90	99	65-129

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		110	56-142
Bromofluorobenzene (PID)		111	55-149

Type: BSD Lab ID: QC134258

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12		NA				
MTBE	20.00	18.23	91	51-125	1	20
Benzene	20.00	18.75	94	67-117	0	20
Toluene	20.00	18.30	92	69-117	0	20
Ethylbenzene	20.00	20.11	101	68-124	0	20
m,p-Xylenes	40.00	42.34	106	70-125	2	20
o-Xylene	20.00	20.19	101	65-129	1	20

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		110	56-142
Bromofluorobenzene (PID)		112	55-149

NA= Not Analyzed

RPD= Relative Percent Difference

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	149546	Location:	McDonalds, 6623 San Pablo
Client:	Baseline Environmental	Prep:	EPA 5030
Project#:	98381	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	60771
Units:	ug/L	Analyzed:	01/13/01
Diln Fac:	1.000		

Type: BS Lab ID: QC134786

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	20.51 b	103	51-125
Benzene	20.00	19.30	97	67-117
Toluene	20.00	20.42	102	69-117
Ethylbenzene	20.00	20.81	104	68-124
m,p-Xylenes	40.00	43.49	109	70-125
o-Xylene	20.00	21.80	109	65-129

Surrogate	%REC	Limits
Trifluorotoluene (PID)	105	56-142
Bromofluorobenzene (PID)	105	55-149

Type: BSD Lab ID: QC134787

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	20.00	21.08 b	105	51-125	3	20
Benzene	20.00	19.81	99	67-117	3	20
Toluene	20.00	20.95	105	69-117	3	20
Ethylbenzene	20.00	21.70	108	68-124	4	20
m,p-Xylenes	40.00	44.85	112	70-125	3	20
o-Xylene	20.00	22.67	113	65-129	4	20

Surrogate	%REC	Limits
Trifluorotoluene (PID)	107	56-142
Bromofluorobenzene (PID)	109	55-149



## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	149546	Location:	McDonalds, 6623 San Pablo
Client:	Baseline Environmental	Prep:	EPA 5030
Project#:	98381	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	60808
Units:	ug/L	Analyzed:	01/16/01
Diln Fac:	1.000		

Type: BS Lab ID: QC134914

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	18.31	92	51-125
Benzene	20.00	16.43	82	67-117
Toluene	20.00	17.81	89	69-117
Ethylbenzene	20.00	18.53	93	68-124
m,p-Xylenes	40.00	39.91	100	70-125
o-Xylene	20.00	18.98	95	65-129

Surrogate	%REC	Limits
Trifluorotoluene (PID)	106	56-142
Bromofluorobenzene (PID)	104	55-149

Type: BSD Lab ID: QC134915

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	20.00	18.09	90	51-125	1	20
Benzene	20.00	16.30	82	67-117	1	20
Toluene	20.00	17.64	88	69-117	1	20
Ethylbenzene	20.00	18.32	92	68-124	1	20
m,p-Xylenes	40.00	39.44	99	70-125	1	20
o-Xylene	20.00	18.95	95	65-129	0	20

Surrogate	%REC	Limits
Trifluorotoluene (PID)	106	56-142
Bromofluorobenzene (PID)	104	55-149

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	149546	Location:	McDonalds, 6623 San Pablo
Client:	Baseline Environmental	Prep:	EPA 5030
Project#:	98381	Analysis:	EPA 8015M
Field ID:	MW-3A	Batch#:	60628
MSS Lab ID:	149546-004	Sampled:	01/08/01
Matrix:	Water	Received:	01/08/01
Units:	ug/L	Analyzed:	01/08/01
Diln Fac:	1.000		

Type: MS Lab ID: QC134255

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,793	2,000	3,628	92	65-131
MTBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		121	59-135
Bromofluorobenzene (FID)		125	60-140
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC134256

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	3,564	89	65-131	2	20
MTBE		NA				
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		120	59-135
Bromofluorobenzene (FID)		119	60-140
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		



Curtis & Tompkins Laboratories Analytical Report

Lab #:	149546	Location:	McDonalds, 6623 San Pablo
Client:	Baseline Environmental	Prep:	EPA 5030
Project#:	98381	Analysis:	EPA 8015M
Field ID:	ZZZZZZZZZZ	Batch#:	60713
SS Lab ID:	149575-002	Sampled:	01/08/01
Matrix:	Water	Received:	01/09/01
Units:	ug/L	Analyzed:	01/12/01
Diln Fac:	1.000		

Type: MS Lab ID: QC134565

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,430	2,000	2,907	74	65-131

Surrogate	%REC	Limits
Trifluorotoluene (FID)	132	59-135
Bromofluorobenzene (FID)	127	60-140

Type: MSD Lab ID: QC134566

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,881	73	65-131	1	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	126	59-135
Bromofluorobenzene (FID)	128	60-140

# Chromatogram

Sample Name : 149546-001,60713

Sample #: B1

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FileName : G:\GC05\DATA\011G045.raw

Date : 1/12/01 06:43 PM

Method : TVHBTXE

Time of Injection: 1/12/01 06:12 PM

Start Time : 0.00 min

End Time : 31.00 min

Low Point : -11.73 mV

High Point : 501.06 mV

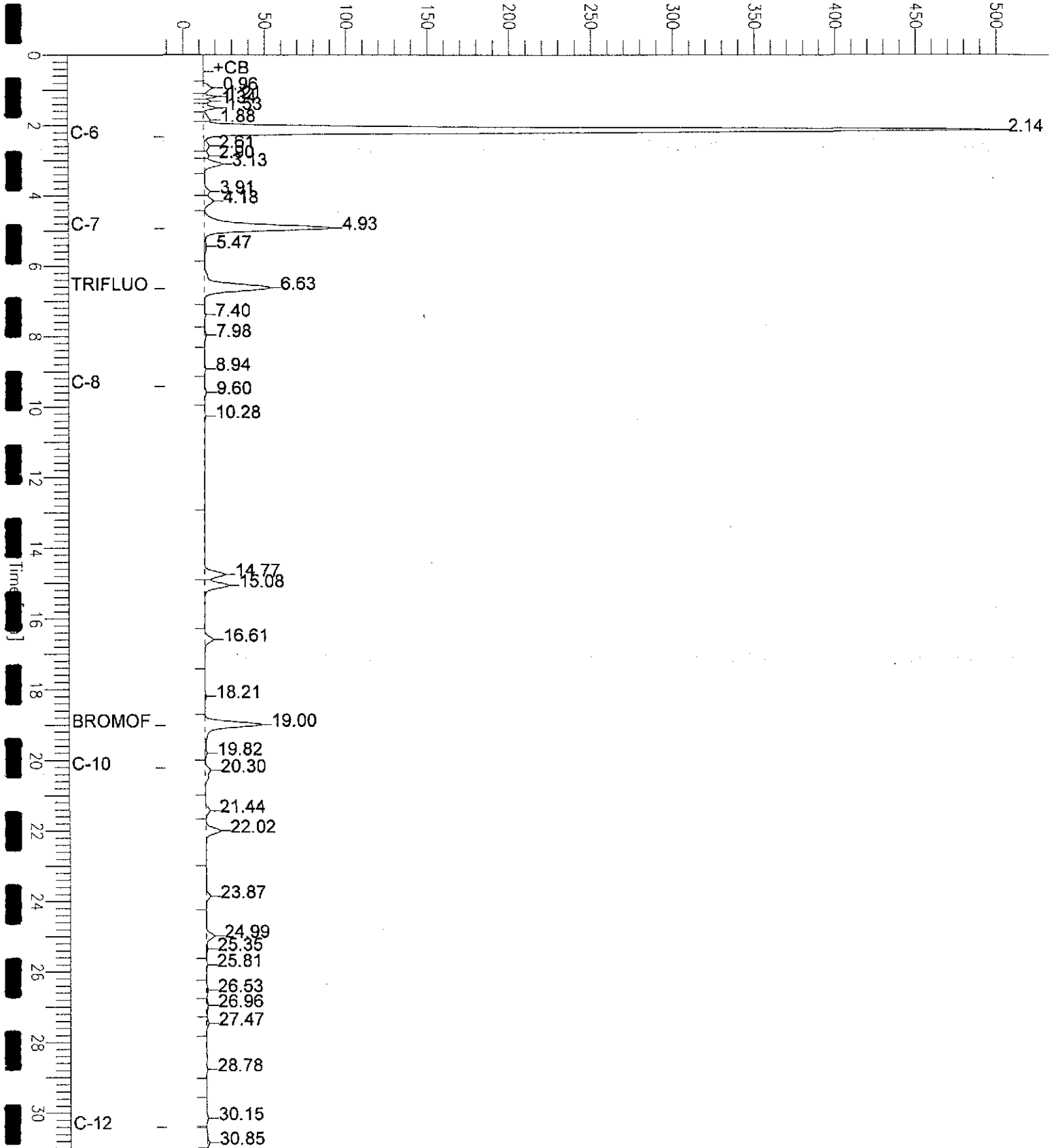
Scale Factor: 1.0

Plot Offset: -12 mV

Plot Scale: 512.8 mV

MW-1A

Response [mV]



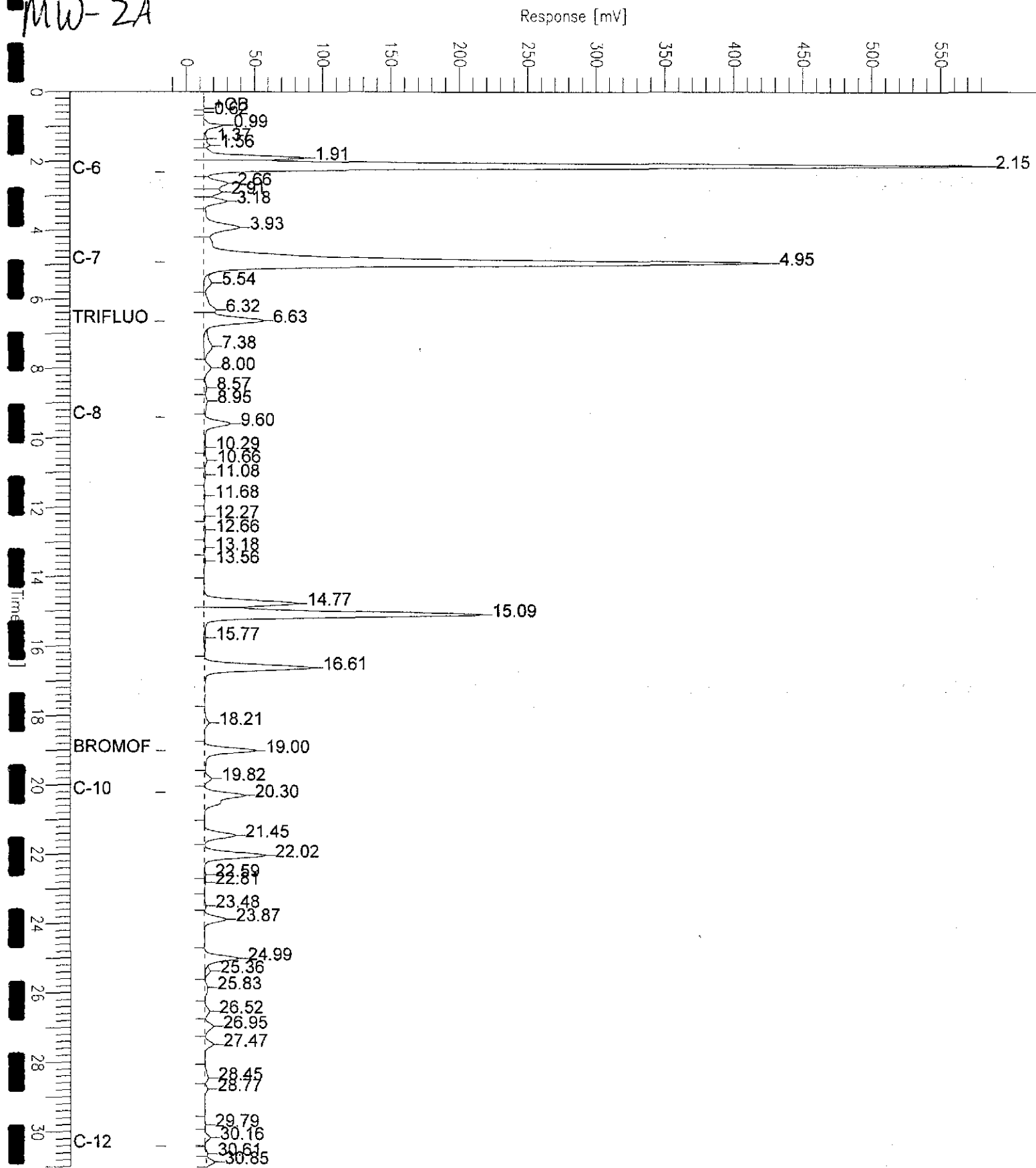
# Chromatogram

Sample Name : 149546-003,60628,+mtbe  
FileName : G:\GC05\DATA\008G015.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

End Time : 31.00 min  
Plot Offset : -16 mV

Sample # :  
Date : 1/9/01 01:30 AM  
Time of Injection: 1/9/01 12:58 AM  
Low Point : -15.63 mV  
Plot Scale: 599.3 mV  
High Point : 583.70 mV

MW-2A





# Chromatogram

Sample Name : mss,149546-004,60628,+mtbe

Sample #:

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FileName : G:\GC05\DATA\008G009.raw

Date : 1/8/01 09:23 PM

Method : TVHBTXE

Time of Injection: 1/8/01 08:52 PM

Start Time : 0.00 min

End Time : 31.00 min

Low Point : 4.55 mV

High Point : 174.04 mV

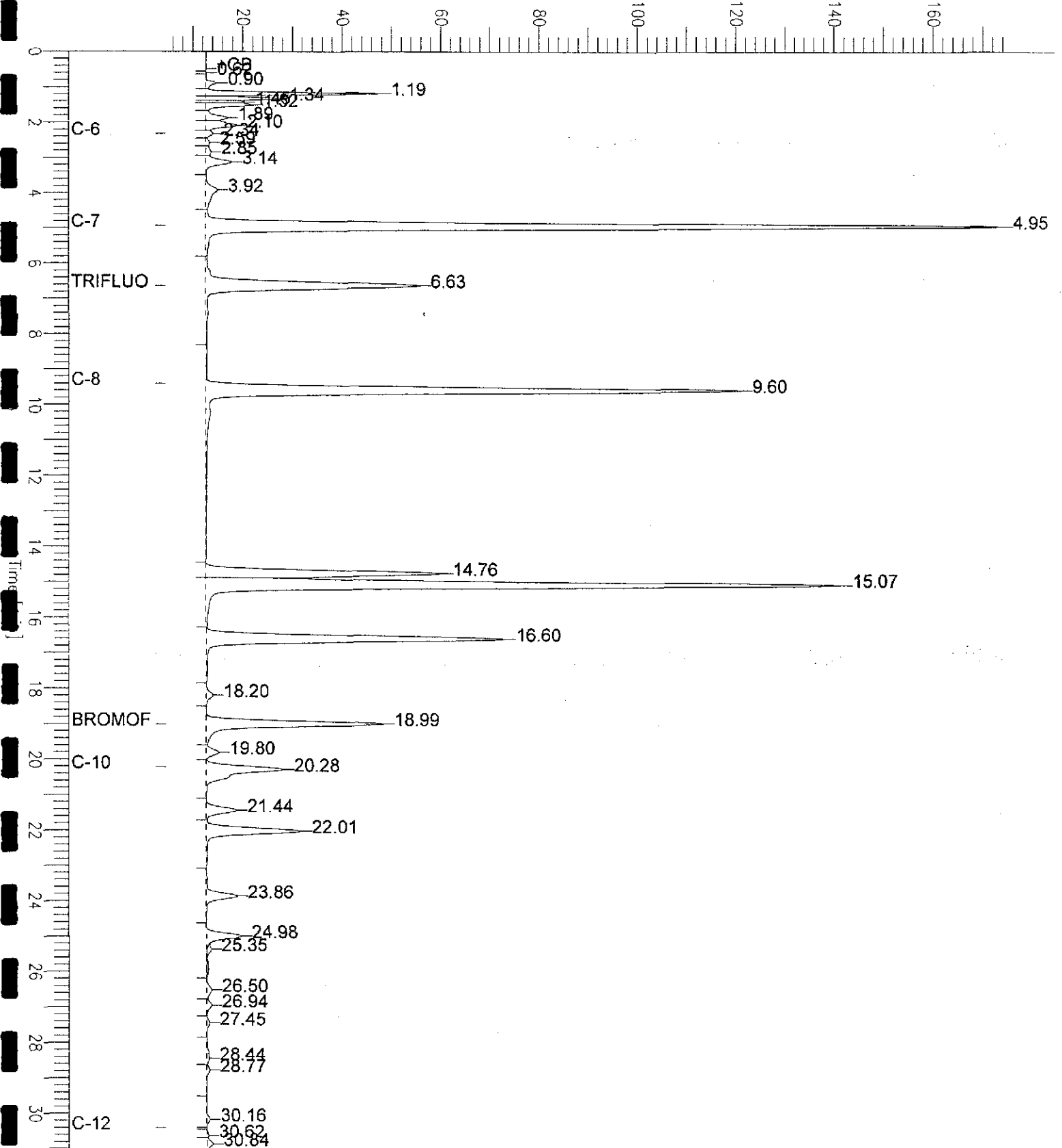
Scale Factor: 1.0

Plot Offset: 5 mV

Plot Scale: 169.5 mV

MW-3A

Response [mV]



# Chromatogram

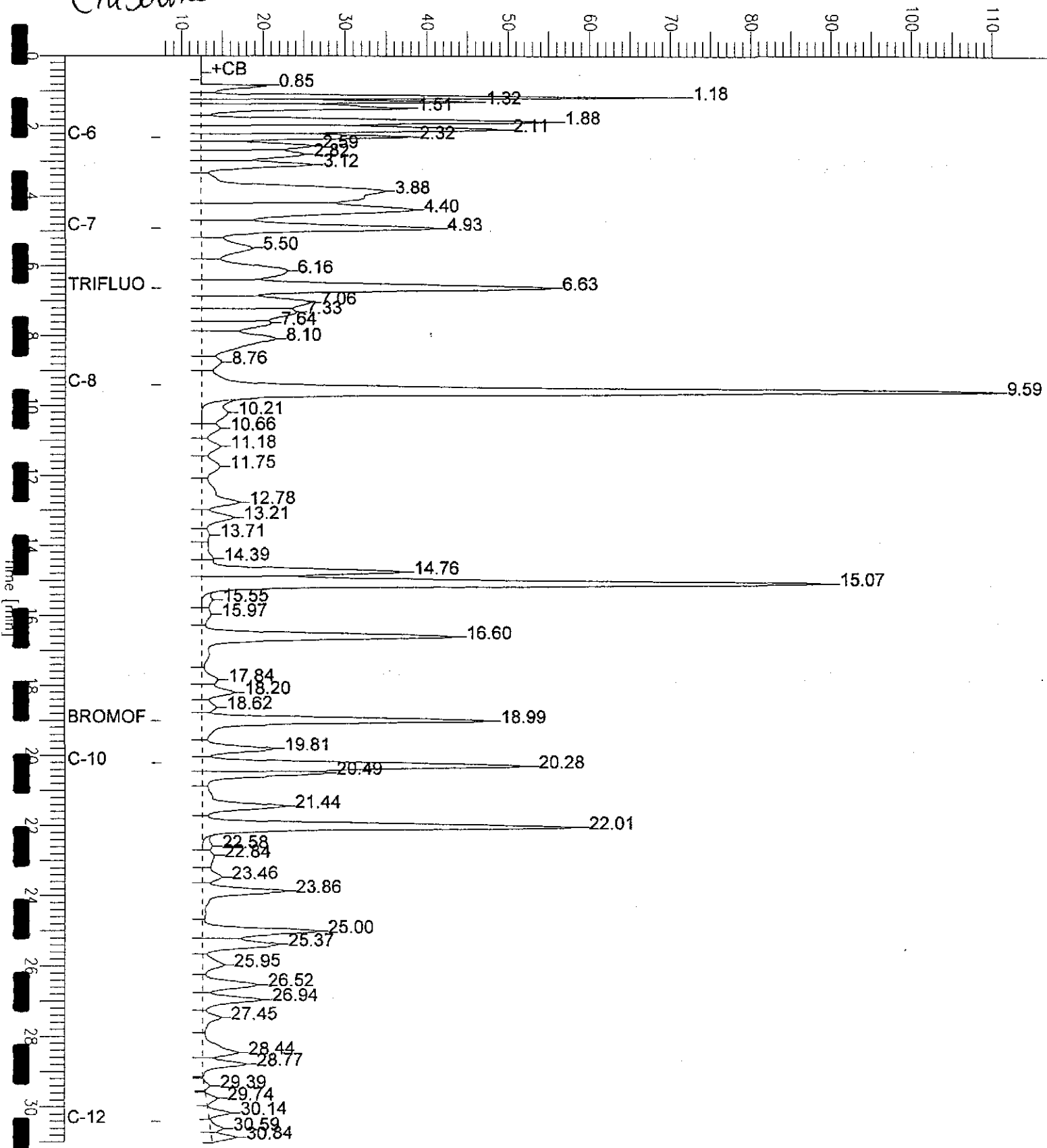
Sample Name : CCV/LCS, QC134254, 60628, 00WS0244, 5/5000  
FileName : G:\GC05\DATA\008G002.raw  
Method : TVHBTXE  
Start Time : 0.00 min End Time : 31.00 min  
Scale Factor : 1.0 Plot Offset : 7 mV

Sample #: GAS  
Date : 1/8/01 04:34 PM  
Time of Injection: 1/8/01 04:03 PM  
Low Point : 7.44 mV High Point : 110.58 mV  
Plot Scale: 103.1 mV

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*Gasoline*

Response [mV]





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L   R E P O R T

Prepared for:

Baseline Environmental  
5900 Hollis Street  
Suite D  
Emeryville, CA 94608

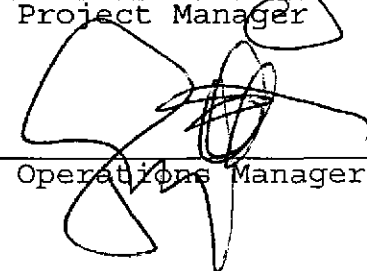
Date: 22-JAN-01  
Lab Job Number: 149666  
Project ID: 98381  
Location: McDonalds, 6623 San Pablo

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by:

  
Project Manager

Reviewed by:

  
Operations Manager

This package may be reproduced only in its entirety.





Total Extractable Hydrocarbons

Lab #:	149666	Location:	McDonalds, 6623 San Pablo
Client:	Baseline Environmental	Prep:	EPA 3520
Project#:	98381	Analysis:	EPA 8015M
Field ID:	MW-2A	Sampled:	01/12/01
Matrix:	Water	Received:	01/12/01
Units:	ug/L	Prepared:	01/16/01
Diln Fac:	1.000	Analyzed:	01/18/01
Batch#:	60840		

Type: SAMPLE Cleanup Method: EPA 3630C  
 Lab ID: 149666-001

Analyte	Result	RL
Diesel C10-C24	250 L Y	50

Surrogate	%REC	Limits
Hexacosane	88	44-121

Type: BLANK Cleanup Method: EPA 3630C  
 Lab ID: QC135026

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
Hexacosane	85	44-121

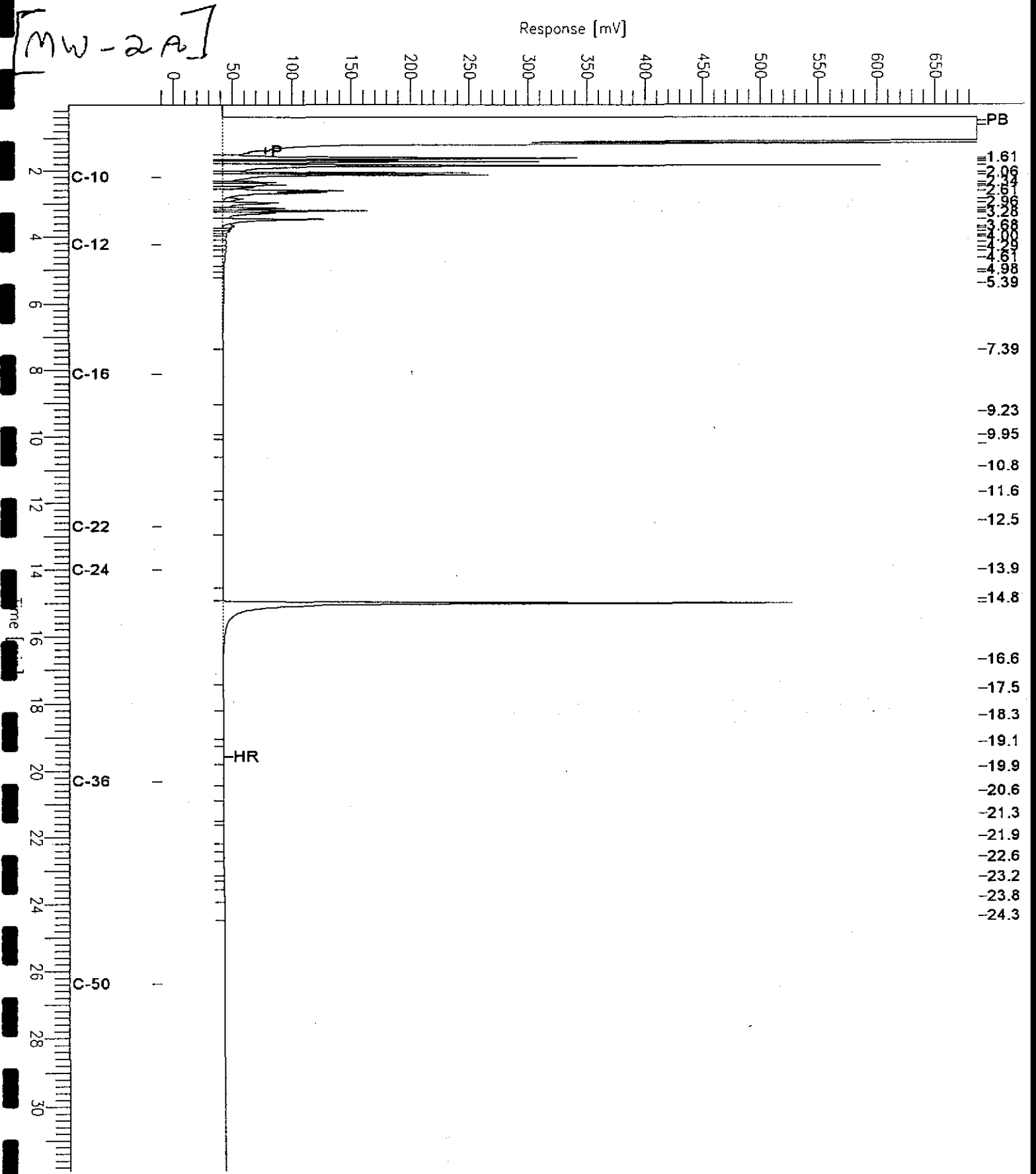
L= Lighter hydrocarbons contributed to the quantitation  
 Y= Sample exhibits fuel pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

# Chromatogram

Sample Name : 149666-001sg,60840  
FileName : G:\GC15\CHB\016B071.RAW  
Method : BTEH362.MTH  
Start Time : 0.01 min  
Scale Factor : 0.0

End Time : 31.91 min  
Plot Offset : -10 mV

Sample #: 60840  
Date : 01/18/2001 10:27 AM  
Time of Injection: 01/18/2001 02:32 AM  
Low Point : -10.12 mV  
High Point : 686.86 mV  
Plot Scale : 697.0 mV



# Chromatogram

Sample Name : ccv,00ws0263,dsl  
File Name : G:\GC15\CHB\0168002.RAW  
Method : BTEH362.MTH  
Start Time : 0.01 min  
Scale Factor : 0.0

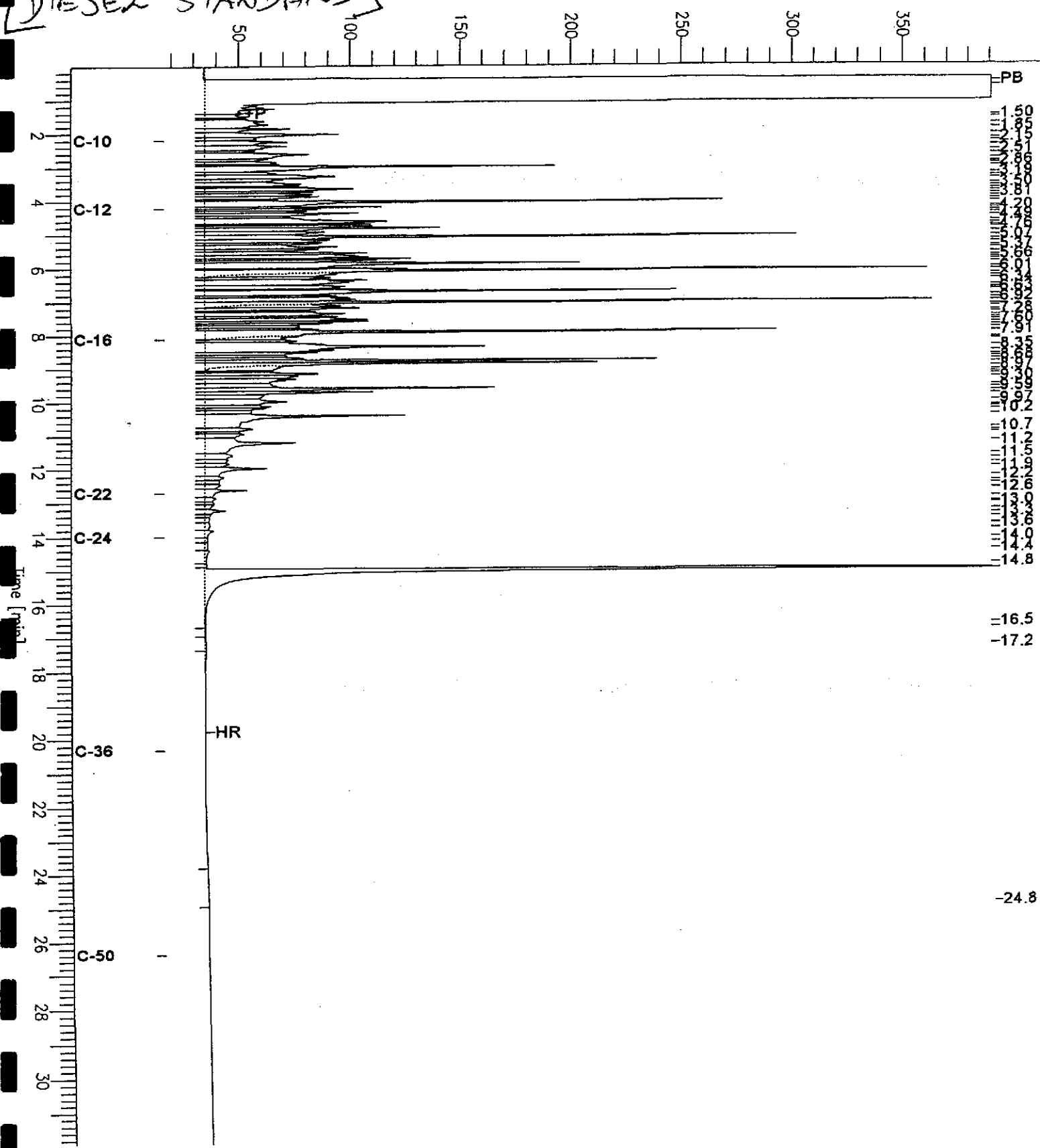
End Time : 31.91 min  
Plot Offset: 17 mV

Sample #: 500mg/L  
Date : 01/15/2001 07:37 PM  
Time of Injection: 01/15/2001 06:44 PM  
Low Point : 16.85 mV  
Plot Scale: 373.9 mV  
High Point : 390.71 mV

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**DIESEL STANDARD**

Response [mV]







Quality Control Checklist  
for Review of Laboratory Report

Job No.: 98381  
 Laboratory: C&T  
 Report Date: 1/19/01 & 1/22/01

Site: 6623 San Pablo  
 Laboratory Report No: 149546 & 149666  
 BASELINE Review By: J. Kane

	Yes	No	NA
<b>GENERAL QUESTIONS</b> (Describe "no" responses below in "comments" section. Contact the laboratory, as required, for further explanation or action on "no" responses; document discussion in comments section.)			
1a. Does the report include a case narrative? (A case narrative MUST be prepared by the lab for all analytical work requested by BASELINE)	X		X
1b. Is the number of pages for the lab report as indicated on the case narrative/lab transmittal consistent with the number of pages that are included in report?	X		X
1c. Does the case narrative indicate which samples were analyzed by a subcontractor and the subcontractor's name?			X
1d. Does the case narrative summarize subsequent requests not shown on the chain-of-custody (e.g., additional analyses requested, release of "hold" samples)?	X*		
1e. Does the case narrative explain why requested analyses could not be performed by laboratory (e.g., insufficient sample)?			X
1f. Does the case narrative explain all problems with the QA/QC data as identified in the checklist (as applicable)?	X		
2a. Is the laboratory report format consistent and legible throughout the report?	X		X
2b. Are the sample and reported dates shown in the laboratory report correct?	X		X
3a. Does the lab report include the original chain-of-custody form?		X	X
3b. Were all samples appropriately analyzed as requested on the chain-of-custody form?	X		X
4. Was the lab report signed and dated as being reviewed by the laboratory director, QA manager, or other appropriate personnel? (Some lab reports have signature spaces for each page). (This requirement also applies to any analyses subcontracted out by the laboratory)	X		X
5a. Are preparation methods, cleanup methods (if applicable), and laboratory methods indicated for all analyses?	X		X
5b. If additional analytes were requested as part of the reporting of the data for an analytical method, were these included in the lab report?	X		X
6. Are the units in the lab report provided for each analysis consistent throughout the report?	X		X
7. Are the detection limits (DL) appropriate based on the intended use of the data? (e.g., DL below applicable MCLs for water quality issues?)	X		X
8a. Are detection limits appropriate based on the analysis performed? (i.e., not elevated due to dilution effects)	X		X
8b. If no, is an explanation provided by the laboratory?			X

\* See comment at end.

Laboratory Quality Control Checklist

Page 2

	Yes	No	NA
9a. Were the samples analyzed within the appropriate holding time? (generally 2 weeks for volatiles, and up to 6 months for total metals)	X		X
9b. If no, was it flagged in the report?			X
10. If samples were composited prior to analysis, does the lab report indicate which samples were composited for each analysis?			X
11a. Do the chromatograms confirm quantitative laboratory results? (petroleum hydrocarbons)	X*		
11b. Is a standard chromatogram(s) included in the laboratory report?	X*		
11c. Do the chromatograms confirm laboratory notes, if present (e.g., sample exhibits lighter hydrocarbon than standard)	X		
12. Are the results consistent with previous analytical results from the site? (If no, contact the lab and request review/reanalysis of data, as appropriate)	X		
13a. REVISED LAB REPORTS ONLY. Is the revised lab report or revised pages to a lab report signed and dated as being reviewed by the laboratory director, QA manager, or other appropriate personnel?			X
13b. REVISED LAB REPORTS ONLY. Does the case narrative indicate the date of revision and provide an explanation for the revision?			X
13c. REVISED LAB REPORTS ONLY. Does the revised lab report adequately address the problem(s) which triggered the need for a revision?			X
13d. REVISED LAB REPORTS ONLY. Are the data included in the revised report the same as data reported in the original report, except where the report was revised to correct incorrectly reported data?			X
<b>QA/QC Questions</b>			
Field/Laboratory Quality Control - Groundwater Analyses			
14. Are field blanks reported as "ND"? (groundwater samples) <i>A field blank is a sample of DI water which is prepared in the field using the same collection and handling procedures as the other samples collected, and used to demonstrate that the sampling procedure has not contaminated the sample.</i>			X
15. Are trip blanks reported as "ND"? (groundwater samples/volatile analyses) <i>A trip blank is a sample of contaminant-free matrix placed in an appropriate container by the lab and transported with the field samples collected. Provides information regarding positive interference introduced during sample transport, storage, preservation, and analysis. The sample is NOT opened in the field.</i>			X
16. Are duplicate sample results consistent with the original sample? (groundwater samples) <i>Field duplicates consist of two independent samples collected at the same sampling location during a single sampling event. Used to evaluate precision of the analytical data and sampling technique. (Differences between the duplicate and sample results may also be attributed to environmental variability).</i>			X

\* See comments at end

Laboratory Quality Control Checklist

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	Yes	No	NA
<p><b>Batch Quality Control</b>                      (Samples are batched together by matrix [soil, water] and analyses requested. A batch generally consists of 20 or fewer samples of the same matrix type, and is prepared using the same reagents, standards, procedures, and time frame as the samples. QC samples are run with each batch to assess performance of the entire measurement process.)</p>			
17. Do the sample batch numbers and corresponding laboratory QA/QC batch numbers match?	X		
18a. Are method blanks (MB) for the analytical method(s) below the laboratory reporting limits? <i>Used to assess lab contamination and prevent false positive results. MBs should be "ND."</i>	X		
18b. If no, is an explanation provided in the case narrative to validate the data?			X
18c. Are analytes which may be considered laboratory contaminants reported below the laboratory reporting limit? <i>Common lab contaminants include acetone, methylene chloride, diethylhexyl phthalate, and di-n-octyl phthalate.</i>			X
18d. If no, was the laboratory contacted to determine whether reported analyte could be a potential laboratory contaminant and was an explanation included in the case narrative?			X
19. Are laboratory control samples (LCS) and LCS duplicate (LCSD) [a.k.a., Blank Spike (BS) and BS duplicates (BSD)] within laboratory reporting limits? Limits should be provided on the report. <i>LCS is a reagent blank spike with a representative selection of target analyte(s) and prepared in the same manner as the samples analyzed. The LCS should be spiked with the same analytes as the matrix spike (below). The LCS is free from interferences from the sample matrix and demonstrates the ability of the lab instruments to recover the target analytes. Accuracy (recovery information) is generally reported as % spike recovery; precision (reproducibility of results) between the LCS and LCSD is generally reported as the relative percent difference (RPD). LCS/LCSD can be run in addition to or in lieu of, matrix QC data.</i>	X*		
20a. Are the Matrix QC data (i.e., MS/MSD) within laboratory limits? Limits should be provided on the lab report. <i>The lab selects a sample from the batch and analyzes a spike and a spike duplicate of that sample. Matrix QC data is used to obtain precision and accuracy information and is reported in the same manner as LCS/LCSD. If the MS/MSD fails, the results may still be considered valid if the MB and either the LCS/LCSD or BS/BSD is within the lab's limits (failure is probably due to matrix interference).</i>	X		
20b. If no, is the MB and either LCS/LCSD or BS/BSD within lab limits to validate the data?			X

60713 ✓  
 60808 ✓  
 60628 ✓  
 60771 ✓  
 60840 ✓

\* See comment at end

Laboratory Quality Control Checklist

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	Yes	No	NA
<b>Sample Quality Control</b>			
21a. Are the surrogate spikes reported within the lab's acceptable recovery limits? A surrogate is a non-target analyte, which is similar in chemical structure to the analyte(s) being analyzed for, and which is not commonly found in environmental samples. A known concentration of the surrogate is spike into the sample or QA "sample" prior to extraction or sample preparation. Results are usually reported as % recovery of the spike. Failure to meet lab's limits for primary and secondary surrogates results in rebatching and reanalysis of the sample; failure of only the primary or the secondary surrogate may be acceptable under certain circumstances. Failure generally is due to coelution with the sample matrix.	X		
21b. If no, is an explanation given in the case narrative to validate the data?			X

Comments:

- 1d) LOC requested confirmation of MTBE w/ 8260, however this request was verbally withdrawn.
- 1a) Chromatograms for TPHs not included in original report. Requested 1/30/01.
- 1g) MTBE failed high in blank spike for batch 60771, however this does not significantly effect sample results b/c MTBE was below RL in sample.

Receive 2/1/01