

VRP 265



ENVIRONMENTAL ENGINEERING, INC  
2660 Bishop Drive • Suite 203 • San Ramon, CA 94583  
TEL (925) 244-6600 • FAX (925) 244-6601

December 9, 2004

Ms. Trish Maguire  
East Bay Municipal Utility District  
EDMUD – Mail Slot #702  
P. O. Box 24055  
Oakland, CA 94623-1055

Alameda County  
DEC 13 2004  
Environmental Health

Re: 3609 International Boulevard, Oakland, California 94601  
**Wastewater Discharge Permit No. 504-27421**

Dear Ms. Maguire:

As you requested, enclosed is SOMA's "Semi-Annual Technical Report: Treatment System Discharge to EBMUD Sewer for Permit No. 50427421 from May 2004 to November 2004" for the subject site.

Thank you for your time in reviewing our report. If you have any questions or comments, please call me at (925) 244-6600.

Sincerely,

Mansour Sepehr, Ph.D., PE  
Principal Hydrogeologist

Enclosure

cc: Mr. Abolghassem Razi w/enclosure  
Mr. Amir Gholami w/enclosure ✓  
Alameda County Dept. of Env. Health



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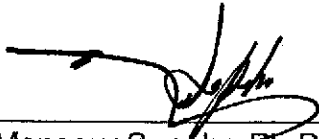
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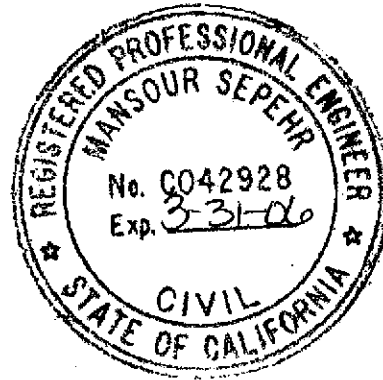
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Alexander County  
DEC 18 2004  
Environmental Health

## CERTIFICATION

This report has been prepared by SOMA Environmental Engineering, Inc. on behalf of Mr. Abolghassem Razi, the property owner of 3609 International Boulevard, Oakland, California to comply with the East Bay Municipal Utility District's requirements for the discharge of extracted and treated groundwater resulting from the cleanup of groundwater polluted by fuel leaks and other related wastes.

  
\_\_\_\_\_  
Mansour Sepéhr, Ph.D., P.E.  
Principal Hydrogeologist



## Certification Statement

Chief Executive Officer

Abolghassem Razi  
Name

Owner  
Title

3609 International Boulevard  
Street Address

Oakland  
City

94601  
Zip

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that the qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

  
Signature

12/6/04  
Date

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## 1.0 INTRODUCTION

The purpose of this report is to present a record of the wastewater discharged from the remediation system operated by SOMA Environmental Engineering, Inc. (SOMA) into the East Bay Municipal Utility District's (EBMUD's) sewer system from May 2004 to November 2004. This report is being submitted on behalf of Mr. Abolghassem Razi, the property owner. The property is Tony's Express Auto Service, which is located at 3609 International Boulevard, Oakland, California (the "Site").

The Site is located at the intersection of 36<sup>th</sup> Avenue and International Boulevard (formerly known as East 14<sup>th</sup> Street) in Oakland, California (see Figure 1). It is currently being used as a gasoline service station and mechanic shop. The Site is relatively flat and the surrounding properties are primarily commercial businesses and residential housing.

Figure 2 illustrates the locations of the service station, dispenser islands, underground storage tanks (USTs), groundwater remediation system, on and off-site groundwater monitoring wells, and surrounding areas. Currently, the groundwater monitoring wells are being monitored on a quarterly basis.

### 1.1 Background

The environmental investigation at the subject property began in 1992 when Mr. Razi retained Soil Tech Engineering, Inc. (STE) to conduct a limited subsurface investigation. The purpose of STE's investigation was to determine whether or not the soil near the product lines and USTs had been impacted with petroleum hydrocarbons.

In July 1993, STE removed one single-walled 10,000-gallon gasoline tank and one single-walled 6,000-gallon gasoline tank along with a 550-gallon waste oil tank from the Site. Three double-walled USTs replaced these tanks. Currently, there is one 10,000 gallon double-walled gasoline tank and two 6,000-gallon double-walled gasoline tanks beneath the Site (Figure 2).

In December 1997, Mr. Razi retained Western Geo-Engineers (WEGE) to conduct an additional investigation and perform groundwater monitoring on a quarterly basis. The results of WEGE's groundwater monitoring events indicated that there were elevated levels of petroleum hydrocarbons and Methyl tertiary Butyl Ether (MtBE) in the groundwater.

In April 1999, Mr. Razi retained SOMA to conduct groundwater monitoring, risk based corrective action (RBCA), a corrective action plan (CAP) and soil and groundwater remediation at the Site. The results of the RBCA study indicated that the Site is a high-risk area, therefore, the soil and groundwater in the on-and

off-site areas needs to be remediated. The results of the CAP study indicated that the installation of a French drain coupled with the vapor extraction technique was the most cost effective alternative for the Site's remediation.

In late August 1999, SOMA installed a French drain and initiated a groundwater treatment system to prevent the chemically impacted groundwater from migrating further. This treatment system has been in operation since early December 1999.

On July 25, 2003, an additional on-site extraction pump was installed in the western French drain riser by SOMA. The extraction pump was installed to create a better capture zone in the region around the USTs and to prevent the off-site migration of contaminants.

On January 9, 2004, the on-site pneumatic downhole pumps in the French drain were converted into electrical pumps by SOMA. A carbon change-out was performed on March 17, 2004.

On October 13, 2004, SOMA met with EBMUD representative, Timothy Quane, to determine the efficiency of the remediation system and to collect groundwater samples from the system. Based on the analytical results from the groundwater samples, EBMUD determined the system was in compliance with the discharge permit requirements.

## **1.2 Site Conditions**

The source of the petroleum hydrocarbons in the groundwater is believed to have originated from the former single-walled USTs that were used to store gasoline at the Site. As mentioned earlier, the former single-walled USTs were replaced with a 10,000-gallon double-walled UST and two 6,000-gallon double-walled USTs.

In general, the more impacted wells have been MW-1 and MW-3, which are near the UST cavity, and MW-6, which is near the SVE system, in the eastern section of the Site. Based on the groundwater analytical results from the monitoring events conducted at the Site by SOMA, the following concentration trends were observed for these three wells, since the last EBMUD report in May 2004.

- In well MW-1, total petroleum hydrocarbons as gasoline (TPH-g) decreased. Both benzene and MtBE were below the January 2004 level.
- In well MW-3, both TPH-g and benzene decreased. MtBE slightly increased.
- In well MW-6, TPH-g significantly decreased, benzene decreased, and MtBE remained below the laboratory reporting limit.

Further detailed information on the groundwater concentrations encountered throughout the Site is presented in SOMA's "Third Quarter 2004 Groundwater Monitoring and Remediation System Operation Report," dated September 28, 2004.

## 2.0 TREATMENT SYSTEM OPERATION

The operation of the treatment system began on December 6, 1999. Since then, (recording date is November 8, 2004) approximately 2,631,600 gallons of groundwater has been treated and discharged into EBMUD's sewer system, under the wastewater discharge permit.

Appendix A includes the EBMUD Wastewater Discharge Permit; permit number 50427421.

As required by the discharge permit and the Alameda County Environmental Health Services (ACEHS), inspection and sampling of the treatment system has been performed on a routine basis since the system's initial start-up. The influent samples have been collected from the 550-gallon holding tank. The effluent samples have been collected from the 2,000 pound Granular Activated Carbon (GAC-1) Unit, and the treatment system effluent (PSP#1). The sample locations can be seen in the schematic diagram of the treatment system, which is shown in Figure 3.

SOMA repaired the treatment system during the Fourth Quarter 2002 to prevent PVC piping connection leaks. Scale deposits had built up inside the PVC piping during the operation of the treatment system. The entire effluent line from GAC-1 to the effluent sample port was removed and a new line was installed. A 1-inch ball valve was installed up-gradient of the 55-gallon GAC vessel. This valve was installed to shut-off flow to the 55-gallon carbon vessel during carbon change-outs.

Table 1 shows the total volume of effluent discharged into EBMUD's sewer system. Also included in Table 1 are the laboratory analytical results of the treatment system samples collected from the effluent and the 2,000-pound GAC-1 unit, as well as pertinent historical maintenance data.

Appendix B includes the laboratory reports for the treatment system from June 2004 to November 2004. The May 2004 sampling event was included in the previous discharge report submitted to EBMUD.

The treatment system has removed approximately 176 pounds of hydrocarbons and 82 pounds of MtBE from the initial start-up in December 1999 to November 8, 2004. Since the previous semi-annual report, approximately



134,250 gallons of chemically impacted groundwater has been treated by the groundwater remediation system (from May 3, 2004 to November 8, 2004).

Figure 4 displays the cumulative mass of both TPH-g and MtBE extracted from the Site's groundwater since December 1999.

### **3.0 CONCLUSIONS AND RECOMMENDATIONS**

- Approximately 134,250 gallons of groundwater has been treated and discharged at the Site since the last EBMUD Semi-Annual Discharge Report (May 3, 2004 to November 8, 2004). Approximately 2,631,600 gallons of chemically impacted groundwater has been treated since the treatment system's initial start-up in December 1999. Approximately 176 pounds of hydrocarbons and 82 pounds of MtBE have been removed from the groundwater.
- Based on the analytical results from the monitoring events, it appears that several groundwater constituents have decreased in the vicinity of the more impacted wells MW-1, MW-3, and MW-6.
- Based on the historical treatment system analytical data and the number of carbon change-out cycles since the initial start-up in December 1999, SOMA is planning to replace the 55-gallon carbon vessel at a minimum of every 18 weeks. SOMA will collect samples from the treatment system at a minimum of every 3 to 4 weeks and will perform routine system maintenance on a weekly basis.

### **4.0 REPORT LIMITATIONS**

This report is the summary of work done by SOMA including observations and descriptions of the Site's conditions. It includes the analytical results produced by Curtis & Tompkins, Ltd. in Berkeley, CA, and Pacific Analytical Laboratory in Alameda, CA. Data summaries produced by the previous environmental consultants are also referenced in this report. The number and location of the wells were selected to provide the required information, but may not be completely representative of the entire site's conditions. All conclusions and recommendations are based on the results of laboratory analysis. Conclusions beyond those specifically stated in this document should not be inferred from this report.

SOMA warrants that the services provided were done in accordance with the generally accepted practices in the environmental engineering and consulting field at the time of this sampling.

# TABLE

**Table 1**  
**Total Volume of Water Treated, Historical Operational Data, and Effluent and GAC-1 Analytical Results**  
**3609 International Boulevard, Oakland, California**

Month	Date	Meter	Lab Results For Effluent <sup>1</sup> and GAC-1					
		Reading (gallons)	(concentrations in ug/L)		Benzene	Toluene	Ethylbenzene	Total Xylenes
			MtBE <sup>2</sup>	TPH-g				
<b>2004</b>								
November	11/8/2004	2,631,600	<0.5 <0.5	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
October	10/13/2004	2,606,420	< 2.0 <2.0	< 50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
September	9/13/2004	2,594,390	< 2.0 < 2.0	< 50 < 50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
August	8/25/2004	2,586,010	55 Gallon Drum Changed Out					
	8/9/2004	2,581,250	< 2.0 < 2.0	< 50 < 50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
July	7/13/2004	2,568,830	< 2.0 < 2.0	< 50 < 50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
	7/21/2004	2,564,710	55 Gallon Drum Changed Out					
June	6/14/2004	2,549,470	< 2.0 < 2.0	< 50 < 50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
May	5/26/2004	2,530,000	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel					
	5/10/2004	2,488,760	Semi Annual Treatment System Meeting With Ebmud					
	5/17/2004	2,518,910	Replaced 55-gallon polishing vessel and restarted the system					
	5/5/2004	2,500,650	Carbon Changed Out and 55 Gallon Drum Changed Out					
	5/3/2004	2,497,350	< 2.0 < 2.0	< 50 < 50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5
April	4/15/2004	2,436,190	< 5.0 <5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
March	3/17/2004	2,376,200	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel					
February	2/24/2004	2,276,770	< 5.0 <5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
January	1/27/2004	2,165,220	< 5.0 <5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
	1/13/2004	2,116,720	< 5.0 <5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0

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Month	Date	Meter	Lab Results For Effluent and GAC-1					Total Xylenes	
		Reading (gallons)	(concentrations in ug/L)		Benzene	Toluene	Ethylbenzene		
			MIBE <sup>2</sup>	TPH-g					
<b>2003</b>									
December	12/8/2003	2,092,330	< 5.0 <5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
November	11/17/2003	2,087,670	< 5.0 <5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
	11/3/2003	2,079,460	< 5.0 <5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
October	10/13/2003	2,073,060	5.3 <5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
	10/1/2003	2,072,610	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel						
September	9/15/2003	2,056,910	<5.0 6	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
	9/2/2003	2,040,040	<5.0 <5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
August	8/19/2003	2,021,040	<5.0 <5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
July	7/21/2003	1,995,240	< 5.0 40	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
	7/9/2003	1,990,260	< 5.0 36	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
June	6/18/2003	1,978,560	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel						
	6/10/2003	1,972,780	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
May	5/21/2003	1,951,830	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
	5/1/2003	1,918,270	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
April	4/11/2003	1,882,440	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
March	3/19/2003	1,846,490	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
February	2/25/2003	1,804,960	replaced 55-gallon polishing vessel with new 55 gallon carbon drum						
	2/19/2003	1,791,720	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
January	1/27/2003	1,733,500	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	
	1/2/2003	1,675,600	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	

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**3609 International Boulevard, Oakland, California**

Month	Date	Meter	Lab Results For Effluent <sup>1</sup> and GAC-1					Total Xylenes
		Reading (gallons)	(concentrations in ug/L)		Benzene	Toluene	Ethylbenzene	
			MtBE <sup>2</sup>	TPH-g				
<b>2002</b>								
December	12/10/2002	1,672,870	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
November	11/22/2002	1,668,650	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
	11/13/2002	1,664,780	replaced gasket on top of 2000 lb GAC vessel, slight leak was detected					
	11/7/2002	1,663,880	Carbon Change-out of 2000 lb vessel and 55 gallon polishing vessel					
October	10/16/02 <sup>3</sup>	1,661,590	< 310 < 0.5	2,000 Y Z < 50	< 310 < 0.5	< 310 < 0.5	< 310 < 0.5	< 310 < 0.5
September	9/19/2002	1,653,600	< 5 < 5	< 50 < 50	< 5 < 5	< 5 < 5	< 5 < 5	< 5 < 5
August	8/23/2002	1,641,650	1 < 0.5	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5
July	7/23/2002	1,632,834	< 5.0 < 5.0	< 50 < 50	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
June	6/24/2002	1,610,050	1.7 < 0.5	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5
May	5/30/2002	1,571,630	< 0.5 < 0.5	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5
	5/20/2002	1,548,000	removed newly installed compressor, installed another compressor					
	5/8/2002	1,538,850	installed new compressor					
	5/1/2002	1,529,650	installed new 55 gallon GAC Vessel					
April	4/24/2002	1,528,740	< 0.5 < 0.5	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5
	4/1/2002	1,478,500	repaired valve plate assembly on compressor					
March	3/25/2002	1,478,420	performed carbon change-out on treatment system					
	3/18/2002	NR	replaced piston on compressor					
	3/14/2002	1,478,330	compressor not building up pressure					
February	2/27/2002	1,449,830	< 0.5 1.1	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5
January	1/22/2002	1,381,370	< 2.0 < 2.0	< 50 < 50	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5

**Table 1**  
**Total Volume of Water Treated, Historical Operational Data, and Effluent and GAC-1 Analytical Results**  
**3609 International Boulevard, Oakland, California**

Month	Date	Meter	Lab Results For Effluent and GAC-1					
		Reading (gallons)	(concentrations in ug/L)		Benzene	Toluene	Ethylbenzene	Total Xylenes
			MIBE <sup>2</sup>	TPH-g				
<b>2001</b>								
December	12/12/2001	1,311,340	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
November	11/2/2001	1,272,660	ND 0.6	ND ND	ND ND	ND ND	ND ND	ND ND
September	9/28/2001	NA	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
August	8/22/2001	1,243,100	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
July	7/26/2001	1,227,270	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
	7/11/2001	1,226,730	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
June	6/29/2001	1,224,600	NA ND	NA ND	NA ND	NA ND	NA ND	NA ND
	6/26/2001	NR	installed new compressor					
	6/16/2001	1,216,580	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	6/7/2001	1,216,580	compressor not working, repaired compressor					
			NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
May	5/30/2001	1,205,198	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	5/23/2001	1,194,390	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	5/17/2001	1,182,360	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
	5/10/2001	1,166,850	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	5/5/2001	1,151,600	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
April	4/28/2001	1,135,690	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	4/21/2001	1,113,570	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	4/11/2001	1,082,700	NA ND	ND ND	ND ND	ND ND	ND ND	ND ND
	4/6/2001	1,065,540	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA

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Month	Date	Meter	Lab Results For Effluent and GAC-1					Total Xylenes
		Reading (gallons)	(concentrations in ug/L)		Benzene	Toluene	Ethylbenzene	
			MtBE <sup>2</sup>	TPH-g				
March	3/29/2001	1,036,330	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
			system was re-started					
	3/21/2001	1,036,070	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
			belt replaced on compressor					
	3/17/2001	1,035,100	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	3/13/2001	1,032,500	ND NA	ND NA	ND NA	ND NA	ND NA	ND NA
	3/2/2001	996,520	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	3/1/2002	NR	system re-started after carbon change-out					
February	2/28/2002	NR	Carbon Change-out was performed on GAC-1, washed algae from holding tank cleaned 2000 lb GAC, re-started system					
	2/10/2001	975,490	System shut down for maintenance and cleaning.					
January	1/29/2001	957,880	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
<b>2000</b>								
December	12/5/2000	883,000	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
November	11/24/2000	NR	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
	11/1/2000	842,000	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
October	10/1/2000	809,000	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
August	8/27/2000	781,000	ND	ND	ND	ND	ND	ND
	8/24/2000	778,000	Totalizer meter replaced at 775,000 gallons					
July	7/26/2000	726,000	ND	ND	ND	ND	ND	ND
	7/19/2000	718,000	ND	ND	ND	ND	ND	ND
	7/13/2000	712,000	ND	ND	ND	ND	ND	ND
	7/7/2000	706,000	ND	ND	ND	ND	ND	ND
June	6/29/2000	700,000	ND	ND	ND	ND	ND	ND
	6/21/2000	682,220	ND	ND	ND	ND	ND	ND
	6/16/2000	669,720	ND	ND	ND	ND	ND	ND
	6/10/2000	651,200	ND	ND	ND	ND	ND	ND
May	5/31/2000	629,000	ND	ND	ND	ND	ND	ND
	5/23/2000	603,700	ND	ND	ND	ND	ND	ND
	5/18/2000	570,000	ND	ND	ND	ND	ND	ND
	5/10/2000	530,400	ND	ND	ND	ND	ND	ND
April	4/30/2000	488,300	ND	ND	ND	ND	ND	ND
	4/18/2000	485,300	ND	ND	ND	ND	ND	0.51
			compressor stopped, system shut down until April 29, 2000					
	4/10/2000	440,200	ND	ND	ND	ND	ND	ND
	4/4/2000	390,100	ND	ND	ND	ND	ND	ND
	4/2/2000	NR	performed a carbon change-out on GAC-1					

**Table 1**  
**Total Volume of Water Treated, Historical Operational Data, and Effluent and GAC-1 Analytical Results**  
**3609 International Boulevard, Oakland, California**

Month	Date	Meter	Lab Results For Effluent <sup>1</sup> and GAC-1					Total Xylenes
		Reading (gallons)	(concentrations in ug/L)					
			MtBE <sup>2</sup>	TPH-g	Benzene	Toluene	Ethylbenzene	
March	3/31/2000	NR	replaced GAC-2 with a special GAC designed for removal of MtBE					
	3/24/2000	388,000	ND	ND	ND	ND	ND	ND
	3/17/2000	357,100	ND	ND	ND	ND	ND	ND
	3/10/2000	329,000	ND	ND	ND	ND	ND	ND
	3/3/2000	300,000	transfer overheated, repaired pump, restarted system 3/6/00					
February	2/25/2000	274,000	ND	ND	ND	ND	ND	ND
	2/18/2000	233,000	ND	ND	ND	ND	ND	ND
	2/11/2000	190,000	ND	ND	ND	ND	ND	ND
	2/4/2000	160,800	ND	ND	ND	ND	ND	ND
January	1/28/2000	130,600	ND	ND	ND	ND	ND	ND
	1/21/2000	103,435	ND	ND	ND	ND	ND	ND
	1/17/2000	NR	GAC-1 was replaced with 2,000 lb GAC unit					
	1/14/2000	83,500	185	ND	ND	ND	ND	ND
<b>1999</b>								
December	12/23/1999	51,680	1486	NA	ND	ND	ND	ND
			ND	NA	ND	ND	ND	ND
	12/16/1999	30,450	963	NA	ND	ND	ND	ND
			ND	NA	ND	ND	ND	ND
	12/9/1999	9,000	230	ND	ND	ND	ND	ND
Pumping began on December 6, 1999								

Notes:

- 1 Effluent is equivalent to PSP#1
  - 2 MTBE was analyzed using EPA Method 8260B, prior to the September 2003. After September 2003, MtBE was only analyzed by EPA Method 8021B.
  - 3 Lab data as shown for Oct. 2002 is erroneous data. During lab analysis a high detection of 2-Butanone was detected in only the effluent sample. The influent sample for 2-Butanone was at only 20 ppb. This caused a high dilution factor causing a high non-detectable value. The high TPH-g value was misrepresentative due to the Y and Z flags.
- ND, < : Not Detected above laboratory reporting limits  
 NA: Not Analyzed  
 NR: Not recorded. Totalizer reading not recorded.  
 Y: Sample exhibits fuel pattern which does not resemble standard  
 Z: Sample exhibits unknown single peak or peaks



# FIGURES



approximate scale in feet



Figure 1: Site vicinity map.

COMMERCIAL AREA

COMMERCIAL AREA

36th AVENUE

Manhole

EBMUD

Main sewer line

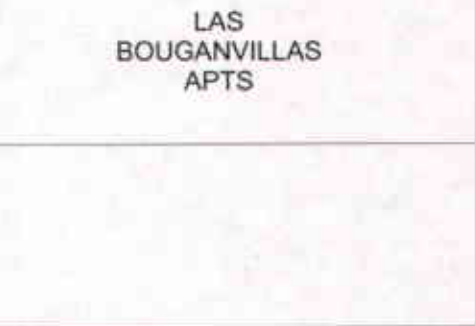
Storm drain

MW-8

MW-7

MW-1

MW-5



SVE TREATMENT SYSTEM

GAC TREATMENT SYSTEM

E 12th STREET

- MONITORING WELL
- EXTRACTION WELL
- EXTRACTION MANIFOLD PIPING
- FACILITY PROPERTY LINES
- SEWER LINE APPROXIMATE
- WATER LINE TO WATER METER APPROXIMATE
- TREATMENT SYSTEM DISCHARGE LINE APPROXIMATE
- RESTROOM
- SINK
- NEPTUNE WATER METER
- TREATMENT SYSTEM SAMPLING POINT

MW-12

MW-11

MW-10

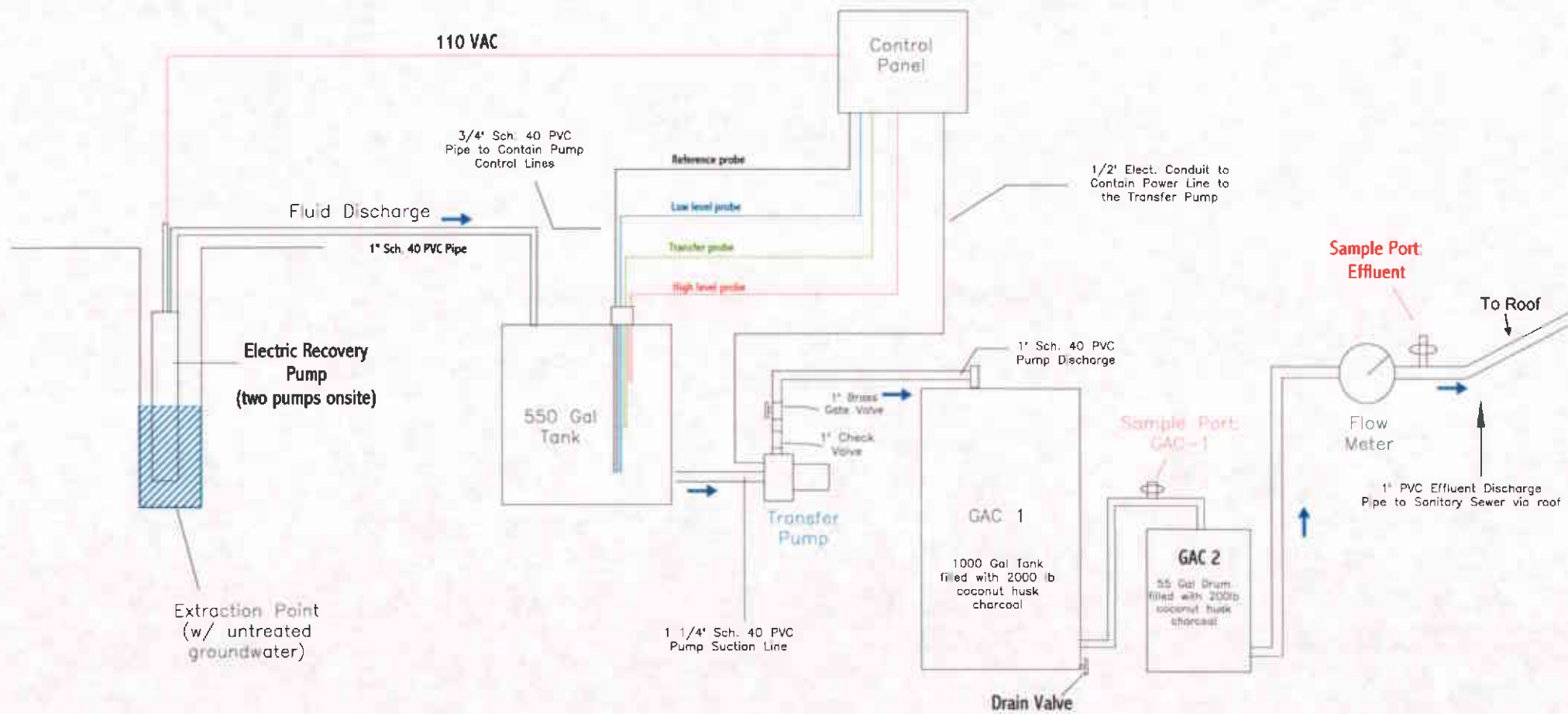
(Discharge permit No: 504-27421)  
Tony's Express Auto Service



approximate scale in feet

Figure 2: Site map showing location of groundwater monitoring wells, French drain, SVE system, and GAC system.





(Discharge permit No: 504-27421)  
 Tony's Express Auto Service. September 1, 2004

Figure 3: Schematic of the Groundwater Remediation System.

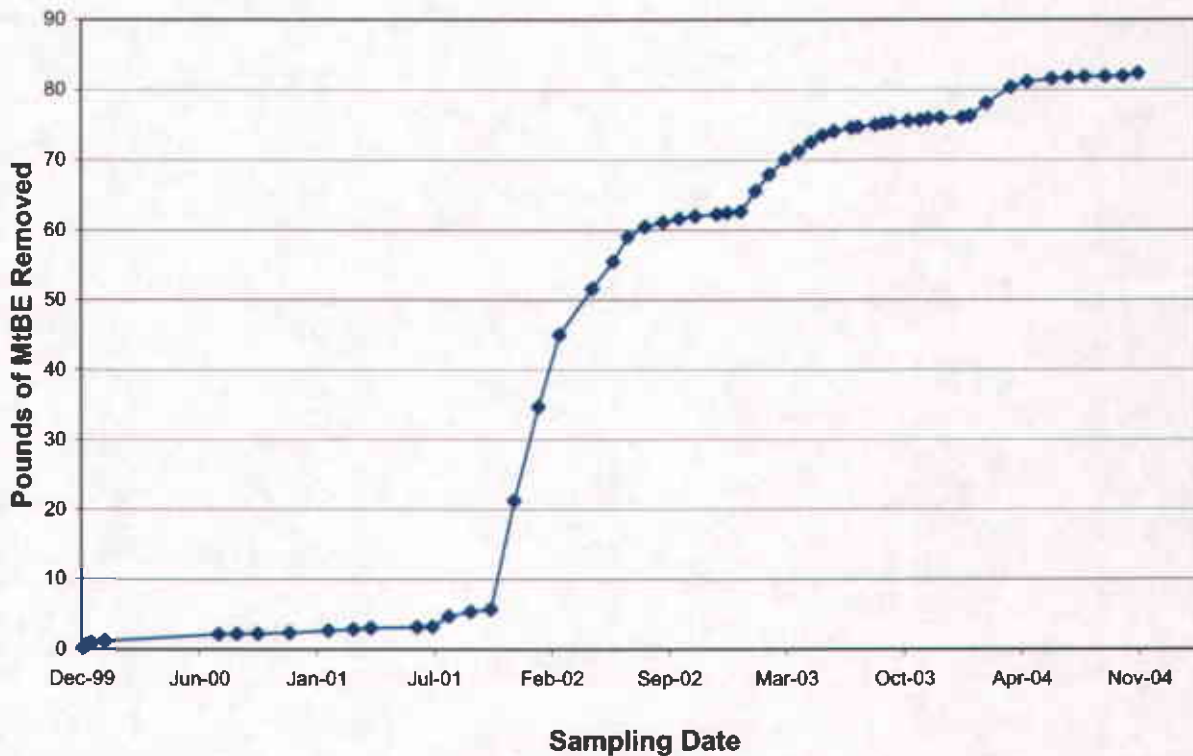
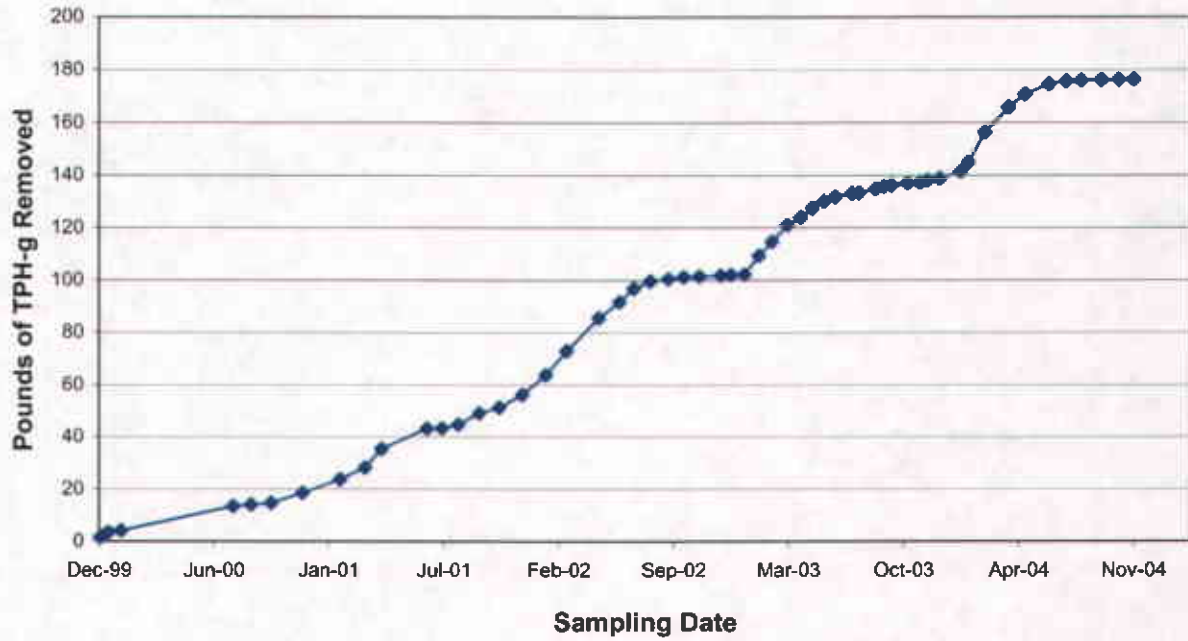


Figure 4. Cumulative mass of TPH-g and MtBE removed from groundwater since the installation of the treatment system.



# **APPENDIX A**

## **EBMUD DISCHARGE PERMIT**



# WASTEWATER DISCHARGE PERMIT

REVISION EFFECTIVE JULY 1, 2000 Terms and Conditions

Tony's Express Auto Service  
Permit No. 504-27421  
Page No. 1

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## GENERAL CONDITIONS

- I. Title I, Section 5 of EBMUD Ordinance No. 311 prohibits the discharge of groundwater to the community sewer. This Permit to discharge treated groundwater is considered a waiver of the prohibition and is issued based on Tony's Express Auto Service's application that discharge of pollutants to the community sewer will be minimized and methods to reclaim the groundwater, to the extent technically and economically feasible, have been made.
- II. This Permit is granted to Tony's Express Auto Service to discharge treated groundwater from 3609 International Boulevard in Oakland.
- III. Tony's Express Auto Service shall cease discharge of groundwater immediately if not in compliance with any of the Terms and Conditions of this Permit.
- IV. Tony's Express Auto Service shall comply with all items of the attached STANDARD TERMS AND CONDITIONS, July 2000 Edition.

## COMPLIANCE REQUIREMENTS

- I. Tony's Express Auto Service shall not discharge any treated wastewater that is known to be, or suspected of, violating wastewater discharge limitations.
- II. Tony's Express Auto Service shall pretreat all groundwater before discharging to the sanitary sewer at 3609 International Boulevard in Oakland. Pretreatment shall consist of a minimum of processes displayed in the *Tony's Express Auto Service System Flow Diagram (Figure 3)*.
- III. Tony's Express Auto Service shall maintain the pretreatment system in proper operating condition.
- IV. Tony's Express Auto Service shall maintain records of operation and maintenance activities on the pretreatment systems. The records shall include, but are not be limited to, meter readings from the flow totalizer at a maximum of monthly intervals; maintenance activities performed; description of operational changes; description of visual observations of the unit for leaks or fouling; and off - haul of hazardous wastes. The records shall be available to the District staff upon request.

**CERTIFIED MAIL**  
**(Return Receipt Requested)**  
Certified Mail No. 7003 0500 0004 6346 4327

November 8, 2004

Mr. Abolghassem Razi  
Tony's Express Auto Service  
3609 International Blvd.  
Oakland, CA 94601

Dear Mr. Razi:

Re: Wastewater Discharge Permit No. 50427421 Extension through November 14, 2006

The Tony's Express Auto Service Wastewater Discharge Permit will expire on November 14, 2004. In order to continue the transition of the Permit to a five-year renewal frequency, your Permit shall be extended through November 14, 2006.

A ten percent yearly increase in the 2003-2004 annual permit fee of \$1,370 will be applied during the 2004-2005 and 2005-2006 permit years and then annually until the \$1,770 permit fee is reached. The table below shows the annual permit fees for the permit extension period of November 15, 2004, through November 14, 2006.

	2004-05	2005-06
Annual Permit Fee	\$1,507	\$1,658

During this Permit extension period, self-monitoring shall occur, at minimum, quarterly, for the following parameters:

PARAMETER	SAMPLE	EPA METHOD
Benzene	grab	8021B
Toluene	grab	8021B
Ethyl Benzene	grab	8021B
Xylenes	grab	8021B

Tony's Express Auto Service shall submit compliance reports as follow:

REPORTING PERIOD	REPORT DUE DATE
November 15, 2004 through May 14, 2005	June 14, 2005
May 15, 2005 through November 14, 2005	December 14, 2005
November 15, 2005 through May 14, 2006	June 14, 2006
May 15, 2006 through November 14, 2006	December 14, 2006





# WASTEWATER DISCHARGE PERMIT

REVISION EFFECTIVE JULY 1, 2000 Terms and Conditions

Tony's Express Auto Service  
Permit No. 504-27421  
Page No. 2

## REPORTING REQUIREMENTS

- I. Violations shall be reported in accordance with Section B, Paragraph II of STANDARD TERMS AND CONDITIONS, July 2000 Edition.
- II. Tony's Express Auto Service shall submit technical reports due on the following dates:

<u>Date Due</u>	<u>Reporting Period</u>
June 14, 2000	November 15, 1999, through May 14, 2000
December 14, 2000	May 15, 2000 through November 14, 2000

The technical reports shall contain the following information, at a minimum:

- 1. Self-monitoring reports prepared in accordance with the "Self-Monitoring Reporting Requirements" of this Permit.
- 2. Monthly readings from the flow totalizer measuring volume of the pretreatment system effluent.
- 3. Volume of groundwater pumped and treated during the reporting period, and a total to date.
- 4. Description of any operational changes occurred during the reporting period.
- 5. Certification and signature prepared in accordance with Section B Part V of STANDARD TERMS AND CONDITIONS, July 2000 Edition, "Signature Requirements".

## WASTEWATER DISCHARGE LIMITATIONS

Tony's Express Auto Service shall not discharge wastewater from a side sewer into the community sewer if the strength of the wastewater exceeds the following local limits:

<u>REGULATED PARAMETER</u>	<u>DAILY MAXIMUM</u>
Benzene	0.005 mg/L
Toluene	0.005 mg/L
Ethylbenzene	0.005 mg/L
Xylenes, total	0.005 mg/L

SD-30.7 2/81



July 30, 2003

DAVID A. WILLIAMS  
DIRECTOR OF WASTEWATER

**CERTIFIED MAIL**  
**Return Receipt Requested**  
Certified Mail No. 7003 0500 0004 6346 268

Mr. Abolghassem Razi  
Tony's Express Auto Service  
3609 International Blvd.  
Oakland, CA 94601

Dear Mr. Abolghassem Razi:

Re: Wastewater Discharge Permit Rate Revisions - Permit No. 50427421

On June 10, 2003, the EBMUD Board of Directors approved changes in wastewater system rates and charges for two years. New rates and charges for fiscal year 2004 (FY04) are effective July 1, 2003. Wastewater treatment charges, as well as monitoring and testing fees, have been changed. The table below compares the treatment unit rates effective July 1, 2002 (FY03) with the new unit rates effective July 1, 2003 (FY04).

	Rates Effective		
	FY03	FY04	% Change
Flow (\$/Ccf)	0.426	0.442	+ 3.8%
CODF (\$/lb)	0.148	0.154	+ 4.0%
TSS (\$/lb)	0.250	0.259	+ 3.6%

The billing conditions for your wastewater discharge permit have been revised to reflect the revised rates and charges. New permit pages incorporating the above revisions are enclosed. Please replace the relevant pages in your Permit with the enclosed pages.

As a Permit holder, you are legally responsible for complying with all Permit conditions and requirements.

If you have any questions regarding the Permit revisions, please contact your Wastewater Control Representative, Trish Maguire at (510) 287-1727.

Sincerely,

BENNETT K. HORENSTEIN  
Manager of Environmental Services

BKH:GT:mow

Enclosure  
P.O. BOX 24099 - OAKLAND, CA 94623-1099, (510) 287-1405



# WASTEWATER DISCHARGE PERMIT

REVISION EFFECTIVE JULY 1, 2003 Terms and Conditions

Tony's Express Auto Service  
Permit No. 504-27421  
Page No. 4

## MONITORING and TESTING CHARGES

EBMUD Inspections Per Year:	2	@ \$590.00 each	\$1,180.00 / year
Analyses Per Year:			
Parameter	Tests per year	Charge per test	Total Charge per year
EPA 624	2	\$168.00	\$336.00
Total Monitoring and Testing Charge =			\$1,516.00 / year \$126.33 / month

## WASTEWATER DISPOSAL SERVICE CHARGE

All wastewater discharged will be charged for treatment and disposal service at the Business Classification Code (BCC) unit rate for 4950, Sanitary Collection and Disposal, or 'All other BCC's'. Wastewater charges are determined by multiplying the metered consumption by the percent discharged, adding any fixed volume, and multiplied by the treatment charge

Unit Rate =	\$0.46 /Ccf	
Discharge Volume =	61 Ccf/mo.	(based on 1,500 gpd average)
Wastewater Disposal Charge =	\$28.04 /mo.	



# WASTEWATER DISCHARGE PERMIT

REVISION EFFECTIVE JULY 1, 2003

Terms and Conditions

Tony's Express Auto Service  
Permit No. 504-27421  
Page No. 5

## FEES AND WASTEWATER CHARGES

The following fees and charges are due when billed by the District:

Permit Fee:	\$2,490.00 (PAID)
Monthly Monitoring Charge:	\$126.33
Monthly Wastewater Disposal Charge:	\$28.04

Total Monthly Charges = \$154.37

The District may change the terms and conditions of a Wastewater Discharge Permit, including changing the average limits on the elements of wastewater strength and rates and charges, from time to time as circumstances may require. The District shall allow a discharger reasonable time to comply with any District required changes in the permit except that a change in average limits of wastewater strength shall immediately affect calculation of the wastewater disposal charge.

Charges listed in this Permit will be assessed on EBMUD bills in accordance with the EBMUD Meter Reading Schedule.

### Authorization

Permit Holder shall report to EBMUD, Wastewater Department any changes, permanent or temporary, to the premises or operations that significantly change the quality or volume of the wastewater discharge or deviation from the terms and conditions under which this permit is granted.

Permit Holder is hereby authorized to discharge wastewater to the community sewer, subject to said Applicant's compliance with EBMUD Wastewater Control Ordinance as well as permit terms and conditions.

Effective: November 15, 2001

Expiration: November 14, 2003

*David R Williams*

Director, Wastewater Department

July 25, 2003

Date



# WASTEWATER DISCHARGE PERMIT

REVISION EFFECTIVE JULY 1, 2000 Terms and Conditions

Tony's Express Auto Service  
Permit No. 504-27421  
Page No. 3

## SELF-MONITORING REPORTING REQUIREMENTS

- I. Tony's Express Auto Service shall monitor and sample the wastewater discharge into the community sewer in accordance with Section C of STANDARD TERMS AND CONDITIONS, July 2000 Edition. The sampling shall be performed at the locations and frequency for the parameters specified below.
- II. Self-monitoring reports shall contain all laboratory results and the corresponding chain of custody documentation, and signatory requirements.
- III. The Sample location shall be the sample tap located on the effluent side of the second (final) Liquid Phase GAC. This sample location shall be referred to as Process Sample Point #1 (PSP #1) in all reports. PSP #1 is shown in Tony's Express Auto Service System Flow Diagram (Figure 3) and Schematic Flow (Figure 4).
- IV. Tony's Express Auto Service shall sample wastewater from PSP #1, at a minimum, quarterly for the following parameters:

Parameter	Sample Type	EPA Method
Benzene	grab	8020 or 624
Toluene	grab	8020 or 624
Ethylbenzene	grab	8020 or 624
Xylenes	grab	8020 or 624



# WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

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## WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

### SECTION A. GENERAL PROVISIONS

#### I. Duty to Comply

The Permit Holder shall comply with all specific and standard terms and conditions of the Wastewater Discharge Permit (Permit).

#### II. Discharge Location and Process

The Permit Holder shall discharge wastewater only from the location(s) and process(es) described in the Permit.

#### III. Permit Renewal

The Permit Holder shall submit an application for Permit renewal at least 60 days prior to expiration of the existing Permit.

#### IV. Disposal of Hazardous Waste

The Permit Holder shall handle and dispose of hazardous waste in accordance with all local, state, and federal laws and regulations.

#### V. Dilution Prohibition

The Permit Holder shall not in any way dilute the wastewater discharge as a substitute for treatment to achieve compliance with the Permit Terms and Conditions.

#### VI. Bypass of Treatment Facilities

The Permit Holder shall not bypass treatment facilities unless:

- a) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production).
- b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance.
- c) The Permit Holder submitted advance notice of the need for a bypass to the District. If the Permit Holder knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.

The Permit Holder shall submit notice of an unanticipated bypass as required in Section B, Paragraph II. Twenty-four Hour Violation Reporting.



## WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

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### VII. Closure Plan

The District may require a facility that intends to close or cease a regulated process to provide a written Closure Plan.

The plan shall include the following four items:

- a) date of proposed work or production stoppage
- b) date of proposed final closure (after cleaning and demobilizing activities are complete)
- c) description of cleaning activities, and
- d) description of disposal of inventoried process material and waste

### VIII. Calibration and Maintenance of Equipment

The Permit Holder shall calibrate, inspect, and maintain all flow measuring, discharge sampling, monitoring, and pretreatment equipment to ensure the equipment accuracy and reliability.

### IX. Availability of Permit

The Permit Holder shall maintain a copy of the current Permit at the permitted site and make the Permit available to both facility and District staff at all times.

### X. Payment of Permit Fees and Charges

The Permit Holder shall pay all Permit fees, monitoring and testing charges, and wastewater treatment charges.

### XI. Continuation of Expired Permits

An expired Permit will continue to be effective and enforceable until the Permit is reissued if:

- a) The Permit Holder has submitted a complete permit application at least 60 days prior to the expiration date of the Permit Holder's existing Permit.
- b) The delay in reissuing the expired Permit is not due to any act or failure to act on the part of the Permit Holder.

### XII. Permit Termination

The District may terminate the Permit for violation of the terms and conditions of the Permit or for violation of the provisions of EBMUD Ordinance No. 311, unless waived by the Permit.

### XIII. Transfer of Permit Prohibition

The Permit Holder shall not assign or transfer the Permit.





## WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

### XIV. Severability

If any provision of the Permit, EBMUD Ordinance No. 311, or the application thereof to any person or circumstance, is held invalid, the remainder of the Permit or EBMUD Ordinance No. 311, or the application of such provision to other persons or circumstances, shall not be affected thereby.

### XV. Property Rights

The issuance of the Permit does not convey to the Permit Holder any property rights of any sort or any exclusive privileges. Nor does such issuance authorize any injury to private property, any invasion of property rights, or any violation of federal, state or local laws.

## SECTION B. REPORTING AND RECORD KEEPING

### I. Spill or Slug Discharge Notification

Immediately upon discovering any spill or slug discharge to the sanitary sewer, the Permit Holder shall notify EBMUD Source Control Division at (510) 287-1651 during business hours or (510) 287-1458 during non-business hours.

The Permit Holder shall submit to the District within five days of the occurrence a formal written notification describing:

- a) the circumstances of discharge
- b) what was discharged
- c) volume of discharge
- d) duration of discharge including beginning and end times and dates
- e) corrective actions to prevent recurrence
- f) whether discharge violates the terms and conditions of the Permit

### II. Twenty-Four Hour Violation Reporting

- a) The Permit Holder shall notify the District within 24 hours of becoming aware of any of the following violations:
  1. discharges prohibited by EBMUD Ordinance No. 311, Title II, except where authorized by the Permit
  2. exceedence of Categorical Pretreatment Standards
  3. exceedence of wastewater discharge limits as established in the Permit
  4. bypass of any part of a required pretreatment system
- b) The Permit Holder shall submit a written report to the District within five days of becoming aware of a violation. The report shall include the following information:
  1. the date and time of the violation



## WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

2. the cause of the violation
  3. a description of the violation, including what was discharged
  4. the volume of the discharge
  5. the duration of the discharge violation including start and end times and dates
  6. analytical results, if available, with chain of custody and other pertinent documentation
  7. measures taken to correct the violation
  8. measures taken to prevent recurrence
- c) If analytical results of a sample collected by the Permit Holder indicate a violation, the Permit Holder shall repeat the sampling and analysis, and submit the results to the District within 30 days of becoming aware of the violation, unless:
1. the District collects samples of the permitted discharge at a frequency of at least once per month, or
  2. the District collects samples for the same parameter between the time the Permit Holder performs its initial sampling and the time when the Permit Holder receives the results of the sampling

### III. Changes in Quantity and Quality of Wastewater

The Permit Holder shall immediately report to the District any significant change to the quality or volume of the wastewater discharge or any deviation from the terms and conditions of the Permit.

### IV. Hazardous Waste Notification

The Permit Holder shall submit to the District a written notification in accordance with 40 CFR 403.12(p) of any discharge, which, if otherwise disposed of, would be a hazardous waste under 40 CFR 261. Pollutants reported as part of the Self-Monitoring Reporting Requirements are not subject to this notification requirement.

### V. Signatory Requirements

The Permit Holder shall submit all applications, reports, or information in accordance with signatory requirements of 40 CFR 403.12 (l) and include the following certification statement:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*



## WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

### VI. Retention of Records

- a) The Permit Holder shall retain all of the following documents:
  1. all records used to complete the Permit Application
  2. copies of reports required by the Permit
  3. all records of monitoring information, including calibration and maintenance records, and original strip chart recordings of continuous monitoring instrumentation
- b) The Permit Holder shall retain all documents for a period of at least three years from the date of the application, report, or monitoring event. The District may extend the document retention period. The Permit Holder shall make all retained records and documents available in a timely manner for inspection.
- c) The Permit Holder shall retain and preserve all records pertaining to special orders or any other enforcement or litigation activities brought by the District until all enforcement activities have concluded and all periods of limitation with respect to any appeals have expired.

### VII. Additional Monitoring

If the Permit Holder monitors any pollutant at the compliance point more frequently than required by this Permit, using test methods specified in the Permit, the results of such monitoring shall be reported on a monthly basis to the District.

### VIII. Falsifying Information

Knowingly making any false statement on any report or other document required by the Permit or knowingly rendering any monitoring device or method inaccurate, is a crime, and may result in administrative, civil and criminal enforcement action.

## SECTION C. MONITORING AND SAMPLING

### I. Representative Sampling

Samples and measurements taken, as required in the Permit or those submitted with the application, shall be representative of the volume and nature of the monitored discharge. The Permit may require that a sample be representative of certain, specific, discharge periods.

Detection limits shall be sufficient to determine compliance with the Permit terms and conditions.



## WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

### II. Chain of Custody

- a) The Permit Holder shall submit a Chain of Custody record for each sample that documents the following:
  1. the location, the type of sample(s) (grab or composite), the date(s) and time, or span of time the sample was taken
  2. the number of containers, and type (glass, plastic, vial, etc.)
  3. preservation techniques (ice, refrigeration at 4°C, chemicals added, etc.)
  4. sample collector's name, legibly written
  5. sample ID number (to cross-reference with the sample ID number on the Laboratory results)
  6. all persons handling the sample and the individual receiving the sample at the laboratory, including their signature, printed name, company, date and time the sample was relinquished and accepted
- b) The Permit Holder shall ensure that samples transported or handled by a courier, delivery service (public or private) or shipper, shall include the company or individual's name, and the method of packaging the samples, on the Chain of Custody record.
- c) The Permit Holder shall show all sample analyses performed in the field on the Chain of Custody record (e.g. pH - field test).
- d) The District may require resampling of the wastewater for an incomplete or incorrect Chain of Custody record.

### III. Sample Preservation and Analytical Methods

Unless the Permit requires otherwise, the Permit Holder shall use sampling methods, sample preservation, and analytical methods for each parameter in accordance with applicable sections of:

- a) *EBMUD Table of Approved Test Methods*
- b) *Standard Methods of Water and Wastewater Analysis*, Edition used in the EBMUD Table of Approved Test Methods
- c) EPA 40 CFR Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act*, latest edition

### IV. Laboratory Reports

The Permit Holder shall use a laboratory certified by the California Department of Health Services for each sample analysis required by the Permit. The laboratory report for each sample shall include:

- a) the name and address of the laboratory performing the analyses
- b) sample ID number (to cross reference with the sample ID number on the Chain of Custody)
- c) the analytical result(s)



## WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

- d) the date of sampling, the date the sample(s) was received at the laboratory, and the date of analysis
- e) the Standard Method or EPA Method used for analyses
- f) the detection limit
- g) the signature and title of an authorized representative of the Laboratory, who reviewed the laboratory results

### V. Flow Measurements

The Permit Holder shall use appropriate flow measurement devices and methods when required by the District. Flow measurement devices and methods are subject to approval by the District.

### VI. Tampering with Equipment

The Permit Holder shall not tamper with monitoring equipment or treatment units.

### VII. Access to Facilities

The Permit Holder shall provide access to facilities by District staff in order to ascertain compliance with the Ordinance and Permit.

## SECTION D. ENFORCEMENT AND PENALTIES

### I. Annual Publication

The Permit Holder shall be subject to annual publication in the largest daily newspaper published within the SD-1 service area if at any time during the previous 12 months, the Permit Holder was in Significant Noncompliance with the terms and conditions of the Permit.

### II. Violations of Permit Terms and Conditions

The Permit Holder shall be subject to District actions for failure to comply with the terms and conditions of the Permit. The actions may include violation follow-up inspections and fees, issuance of Cease and Desist Orders, Administrative Civil Liability penalties, and other actions as authorized by Ordinance No. 311, Title VI.

### III. Payment of Fines and Violation Fees

The Permit Holder shall pay the District any fines and violation fees that are assessed.



SECTION E. DEFINITIONS

**BMPs** - Best Management Practices (also known as Pollution Prevention Practices) are guidelines and procedures that include maintenance procedures, management practices and prohibition of practices that focus on the reduction or elimination of pollutants or wastes at the source.

**Bypass** - The diversion of wastestreams from any portion of a treatment facility.

**Chain of Custody** - A Chain-of-Custody is a legal record of each person who had possession of a sample. It is included with an analytical report.

**Combined Wastestream Formula** - Formula defined in 40 CFR 403.6(e)

**Director** - Refers to the term "Manager", as defined in EBMUD Ordinance No. 311, the Director of the District's Wastewater Department, or his/her designated representative.

**Discharge Minimization Permit** - Permits issued for the purpose of regulating the discharge of wastewater to the sanitary sewer. Discharge Minimization Permits generally include monitoring and reporting requirements and District inspections.

**District** - Refers to East Bay Municipal Utility District (EBMUD). EBMUD is a publicly owned water district formed in 1923 under the Municipal Utility District Act of 1921.

**Hazardous Waste** - Listed and characterized wastes under the Section 3001 of the Resource Conservation and Recovery Act, as described in the Code of Federal Regulations (40 CFR Part 261) or as defined in California Health and Safety Code Section 25117. VII.

**Permit Holder** - Any individual, partnership, firm, association, corporation, or public agency issued a Wastewater Discharge Permit.

**Pollution Prevention Permits** - Permits issued to businesses in specific commercial categories. Pollution Prevention Permits are based on pollution prevention or waste minimization at sources, and the implementation of specific BMPs.

**POTW** - Publicly Owned Treatment Works, e.g., EBMUD SD-1.

**Prohibition** - Prohibited discharges of wastewater as defined in EPA 40 CFR Part 403.5 or EBMUD Ordinance No. 311, Title I, Section 5, and Title II, Section 2.

**Pretreatment Program** - A program administered by a POTW that meets the criteria established in EPA 40 CFR Part 403.8, 403.9 and 403.11.

**Regional Water Quality Control Board** - The California Regional Water Quality Control Board, San Francisco Bay Region, is the approval authority for the District's Pretreatment Program.

**Sample** - A portion of wastewater that is representative of a larger volume of wastewater being discharged. The two types of samples are:

- a) **Grab** - an individual sample collected in a short period of time not exceeding fifteen minutes.



## WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

- b) Composite – a sample consisting of a number of discrete aliquots combined into a single sample, representative of a period of time.

**SD-1** - EBMUD Special District No. 1, a district established to provide treatment of wastewater from the following East Bay Communities: Alameda, Albany, Berkeley, Emeryville, Oakland, Piedmont, and the Stege Sanitary District that includes the City of El Cerrito, the Richmond Annex, and the Kensington area. [Ref. MUD Act, Division 6, Chapter 8, Section 13451].

**Significant Noncompliance** – The status of a Permit Holder when one or more of the following conditions exist:

- a) Chronic violations of wastewater discharge limits, defined as those in which sixty-six percent or more of all of the measurements taken during a six-month period exceed (by any magnitude) the daily maximum limit or the average limit for the same pollutant parameter.
- b) Technical Review Criteria (TRC) violations, defined as those in which thirty-three percent or more of all of the measurements for each pollutant parameter taken during a six-month period equal or exceed the product of the daily maximum limit or the average limit multiplied by the applicable TRC.
- TRC = 1.4 for Oil and Grease.  
TRC = 1.2 for all other pollutants (except pH).
- c) Any violation of a discharge limit, maximum or average, that the District determines has caused, alone or in combination with other discharges, interference or pass through (including endangering the health of District personnel or the general public).
- d) Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the exercise of emergency authority.
- e) Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in this Permit or Manager's order for starting construction, completing construction, or attaining final compliance.
- f) Failure to provide, within 30 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, self-monitoring reports, and reports on compliance with compliance schedules.
- g) Failure to accurately report noncompliance.
- h) Any other violation or group of violations, which the District determines, will adversely affect the operation or implementation of the local pretreatment program.

**Slug Discharge** - Any non-routine batch discharge that may cause problems to the POTW including interference [40 CFR 403.3(i)] or pass-through [40 CFR 403.3(n)], or that may result in the Permit Holder being in violation of the General Prohibitions or Specific Prohibitions contained in 40 CFR 403.5.

**Spill** - An accidental discharge of a substance that may pose an environmental, public health, or wastewater quality concern.

**Total Metals** - The sum of the concentrations of copper, chromium, nickel, and zinc (40 CFR 413.02,e)



## WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

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**Total Toxic Organics (TTO)**- The sum of the concentrations of specific toxic organic compounds found in the wastewater discharge at a concentration greater than 10 ug/L. Each categorical standard (40 CFR 405 - 471) lists the specific toxic organic compounds that are to be included in the summation.

**Total Identifiable Chlorinated Hydrocarbons (TICH)** - The sum of the concentrations of all quantifiable values greater than the detection limit for all chlorinated hydrocarbons identified by EPA Method 624.

**Wastewater Discharge Limits** - A wastewater discharge limit is the maximum concentration of a pollutant allowed to be discharged during a specific period of time. Wastewater discharge limits may be of three types: Monthly Average, 4-day Average, and Maximum.

**Monthly Average** - The maximum arithmetic average value of all samples taken in a calendar month.

**4-day Average** - The maximum arithmetic average value of four consecutive samples taken on different days.

**Maximum** - The maximum concentration of a pollutant allowed to be discharged at any time, as determined from the analysis of a grab or composite sample.

w:\ids\permits\standard terms and conditions.doc





## EBMUD TABLE OF APPROVED TEST METHODS

### Required Preservation & Holding Times

Parameter	Preservative	Maximum Hold Time	EPA Method	STD Methods* 18 <sup>th</sup> Ed.
Arsenic (Total)	HNO <sub>3</sub> to pH<2 Cool to 4°C	6 months	206.3 200.7	3114 B 3120 B
Cadmium (Total)	HNO <sub>3</sub> to pH<2 Cool to 4°C	6 months	213.2 200.7	3113 B 3120 B
CODF, using a Whatman 934AH Glass Microfiber filter, or equivalent	Preserve with H <sub>2</sub> SO <sub>4</sub> to pH <2 Cool to 4°C	28 days		5220 D
Chromium (Total)	HNO <sub>3</sub> to pH<2 Cool to 4°C	6 months	218.2 200.7	3113 B 3120 B
Copper (Total)	HNO <sub>3</sub> to pH<2 Cool to 4°C	6 months	220.2 200.7	3113 B 3120 B
Cyanide (Amenable)	NaOH to pH>12 Ascorbic acid if Cl <sub>2</sub> present Cool to 4°C	14 days	335.1	4500-CN G
Cyanide (Total)	NaOH to pH>12, ascorbic acid if Cl <sub>2</sub> present Cool to 4°C	14 days	335.2	4500-CN B-E
Iron (Total)	HNO <sub>3</sub> to pH<2 Cool to 4°C	6 months	200.7	3113 B 3120 B
Lead (Total)	HNO <sub>3</sub> to pH<2 Cool to 4°C	6 months	239.2 200.7	3113 B 3120 B
Mercury (Total)	HNO <sub>3</sub> to pH<2 Cool to 4°C	28 days	245.1 245.2	3112 B
Nickel (Total)	HNO <sub>3</sub> to pH<2 Cool to 4°C	6 months	249.2 200.7	3113 B 3120 B
Oil & Grease (Total) Oil & Grease (HC)	H <sub>2</sub> SO <sub>4</sub> to pH<2 Cool to 4°C	28 days	1664 HEM 1664 HEM- SGT	
Phenolic Compounds	H <sub>2</sub> SO <sub>4</sub> to pH<2 Cool to 4°C	28 days	420.1	5530-D
pH, Hydrogen Ion	None	Analyze Immediately	150.1	4500-H+ B
Silver (Total)	HNO <sub>3</sub> to pH<2 Cool to 4°C	6 months	272.2 200.7	3113 B 3120 B
Temperature (°C)	None	Analyze immediately	170.1	2550 B

Parameter	Preservative	Maximum Hold Time	EPA Method	STD Methods* 18 <sup>th</sup> Ed.
Total Suspended Solids TSS, filtered with Whatman 934 AH Glass Microfiber filter, or equivalent	Cool to 4°C	7 days	160.2	
Zinc (Total)	HNO <sub>3</sub> to pH<2 Cool to 4°C	6 months	289.2 200.7	
Organochlorine Pesticides & Poly Chlorinated Biphenyls (PCBs)	Cool to 4°C	7 days until extraction; 40 days after extraction	608	6630B & C
Purgeable Organics (BTEX)	HCl to pH <2, add ascorbic acid if Cl <sub>2</sub> is present. VOA vials, No headspace. Cool to 4°C	14 days	624 <sup>1</sup> 8021 B 8260 B	
Semi-Volatile Organics (BNA's)	Cool to 4°C	7 days until extraction; 40 days after extraction	625	
Total Identifiable Chlorinated Hydrocarbon (Volatile Organics)	HCl to pH<2, add ascorbic acid if Cl <sub>2</sub> is present. VOA vials, No headspace. Cool to 4°C	14 days	624 8260 B	

<sup>1</sup> EPA Method 624 table in 40CFR Part 136 does not list xylenes, however, EBMUD may accept xylenes detected by this method.

\* Standard Methods for the Examination of Water and Wastewater

W:\NDS\Permits\Standard Terms and Conditions\Table of Approved Test Methods.doc

# **APPENDIX B**

## **Laboratory Results and Chain of Custody Forms for the Treatment System**

# PAL Pacific Analytical Laboratory

851 West Midway Ave. Suite 201  
Alameda, CA 94501

Phone (510) 864-0364

## LABORATORY REPORT

Prepared For: SOMA Environmental Engineering Inc.  
2680 Bishop Dr.  
Suite 203  
San Ramon, CA 94583

Attention: Joyce Bobek

Date: 11/20/2004

Project ID: 2333

Location: 3609 International Blvd., Oakland

Lab Job Number: 1009

This Laboratory report has been reviewed for technical Correctness and completeness. This entire report was reviewed and approved by the Laboratory Director or the Director's designee, as verified by the following signature.

Reviewed by: \_\_\_\_\_

Laboratory Director



SOMA Environmental	Lab Job #	1009
2680 Bishop Dr.	Project ID:	2333
Suite 203	Project Location:	3609 International Blvd. Oakland
San Ramon, CA 945	Sampled:	11/8/2004
	Received:	11/8/2004

**TPHg by GC/MS**

Field ID:	Influent	Lab ID:	110804-001
Type:	Sample	Dilution Factor:	1
Matrix:	Water	Date Prep:	11/9/2004
Units:	µg/L	Date Analyzed:	11/9/2004
Batch:		Method Prep:	5030B

Analyte	Result	Reporting Limit	Analysis
Gasoline (C6-C12)	252	50	8260B

**BTEX/MTBE by GC/MS**

Field ID:	Influent	Lab ID:	110804-001
Type:	Sample	Dilution Factor:	21.5
Matrix:	Water	Prep:	11/9/2004
Units:	µg/L	Date Analyzed:	11/9/2004
Batch:			

Analyte	Result	Reporting Limit	Analysis
MTBE	2024	10.75	8260B
Benzene	1146	10.75	8260B
Toluene	156	10.75	8260B
Ethyl benzene	110	10.75	8260B
m&p-xylene	974	21.5	8260B
o-xylene	412	10.75	8260B
Surrogate	% REC	%REC Limits	Analysis
Dibromofluoromethane	89	70-130	8260B
Toluene-d8	82	70-130	8260B

ND= Not Detected

RL= Reporting Limits

TPH by GC/MS			
Field ID:	GAC-1	Lab ID:	110804-002
Type:	Sample	Dilution Factor:	1
Matrix:	Water	Date Prep:	11/9/2004
Units:	µg/L	Date Analyzed:	11/9/2004
Batch:		Method Prep:	5030B
Analyte	Result	Reporting Limit	Analysis
Gasoline (C6-C12)	ND	50	8260B
BTEX/MTBE by GC/MS			
Field ID:	GAC-1	Lab ID:	110804-002
Type:	Sample	Dilution Factor:	1
Matrix:	Water	Prep:	11/9/2004
Units:	µg/L	Date Analyzed:	11/9/2004
Batch:		Method Prep:	5030B
Analyte	Result	Reporting Limit	Analysis
MTBE	ND	0.5	8260B
Benzene	ND	0.5	8260B
Toluene	ND	0.5	8260B
Ethyl benzene	ND	0.5	8260B
m&p-xylene	ND	1	8260B
O-xylene	ND	0.5	8260B
Surrogate	% REC	% REC Limits	Analysis
DiBromofluoromethane	89	70-130	8260B
Toluene-d8	82	70-130	8260B

ND= Not Detected

RL= Reporting Limits

Pacific Analytical Laboratory  
Majid Akhavan  
Laboratory Director

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page 2 of 7

TPHg by GC/MS			
Field ID:	PSP#1	Lab ID:	110804-003
Type:	Sample	Dilution Factor:	1
Matrix:	Water	Date Prep:	11/9/2004
Units:	µg/L	Date Analyzed:	11/9/2004
Batch:		Method Prep:	5030B
Analyte	Result	Reporting Limit	Analysis
Gasoline (C6-C12)	ND	50	8260B
BTEX/MTBE by GC/MS			
Field ID:	PSP#1	Lab ID:	110804-003
Type:	Sample	Dilution Factor:	1
Matrix:	Water	Prep:	11/9/2004
Units:	µg/L	Date Analyzed:	11/9/2004
Batch:			
Analyte	Result	Reporting Limit	Analysis
MTBE	ND	0.5	8260B
Benzene	ND	0.5	8260B
Toluene	ND	0.5	8260B
Ethyl benzene	ND	0.5	8260B
m&p-xylene	ND	1	8260B
o-xylene	ND	0.5	8260B
Surrogate	%REC	%REC Limits	Analysis
Dibromofluoromethane	89	70-130	8260B
Toluene-d8	82	70-130	8260B

ND= Not Detected

RL= Reporting Limits



TPHg by GC/MS			
Field ID:	N/A	Lab ID:	Blank
Type:	QC	Dilution Factor:	1
Matrix:	Water	Prep:	11/11/2004
Units:	µg/L	Date Analyzed:	11/11/2004
Batch:			
Analyte	Result	Reporting Limit	Analysis
Gasoline (C6-C12)	ND	50	8260B
BTEX/MTBE by GC/MS			
Field ID:	N/A	Lab ID:	Blank
Type:	Sample	Dilution Factor:	
Matrix:	Water	Prep:	11/9/2004
Units:	µg/L	Date Analyzed:	11/9/2004
Batch:		Prep. Method:	5030B
Analyte	Result	Reporting Limit	Analysis
MTBE	ND	0.5	8260B
Benzene	ND	0.5	8260B
Toluene	ND	0.5	8260B
Ethyl benzene	ND	0.5	8260B
m&p-xylene	ND	1	8260B
O-xylene	ND	0.5	8260B
Surrogate	% REC	%REC Limits	Analysis
Dibromofluoromethane	92	70-130	8260B
Toluene-d8	85	70-130	8260B

ND= Not Detected

RL= Reporting Limits

TPH <sub>g</sub> by GC/MS			
Field ID:	N/A	Lab ID:	MS
Type:	QC	Dilution Factor:	1
Matrix:	Water	Prep:	11/11/2004
Units:	µg/L	Date Analyzed:	11/11/2004
Batch:		Prep. Method:	5030B
Analyte	% REC	% REC Limit	Analysis
Gasoline (C6-C12)	79	70-130	8260B
BTEX/MTBE by GC/MS			
Field ID:	N/A	Lab ID:	MS
Type:	QC	Dilution Factor:	1
Matrix:	Water	Prep:	11/9/2004
Units:	µg/L	Date Analyzed:	11/9/2004
Batch:			
Analyte	% REC	REC Limit	
MTBE	81	8260B	
Benzene	83	8260B	
Toluene	79	8260B	
Ethyl benzene	92	8260B	
m&p-xylene	92	8260B	
o-xylene	93	8260B	
Surrogate	% REC	% REC Limits	Analysis
Dibromofluoromethane	72	70-130	8260B
Toluene-d8	75	70-130	8260B

ND= Not Detected

RL= Reporting Limits

TPHg by GC/MS			
Field ID:	N/A	Lab ID:	MSD
Type:	QC	Dilution Factor:	1
Matrix:	Water	Prep:	11/11/2004
Units:	µg/L	Date Analyzed:	11/11/2004
Batch:		Prep. Method:	5030B
Analyte	Result	Reporting Limit	Analysis
Gasoline (C6-C12)	77	50	8260B
BTEX/MTBE by GC/MS			
Field ID:	N/A	Lab ID:	MS
Type:	QC	Dilution Factor:	1
Matrix:	Water	Prep:	11/9/2004
Units:	µg/L	Date Analyzed:	11/9/2004
Batch:		Prep. Method:	5030B
Analyte	% REC.	REC Limit	Analysis
MTBE	107	70-130	8260B
Benzene	108	70-130	8260B
Toluene	105	70-130	8260B
Ethyl benzene	117	70-130	8260B
m&p-xylene	233	70-130	8260B
o-xylene	116	70-130	8260B
Surrogate	% REC.	%REC Limits	Analysis
Dibromofluoromethane	91	70-130	8260B
Toluene-d8 <sup>L</sup>	78	70-130	8260B

ND= Not Detected

RL= Reporting Limits

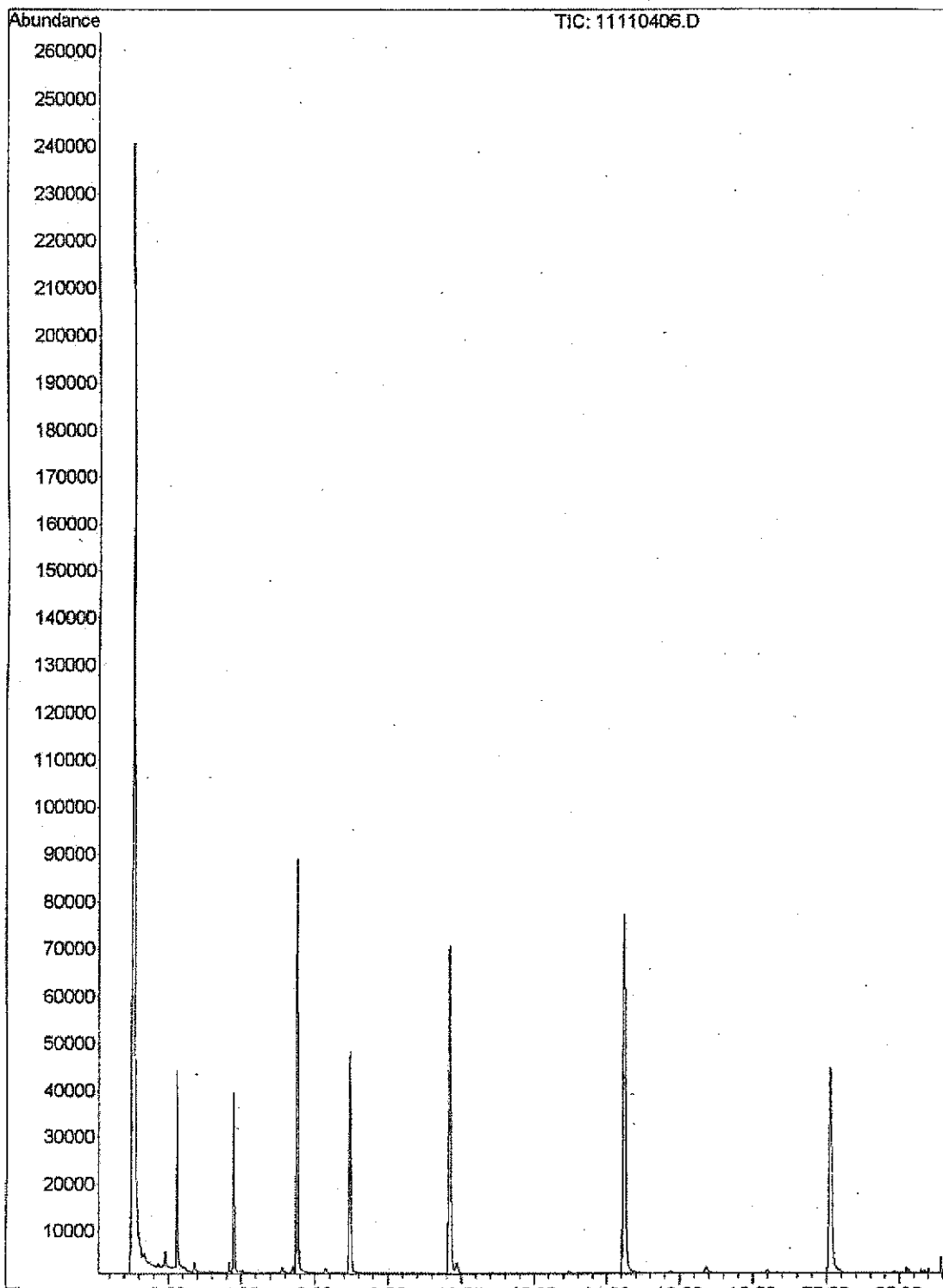
L= Low Recovery

TPH <sub>g</sub> by GC/MS			
Field ID:	N/A	Lab ID:	LCS
Type:	QC	Dilution Factor:	1
Matrix:	Water	Prep:	11/9/2004
Units:	µg/L	Date Analyzed:	11/9/2004
Batch:			
Analyte	Result	%RBC Limits	Analysis
Gasoline (C6-C12)	77	70-130	8260B
BTEX/MTBE by GC/MS			
Field ID:	N/A	Lab ID:	LCS
Type:	QC	Dilution Factor:	1
Matrix:	Water	Prep:	11/9/2004
Units:	µg/L	Date Analyzed:	11/9/2004
Batch:			
Analyte	Result	%RBC Limits	Analysis
MTBE	95	70-130	8260B
Benzene	86	70-130	8260B
Toluene	85	70-130	8260B
Ethyl benzene	97	70-130	8260B
m&p-xylene	95	70-130	8260B
o-xylene	95	70-130	8260B
Surrogate	% RBC	%RBC Limits	Analysis
Dibromofluoromethane	111	70-130	8260B
Toluene-d8	96	70-130	8260B

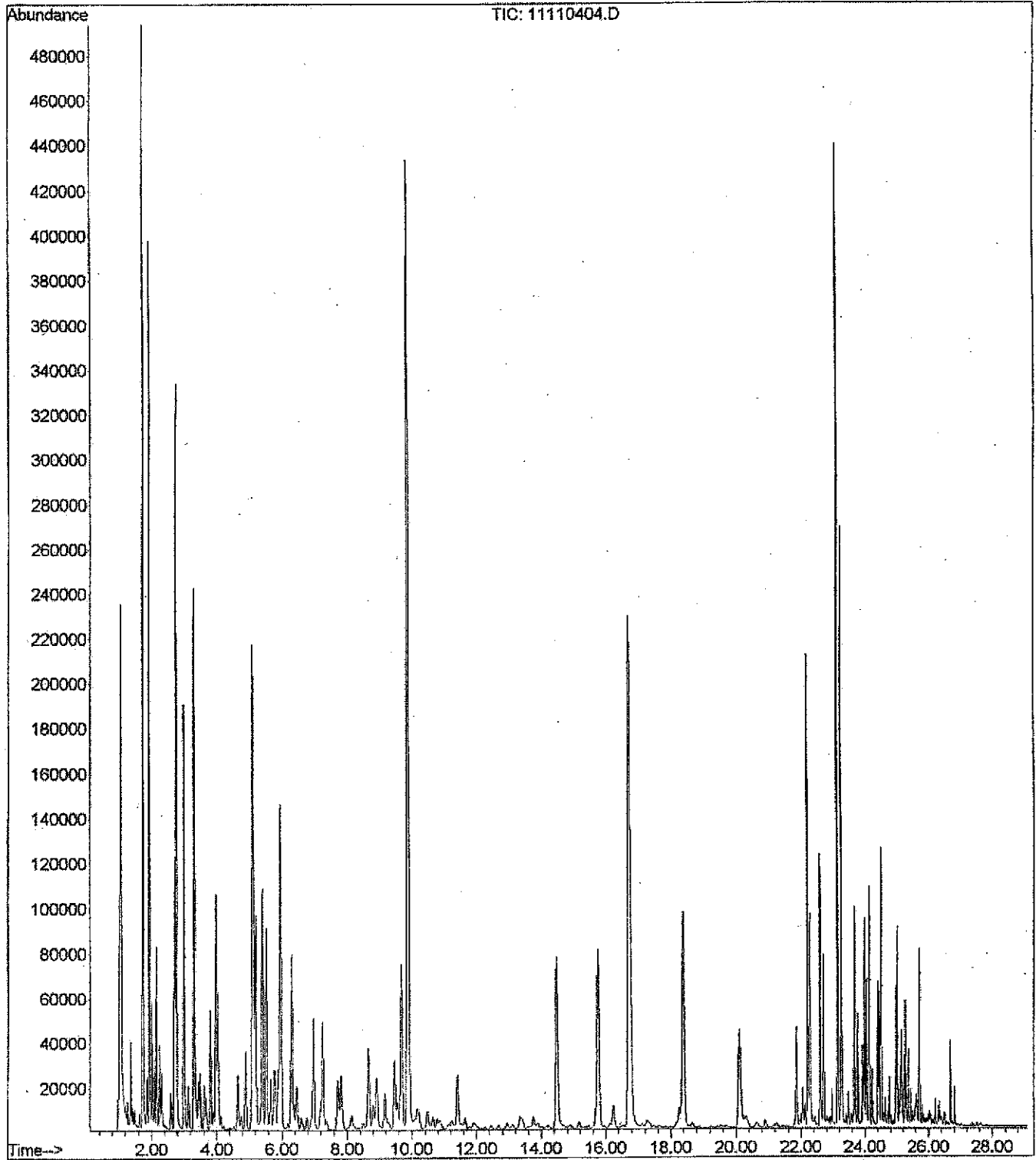
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RL= Reporting Limits

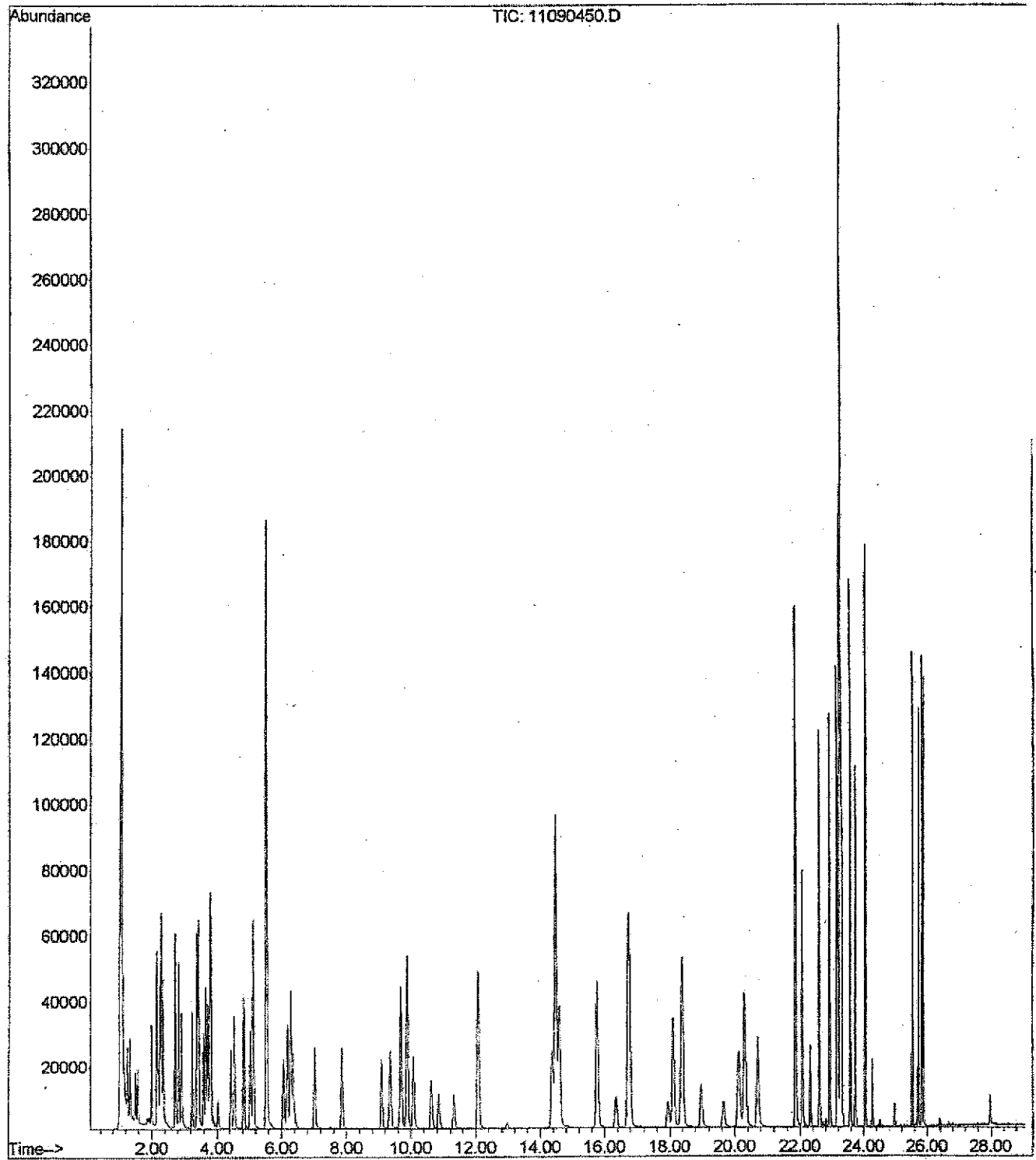
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Operator : THU  
Acquired : 11 Nov 2004 2:33 pm using AcqMethod VOCOX  
Instrument : PAL GCMS  
Sample Name: BLKN  
Misc Info :  
Vial Number: 6



Operator : THU  
Acquired : 11 Nov 2004 1:21 pm using AcqMethod VOCOXY  
Instrument : PAL GCMS  
Sample Name: MS-111101  
Misc Info :  
Vial Number: 4



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Acquired : 10 Nov 2004 5:52 pm using AcqMethod VOCOXY  
Instrument : PAL GCMS  
Sample Name: MS-110901  
Misc Info :  
Vial Number: 50





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A N A L Y T I C A L   R E P O R T

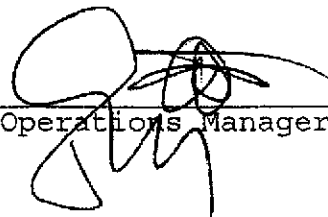
Prepared for:

SOMA Environmental Engineering Inc.  
2680 Bishop Dr.  
Suite 203  
San Ramon, CA 94583

Date: 27-OCT-04  
Lab Job Number: 175250  
Project ID: 2333  
Location: 3609 International Blvd

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

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CASE NARRATIVE

Laboratory number: 175250  
Client: SOMA Environmental Engineering Inc.  
Project: 2333  
Location: 3609 International Blvd  
Request Date: 10/13/04  
Samples Received: 10/13/04

This hardcopy data package contains sample and QC results for three water samples, requested for the above referenced project on 10/13/04. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B and EPA 8021B):  
No analytical problems were encountered.





## Total Volatile Hydrocarbons

Lab #:	175250	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	10/13/04
Units:	ug/L	Received:	10/13/04
Diln Fac:	1.000	Analyzed:	10/13/04
Batch#:	95428		

Field ID: INFLUENT                      Lab ID: 175250-001  
 Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	1,900	50	EPA 8015B
MTBE	520	2.0	EPA 8021B
Benzene	240	0.50	EPA 8021B
Toluene	24	0.50	EPA 8021B
Ethylbenzene	13	0.50	EPA 8021B
m,p-Xylenes	130	0.50	EPA 8021B
o-Xylene	100	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	109	70-141	EPA 8015B
Bromofluorobenzene (FID)	92	80-143	EPA 8015B
Trifluorotoluene (PID)	97	59-133	EPA 8021B
Bromofluorobenzene (PID)	91	76-128	EPA 8021B

Field ID: GAC-1                              Lab ID: 175250-002  
 Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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)	87	70-141	EPA 8015B
Bromofluorobenzene (FID)	92	80-143	EPA 8015B
Trifluorotoluene (PID)	93	59-133	EPA 8021B
Bromofluorobenzene (PID)	97	76-128	EPA 8021B

ND= Not Detected  
 RL= Reporting Limit  
 Page 1 of 2

# Chromatogram

Sample Name : 175250-001,95428

Sample #: a1.0

Page 1 of 1

FileName : G:\GC05\DATA\2870010.raw

Date : 10/14/04 09:02 AM

Method : TVHBTXE

Time of Injection: 10/13/04 05:52 PM

Start Time : 0.00 min End Time : 25.00 min

Low Point : -12.31 mV

High Point : 508.55 mV

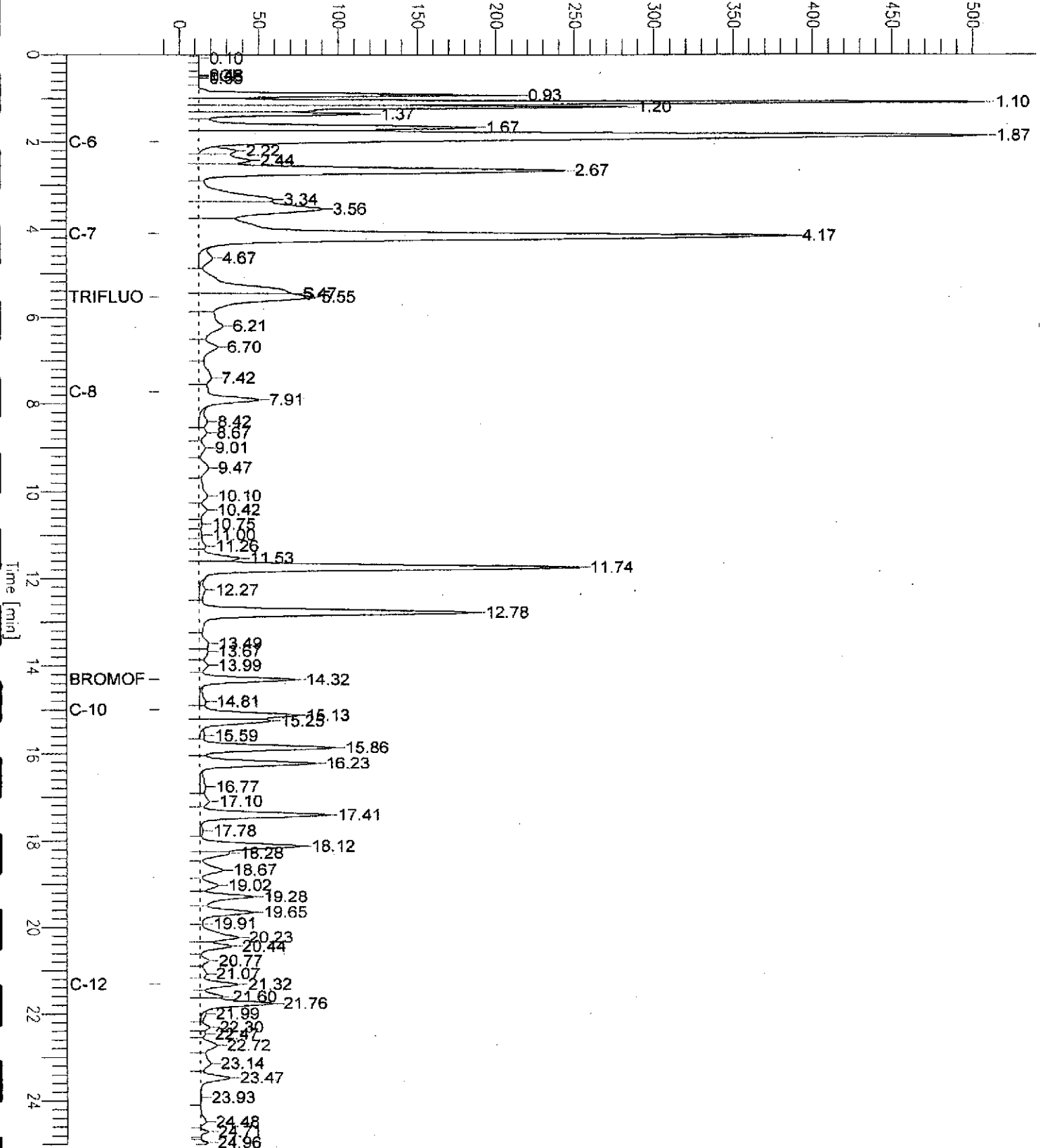
Scale Factor: 1.0

Plot Offset: -12 mV

Plot Scale: 520.9 mV

Influent

Response [mV]



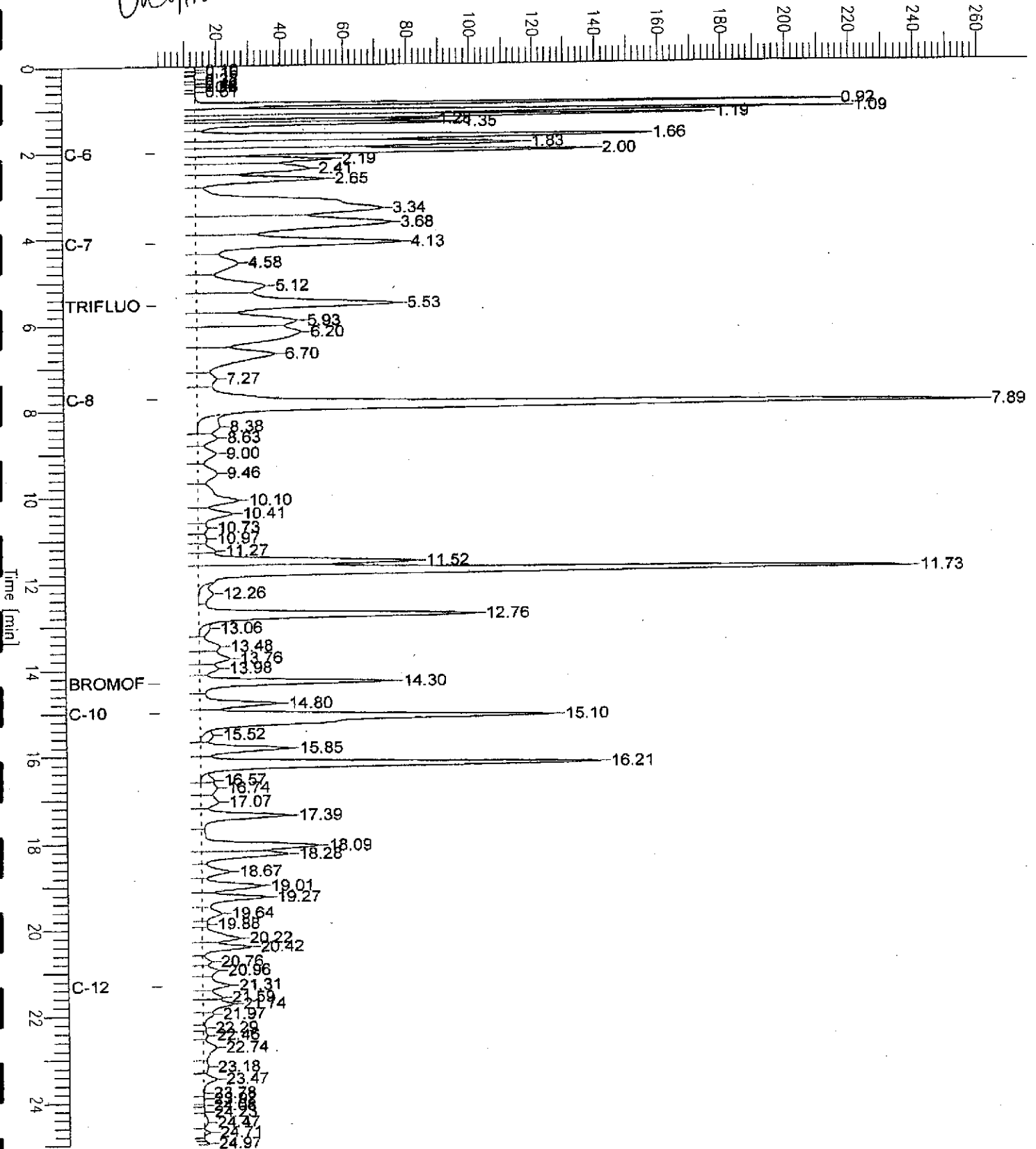
# Chromatogram

Sample Name : ccv/lcs,qc267944,95428,04ws1816,5/5000  
FileName : G:\GC05\DATA\287G002.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

Sample # :  
Date : 10/13/04 11:25 AM  
Time of Injection: 10/13/04 10:59 AM  
Low Point : 1.02 mV  
High Point : 260.53 mV  
End Time : 25.00 min  
Plot Offset: 1 mV  
Plot Scale: 259.5 mV

*Gasoline*

Response [mV]



**Total Volatile Hydrocarbons**

Lab #:	175250	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	10/13/04
Units:	ug/L	Received:	10/13/04
Diln Fac:	1.000	Analyzed:	10/13/04
Batch#:	95428		

Field ID: PSP#1                      Lab ID: 175250-003  
 Type: SAMPLE

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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)	83	70-141	EPA 8015B
Bromofluorobenzene (FID)	87	80-143	EPA 8015B
Trifluorotoluene (PID)	87	59-133	EPA 8021B
Bromofluorobenzene (PID)	92	76-128	EPA 8021B

Type: BLANK                              Lab ID: QC267942

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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)	81	70-141	EPA 8015B
Bromofluorobenzene (FID)	85	80-143	EPA 8015B
Trifluorotoluene (PID)	85	59-133	EPA 8021B
Bromofluorobenzene (PID)	89	76-128	EPA 8021B

## Batch QC Report

## Total Volatile Hydrocarbons

Lab #:	175250	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC267943	Batch#:	95428
Matrix:	Water	Analyzed:	10/13/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	22.77	114	67-124
Benzene	20.00	21.23	106	80-120
Toluene	20.00	21.66	108	80-120
Ethylbenzene	20.00	22.10	111	80-120
m,p-Xylenes	20.00	19.76	99	80-120
o-Xylene	20.00	22.55	113	80-120

Surrogate	%REC	Limits
Trifluorotoluene (PID)	89	59-133
Bromofluorobenzene (PID)	94	76-128

## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	175250	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC267944	Batch#:	95428
Matrix:	Water	Analyzed:	10/13/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	1,770	89	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	114	70-141
Bromofluorobenzene (FID)	95	80-143



## Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	175250	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Field ID:	PSP#1	Batch#:	95428
MSS Lab ID:	175250-003	Sampled:	10/13/04
Matrix:	Water	Received:	10/13/04
Units:	ug/L	Analyzed:	10/13/04
Diln Fac:	1.000		

Type: MS Lab ID: QC268034

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	21.82	2,000	1,833	91	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	120	70-141
Bromofluorobenzene (FID)	99	80-143

Type: MSD Lab ID: QC268035

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,822	90	80-120	1	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	121	70-141
Bromofluorobenzene (FID)	95	80-143



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A N A L Y T I C A L   R E P O R T

Prepared for:

SOMA Environmental Engineering Inc.  
2680 Bishop Dr.  
Suite 203  
San Ramon, CA 94583

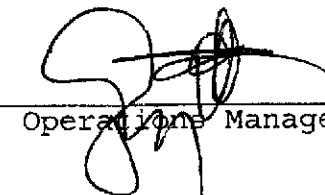
Date: 27-SEP-04  
Lab Job Number: 174584  
Project ID: 2333  
Location: 3609 International Blvd

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

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CASE NARRATIVE

Laboratory number: 174584  
Client: SOMA Environmental Engineering Inc.  
Project: 2333  
Location: 3609 International Blvd  
Request Date: 09/13/04  
Samples Received: 09/13/04

This hardcopy data package contains sample and QC results for three water samples, requested for the above referenced project on 09/13/04. The samples were received on ice and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B and EPA 8021B):

No analytical problems were encountered.





## Total Volatile Hydrocarbons

Lab #: 174584	Location: 3609 International Blvd
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2333	
Matrix: Water	Batch#: 94542
Units: ug/L	Sampled: 09/13/04
Diln Fac: 1.000	Received: 09/13/04

Field ID: INFLUENT	Lab ID: 174584-001
Type: SAMPLE	Analyzed: 09/14/04

Analyte	Result	RL	Analysis
Gasoline C7-C12	1,500	50	EPA 8015B
MTBE	260	2.0	EPA 8021B
Benzene	180	0.50	EPA 8021B
Toluene	23	0.50	EPA 8021B
Ethylbenzene	13	0.50	EPA 8021B
m,p-Xylenes	120	0.50	EPA 8021B
o-Xylene	62	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	132	70-141	EPA 8015B
Bromofluorobenzene (FID)	107	80-143	EPA 8015B
Trifluorotoluene (PID)	108	59-133	EPA 8021B
Bromofluorobenzene (PID)	101	76-128	EPA 8021B

Field ID: GAC-1	Lab ID: 174584-002
Type: SAMPLE	Analyzed: 09/13/04

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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)	96	70-141	EPA 8015B
Bromofluorobenzene (FID)	103	80-143	EPA 8015B
Trifluorotoluene (PID)	91	59-133	EPA 8021B
Bromofluorobenzene (PID)	99	76-128	EPA 8021B

ND= Not Detected  
 RL= Reporting Limit  
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## Total Volatile Hydrocarbons

Lab #:	174584	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Batch#:	94542
Units:	ug/L	Sampled:	09/13/04
Diln Fac:	1.000	Received:	09/13/04

Field ID:	PSP#1	Lab ID:	174584-003
Type:	SAMPLE	Analyzed:	09/13/04

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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)	97	70-141	EPA 8015B
Bromofluorobenzene (FID)	104	80-143	EPA 8015B
Trifluorotoluene (PID)	85	59-133	EPA 8021B
Bromofluorobenzene (PID)	94	76-128	EPA 8021B

Type:	BLANK	Analyzed:	09/13/04
Lab ID:	QC264415		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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)	90	70-141	EPA 8015B
Bromofluorobenzene (FID)	94	80-143	EPA 8015B
Trifluorotoluene (PID)	87	59-133	EPA 8021B
Bromofluorobenzene (PID)	91	76-128	EPA 8021B

ND= Not Detected  
 RL= Reporting Limit  
 Page 2 of 2

# Chromatogram

Sample Name : 174584-001,94542

FileName : G:\GC05\DATA\257G025.raw

Method : TVHBTXE

Start Time : 0.00 min

Scale Factor: 1.0

End Time : 25.00 min

Plot Offset: -3 mV

Sample #: a1.0

Date : 9/14/04 11:35 AM

Time of Injection: 9/14/04 12:16 AM

Low Point : -3.40 mV

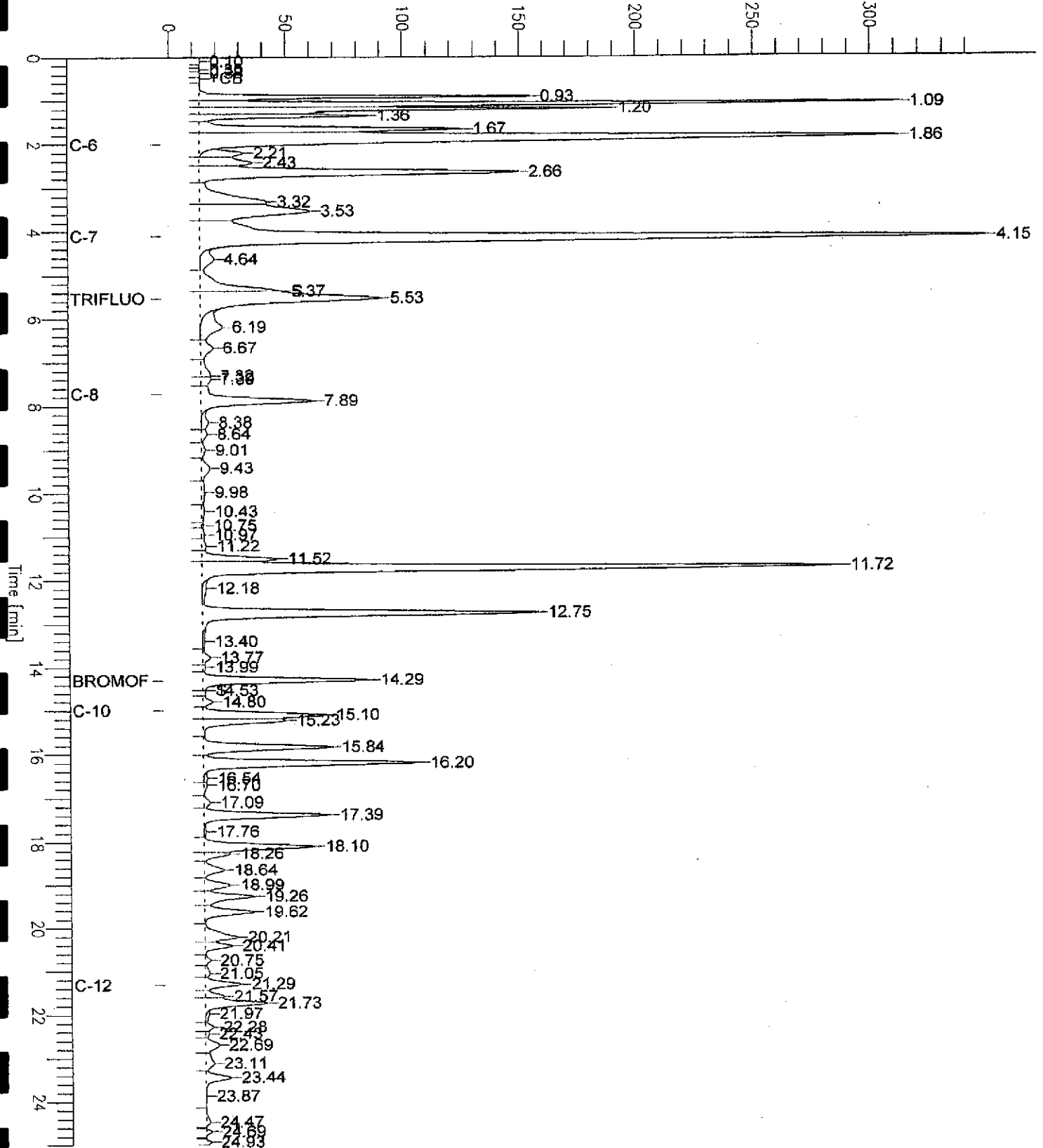
Plot Scale: 352.5 mV

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High Point : 349.10 mV

Influent

Response [mV]



# Chromatogram

Sample Name : ccv/lcs,qc264417.94542,04ws1636,5/5000  
FileName : g:\gc05\data\257g003.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

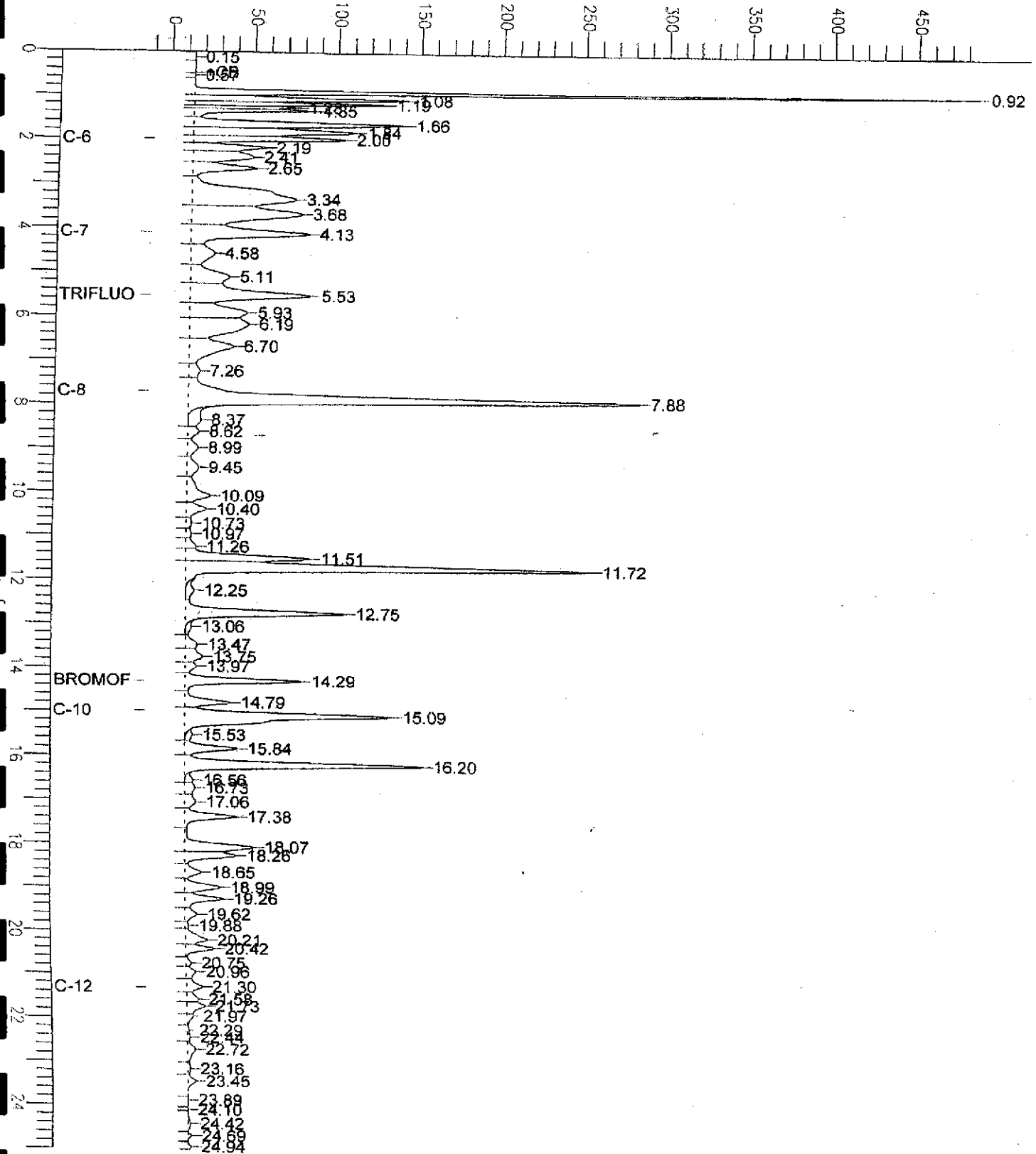
End Time : 25.00 min  
Plot Offset : -10 mV

Sample # :  
Date : 9/13/04 01:23 PM  
Time of Injection : 9/13/04 11:11 AM  
Low Point : -10.18 mV  
High Point : 487.29 mV  
Plot Scale : 497.5 mV

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## Gasoline

Response [mV]





Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	174584	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8021B
Type:	BS	Diln Fac:	1.000
Lab ID:	QC264416	Batch#:	94542
Matrix:	Water	Analyzed:	09/13/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	18.48	92	67-124
Benzene	20.00	20.25	101	80-120
Toluene	20.00	18.44	92	80-120
Ethylbenzene	20.00	17.86	89	80-120
m,p-Xylenes	20.00	17.32	87	80-120
o-Xylene	20.00	17.36	87	80-120

Surrogate	%REC	Limits
Trifluorotoluene (PID)	88	59-133
Bromofluorobenzene (PID)	92	76-128



Batch QC Report

Total Volatile Hydrocarbons

Lab #:	174584	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8021B
Type:	BSD	Diln Fac:	1.000
Lab ID:	QC264449	Batch#:	94542
Matrix:	Water	Analyzed:	09/13/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	20.00	18.57	93	67-124	0	27
Benzene	20.00	19.89	99	80-120	2	20
Toluene	20.00	19.13	96	80-120	4	20
Ethylbenzene	20.00	17.31	87	80-120	3	20
m,p-Xylenes	20.00	18.86	94	80-120	9	20
o-Xylene	20.00	17.99	90	80-120	4	20

Surrogate	%REC	Limits
Trifluorotoluene (PID)	89	59-133
Bromofluorobenzene (PID)	95	76-128

## Batch QC Report

## Total Volatile Hydrocarbons

Lab #:	174584	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC264417	Batch#:	94542
Matrix:	Water	Analyzed:	09/13/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	1,949	97	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	128	70-141
Bromofluorobenzene (FID)	109	80-143



Batch QC Report

Total Volatile Hydrocarbons

Lab #:	174584	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Field ID:	PSP#1	Batch#:	94542
MSS Lab ID:	174584-003	Sampled:	09/13/04
Matrix:	Water	Received:	09/13/04
Units:	ug/L	Analyzed:	09/14/04
Diln Fac:	1.000		

Type: MS Lab ID: QC264447

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	23.38	2,000	1,988	98	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	136	70-141
Bromofluorobenzene (FID)	115	80-143

Type: MSD Lab ID: QC264448

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,033	100	80-120	2	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	134	70-141
Bromofluorobenzene (FID)	117	80-143



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Prepared for:

SOMA Environmental Engineering Inc.  
2680 Bishop Dr.  
Suite 203  
San Ramon, CA 94583

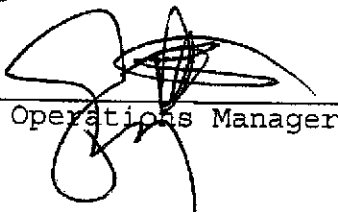
Date: 10-SEP-04  
Lab Job Number: 174442  
Project ID: 2333  
Location: 3609 International Blvd

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

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NELAP # 01107CA

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## CASE NARRATIVE

Laboratory number: 174442  
Client: SOMA Environmental Engineering Inc.  
Project: 2333  
Location: 3609 International Blvd  
Request Date: 09/03/04  
Samples Received: 09/03/04

This hardcopy data package contains sample and QC results for two water samples, requested for the above referenced project on 09/03/04. The samples were received intact at ambient temperature.

Total Suspended Solids (TSS) (EPA 160.2):  
No analytical problems were encountered.

Chemical Oxygen Demand (SM 5220D):  
Low recoveries were observed for COD (filtered) in the MS/MSD of EFFLUENT (lab # 174442-001); the LCS was within limits. No other analytical problems were encountered.





**Chemical Oxygen Demand**

Lab #:	174442	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2333	Analysis:	SM 5220D
Analyte:	COD (Filtered)	Batch#:	94439
Field ID:	EFFLUENT	Sampled:	09/03/04
Matrix:	Water	Received:	09/03/04
Units:	mg/L	Analyzed:	09/08/04
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	174442-001	11	10
BLANK	QC263982	ND	10

ND= Not Detected  
RL= Reporting Limit  
Page 1 of 1



## Batch QC Report

## Chemical Oxygen Demand

Lab #:	174442	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2333	Analysis:	SM 5220D
Analyte:	COD (Filtered)	Diln Fac:	1.000
Field ID:	EFFLUENT	Batch#:	94439
MSS Lab ID:	174442-001	Sampled:	09/03/04
Matrix:	Water	Received:	09/03/04
Units:	mg/L	Analyzed:	09/08/04

Type	Lab ID	MSS Result	Spiked	Result	UREC	Limits	RPD	Lin
LCS	QC263983		40.00	40.26	101	80-120		
MS	QC263984	10.60	40.00	42.38	79 *	80-120		
MSD	QC263985		40.00	42.38	79 *	80-120	0	20

\*\* Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Page 1 of 1

**Total Suspended Solids (TSS)**

Lab #:	174442	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2333	Analysis:	EPA 160.2
Analyte:	Total Suspended Solids	Batch#:	94402
Field ID:	EFFLUENT	Sampled:	09/03/04
Matrix:	Water	Received:	09/03/04
Units:	mg/L	Analyzed:	09/07/04
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	174442-002	7	5
BLANK	QC263825	ND	5

Batch QC Report

Total Suspended Solids (TSS)

Lab #:	174442	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	METHOD
Project#:	2333	Analysis:	EPA 160.2
Analyte:	Total Suspended Solids	Units:	mg/L
Field ID:	ZZZZZZZZZZ	Batch#:	94402
Matrix:	Water	Analyzed:	09/07/04

Type	MSS Lab ID	Lab ID	MSS Result	Spiked	Result	RL	\$REC	Limits	RPD	Lim	Di	In	Fac	Sampled	Received
BS		QC263826		50.00	49.00		98	80-120					1.000		
BSD		QC263827		50.00	48.00		96	80-120	2	20			1.000		
SDUP	174431-001	QC263828	86.00		99.00	5			14	36			1.000	09/03/04	09/03/04
SSPIKE	174431-001	QC263829	86.00	50.00	127.0		82	49-139					1.000	09/03/04	09/03/04
SDUP	174468-001	QC263830	5,650		6,350	250			12	36			50.00	09/07/04	09/07/04

RL= Reporting Limit  
 RPD= Relative Percent Difference  
 Page 1 of 1



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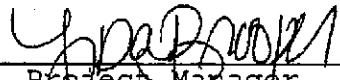
A N A L Y T I C A L   R E P O R T

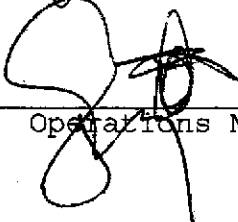
Prepared for:

SOMA Environmental Engineering Inc.  
2680 Bishop Dr.  
Suite 203  
San Ramon, CA 94583

Date: 25-AUG-04  
Lab Job Number: 173891  
Project ID: 2333  
Location: 3609 International Blvd

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Project Manager

Reviewed by:   
Operations Manager

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## Total Volatile Hydrocarbons

Lab #: 173891 Location: 3609 International Blvd  
 Client: SOMA Environmental Engineering Inc. Prep: EPA 5030B  
 Project#: 2333  
 Matrix: Water Sampled: 08/09/04  
 Units: ug/L Received: 08/09/04  
 Batch#: 93574

Field ID: INFLUENT Lab ID: 173891-001  
 Type: SAMPLE

Analyte	Result	RL	Diln Fac	Analyzed	Analysis
Gasoline C7-C12	3,100	50	1.000	08/09/04	EPA 8015B
MTBE	660	2.0	1.000	08/09/04	EPA 8021B
Benzene	530	1.0	2.000	08/10/04	EPA 8021B
Toluene	82	0.50	1.000	08/09/04	EPA 8021B
Ethylbenzene	34	0.50	1.000	08/09/04	EPA 8021B
m,p-Xylenes	340	0.50	1.000	08/09/04	EPA 8021B
o-Xylene	200	0.50	1.000	08/09/04	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Analyzed	Analysis
Trifluorotoluene (FID)	116	70-141	1.000	08/09/04	EPA 8015B
Bromofluorobenzene (FID)	106	80-143	1.000	08/09/04	EPA 8015B
Trifluorotoluene (PID)	123	59-133	1.000	08/09/04	EPA 8021B
Bromofluorobenzene (PID)	110	76-128	1.000	08/09/04	EPA 8021B

Field ID: GAC-1 Diln Fac: 1.000  
 Type: SAMPLE Analyzed: 08/09/04  
 Lab ID: 173891-002

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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)	96	70-141	EPA 8015B
Bromofluorobenzene (FID)	110	80-143	EPA 8015B
Trifluorotoluene (PID)	92	59-133	EPA 8021B
Bromofluorobenzene (PID)	107	76-128	EPA 8021B

ND= Not Detected

RL= Reporting Limit

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## Total Volatile Hydrocarbons

Lab #:	173891	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	08/09/04
Units:	ug/L	Received:	08/09/04
Batch#:	93574		

Field ID:	PSP#1	Diln Fac:	1.000
Type:	SAMPLE	Analyzed:	08/10/04
Lab ID:	173891-003		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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	UREC	Limits	Analysis
Trifluorotoluene (FID)	89	70-141	EPA 8015B
Bromofluorobenzene (FID)	103	80-143	EPA 8015B
Trifluorotoluene (PID)	83	59-133	EPA 8021B
Bromofluorobenzene (PID)	96	76-128	EPA 8021B

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC260508	Analyzed:	08/09/04

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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	UREC	Limits	Analysis
Trifluorotoluene (FID)	91	70-141	EPA 8015B
Bromofluorobenzene (FID)	100	80-143	EPA 8015B
Trifluorotoluene (PID)	89	59-133	EPA 8021B
Bromofluorobenzene (PID)	99	76-128	EPA 8021B

ND= Not Detected  
 RL= Reporting Limit  
 Page 2 of 2



Batch QC Report

Total Volatile Hydrocarbons

Lab #:	173891	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC260509	Batch#:	93574
Matrix:	Water	Analyzed:	08/09/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	17.88	89	67-124
Benzene	20.00	18.05	90	80-120
Toluene	20.00	19.22	96	80-120
Ethylbenzene	20.00	18.93	95	80-120
m,p-Xylenes	20.00	19.21	96	80-120
o-Xylene	20.00	19.32	97	80-120

Surrogate	%REC	Limits
Trifluorotoluene (PID)	84	59-133
Bromofluorobenzene (PID)	92	76-128





Batch QC Report

Total Volatile Hydrocarbons

Lab #:	173891	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC260510	Batch#:	93574
Matrix:	Water	Analyzed:	08/09/04
Units:	ug/L		

Analyte	Spiked	Result	REC	Limits
Gasoline C7-C12	2,000	2,278	114	80-120

Surrogate	REC	Limits
Trifluorotoluene (FID)	139	70-141
Bromofluorobenzene (FID)	109	80-143

## Batch QC Report

## Total Volatile Hydrocarbons

Lab #:	173891	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	93574
MSS Lab ID:	173892-001	Sampled:	08/09/04
Matrix:	Water	Received:	08/09/04
Units:	ug/L	Analyzed:	08/09/04
Diln Fac:	1.000		

Type: MS Lab ID: QC260615

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	17.92	2,000	2,189	109	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	136	70-141
Bromofluorobenzene (FID)	117	80-143

Type: MSD Lab ID: QC260616

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,115	105	80-120	3	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	136	70-141
Bromofluorobenzene (FID)	116	80-143



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

ANALYTICAL REPORT

Prepared for:

SOMA Environmental Engineering Inc.  
2680 Bishop Dr.  
Suite 203  
San Ramon, CA 94583

Date: 27-JUL-04  
Lab Job Number: 173376  
Project ID: 2333  
Location: 3609 International Blvd

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

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## Total Volatile Hydrocarbons

Lab #: 173376	Location: 3609 International Blvd
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2333	
Matrix: Water	Sampled: 07/13/04
Units: ug/L	Received: 07/13/04
Batch#: 92776	Analyzed: 07/13/04

Field ID: INFLUENT	Lab ID: 173376-001
Type: SAMPLE	Diln Fac: 5.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	6,700	250	EPA 8015B
MTBE	1,200	10	EPA 8021B
Benzene	410	2.5	EPA 8021B
Toluene	300	2.5	EPA 8021B
Ethylbenzene	160	2.5	EPA 8021B
m,p-Xylenes	830	2.5	EPA 8021B
o-Xylene	440	2.5	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	124	74-142	EPA 8015B
Bromofluorobenzene (FID)	102	80-139	EPA 8015B
Trifluorotoluene (PID)	113	55-139	EPA 8021B
Bromofluorobenzene (PID)	108	62-134	EPA 8021B

Field ID: GAC-1	Lab ID: 173376-002
Type: SAMPLE	Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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)	92	74-142	EPA 8015B
Bromofluorobenzene (FID)	101	80-139	EPA 8015B
Trifluorotoluene (PID)	93	55-139	EPA 8021B
Bromofluorobenzene (PID)	103	62-134	EPA 8021B

ND= Not Detected

RL= Reporting Limit

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## Total Volatile Hydrocarbons

Lab #:	173376	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	07/13/04
Units:	ug/L	Received:	07/13/04
Batch#:	92776	Analyzed:	07/13/04

Field ID:	PSP#1	Lab ID:	173376-003
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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	MRSL	Limits	Analysis
Trifluorotoluene (FID)	93	74-142	EPA 8015B
Bromofluorobenzene (FID)	102	80-139	EPA 8015B
Trifluorotoluene (PID)	94	55-139	EPA 8021B
Bromofluorobenzene (PID)	102	62-134	EPA 8021B

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC257452		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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	MRSL	Limits	Analysis
Trifluorotoluene (FID)	92	74-142	EPA 8015B
Bromofluorobenzene (FID)	99	80-139	EPA 8015B
Trifluorotoluene (PID)	93	55-139	EPA 8021B
Bromofluorobenzene (PID)	99	62-134	EPA 8021B

ND= Not Detected

RL= Reporting Limit

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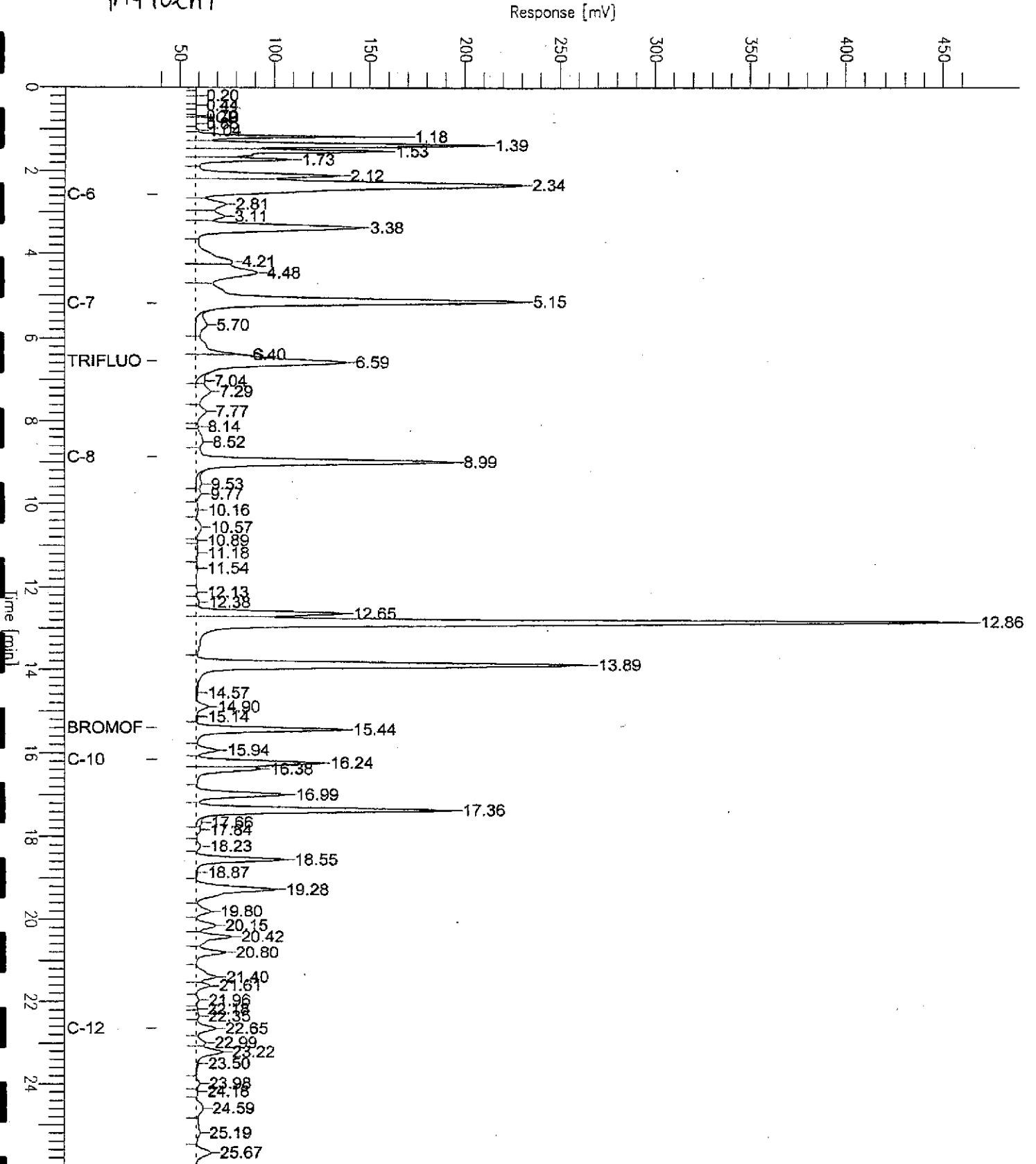
# GC04 TVH 'J' Data File FID

Sample Name : 173376-001,92776  
 FileName : G:\GC04\DATA\195JD09.raw  
 Method : TVHBTXE  
 Start Time : 0.00 min  
 Scale Factor : 1.0

Sample #: a1.0  
 Date : 7/14/04 11:18 AM  
 Time of Injection: 7/13/04 07:29 PM  
 Low Point : 38.23 mV  
 High Point : 464.33 mV  
 Plot Offset: 38 mV  
 Plot Scale: 426.1 mV

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Influent

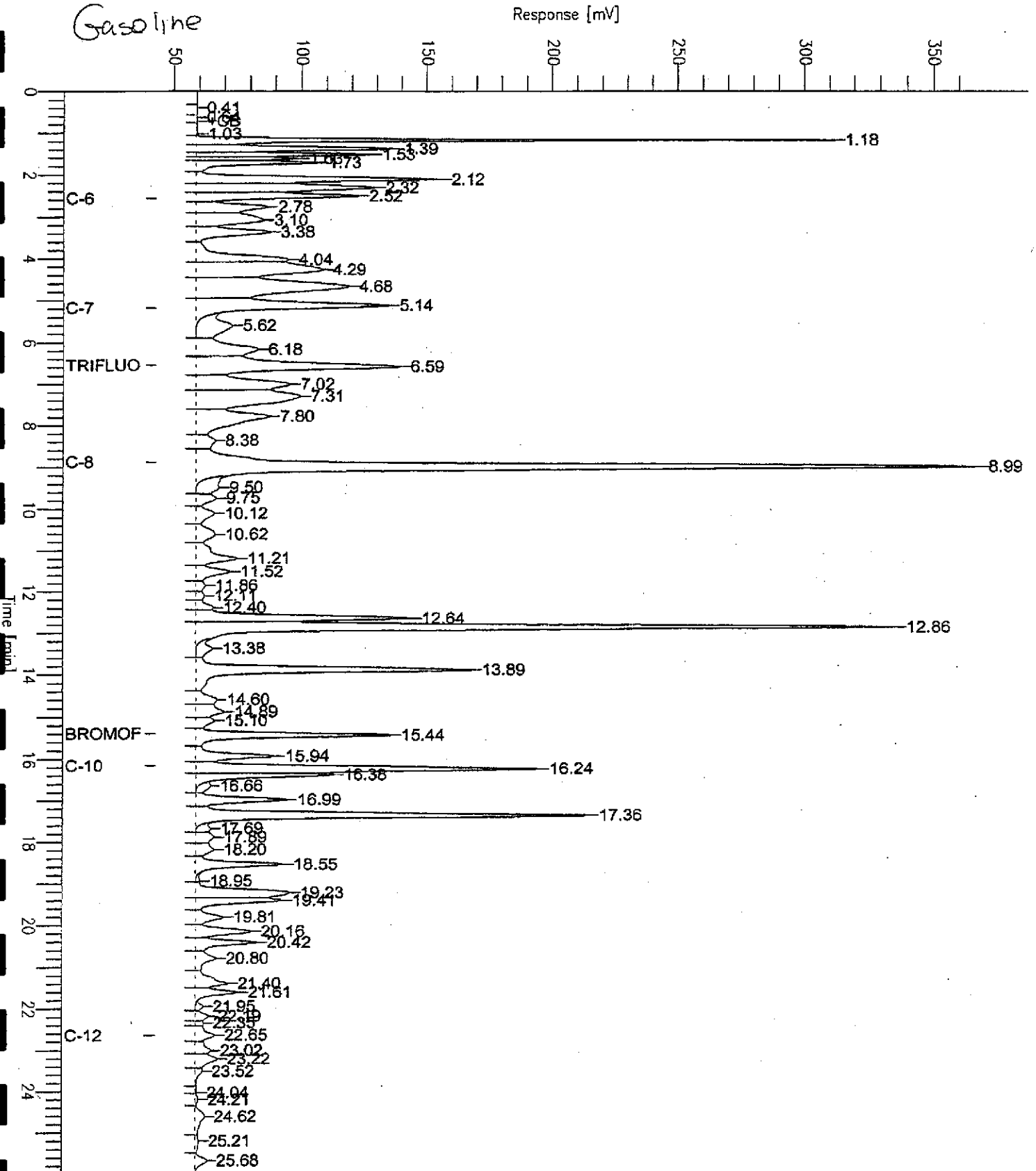


# GC04 TVH 'J' Data File FID

Sample Name : ccv/lcs,qc257454,92776,04wsl079,5/5000  
FileName : G:\GC04\DATA\195J002.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

Sample # :  
Date : 7/13/04 03:45 PM  
Time of Injection : 7/13/04 03:19 PM  
Low Point : 43.27 mV  
Plot Scale : 324.2 mV  
End Time : 26.00 min  
Plot Offset : 43 mV  
High Point : 367.50 mV

Page 1 of 1







## Batch QC Report

## Total Volatile Hydrocarbons

Lab #:	173376	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC257453	Batch#:	92776
Matrix:	Water	Analyzed:	07/13/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	20.26	101	59-131
Benzene	20.00	17.70	89	80-120
Toluene	20.00	18.98	95	80-120
Ethylbenzene	20.00	20.46	102	80-120
m,p-Xylenes	20.00	20.44	102	80-120
o-Xylene	20.00	20.22	101	80-120

Surrogate	%REC	Limits
Trifluorotoluene (PID)	88	55-139
Bromofluorobenzene (PID)	95	62-134



Batch QC Report

Total Volatile Hydrocarbons

Lab #:	173376	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC257454	Batch#:	92776
Matrix:	Water	Analyzed:	07/13/04
Units:	ug/L		

Analyte	Spiked	Result	REC	Limits
Gasoline C7-C12	2,000	1,983	99	80-120

Surrogate	REC	Limits
Trifluorotoluene (FID)	128	74-142
Bromofluorobenzene (FID)	106	80-139



Batch QC Report

Total Volatile Hydrocarbons

Lab #:	173376	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	92776
MSS Lab ID:	173379-002	Sampled:	07/13/04
Matrix:	Water	Received:	07/13/04
Units:	ug/L	Analyzed:	07/14/04
Diln Fac:	1.000		

Type: MS Lab ID: QC257455

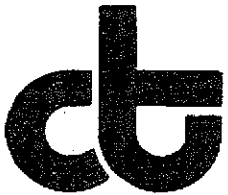
Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	22.60	2,000	2,094	104	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	127	74-142
Bromofluorobenzene (FID)	109	80-139

Type: MSD Lab ID: QC257456

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,052	101	80-120	2	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	127	74-142
Bromofluorobenzene (FID)	110	80-139



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A N A L Y T I C A L   R E P O R T

Prepared for:

SOMA Environmental Engineering Inc.  
2680 Bishop Dr.  
Suite 203  
San Ramon, CA 94583

Date: 25-JUN-04  
Lab Job Number: 172836  
Project ID: 2333  
Location: 3609 International Blvd

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 NELAP and pertain only to those samples which were submitted for analysis.

Reviewed by:

Tracy Berger  
Project Manager

Reviewed by:

Thomas K. Morrison  
Operations Manager

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NELAP # 01107CA

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## Total Volatile Hydrocarbons

Lab #:	172836	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	06/14/04
Units:	ug/L	Received:	06/14/04
Batch#:	91936	Analyzed:	06/14/04

Field ID:	INFLUENT	Lab ID:	172836-001
Type:	SAMPLE	Diln Fac:	5.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	8,800	250	EPA 8015B
MTBE	1,100	10	EPA 8021B
Benzene	690	2.5	EPA 8021B
Toluene	360	2.5	EPA 8021B
Ethylbenzene	310	2.5	EPA 8021B
m,p-Xylenes	1,000	2.5	EPA 8021B
o-Xylene	490	2.5	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	120	74-142	EPA 8015B
Bromofluorobenzene (FID)	109	80-139	EPA 8015B
Trifluorotoluene (PID)	120	55-139	EPA 8021B
Bromofluorobenzene (PID)	118	62-134	EPA 8021B

Field ID:	GAC-1	Lab ID:	172836-002
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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)	99	74-142	EPA 8015B
Bromofluorobenzene (FID)	108	80-139	EPA 8015B
Trifluorotoluene (PID)	106	55-139	EPA 8021B
Bromofluorobenzene (PID)	117	62-134	EPA 8021B

ND= Not Detected

L= Reporting Limit

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# GC04 TVH 'J' Data File FID

Sample Name : 172836-001.91936

FileName : G:\GC04\DATA\166J010.raw

Method : TVHBTXE

Start Time : 0.00 min

Scale Factor : 1.0

End Time : 26.00 min

Plot Offset : 33 mV

Sample #: a1.0

Date : 6/15/04 08:51 AM

Time of Injection: 6/14/04 07:21 PM

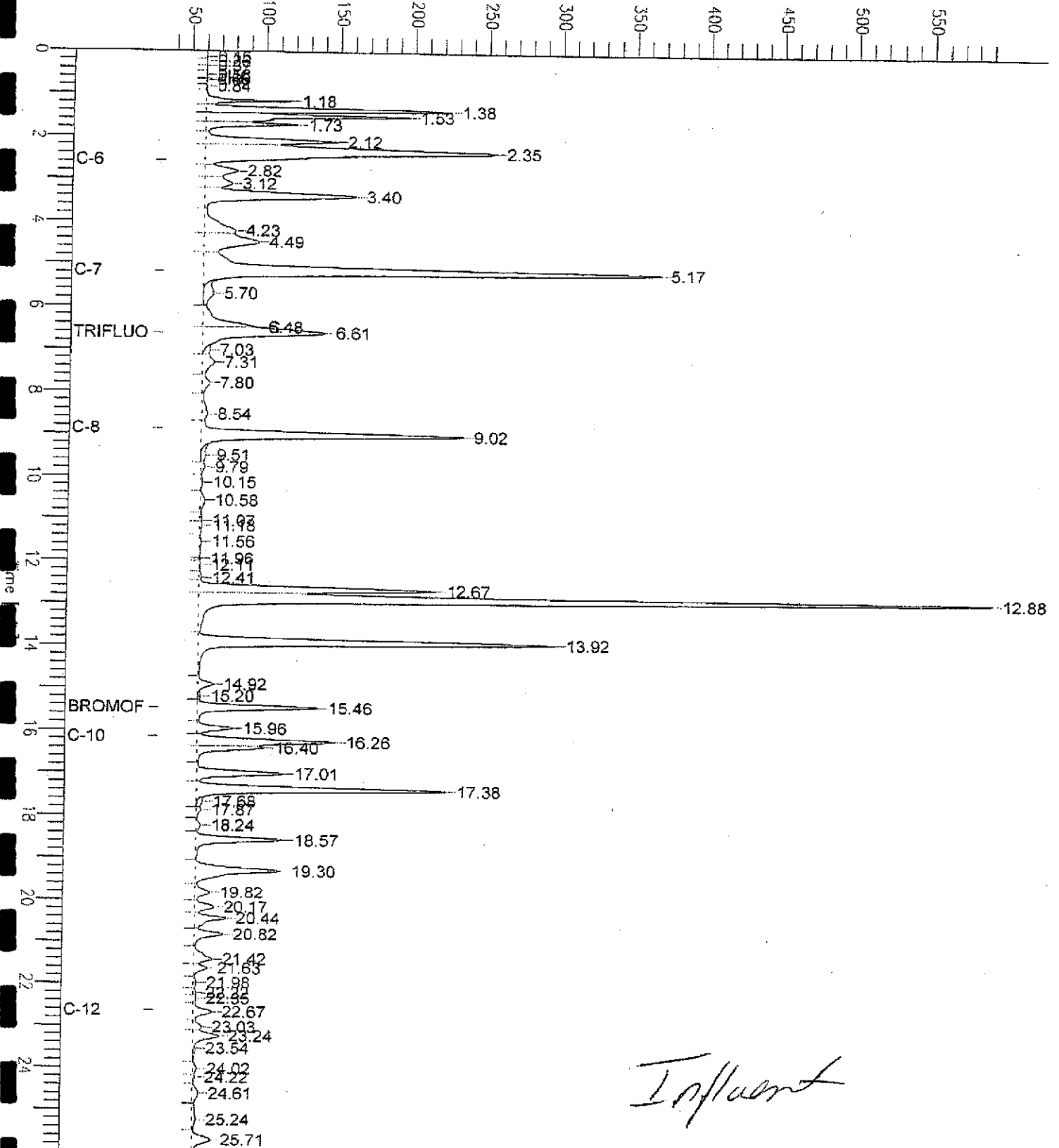
Low Point : 32.84 mV

Plot Scale: 558.7 mV

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High Point : 591.49 mV

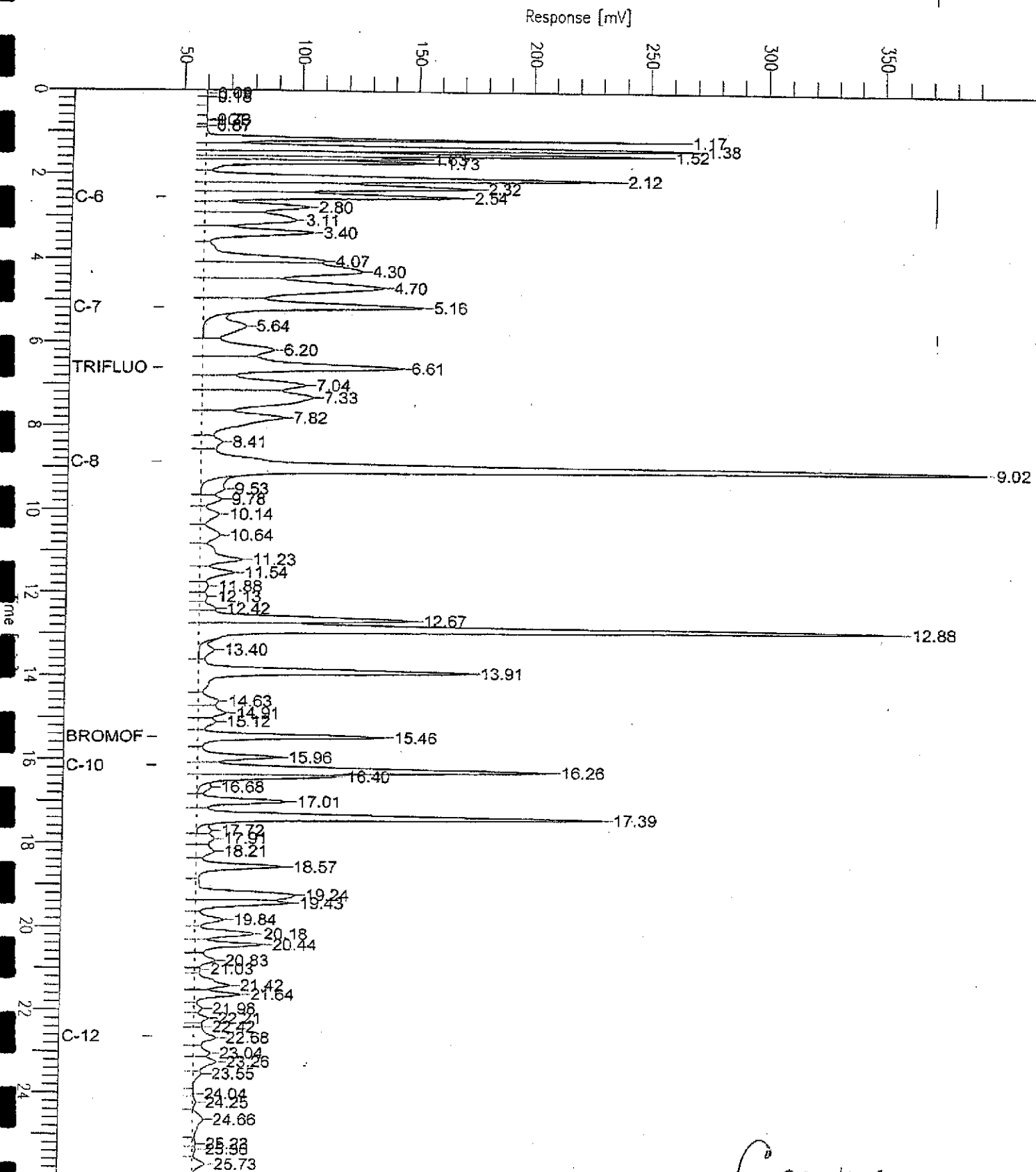
Response [mV]



GC04 TVH 'J' Data File FID

Sample Name : ccv/lcs, qc254116, 91936, 04ws1095, 5/5000  
File Name : G:\GC04\DATA\166J002.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

Sample #: <sup>3 mmol/liter</sup>  
Date : 6/14/04 12:42 PM  
Time of Injection: 6/14/04 12:16 PM  
Low Point : 42.77 mV  
Plot Scale: 350.4 mV



Gasoline





## Total Volatile Hydrocarbons

Lab #:	172836	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	06/14/04
Units:	ug/L	Received:	06/14/04
Batch#:	91936	Analyzed:	06/14/04

Field ID:	PSP#1	Lab ID:	172836-003
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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)	102	74-142	EPA 8015B
Bromofluorobenzene (FID)	111	80-139	EPA 8015B
Trifluorotoluene (PID)	106	55-139	EPA 8021B
Bromofluorobenzene (PID)	118	62-134	EPA 8021B

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC254114		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
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)	101	74-142	EPA 8015B
Bromofluorobenzene (FID)	108	80-139	EPA 8015B
Trifluorotoluene (PID)	107	55-139	EPA 8021B
Bromofluorobenzene (PID)	115	62-134	EPA 8021B

ND= Not Detected

L= Reporting Limit

Page 2 of 2

## Batch QC Report

## Total Volatile Hydrocarbons

Lab #:	172836	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC254115	Batch#:	91936
Matrix:	Water	Analyzed:	06/14/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	19.98	100	59-131
Benzene	20.00	20.43	102	80-120
Toluene	20.00	20.72	104	80-120
Ethylbenzene	20.00	21.14	106	80-120
m,p-Xylenes	20.00	21.17	106	80-120
o-Xylene	20.00	21.36	107	80-120

Surrogate	%REC	Limits
Trifluorotoluene (PID)	103	55-139
Bromofluorobenzene (PID)	111	62-134

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	172836	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC254116	Batch#:	91936
Matrix:	Water	Analyzed:	06/14/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,159	108	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	141	74-142
Bromofluorobenzene (FID)	109	80-139



Batch QC Report

Total Volatile Hydrocarbons

Lab #:	172836	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	91936
MSS Lab ID:	172837-001	Sampled:	06/14/04
Matrix:	Water	Received:	06/14/04
Units:	ug/L	Analyzed:	06/16/04
Diln Fac:	1.000		

Type: MS Lab ID: QC254175

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	21.62	2,000	1,908	94	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	104	74-142
Bromofluorobenzene (FID)	96	80-139

Type: MSD Lab ID: QC254176

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,904	94	80-120	0	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	74-142
Bromofluorobenzene (FID)	96	80-139