



ENVIRONMENTAL ENGINEERING, INC  
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June 2, 2004

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ENVIRONMENTAL ENGINEERING, INC

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

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 November 2003 to May 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



Approved by  
JUL 17 2011  
Environmental Engineering, Inc.

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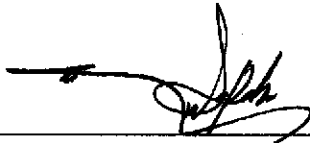
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Approved by  
JUL 17 2011  
Environmental Engineering, Inc.

## 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 Sepehr, 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

6/2/04  
Date

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Appendix A: EBMUD Discharge Permit

Appendix B: Laboratory results and Chain of Custody forms for the treatment system

## 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 November 2003 to May 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 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 location 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

Currently, the Site is used as a gasoline service station. 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. As stated earlier, 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 by SOMA, in the western French drain riser. 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 down hole pumps in the French drain were converted into electrical pumps by SOMA Environmental. A carbon change-out was performed on March 17, 2004.

On May 10, 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, which were used to store gasoline at the Site. The former single-walled USTs were replaced with a 10,000-gallon double-walled UST and two 6,000-gallon double-walled USTs.

Based on the results from the Second Quarter 2004 monitoring event, since the First Quarter 2004, the concentration trends in the vicinity of the USTs were as follows:

- In well MW-1, total petroleum hydrocarbons as gasoline (TPH-g) slightly increased, however, all benzene, toluene, ethylbenzene, and total xylene (BTEX) analytes, as well as, MtBE decreased. In well MW-3 both TPH-g and MtBE decreased, and benzene slightly increased.

Based on the results of the Second Quarter 2004 monitoring event, the highest TPH-g concentration was detected in well MW-6, which is in the vicinity of the SVE system and southeast of the USTs. The TPH-g result for well MW-6 can be



attributed to the inoperability of the SVE system, from November 2003 to April 2004. The SVE system is inoperable during the rainy seasons the year.

Further detailed information on the groundwater concentrations encountered throughout the Site is presented in SOMA's "Second Quarter 2004 Groundwater Monitoring and Remediation System Operation Report," dated May 25, 2004.

## **2.0 TREATMENT SYSTEM OPERATION**

The operation of the treatment system began on December 6, 1999. Since then, (recording date is May 3, 2004) approximately 2,497,350 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 modified 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.

As shown in Table 1, all treatment system effluent samples have maintained in compliance with the discharge permit requirements. During October 2002, during the laboratory testing, 2-Butanone was detected at a high concentration of 200,000  $\mu\text{g/L}$  in only the effluent sample. The influent sample concentration for 2-Butanone was only 20  $\mu\text{g/L}$ . This caused a high dilution factor to be used to compensate for the variation in 2-Butanone. Since December 1999, 2-Butanone has not been detected in any of the effluent samples. In the October 2002 sampling event the influent concentration was very low. Therefore, the sample results shown for October 2002 are erroneous and are shown only to depict that sampling was conducted. Also, based on the laboratory data, the sample analysis for TPH-g did not resemble a standard fuel pattern. However, the system was turned off upon the detection of the TPH-g concentration and a carbon change-out was performed. During this carbon change-out, both the carbon in the 2,000-pound carbon vessel and the carbon in the 55-gallon vessel (GAC-2) were removed and replaced.

Appendix B includes the laboratory reports for the treatment system from November 2003 to May 2004.

The treatment system has removed approximately 171 pounds of hydrocarbons and 81 pounds of MtBE from the initial start-up in December 1999 to May 3,

2004. Since the previous semi-annual report, approximately 409,680 gallons of chemically impacted groundwater has been treated by the groundwater remediation system (from November 17, 2003 to May 3, 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 409,680 gallons of groundwater has been treated and discharged at the Site since the last EBMUD Semi-Annual Discharge Report (November 17, 2003 to May 3, 2004). Approximately 2,497,350 gallons of chemically impacted groundwater has been treated since the treatment system's initial start-up in December 1999. Approximately 171 pounds of hydrocarbons and 81 pounds of MtBE have been removed from the groundwater.
- Based on the analytical results from the Second Quarter 2004 monitoring event, it appears that several groundwater constituents have decreased in the vicinity of the USTs, especially in wells MW-1 and MW-3.
- 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., as well as the data summaries produced by the previous environmental consultants. 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 and GAC-1					Ethyl benzene	Total Xylenes
		Reading (gallons)	(concentrations in ug/L)						
			MtBE <sup>2</sup>	TPH-g	Benzene	Toluene			
May	5/3/2004	2,497,350	< 2.0	< 50	<0.5	<0.5	<0.5	<0.5	
			< 2.0	< 50	<0.5	<0.5	<0.5	<0.5	
April	4/15/2004	2,436,190	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			<5.0	< 50	< 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	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
January	1/27/2004	2,165,220	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			<5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
	1/13/2004	2,116,720	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			<5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
December	12/8/2003	2,092,330	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			<5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
November	11/17/2003	2,087,670	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			<5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
	11/3/2003	2,079,460	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			<5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
October	10/13/2003	2,073,060	5.3	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			<5.0	< 50	< 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	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			6	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
	9/2/2003	2,040,040	<5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			<5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
August	8/19/2003	2,021,040	<5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			<5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
July	7/21/2003	1,995,240	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			40	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
	7/9/2003	1,990,260	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	
			36	< 50	< 5.0	< 5.0	< 5.0	< 5.0	

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Month	Date	Meter	Lab Results For Effluent <sup>1</sup> and GAC-1					Ethyl benzene	Total Xylenes	
		Reading (gallons)	(concentrations in ug/L)							
			MtBE <sup>2</sup>	TPH-g	Benzene	Toluene				
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	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
			< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
May	5/21/2003	1,951,830	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
			< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
	5/1/2003	1,918,270	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
			< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
April	4/11/2003	1,882,440	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
			< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
March	3/19/2003	1,846,490	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
			< 5.0	< 50	< 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	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
			< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
January	1/27/2003	1,733,500	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
			< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
	1/2/2003	1,675,600	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
			< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
December	12/10/2002	1,672,870	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
			< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
November	11/22/2002	1,668,650	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
			< 5.0	< 50	< 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	2,000 Y Z	< 310	< 310	< 310	< 310	< 310	
			< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
September	9/19/2002	1,653,600	< 5	< 50	< 5	< 5	< 5	< 5	< 5	
			< 5	< 50	< 5	< 5	< 5	< 5	< 5	
August	8/23/2002	1,641,650	1	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
			< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
July	7/23/2002	1,632,834	< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
			< 5.0	< 50	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	

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Month	Date	Meter	Lab Results For Effluent <sup>1</sup> and GAC-1					Ethyl benzene	Total Xylenes
		Reading (gallons)	(concentrations in ug/L)						
			MtBE <sup>2</sup>	TPH-g	Benzene	Toluene			
June	6/24/2002	1,610,050	1.7	< 50	< 0.5	< 0.5	< 0.5	< 0.5	
			< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 0.5	
May	5/30/2002	1,571,630	< 0.5	< 50	< 0.5	< 0.5	< 0.5	< 0.5	
			< 0.5	< 50	< 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	< 50	< 0.5	< 0.5	< 0.5	< 0.5	
			< 0.5	< 50	< 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	< 50	< 0.5	< 0.5	< 0.5	< 0.5	
			1.1	< 50	< 0.5	< 0.5	< 0.5	< 0.5	
January	1/22/2002	1,381,370	< 2.0	< 50	< 0.5	< 0.5	< 0.5	< 0.5	
			< 2.0	< 50	< 0.5	< 0.5	< 0.5	< 0.5	
2001									
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	ND	ND	ND	ND	ND	
			0.6	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	



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Month	Date	Meter	Lab Results For Effluent <sup>1</sup> and GAC-1					Ethyl benzene	Total Xylenes
		Reading (gallons)	(concentrations in ug/L)						
			MtBE <sup>2</sup>	TPH-g	Benzene	Toluene			
June	6/29/2001	1,224,600	NA	NA	NA	NA	NA	NA	
			ND	ND	ND	ND	ND	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	
			compressor not working, repaired compressor						
	6/7/2001	1,216,580	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	
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	ND	ND	ND	ND	ND	
			NA	NA	NA	NA	NA	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	

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Month	Date	Meter	Lab Results For Effluent <sup>1</sup> and GAC-1					
		Reading (gallons)	(concentrations in ug/L)					
			MtBE <sup>2</sup>	TPH-g	Benzene	Toluene	Ethyl benzene	Total Xylenes
<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 and GAC-1				Ethyl benzene	Total Xylenes
		Reading (gallons)	(concentrations in ug/L)					
			MtBE <sup>2</sup>	TPH-g	Benzene	Toluene		
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					
			second polishing GAC was replaced with 55 gallon 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

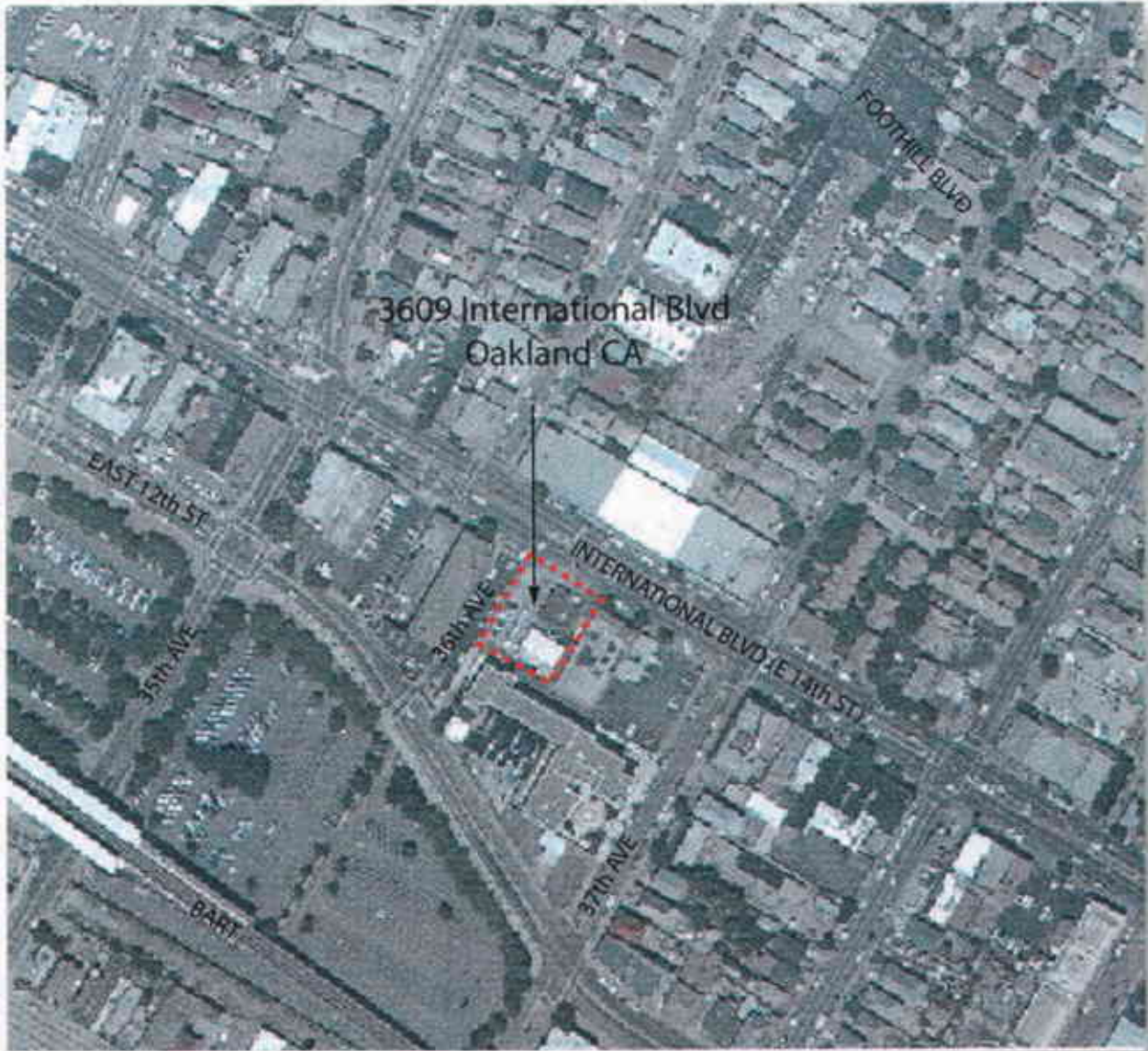


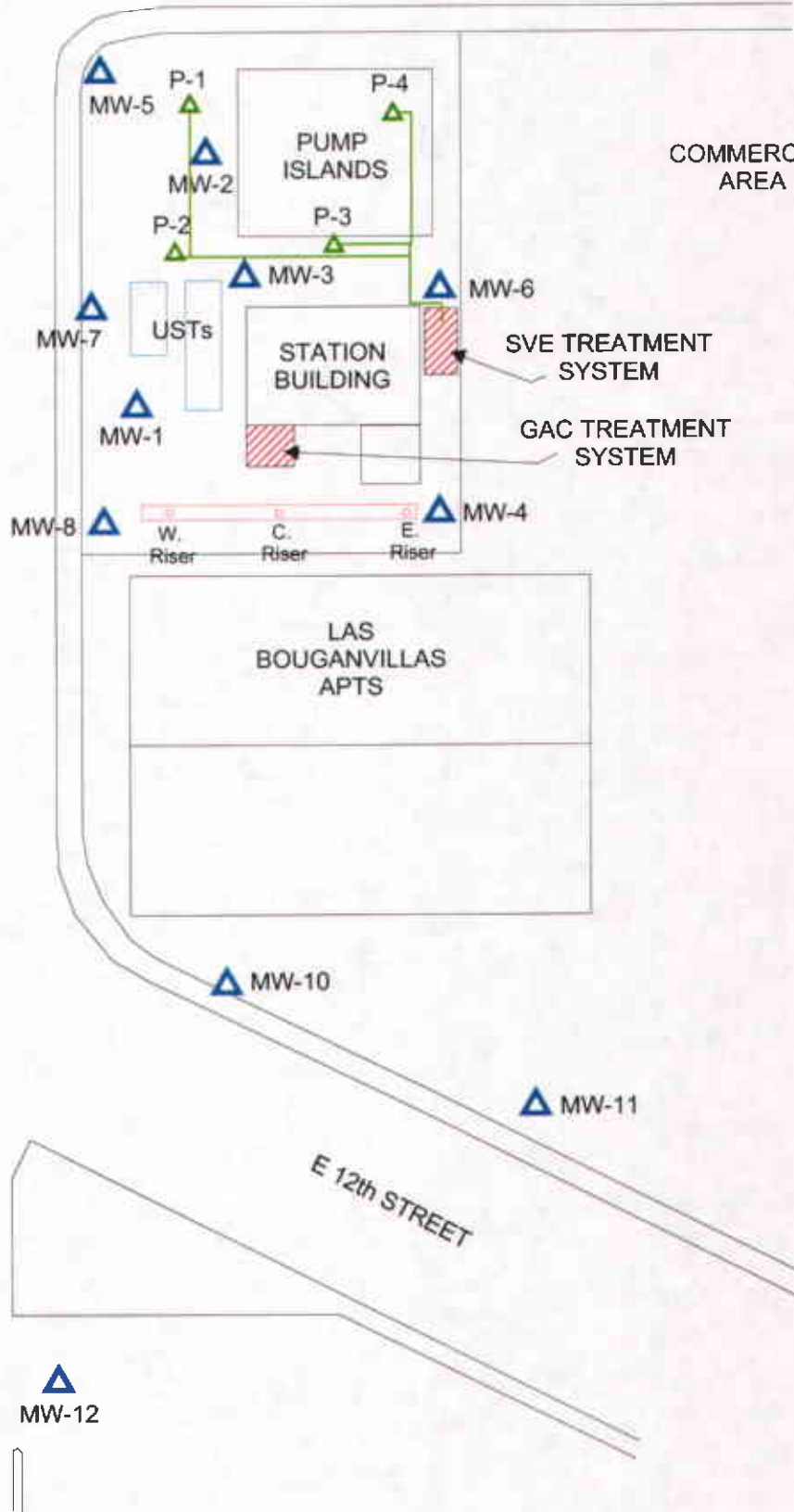
Figure 1: Site vicinity map.




INTERNATIONAL BLVD

COMMERCIAL AREA

COMMERCIAL AREA

36th AVENUE



-  MONITORING WELL
-  EXTRACTION WELL
-  EXTRACTION MANIFOLD PIPING



approximate scale in feet

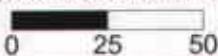


Figure 2: Site map showing location of groundwater monitoring wells, French drain, SVE system, and GAC system.



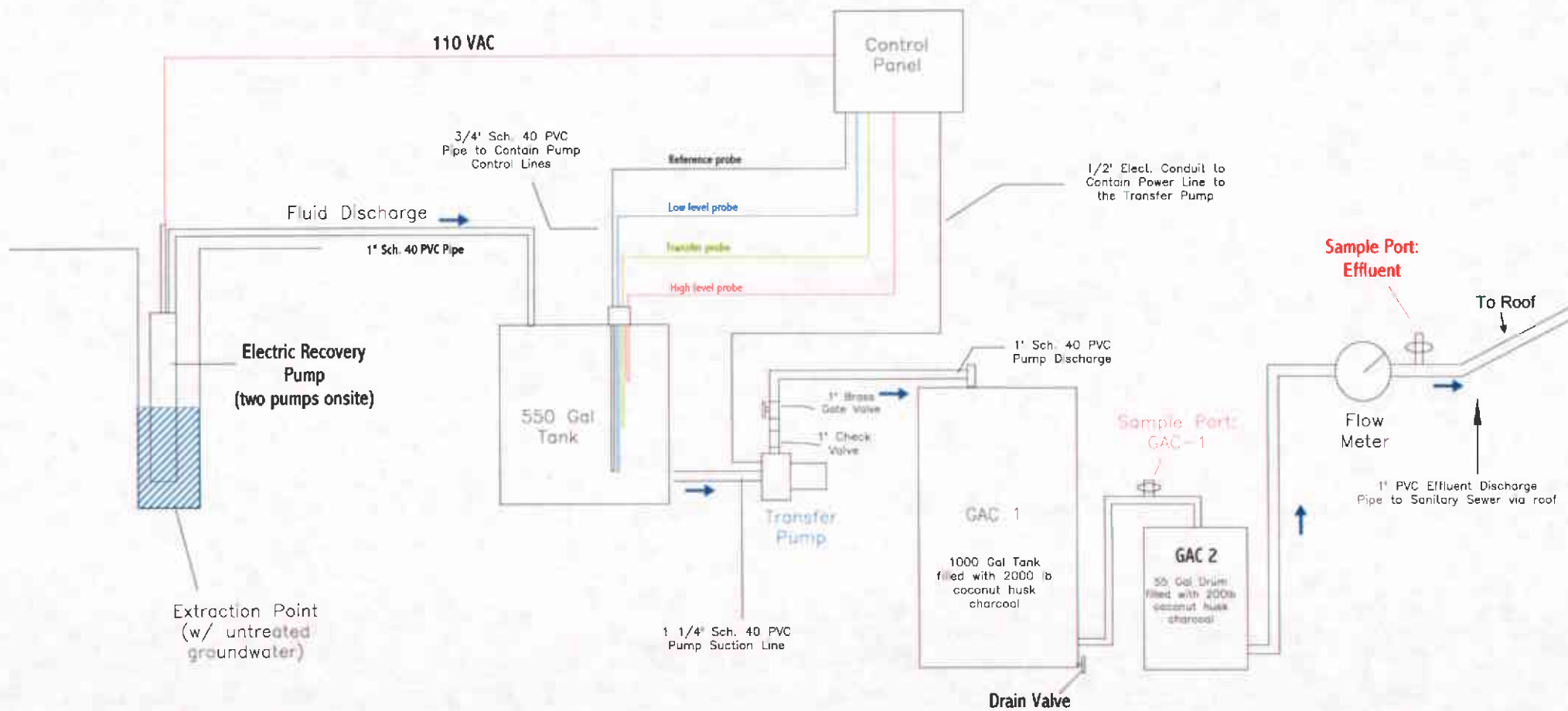


Figure 3: Schematic of the Groundwater Remediation System.

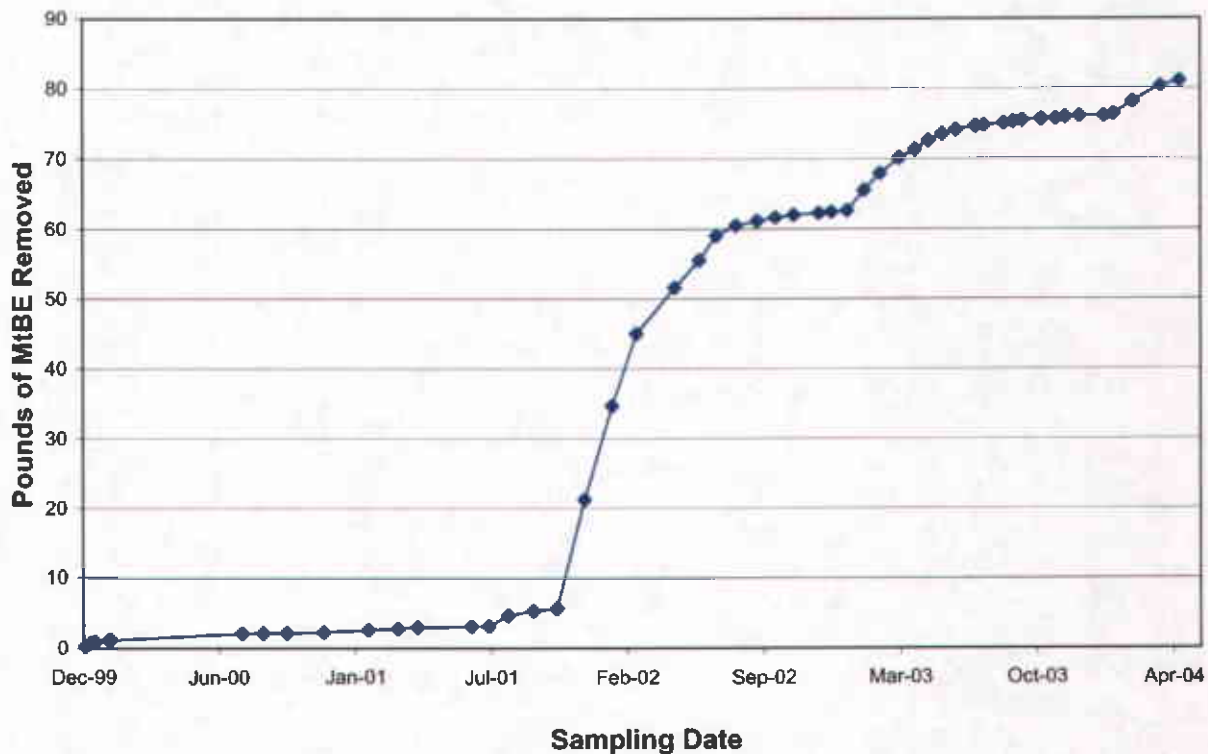
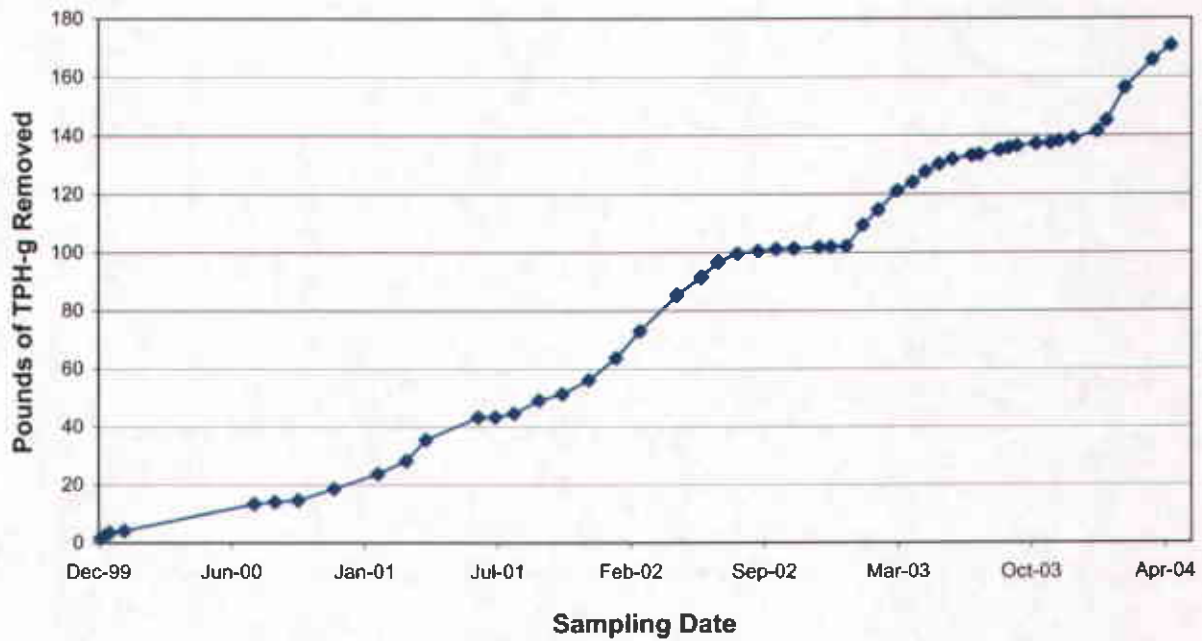


Figure 4. Cumulative mass of TPH-g and MtBE removed from groundwater since the installation of the treatment system.



**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

## 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.



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



# 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

**EB EAST BAY  
MUNICIPAL UTILITY DISTRICT**

DAVID R. WILLIAMS  
DIRECTOR OF WASTEWATER

**CERTIFIED MAIL**  
**(Return Receipt Requested)**

**Certified Mail No. 7000 1670 0005 9621 445**

July 30, 2002

Abolghassem Razi  
TONY'S EXPRESS AUTO SERVICE  
3609 International Blvd.  
Oakland, CA 94601

Dear Abolghassem Razi:

Re: Wastewater Discharge Permit Revisions - Permit No. 50427421

On June 12, 2001, the EBMUD Board of Directors approved changes in wastewater system rates and charges for two years. New rates and charges for fiscal year 2003 (FY03) are effective July 1, 2002. Wastewater system and testing fees are unchanged. The table below compares the unit rates effective July 1, 2001 (FY02) with the new unit rates effective July 1, 2002 (FY03).

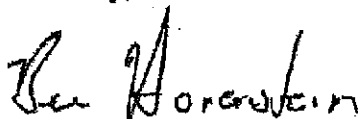
	Rates Effective		
	FY02	FY03	% Change
Flow (\$/Ccf)	0.408	0.426	+ 4.4%
CODF (\$/lb)	0.144	0.148	+ 2.8%
TSS (\$/lb)	0.243	0.250	+ 2.9%

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 Source Control Division

BKH:PEM:mow

Enclosure

P.O. BOX 24055, OAKLAND, CA 94623-1055, (510) 287-1405

W:\MS\Administration\Budget\FY2003\revision transmittal letter.doc



# WASTEWATER DISCHARGE PERMIT

REVISION EFFECTIVE JULY 1, 2002

Terms and Conditions

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

## MONITORING and TESTING CHARGES

EBMUD Inspections Per Year:	2	@ \$540.00 each =	\$1,080.00 / year
Analyses Per Year:			
Parameter	Tests per year	Charge per test	Total Charge per year
EPA 624	2	\$146.00	\$292.00
Total Monitoring and Testing Charge =			\$1,372.00 / year \$114.33 / 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 =	\$0.44 /Ccf	
Discharge Volume =	61 Ccf/mo.	(based on 1,500 gpd average)
Wastewater Disposal Charge =	\$27.02 /mo.	



# WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

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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

### 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.



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 in accordance with the signatory requirements of 40 CFR 403.12 (l) all applications, self-monitoring reports, violation response reports, compliance reports, and other reports or documents required by the District. The submittal shall include the following certification statement and shall be signed by the duly authorized representative:

*"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*



## WASTEWATER DISCHARGE PERMIT STANDARD TERMS AND CONDITIONS

*penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

### 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

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- 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 equal to or 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

**APPENDIX: TABLE OF APPROVED TEST METHODS**  
**Required Preservation & Holding Times**

The District has approved the following test methods for wastewater analysis. These methods are generally used for District and self-monitoring. Other methods not listed in this table may be required. Refer to the self-monitoring section of your wastewater discharge permit for required specific test methods.

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
CODE, 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:\IDS\Permits\Standard Terms and Conditions\Table of Approved Test Methods.doc

# **APPENDIX B**

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



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

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


A N A L Y T I C A L   R E P O R T

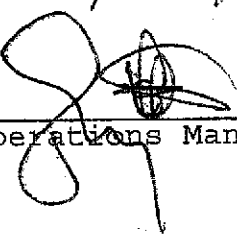
Prepared for:

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

Date: 19-MAY-04  
Lab Job Number: 172058  
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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# CHAIN OF CUSTODY

## Analyses

### Curtis & Tompkins, Ltd.

Analytical Laboratory Since 1878  
2323 Fifth Street  
Berkeley, CA 94710  
(510)486-0900 Phone  
(510)486-0532 Fax

C&T LOGIN # 172058

Sampler: Mehran Nowrozi

Report To: Tony Perini

Project No: 2333

Project Name: 3609 International Blvd., Oakland

Company: SOMA Environmental

Turnaround Time: Standard

Telephone: 925-244-6600

Fax: 925-244-6601

Lab No.	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative				TPH-g 8015 BTEX & MBE 8021B	
			Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE		
-1	Influent	5/3/04 12:00 PM		X		3-VOAs	X				X	X
-2	GAC-1	5/3/04 11:55 AM		X		3-VOAs	X				X	X
-3	PSP#1	5/3/04 11:50 AM		X		3-VOAs	X				X	X

Notes: EDF OUTPUT REQUIRED  
Grab Sample  
Totalizer Reading:

RELINQUISHED BY:		RECEIVED BY:	
2:35 PM	5/3/04	<i>[Signature]</i>	5/3/04 1435
Mehran Nowrozi	DATE/TIME	<i>[Signature]</i>	DATE/TIME
<i>[Signature]</i>	DATE/TIME		DATE/TIME
	DATE/TIME		DATE/TIME

Rec'd cold & intact on ice  
5/3/04



Total Volatile Hydrocarbons

Lab #: 172058      Location: 3609 International Blvd  
 Client: SOMA Environmental Engineering Inc.      Prep: EPA 5030B  
 Project#: 2333  
 Matrix: Water      Sampled: 05/03/04  
 Units: ug/L      Received: 05/03/04  
 Batch#: 90780

Field ID: INFLUENT      Diln Fac: 5.000  
 Type: SAMPLE      Analyzed: 05/04/04  
 Lab ID: 172058-001

Analyte	Result	RL	Analysis
Gasoline C7-C12	9,600	250	EPA 8015B
MTBE	1,500	10	EPA 8021B
Benzene	680	2.5	EPA 8021B
Toluene	410	2.5	EPA 8021B
Ethylbenzene	320	2.5	EPA 8021B
m,p-Xylenes	1,200	2.5	EPA 8021B
o-Xylene	600	2.5	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	117	74-142	EPA 8015B
Bromofluorobenzene (FID)	127	80-139	EPA 8015B
Trifluorotoluene (PID)	107	55-139	EPA 8021B
Bromofluorobenzene (PID)	115	62-134	EPA 8021B

Field ID: GAC-1      Diln Fac: 1.000  
 Type: SAMPLE      Analyzed: 05/04/04  
 Lab ID: 172058-002

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)	89	74-142	EPA 8015B
Bromofluorobenzene (FID)	128	80-139	EPA 8015B
Trifluorotoluene (PID)	78	55-139	EPA 8021B
Bromofluorobenzene (PID)	113	62-134	EPA 8021B

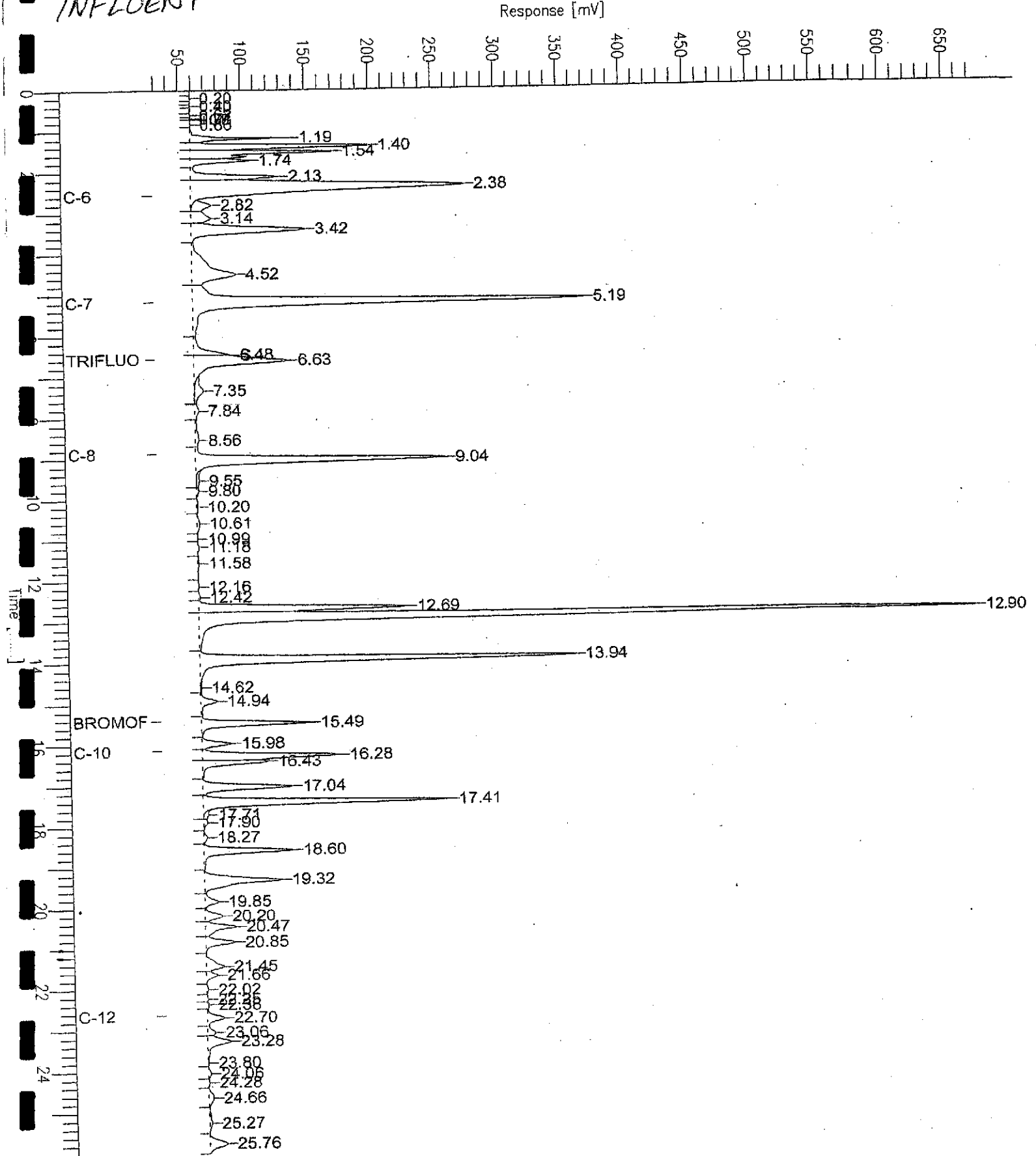
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Sample Name : 172058-001,90780  
 Name : G:\GC04\DATA\124J021.raw  
 Mod : TVHETXE  
 Start Time : 0.00 min  
 Scale Factor : 1.0

End Time : 26.00 min  
 Plot Offset : 29 mV

Sample #: a1.0  
 Date : 5/4/04 12:51 PM  
 Time of Injection: 5/4/04 11:29 AM  
 Low Point : 28.97 mV  
 High Point : 670.10 mV  
 Plot Scale: 641.1 mV

**INFLUENT**





**Total Volatile Hydrocarbons**

Lab #: 172058      Location: 3609 International Blvd  
 Client: SOMA Environmental Engineering Inc.      Prep: EPA 5030B  
 Project#: 2333  
 Matrix: Water      Sampled: 05/03/04  
 Units: ug/L      Received: 05/03/04  
 Batch#: 90780

Field ID: PSP#1      Diln Fac: 1.000  
 Type: SAMPLE      Analyzed: 05/04/04  
 ID: 172058-003

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	%REC	Limits	Analysis
Trifluorotoluene (FID)	91	74-142	EPA 8015B
Bromofluorobenzene (FID)	128	80-139	EPA 8015B
Trifluorotoluene (PID)	76	55-139	EPA 8021B
Bromofluorobenzene (PID)	111	62-134	EPA 8021B

Type: BLANK      Diln Fac: 1.000  
 Lab ID: QC249725      Analyzed: 05/03/04

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)	87	74-142	EPA 8015B
Bromofluorobenzene (FID)	115	80-139	EPA 8015B
Trifluorotoluene (PID)	76	55-139	EPA 8021B
Bromofluorobenzene (PID)	101	62-134	EPA 8021B

# GC04 TVH 'J' Data File FID

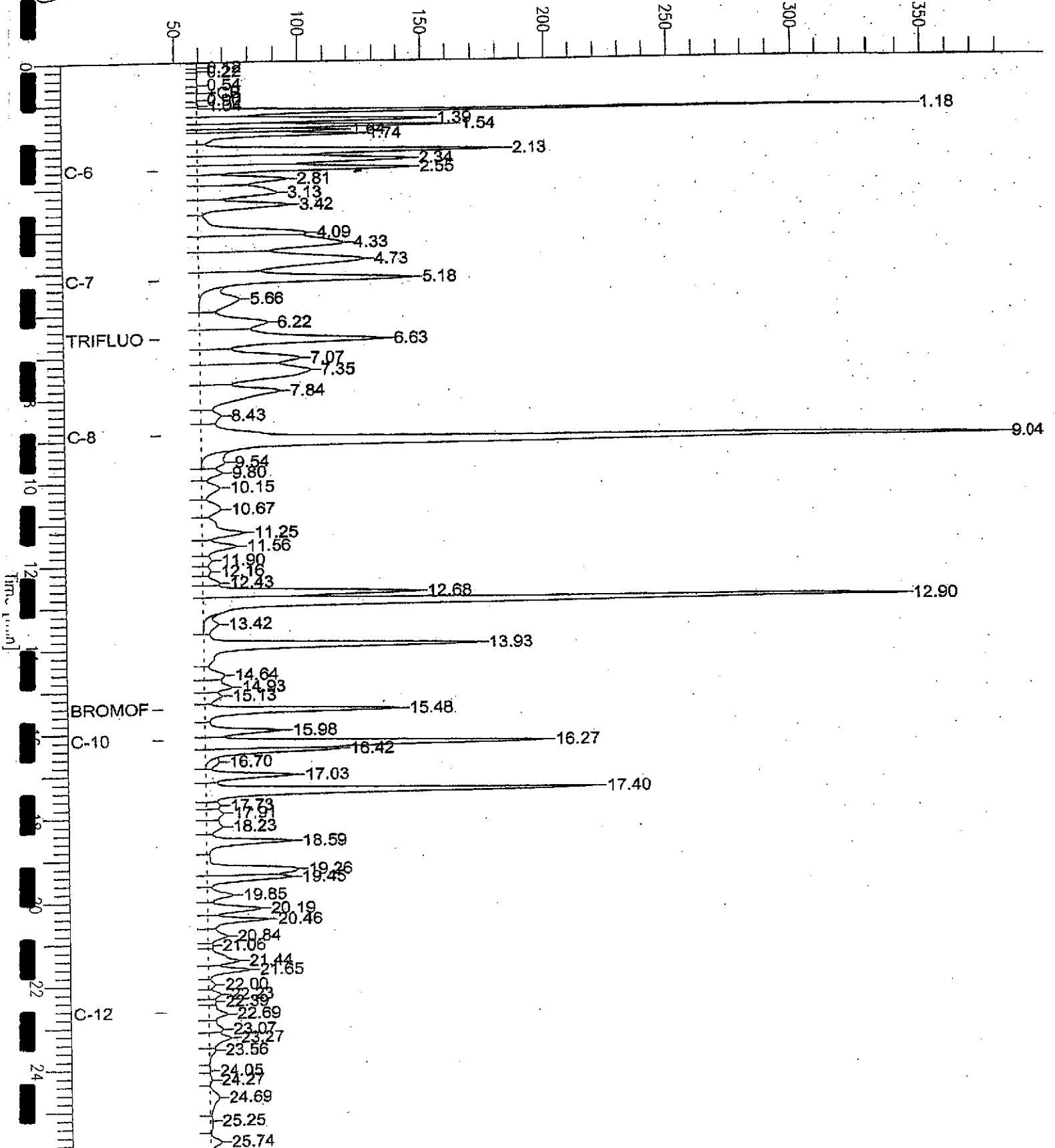
Name : ccv/lcs,qc249727,90780,04ws0672,5/5000  
Name : G:\GC04\DATA\124J002.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Factor : 1.0

End Time : 26.00 min  
Plot Offset : 44 mV

Sample # :  
Date : 5/3/04 01:24 PM  
Time of Injection : 5/3/04 12:58 PM  
Low Point : 43.53 mV  
High Point : 380.30 mV  
Plot Scale : 336.6 mV

*Casoline*

Response [mV]



Lab QC Report

Total Volatile Hydrocarbons

Lab #:	172058	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:	QC249726	Batch#:	90780
Matrix:	Water	Analyzed:	05/03/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
MTBE	20.00	17.86	89	59-131
Benzene	20.00	17.27	86	80-120
Toluene	20.00	17.30	87	80-120
Ethylbenzene	20.00	17.63	88	80-120
m,p-Xylenes	20.00	17.34	87	80-120
o-Xylene	20.00	17.46	87	80-120

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		68	55-139
Bromofluorobenzene (PID)		87	62-134



Batch QC Report

Total Volatile Hydrocarbons

Lab #:	172058	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:	QC249727	Batch#:	90780
Matrix:	Water	Analyzed:	05/03/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,028	101	80-120
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		129	74-142
Bromofluorobenzene (FID)		122	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		



Batch QC Report

Total Volatile Hydrocarbons

Lab #:	172058	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	90780
MS Lab ID:	172057-001	Sampled:	05/03/04
Matrix:	Water	Received:	05/03/04
Units:	ug/L	Analyzed:	05/04/04
Diln Fac:	1.000		

Type: MS Lab ID: QC249786

Analyte	MS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	21.04	2,000	2,065	102	80-120
MTBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		132	74-142
Bromofluorobenzene (FID)		136	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC249787

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,096	104	80-120	2	20
MTBE			NA			
Benzene			NA			
Toluene			NA			
Ethylbenzene			NA			
m,p-Xylenes			NA			
o-Xylene			NA			

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		129	74-142
Bromofluorobenzene (FID)		133	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed  
RPD= Relative Percent Difference  
Page 1 of 1



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

A N A L Y T I C A L   R E P O R T

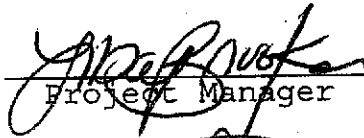
Prepared for:

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

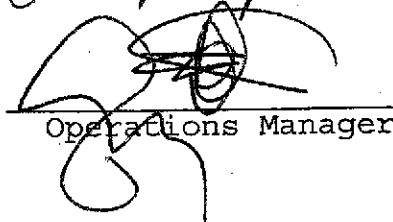
Date: 21-APR-04  
Lab Job Number: 171567  
Project ID: 2333  
Location: 3609 International Blvd

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

This package may be reproduced only in its entirety.

Laboratory Number: 171567  
Client: SOMA Environmental Engineering Inc.  
Project: 2333  
Request Date: 4/5/2004

### CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for three water samples requested from the above referenced project on April 5, 2004. The samples were received cold and intact.

**TVH/BTXE:**

The recoveries for the surrogate trifluorotoluene in the spikes exceed control limits due to coelution of the surrogate peak with other hydrocarbon peaks. The associated surrogates are acceptable.

No other analytical problems were encountered.

# CHAIN OF CUSTODY

**Curtis & Tompkins, Ltd.**

Analytical Laboratory Since 1878  
2323 Fifth Street  
Berkeley, CA 94710  
(510)486-0900 Phone  
(510)486-0532 Fax

**Analyses**C&T LOGIN # 171567Sampler: Mehran NowrooziProject No: 2333Report To: Tony PeriniProject Name: 3609 International Blvd., OaklandCompany: SOMA EnvironmentalTurnaround Time: StandardTelephone: 925-244-6600Fax: 925-244-6601

Lab No.	Sample ID.	Sampling Date	Matrix			# of Containers	Preservative			
			Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE
<u>1</u>	<u>Influent</u>	<u>4/5/04 1:10 PM</u>		<input checked="" type="checkbox"/>		<u>3-VOAs</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
<u>2</u>	<u>GAC-1</u>	<u>4/5/04 1:15 PM</u>		<input checked="" type="checkbox"/>		<u>3-VOAs</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
<u>3</u>	<u>PSP#1</u>	<u>4/5/04 1:20 PM</u>		<input checked="" type="checkbox"/>		<u>3-VOAs</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>

TPH-g 8015  
BTEX & MBE 8021B

Notes: **EDF OUTPUT REQUIRED**  
Grab Sample  
Totalizer Reading:  
 Cold  
 Ambient  
 Intact  
Received  On Ice

RELINQUISHED BY:  
1:16 PM 4/5/04  
Mehran Nowroozi DATE/TIME  
[Signature] DATE/TIME

RECEIVED BY:  
[Signature] 4/5/04 1:30  
DATE/TIME  
DATE/TIME  
DATE/TIME



## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	171567	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	04/05/04
Units:	ug/L	Received:	04/05/04
Batch#:	90037	Analyzed:	04/06/04

Field ID:	INFLUENT	Lab ID:	171567-001
Type:	SAMPLE	Diln Fac:	5.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	7,100	250	EPA 8015B
TBE	1,700	25	EPA 8021B
Benzene	730	25	EPA 8021B
Toluene	210	25	EPA 8021B
Ethylbenzene	120	25	EPA 8021B
m,p-Xylenes	870	25	EPA 8021B
o-Xylene	550	25	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	126	74-142	EPA 8015B
Bromofluorobenzene (FID)	109	80-139	EPA 8015B
Trifluorotoluene (PID)	132	55-139	EPA 8021B
Bromofluorobenzene (PID)	114	62-134	EPA 8021B

Field ID:	GAC-1	Lab ID:	171567-002
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
TBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	107	74-142	EPA 8015B
Bromofluorobenzene (FID)	115	80-139	EPA 8015B
Trifluorotoluene (PID)	108	55-139	EPA 8021B
Bromofluorobenzene (PID)	117	62-134	EPA 8021B

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	171567	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	04/05/04
Units:	ug/L	Received:	04/05/04
Batch#:	90037	Analyzed:	04/06/04

Field ID:	PSP#1	Lab ID:	171567-003
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	100	74-142	EPA 8015B
Bromofluorobenzene (FID)	119	80-139	EPA 8015B
Trifluorotoluene (PID)	101	55-139	EPA 8021B
Bromofluorobenzene (PID)	121	62-134	EPA 8021B

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC246889		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	93	74-142	EPA 8015B
Bromofluorobenzene (FID)	106	80-139	EPA 8015B
Trifluorotoluene (PID)	93	55-139	EPA 8021B
Bromofluorobenzene (PID)	106	62-134	EPA 8021B

# GC04 TVH 'J' Data File FID

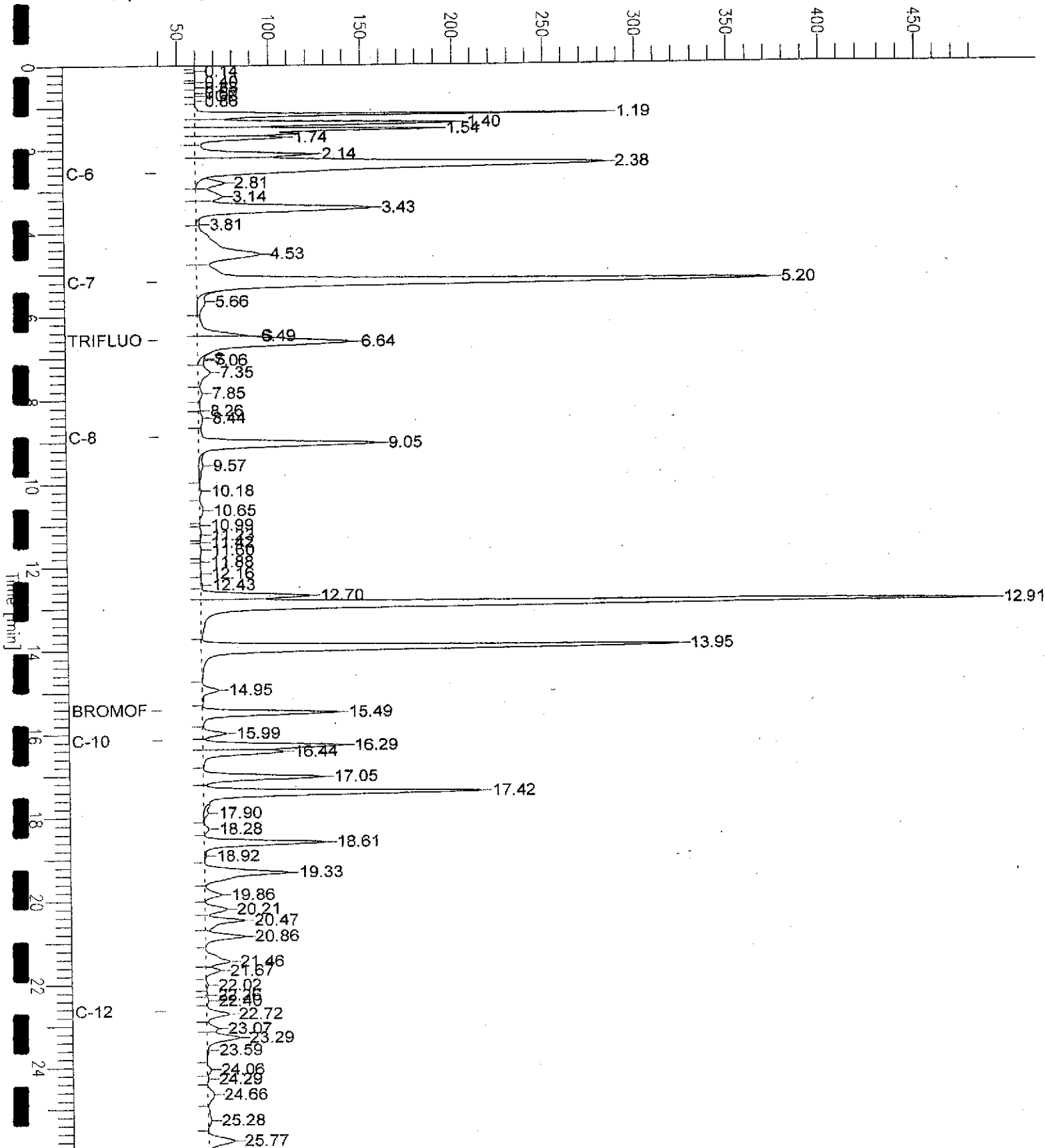
Sample Name : 171567-001,90037  
File Name : G:\GC04\DATA\097J009.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

End Time : 26.00 min  
Plot Offset : 38 mV

Sample #: a1.0  
Date : 4/7/04 12:24 PM  
Time of Injection: 4/6/04 02:07 PM  
Low Point : 38.30 mV  
High Point : 489.82 mV  
Plot Scale : 451.5 mV

Influent

Response [mV]

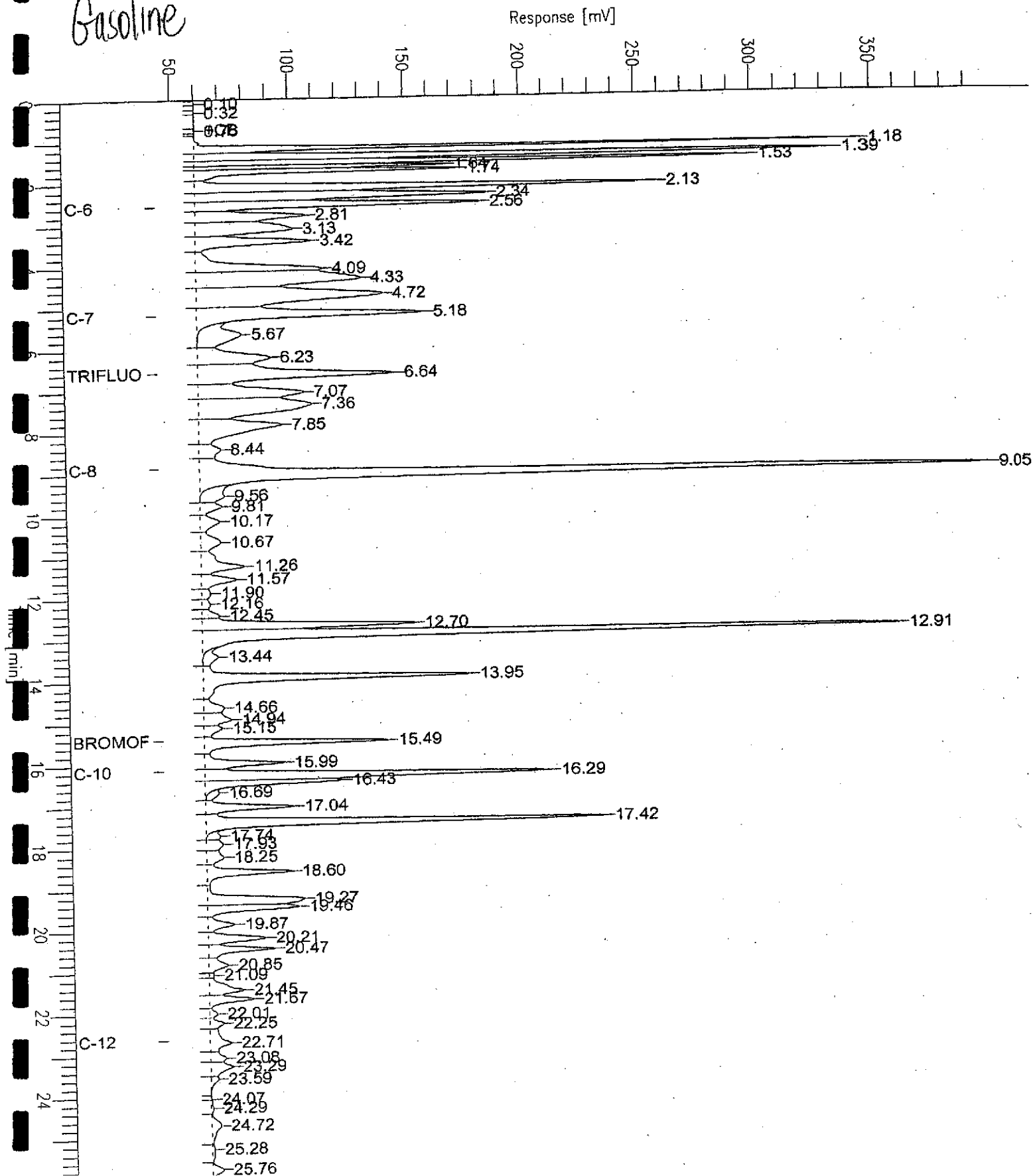


# GC04 TVH 'J' Data File FID

Sample Name : ccv/lcs,gc246891,90037,04ws0672,5/5000  
FileName : G:\GC04\DATA\097J002.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

Sample # :  
Date : 4/6/04 10:15 AM  
Time of Injection : 4/6/04 09:49 AM  
Low Point : 43.42 mV  
High Point : 397.72 mV  
End Time : 26.00 min  
Plot Offset : 43 mV  
Plot Scale : 354.3 mV

*Gasoline*





Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	171567	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:	QC246890	Batch#:	90037
Matrix:	Water	Analyzed:	04/06/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
MTBE	20.00	19.53	98	59-131
Benzene	20.00	18.45	92	80-120
Toluene	20.00	18.45	92	80-120
Ethylbenzene	20.00	19.19	96	80-120
m,p-Xylenes	40.00	36.94	92	80-120
o-Xylene	20.00	18.07	90	80-120

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		91	55-139
Bromofluorobenzene (PID)		107	62-134



Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #: 171567	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: QC246891	Batch#: 90037
Matrix: Water	Analyzed: 04/06/04
Units: ug/L	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,181	109	80-120
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		148 *	74-142
Bromofluorobenzene (FID)		122	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

\* = Value outside of QC limits; see narrative

NA= Not Analyzed

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #: 171567	Location: 3609 International Blvd
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2333	Analysis: EPA 8015B
Field ID: ZZZZZZZZZZ	Batch#: 90037
MS Lab ID: 171571-004	Sampled: 04/02/04
Matrix: Water	Received: 04/06/04
Units: ug/L	Analyzed: 04/07/04
Diln Fac: 1.000	

Type: MS Lab ID: QC246915

Analyte	MS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	24.88	2,000	2,078	103	80-120
MTBE			NA		
Benzene			NA		
Toluene			NA		
ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		151 *	74-142
Bromofluorobenzene (FID)		120	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC246916

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,086	103	80-120	0	20
MTBE			NA			
Benzene			NA			
Toluene			NA			
ethylbenzene			NA			
m,p-Xylenes			NA			
o-Xylene			NA			

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		152 *	74-142
Bromofluorobenzene (FID)		120	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

\*= Value outside of QC limits; see narrative  
 NA= Not Analyzed  
 RPD= Relative Percent Difference  
 Page 1 of 1



ANALYTICAL REPORT

Prepared for:

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

Date: 08-MAR-04

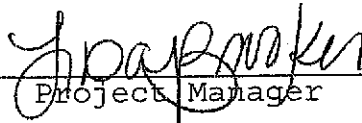
Lab Job Number: 170765

Project ID: 2333

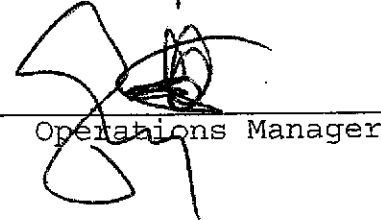
Location: 3609 International Blvd

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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# CHAIN OF CUSTODY

**Curtis & Tompkins, Ltd.**  
 Analytical Laboratory Since 1878  
 2323 Fifth Street  
 Berkeley, CA 94710  
 (510)486-0900 Phone  
 (510)486-0532 Fax

Analyses

C&T LOGIN # 170765

Sampler: Mehran Nowroozi  
 Report To: Tony Perini  
 Company: SOMA Environmental  
 Telephone: 925-244-6600  
 Fax: 925-244-6601

Project No: 2333  
 Project Name: 3609 International Blvd., Oakland  
 Turnaround Time: Standard

Lab No.	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative			
			Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE
<u>1</u>	<u>Influent</u>	<u>2/24/04 2:00 PM</u>		<input checked="" type="checkbox"/>		<u>3-VOAs</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
<u>2</u>	<u>GAC-1</u>	<u>2/24/04 2:05 PM</u>		<input checked="" type="checkbox"/>		<u>3-VOAs</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>
<u>3</u>	<u>PSP#1</u>	<u>2/24/04 2:10 PM</u>		<input checked="" type="checkbox"/>		<u>3-VOAs</u>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>

TPH-g 8015	BTEX & MIBE 8021B																				

Notes: **EDF OUTPUT REQUIRED**  
 Grab Sample  
 Totalizer Reading:

Received     On Ice  
 Cold     Ambient     Intact

RELINQUISHED BY:  
Mehran Nowroozi    2:40 PM    2/24/04  
 DATE/TIME

RECEIVED BY:  
[Signature]    2/24/04 1440  
 DATE/TIME

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	170765	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	02/24/04
Units:	ug/L	Received:	02/24/04

Field ID:	INFLUENT	Diln Fac:	5.000
Type:	SAMPLE	Batch#:	88749
Lab ID:	170765-001	Analyzed:	02/25/04

Analyte	Result	RL	Analysis
Gasoline C7-C12	12,000	250	EPA 8015B
MTBE	1,900	25	EPA 8021B
Benzene	1,000	25	EPA 8021B
Toluene	480	25	EPA 8021B
Ethylbenzene	280	25	EPA 8021B
m,p-Xylenes	1,100	25	EPA 8021B
o-Xylene	630	25	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	141	74-142	EPA 8015B
Bromofluorobenzene (FID)	106	80-139	EPA 8015B
Trifluorotoluene (PID)	125	55-139	EPA 8021B
Bromofluorobenzene (PID)	117	62-134	EPA 8021B

Field ID:	GAC-1	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	88708
Lab ID:	170765-002	Analyzed:	02/24/04

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	101	74-142	EPA 8015B
Bromofluorobenzene (FID)	115	80-139	EPA 8015B
Trifluorotoluene (PID)	105	55-139	EPA 8021B
Bromofluorobenzene (PID)	119	62-134	EPA 8021B

ND= Not Detected  
 RL= Reporting Limit  
 Page 1 of 3

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	170765	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	02/24/04
Units:	ug/L	Received:	02/24/04

Field ID:	PSP#1	Diln Fac:	1.000
Type:	SAMPLE	Batch#:	88708
Lab ID:	170765-003	Analyzed:	02/24/04

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	99	74-142	EPA 8015B
Bromofluorobenzene (FID)	113	80-139	EPA 8015B
Trifluorotoluene (PID)	104	55-139	EPA 8021B
Bromofluorobenzene (PID)	117	62-134	EPA 8021B

Type:	BLANK	Batch#:	88708
Lab ID:	QC241859	Analyzed:	02/24/04
Diln Fac:	1.000		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	98	74-142	EPA 8015B
Bromofluorobenzene (FID)	106	80-139	EPA 8015B
Trifluorotoluene (PID)	105	55-139	EPA 8021B
Bromofluorobenzene (PID)	114	62-134	EPA 8021B

ND= Not Detected  
 RL= Reporting Limit  
 Page 2 of 3



## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	170765	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	02/24/04
Units:	ug/L	Received:	02/24/04

Type:	BLANK	Batch#:	88749
Lab ID:	QC242015	Analyzed:	02/25/04
Gain Fac:	1.000		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
p-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	97	74-142	EPA 8015B
Bromofluorobenzene (FID)	111	80-139	EPA 8015B
Trifluorotoluene (PID)	99	55-139	EPA 8021B
Bromofluorobenzene (PID)	116	62-134	EPA 8021B

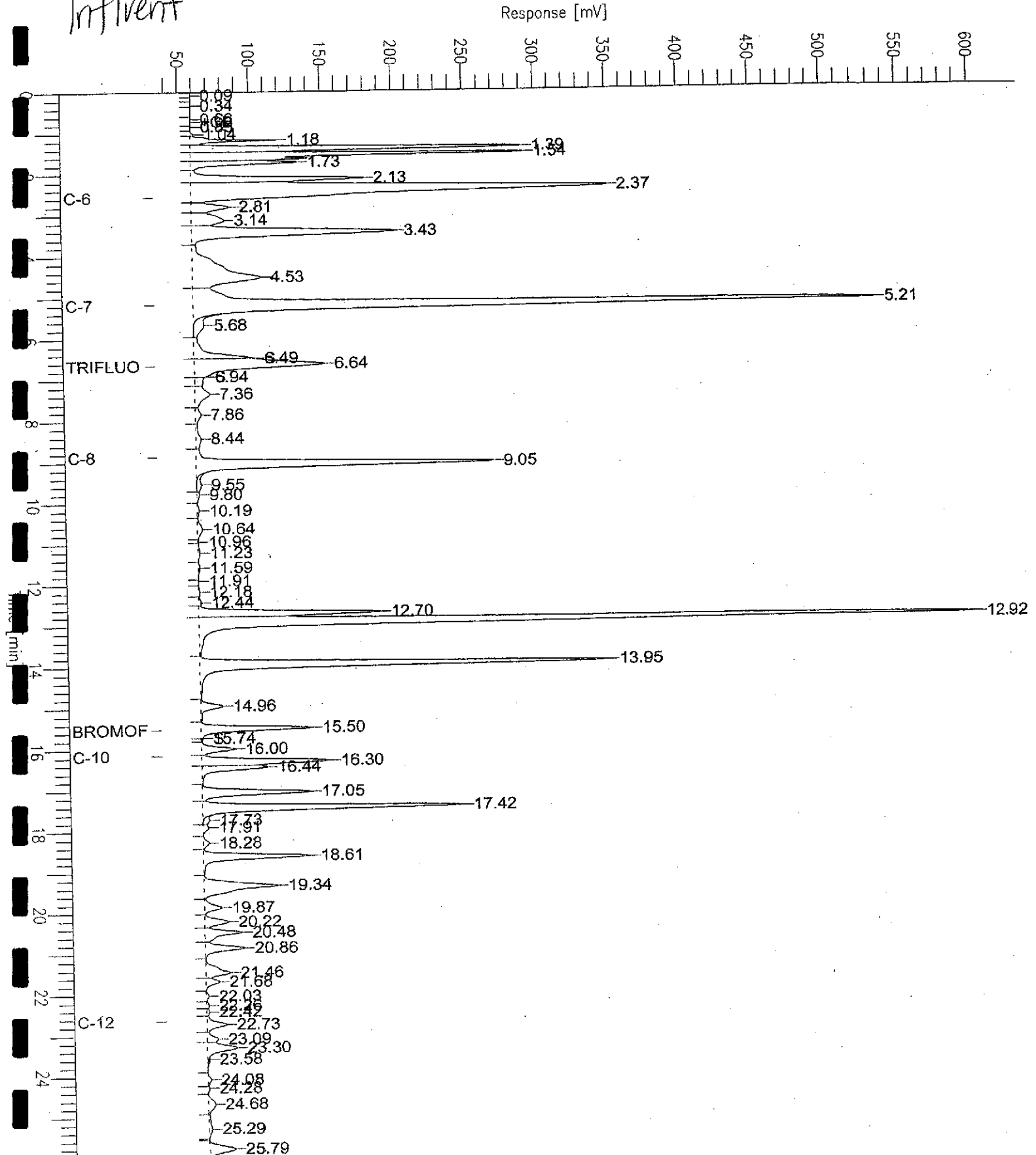
# GC04 TVH 'J' Data File FID

Sample Name : 170765-001,88749  
FileName : G:\GC04\DATA\0560012.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

End Time : 26.00 min  
Plot Offset : 32 mV

Sample #: a1.0  
Date : 2/26/04 12:13 PM  
Time of Injection: 2/25/04 05:41 PM  
Low Point : 32.02 mV  
High Point : 601.93 mV  
Plot Scale: 569.9 mV

*Influent*



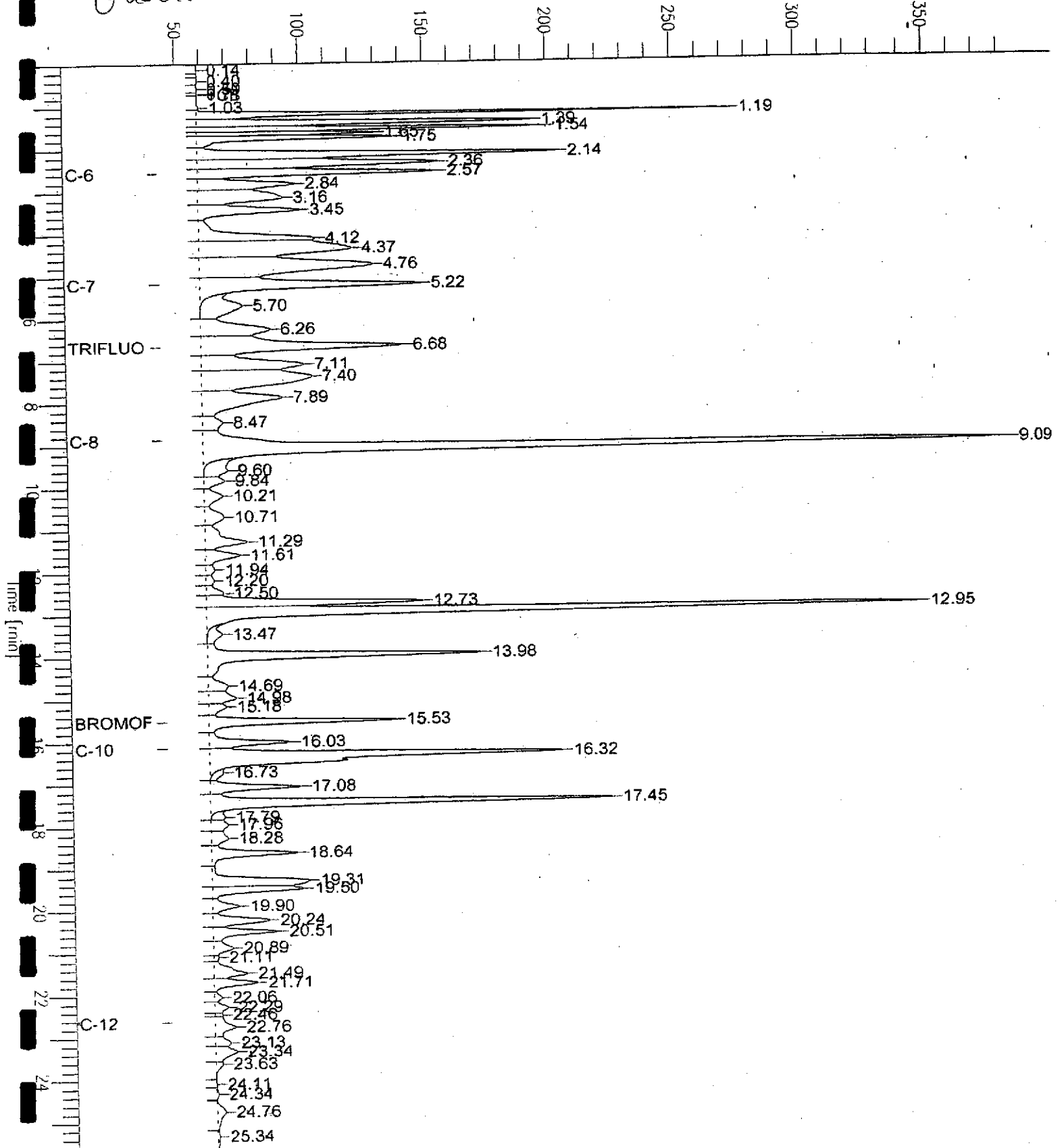
# GC04 TVH 'J' Data File FID

Sample Name : ccv/lcs,gc241861,88708,04ws0146,5/5000  
 FileName : G:\GC04\DATA\055J003.raw  
 Method : TVHBTXE  
 Start Time : 0.00 min      End Time : 26.00 min  
 Factor : 1.0                  Plot Offset: 43 mV

Sample # :  
 Date : 2/24/04 10:49 AM  
 Time of Injection: 2/24/04 10:23 AM  
 Low Point : 42.83 mV      High Point : 382.47 mV  
 Plot Scale: 339.6 mV

Gasoline

Response [mV]





## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	170765	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:	QC241860	Batch#:	88708
Matrix:	Water	Analyzed:	02/24/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
MTBE	20.00	19.77	99	59-131
Benzene	20.00	19.74	99	80-120
Toluene	20.00	19.77	99	80-120
Ethylbenzene	20.00	20.63	103	80-120
m,p-Xylenes	40.00	39.09	98	80-120
o-Xylene	20.00	19.14	96	80-120

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		98	55-139
Bromofluorobenzene (PID)		105	62-134

NA= Not Analyzed



## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	170765	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:	QC241861	Batch#:	88708
Matrix:	Water	Analyzed:	02/24/04
Units:	ug/L		

Analyte	Spiked	Result	#REC	Limits
Gasoline C7-C12	2,000	2,157	108	80-120
TBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	#REC	Limits
Trifluorotoluene (FID)		133	74-142
Bromofluorobenzene (FID)		106	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		



**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	170765	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:	QC242016	Batch#:	88749
Matrix:	Water	Analyzed:	02/25/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
MTBE	20.00	17.63	88	59-131
Benzene	20.00	18.73	94	80-120
Toluene	20.00	19.03	95	80-120
Ethylbenzene	20.00	19.90	100	80-120
m,p-Xylenes	40.00	39.06	98	80-120
o-Xylene	20.00	19.12	96	80-120

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		94	55-139
Bromofluorobenzene (PID)		112	62-134



## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	170765	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:	QC242017	Batch#:	88749
Matrix:	Water	Analyzed:	02/25/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,253	113	80-120
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		136	74-142
Bromofluorobenzene (FID)		114	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #: 170765	Location: 3609 International Blvd
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2333	Analysis: EPA 8015B
Field ID: ZZZZZZZZZZ	Batch#: 88708
MSS Lab ID: 170740-001	Sampled: 02/23/04
Matrix: Water	Received: 02/23/04
Units: ug/L	Analyzed: 02/24/04
Diln Fac: 1.000	

Type: MS Lab ID: QC241880

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	17.59	2,000	2,270	113	80-120
MTBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		140	74-142
Bromofluorobenzene (FID)		114	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC241881

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,285	113	80-120	1	20
MTBE		NA				
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		140	74-142
Bromofluorobenzene (FID)		113	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed  
 RPD= Relative Percent Difference  
 Page 1 of 1



## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #: 170765	Location: 3609 International Blvd
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2333	Analysis: EPA 8015B
Field ID: ZZZZZZZZZZ	Batch#: 88749
SS Lab ID: 170787-002	Sampled: 02/25/04
Matrix: Water	Received: 02/25/04
Units: ug/L	Analyzed: 02/25/04
Diln Fac: 1.000	

Type: MS Lab ID: QC242109

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	23.65	2,000	2,272	112	80-120
MTBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		130	74-142
Bromofluorobenzene (FID)		113	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC242110

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,264	112	80-120	0	20
MTBE			NA			
Benzene			NA			
Toluene			NA			
Ethylbenzene			NA			
m,p-Xylenes			NA			
o-Xylene			NA			

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		129	74-142
Bromofluorobenzene (FID)		112	80-139
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

RPD= Relative Percent Difference



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

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: 10-FEB-04  
Lab Job Number: 170222  
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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### Analyses

**Curtis & Tompkins, Ltd.**  
 Analytical Laboratory Since 1878  
 2323 Fifth Street  
 Berkeley, CA 94710  
 (510)486-0900 Phone  
 (510)486-0532 Fax

C&T LOGIN # 170222

Sampler: Mehran Nowrozi

Project No: 2333

Report To: Tony Perini

Project Name: 3609 International Blvd., Oakland Company: SOMA Environmental

Turnaround Time: Standard Telephone: 925-244-6600

Fax: 925-244-6601

Lab No.	Sample ID.	Sampling Date Time	Matrix			# of Containers	Preservative			
			Soil	Water	Waste		HCL	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE
<u>1</u>	<u>Influent</u>	<u>1/27/04 2:30 PM</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<u>3-VOAs</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<u>2</u>	<u>GAC-1</u>	<u>1/27/04 2:35 PM</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<u>3-VOAs</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<u>3</u>	<u>PSP#1</u>	<u>1/27/04 2:40 PM</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<u>3-VOAs</u>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

TPH-g 8015																				
BTEX & MBE 8021B																				

Received  On ice  
 Cold  Ambient  Intact

**Notes: EDF OUTPUT REQUIRED**  
 Grab Sample  
 Totalizer Reading: 1,392,320

<b>RELINQUISHED BY:</b>		<b>RECEIVED BY:</b>	
<u>3:20 PM</u>	<u>1/27/04</u>	<u>1-27-04</u>	<u>2:20 PM</u>
<u>Mehran Nowrozi</u>	DATE/TIME		DATE/TIME
<u>Mehran Nowrozi</u>	DATE/TIME		DATE/TIME
	DATE/TIME		DATE/TIME

**Curtis & Tompkins Laboratories Analytical Report**

Lab #: 170222      Location: 3609 International Blvd  
 Client: SOMA Environmental Engineering Inc.      Prep: EPA 5030B  
 Project#: 2333  
 Matrix: Water      Sampled: 01/27/04  
 Units: ug/L      Received: 01/27/04  
 Batch#: 87995      Analyzed: 01/28/04

Field ID: INFLUENT      Lab ID: 170222-001  
 Type: SAMPLE      Diln Fac: 5.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	9,000	250	EPA 8015B
MTBE	680	25	EPA 8021B
Benzene	1,400	25	EPA 8021B
Toluene	190	25	EPA 8021B
Ethylbenzene	58	25	EPA 8021B
m,p-Xylenes	700	25	EPA 8021B
o-Xylene	460	25	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	118	57-150	EPA 8015B
Bromofluorobenzene (FID)	120	65-144	EPA 8015B
Trifluorotoluene (PID)	108	54-149	EPA 8021B
Bromofluorobenzene (PID)	113	58-143	EPA 8021B

Field ID: GAC-1      Lab ID: 170222-002  
 Type: SAMPLE      Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	106	57-150	EPA 8015B
Bromofluorobenzene (FID)	114	65-144	EPA 8015B
Trifluorotoluene (PID)	100	54-149	EPA 8021B
Bromofluorobenzene (PID)	111	58-143	EPA 8021B

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



**Curtis & Tompkins Laboratories Analytical Report**

Lab #: 170222	Location: 3609 International Blvd
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2333	
Matrix: Water	Sampled: 01/27/04
Units: ug/L	Received: 01/27/04
Batch#: 87995	Analyzed: 01/28/04

Field ID: PSP#1                      Lab ID: 170222-003  
 Type: SAMPLE                      Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
TBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	106	57-150	EPA 8015B
Bromofluorobenzene (FID)	117	65-144	EPA 8015B
Trifluorotoluene (PID)	103	54-149	EPA 8021B
Bromofluorobenzene (PID)	117	58-143	EPA 8021B

Type: BLANK                      Diln Fac: 1.000  
 Lab ID: QC239175

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
TBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	91	57-150	EPA 8015B
Bromofluorobenzene (FID)	98	65-144	EPA 8015B
Trifluorotoluene (PID)	86	54-149	EPA 8021B
Bromofluorobenzene (PID)	92	58-143	EPA 8021B

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

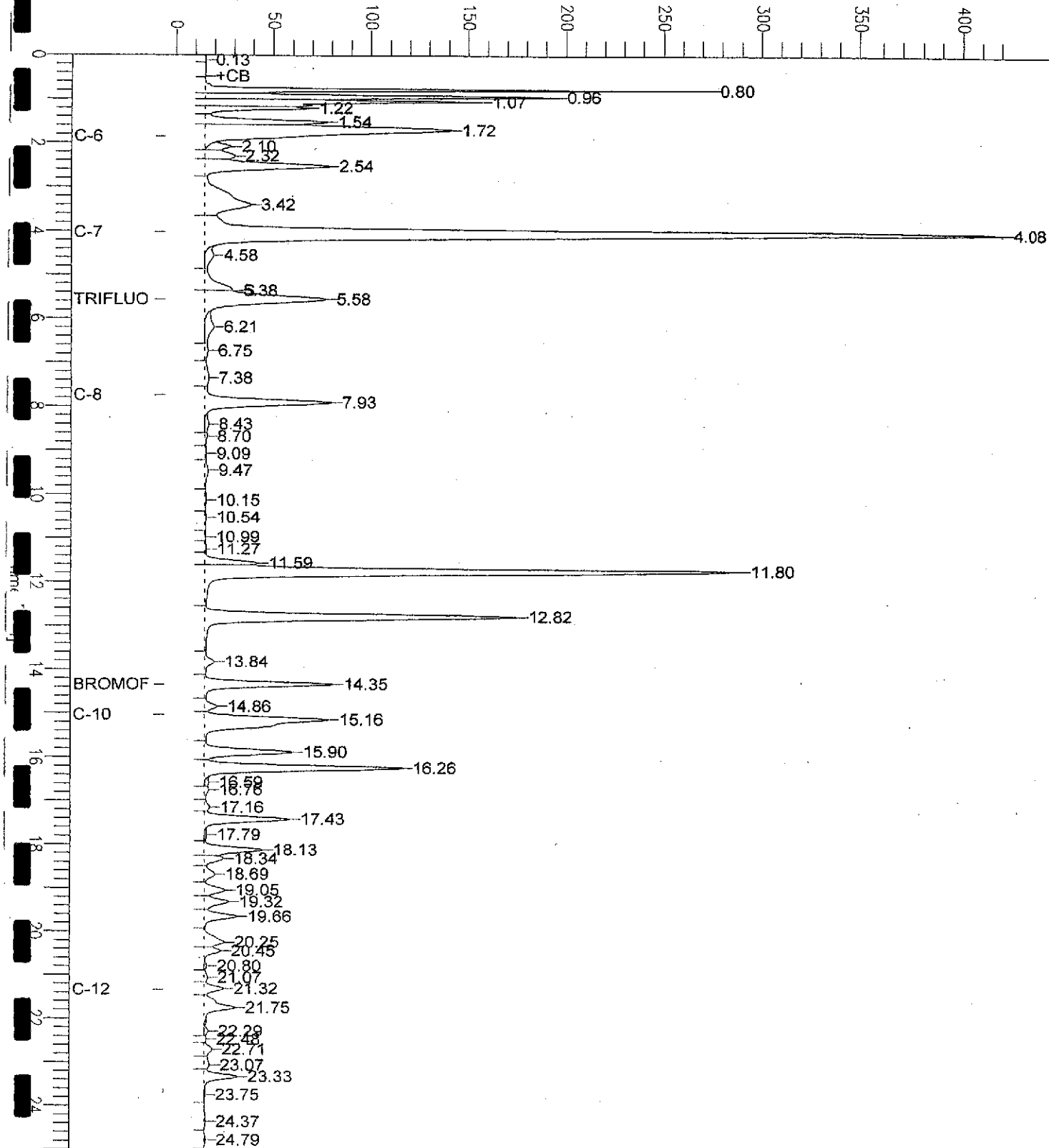


Sample Name : 170222-001,87995  
FileName : G:\GC05\DATA\028G004.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

Sample #: a1.0  
Date : 1/29/04 08:46 AM  
Time of Injection: 1/28/04 12:29 PM  
Low Point : -5.32 mV  
High Point : 4.20.83 mV  
Plot Scale: 426.2 mV

Influent

Response [mV]

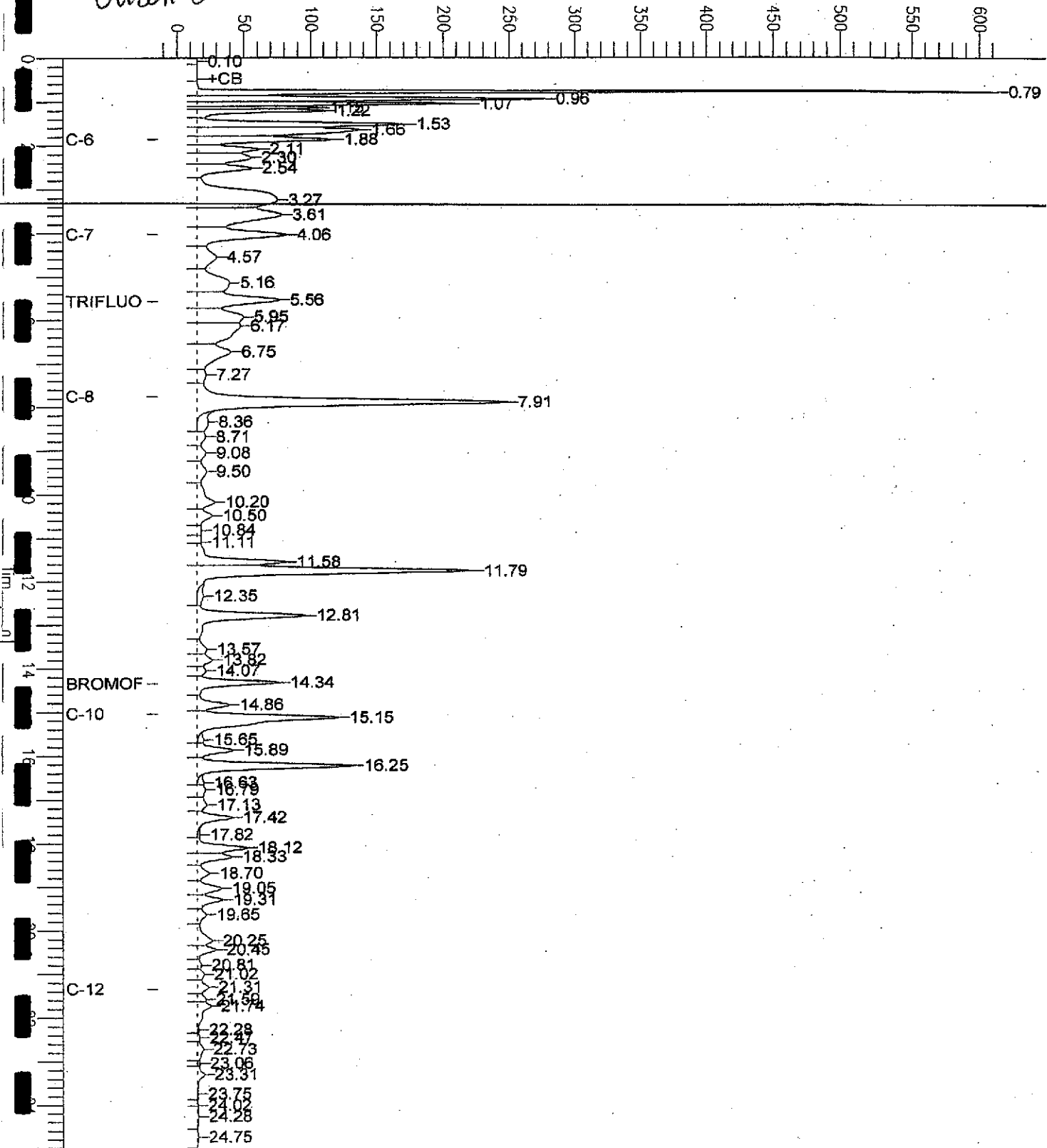


Sample Name : ccv/lcs.qc239176,87995,04ws0146,5/5000  
File Name : G:\GC05\DATA\028G002.raw  
Method : TVHBTXK  
Start Time : 0.00 min  
Scale Factor : 1.0

Sample # :  
Date : 1/28/04 11:47 AM  
Time of Injection: 1/28/04 11:22 AM  
Low Point : -14.59 mV  
High Point : 614.29 mV  
End Time : 25.00 min  
Plot Offset: -15 mV  
Plot Scale: 628.9 mV

*Baseline*

Response [mV]



**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	170222	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:	QC239176	Batch#:	87995
Matrix:	Water	Analyzed:	01/28/04
Units:	ug/L		

Analyte	Spiked	Result	UREC	Limits
Gasoline C7-C12	2,000	2,125	106	80-120
TBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	UREC	Limits
Trifluorotoluene (FID)		122	57-150
Bromofluorobenzene (FID)		119	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	170222	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:	QC239177	Batch#:	87995
Matrix:	Water	Analyzed:	01/28/04
Units:	ug/L		

Analyte	Spiked	Result	REC	Limits
Gasoline C7-C12		NA		
MTBE	20.00	17.93	90	63-133
Benzene	20.00	20.12	101	78-123
Toluene	20.00	17.97	90	79-120
Ethylbenzene	20.00	18.62	93	80-120
m,p-Xylenes	40.00	34.38	86	76-120
o-Xylene	20.00	18.63	93	80-121

Surrogate	Result	REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		88	54-149
Bromofluorobenzene (PID)		92	58-143

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	170222	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Field ID:	PSP#1	Batch#:	87995
SS Lab ID:	170222-003	Sampled:	01/27/04
Matrix:	Water	Received:	01/27/04
Units:	ug/L	Analyzed:	01/28/04
Diln Fac:	1.000		

Type: MS Lab ID: QC239193

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	14.81	2,000	2,201	109	76-120
MTBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		136	57-150
Bromofluorobenzene (FID)		140	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC239194

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,233	111	76-120	1	20
MTBE		NA				
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		133	57-150
Bromofluorobenzene (FID)		139	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

RPD= Relative Percent Difference

Page 1 of 1



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

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

ANALYTICAL REPORT

Prepared for:

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

Date: 26-JAN-04  
Lab Job Number: 169944  
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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Curtis & Tompkins, Ltd.

Laboratory Number: 169944  
Client: SOMA Environmental Engineering Inc  
Project: 2333  
Request Date: 1/13/04

#### CASE NARRATIVE

This hardcopy data package contains sample results and batch QC results for three water samples requested from the above referenced project on January 13, 2004. The samples were received cold and intact.

#### TVH/BTXE:

The recovery for the surrogate bromofluorobenzene in the sample PSP#1 is outside control limits due to coelution of the surrogate peak with other hydrocarbon peaks. The associated surrogate recoveries are acceptable.

No other analytical problems were encountered.





## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #: 169944  
 Client: SOMA Environmental Engineering Inc. Location: 3609 International Blvd  
 Project#: 2333 Prep: EPA 5030B  
 Matrix: Water  
 Units: ug/L Sampled: 01/13/04  
 Batch#: 87607 Received: 01/13/04

Field ID: INFLUENT Diln Fac: 5.000  
 Type: SAMPLE Analyzed: 01/13/04  
 Lab ID: 169944-001

Analyte	Result	RI	Analysis
Gasoline C7-C12	12,000	250	8015B
MTBE	180	25	EPA 8021B
Benzene	1,600	25	EPA 8021B
Toluene	260	25	EPA 8021B
Ethylbenzene	53	25	EPA 8021B
m,p-Xylenes	1,200	25	EPA 8021B
o-Xylene	670	25	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	129	57-150	8015B
Bromofluorobenzene (FID)	116	65-144	8015B
Trifluorotoluene (PID)	114	54-149	EPA 8021B
Bromofluorobenzene (PID)	107	58-143	EPA 8021B

Field ID: GAC-1 Diln Fac: 1.000  
 Type: SAMPLE Analyzed: 01/13/04  
 Lab ID: 169944-002

Analyte	Result	RI	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	107	57-150	8015B
Bromofluorobenzene (FID)	108	65-144	8015B
Trifluorotoluene (PID)	105	54-149	EPA 8021B
Bromofluorobenzene (PID)	107	58-143	EPA 8021B

Value outside of QC limits; see narrative

ND= Not Detected

RL= Reporting Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #: 169944 Location: 3609 International Blvd  
 Client: SOMA Environmental Engineering Inc. Prep: EPA 5030B  
 Project#: 2333  
 Matrix: Water Sampled: 01/13/04  
 Units: ug/L Received: 01/13/04  
 Batch#: 87607

Field ID: PSP#1 Diln Fac: 1.000  
 Type: SAMPLE Analyzed: 01/14/04  
 Lab ID: 169944-003

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m, p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	81	57-150	8015B
Bromofluorobenzene (FID)	45 *	65-144	8015B
Trifluorotoluene (PID)	79	54-149	EPA 8021B
Bromofluorobenzene (PID)	43 *	58-143	EPA 8021B

Sample: BLANK Diln Fac: 1.000  
 Lab ID: QC237679 Analyzed: 01/13/04

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m, p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	84	57-150	8015B
Bromofluorobenzene (FID)	125	65-144	8015B
Trifluorotoluene (PID)	80	54-149	EPA 8021B
Bromofluorobenzene (PID)	126	58-143	EPA 8021B

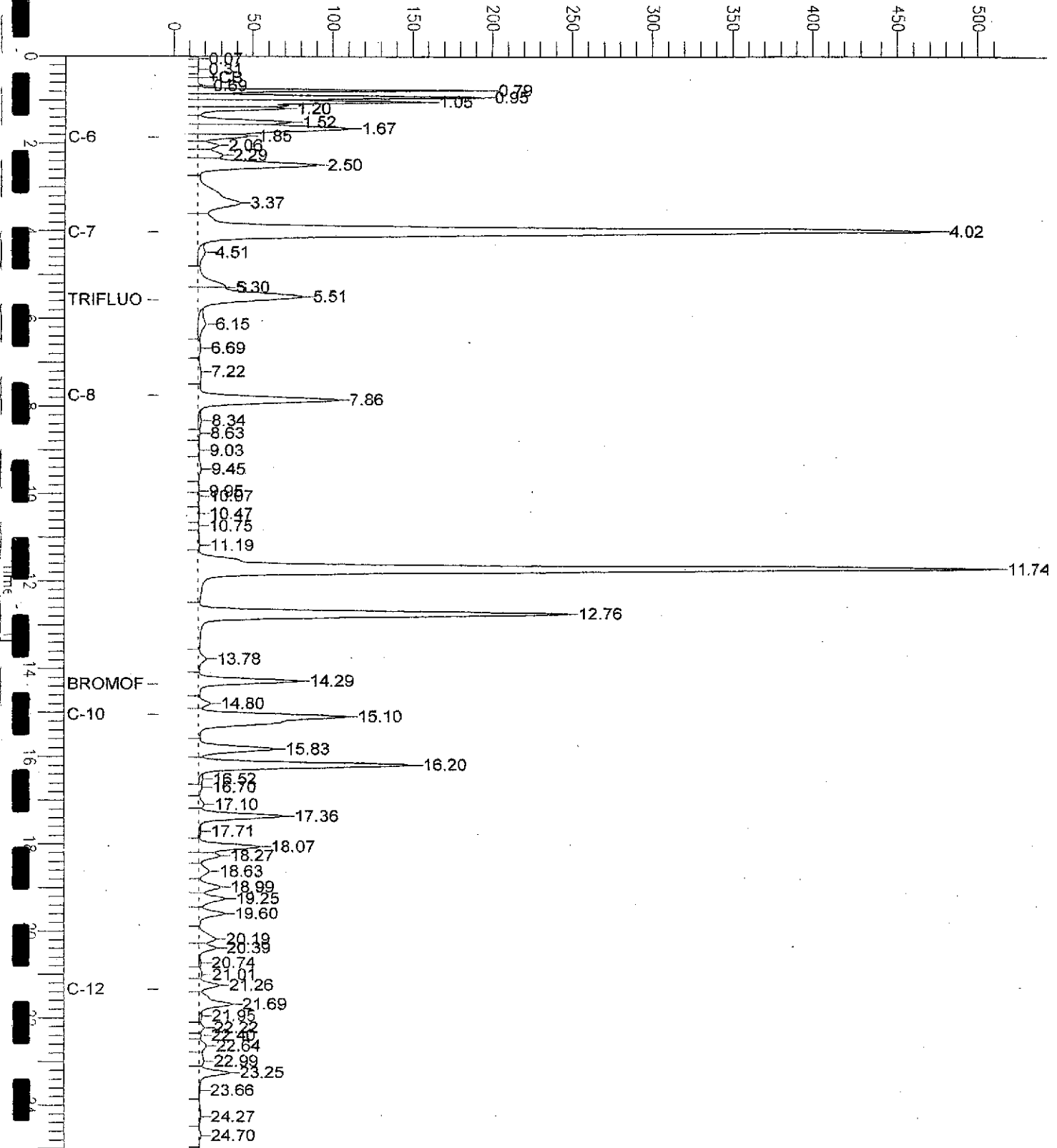
Chromatogram

Sample Name : 169944-001,87607  
File Name : G:\GC05\DATA\013G022.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

Sample #: a1.0  
Date : 1/14/04 08:08 AM  
Time of Injection: 1/13/04 11:09 PM  
Low Point : -9.35 mV  
High Point : 512.17 mV  
End Time : 25.00 min  
Plot Offset: -9 mV  
Plot Scale: 521.5 mV

Influent

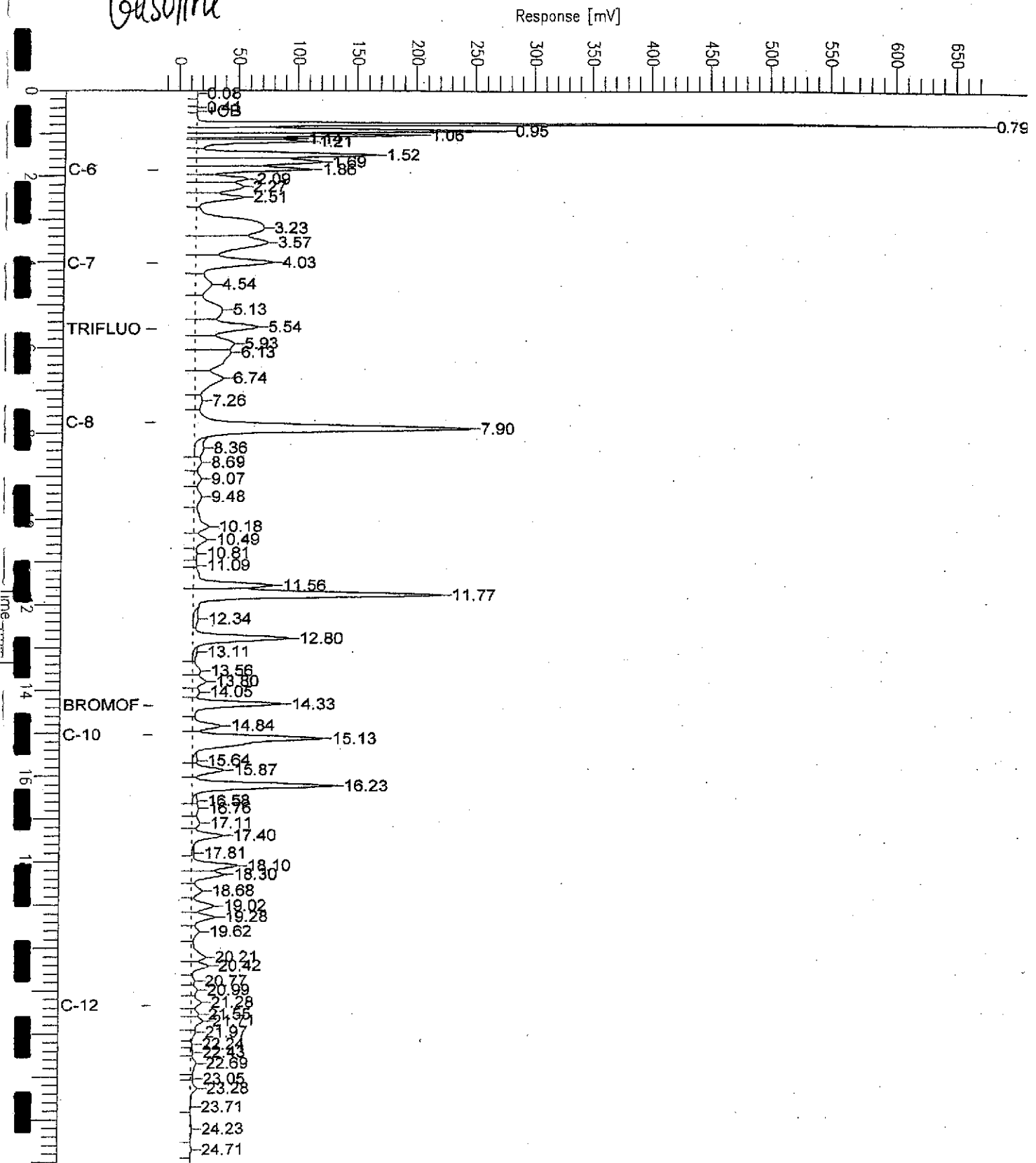
Response [mV]



Sample Name : ccv/lcs,gc237681,87607,03ws2034,5/5000  
File Name : g:\gc05\data\013g003.raw  
Method : TVHBTXE  
Start Time : 0.00 min End Time : 25.00 min  
Scale Factor : 1.0 Plot Offset : -18 mV

Sample # : Page 1 of 1  
Date : 1/13/04 10:49 AM  
Time of Injection : 1/13/04 10:18 AM  
Low Point : -18.07 mV High Point : 674.72 mV  
Plot Scale : 692.8 mV

*Gasoline*





## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	169944	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:	QC237680	Batch#:	87607
Matrix:	Water	Analyzed:	01/13/04
Units:	ug/L		

Analyte	Spiked	Result	UREC	Limits
Gasoline C7-C12		NA		
MTBE	20.00	20.34	102	63-133
Benzene	20.00	21.78	109	78-123
Toluene	20.00	19.33	97	79-120
Ethylbenzene	20.00	20.99	105	80-120
m,p-Xylenes	40.00	36.75	92	76-120
o-Xylene	20.00	20.24	101	80-121

Surrogate	Result	UREC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		82	54-149
Bromofluorobenzene (PID)		126	58-143

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	169944	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC237681	Batch#:	87607
Matrix:	Water	Analyzed:	01/13/04
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,098	105	80-120
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		107	57-150
Bromofluorobenzene (FID)		142	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	169944	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8021B
Field ID:	ZZZZZZZZZZ	Batch#:	87607
SS Lab ID:	169921-001	Sampled:	01/12/04
Matrix:	Water	Received:	01/12/04
Units:	ug/L	Analyzed:	01/13/04
Diln Fac:	1.000		

Type: MS Lab ID: QC237725

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12			NA		
MTBE	1.585	20.00	22.73	106	38-149
Benzene	<0.1200	20.00	22.65	113	75-128
Toluene	0.09893	20.00	20.17	100	79-127
Ethylbenzene	<0.03800	20.00	20.70	103	78-124
m,p-Xylenes	<0.05100	40.00	37.52	94	67-121
o-Xylene	<0.03400	20.00	20.74	104	77-131

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		107	54-149
Bromofluorobenzene (PID)		109	58-143

Type: MSD Lab ID: QC237726

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12		NA				
MTBE	20.00	20.37	94	38-149	11	38
Benzene	20.00	22.07	110	75-128	3	20
Toluene	20.00	19.69	98	79-127	2	20
Ethylbenzene	20.00	19.64	98	78-124	5	20
m,p-Xylenes	40.00	37.11	93	67-121	1	20
o-Xylene	20.00	20.06	100	77-131	3	20

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		104	54-149
Bromofluorobenzene (PID)		107	58-143

NA= Not Analyzed

RPD= Relative Percent Difference



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

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

A N A L Y T I C A L   R E P O R T

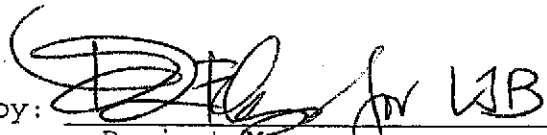
Prepared for:

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

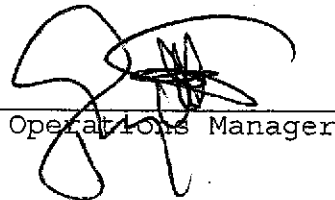
Date: 22-DEC-03  
Lab Job Number: 169296  
Project ID: 2333  
Location: 3609 International Blvd

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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Curtis & Tompkins, Ltd.

**Laboratory Number:** 169296

**Receipt Date:** 12/08/03

**Client:** SOMA Environmental Engineering Inc.

**Location:** 3609 International Blvd.

**Project:** 2333

### CASE NARRATIVE

This hardcopy data package contains sample and QC results for three water samples that were received on November 08, 2003. The samples were received cold and intact.

**TVH / BTXE by EPA 8015B/8021B:** High surrogate recovery was observed for Trifluorotoluene in sample ID Influent (C&T#169296-001) due to coelution with a hydrocarbon peak. No other analytical problems were encountered.



## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #: 169296 Location: 3609 International Blvd  
 Client: SOMA Environmental Engineering Inc. Prep: EPA 5030B  
 Project#: 2333  
 Matrix: Water Sampled: 12/08/03  
 Units: ug/L Received: 12/08/03  
 Batch#: 86743

Field ID: INFLUENT Lab ID: 169296-001  
 Type: SAMPLE

Analyte	Result	RL	Diln Fac	Analyzed	Analysis
Gasoline C7-C12	21,000	250	5.000	12/08/03	8015B
MTBE	3,200	25	5.000	12/08/03	EPA 8021B
Benzene	1,700	25	5.000	12/08/03	EPA 8021B
Toluene	2,100	50	10.00	12/09/03	EPA 8021B
Ethylbenzene	700	25	5.000	12/08/03	EPA 8021B
m,p-Xylenes	2,000	50	10.00	12/09/03	EPA 8021B
o-Xylene	1,000	25	5.000	12/08/03	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Analyzed	Analysis
Trifluorotoluene (PID)	158 *	57-150	5.000	12/08/03	8015B
Bromofluorobenzene (FID)	109	65-144	5.000	12/08/03	8015B
Trifluorotoluene (PID)	86	54-149	5.000	12/08/03	EPA 8021B
Bromofluorobenzene (PID)	77	58-143	5.000	12/08/03	EPA 8021B

Field ID: GAC-1 Diln Fac: 1.000  
 Type: SAMPLE Analyzed: 12/09/03  
 Lab ID: 169296-002

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (PID)	98	57-150	8015B
Bromofluorobenzene (FID)	105	65-144	8015B
Trifluorotoluene (PID)	67	54-149	EPA 8021B
Bromofluorobenzene (PID)	74	58-143	EPA 8021B

\* = Value outside of QC limits; see narrative

D = Not Detected

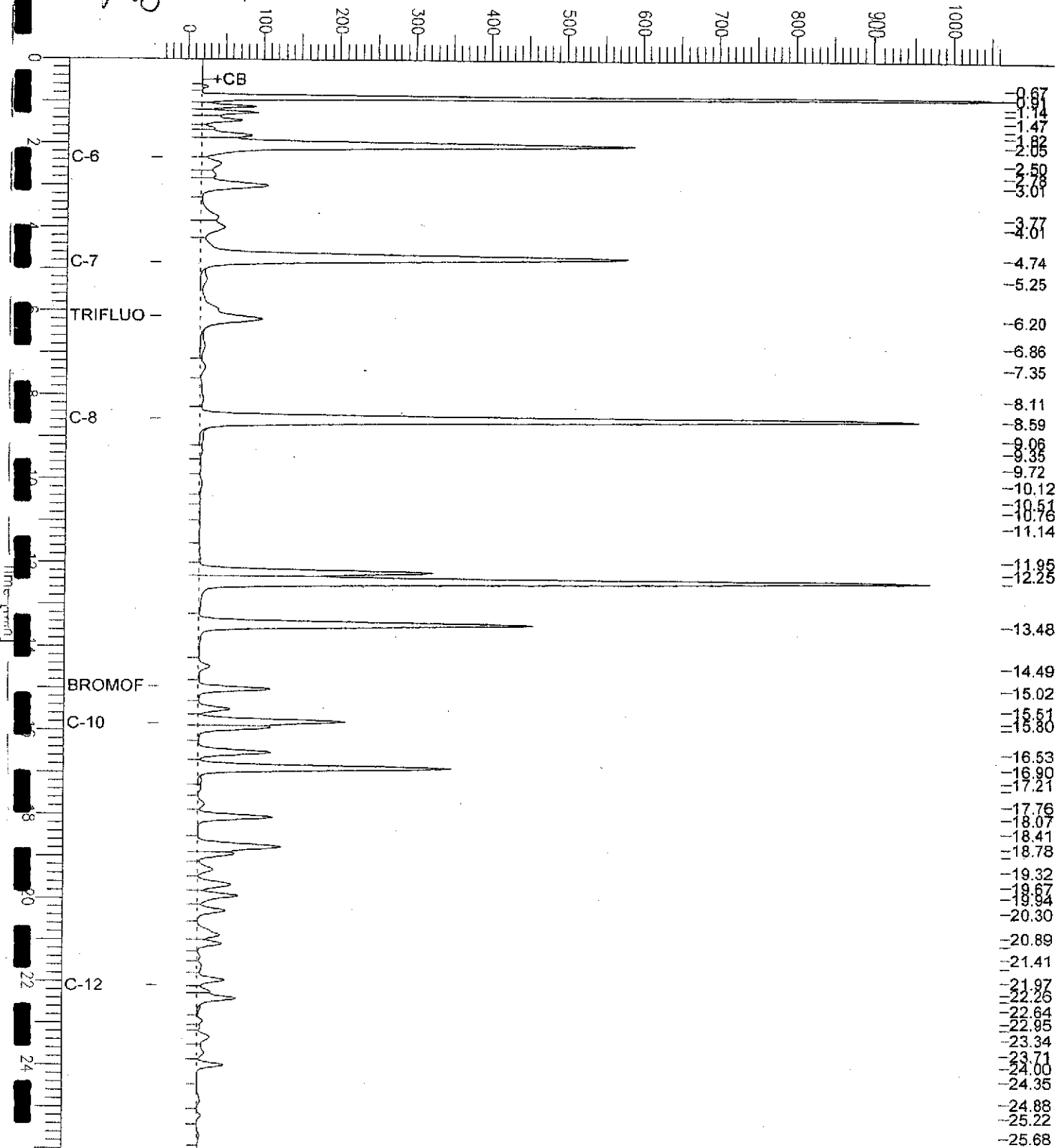
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Sample Name : 169296-001,86743  
FileName : G:\GC07\DATA\342A010.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Sample Factor: 1.0

Sample #: a1.0  
Date : 12/8/03 08:32 PM  
Time of Injection: 12/8/03 08:06 PM  
Low Point : -34.33 mV  
Plot Scale: 1101.4 mV  
End Time : 26.00 min  
Plot Offset: -34 mV  
High Point : 1067.06 mV

Influent

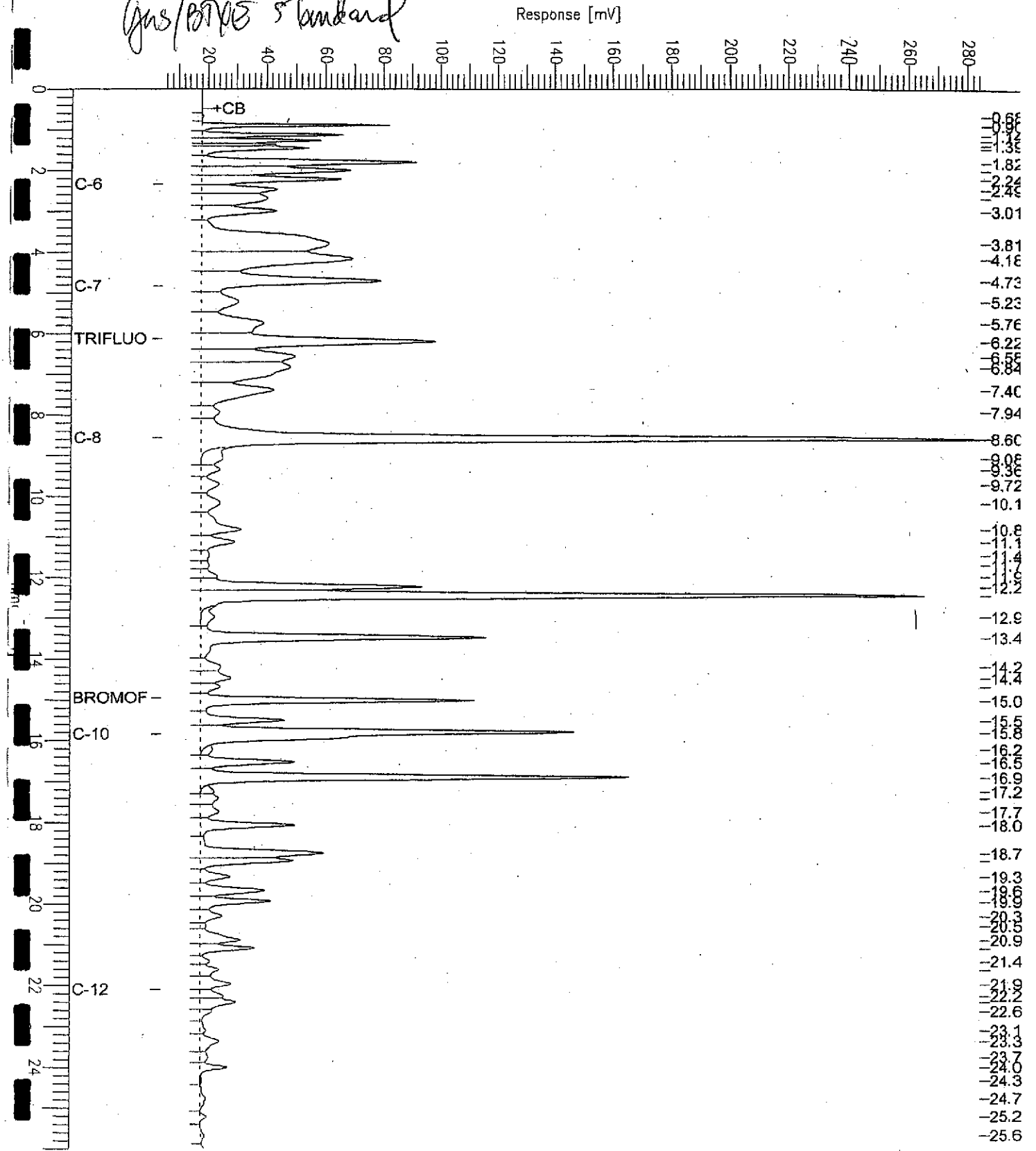
Response [mV]



Sample Name : ccv/lcs, qc234422, 76743, 03ws1887, 5/5000  
File Name : G:\GC07\DATA\342A002.raw  
Method : TVHBTXK  
Start Time : 0.00 min End Time : 26.00 min  
Scale Factor : 1.0 Plot Offset : 4 mV

Sample # :  
Date : 12/8/03 12:30 PM Page 1 of 1  
Time of Injection : 12/8/03 12:04 PM  
Low Point : 4.46 mV High Point : 284.57 mV  
Plot Scale : 280:1 mV

*Gas/BTEX Standard*



Curtis & Tompkins Laboratories Analytical Report

Lab #: 169296  
 Client: SOMA Environmental Engineering Inc. Location: 3609 International Blvd  
 Project#: 2333 Prep: EPA 5030B  
 Matrix: Water  
 Units: ug/L Sampled: 12/08/03  
 Batch#: 86743 Received: 12/08/03

Field ID: PSP#1 Diln Fac: 1.000  
 Type: SAMPLE Analyzed: 12/08/03  
 Lab ID: 169296-003

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	102	57-150	8015B
Bromofluorobenzene (FID)	110	65-144	8015B
Trifluorotoluene (PID)	69	54-149	EPA 8021B
Bromofluorobenzene (PID)	76	58-143	EPA 8021B

Type: BLANK Diln Fac: 1.000  
 Lab ID: QC234421 Analyzed: 12/08/03

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	98	57-150	8015B
Bromofluorobenzene (FID)	102	65-144	8015B
Trifluorotoluene (PID)	71	54-149	EPA 8021B
Bromofluorobenzene (PID)	74	58-143	EPA 8021B

= Value outside of QC limits; see narrative  
 D= Not Detected  
 RL= Reporting Limit  
 Page 2 of 2

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	169296	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC234422	Batch#:	86743
Matrix:	Water	Analyzed:	12/08/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	1,983	99	80-120
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		118	57-150
Bromofluorobenzene (FID)		110	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	169296	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:	QC234423	Batch#:	86743
Matrix:	Water	Analyzed:	12/08/03
Units:	ug/L		

Analyte	Spiked	Result	REC	Limits
Gasoline C7-C12		NA		
MTBE	20.00	16.99	85	63-133
Benzene	20.00	19.82	99	78-123
Toluene	20.00	18.94	95	79-120
Ethylbenzene	20.00	18.50	93	80-120
m,p-Xylenes	40.00	40.76	102	76-120
o-Xylene	20.00	19.36	97	80-121

Surrogate	Result	REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		70	54-149
Bromofluorobenzene (PID)		75	58-143







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

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

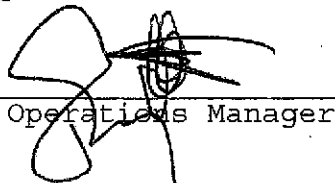
Date: 05-DEC-03  
Lab Job Number: 168910  
Project ID: 2333  
Location: 3609 International Blvd

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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## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	168910	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	11/17/03
Units:	ug/L	Received:	11/17/03
Batch#:	86223	Analyzed:	11/17/03

Field ID:	INFLUENT	Lab ID:	168910-001
Type:	SAMPLE	Diln Fac:	10.00

Analyte	Result	RL	Analysis
Gasoline C7-C12	12,000	500	8015B
MTBE	3,400	50	EPA 8021B
Benzene	820	50	EPA 8021B
Toluene	770	50	EPA 8021B
Ethylbenzene	370	50	EPA 8021B
m,p-Xylenes	1,100	50	EPA 8021B
o-Xylene	860	50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	108	57-150	8015B
Bromofluorobenzene (FID)	116	65-144	8015B
Trifluorotoluene (PID)	80	54-149	EPA 8021B
Bromofluorobenzene (PID)	93	58-143	EPA 8021B

Field ID:	GAC-1	Lab ID:	168910-002
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	97	57-150	8015B
Bromofluorobenzene (FID)	120	65-144	8015B
Trifluorotoluene (PID)	76	54-149	EPA 8021B
Bromofluorobenzene (PID)	93	58-143	EPA 8021B

ND= Not Detected

RL= Reporting Limit

Page 1 of 2

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	168910	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	11/17/03
Units:	ug/L	Received:	11/17/03
Batch#:	86223	Analyzed:	11/17/03

Field ID:	PSP#1	Lab ID:	168910-003
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	97	57-150	8015B
Bromofluorobenzene (FID)	117	65-144	8015B
Trifluorotoluene (PID)	76	54-149	EPA 8021B
Bromofluorobenzene (PID)	92	58-143	EPA 8021B

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC232381		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	95	57-150	8015B
Bromofluorobenzene (FID)	113	65-144	8015B
Trifluorotoluene (PID)	75	54-149	EPA 8021B
Bromofluorobenzene (PID)	90	58-143	EPA 8021B

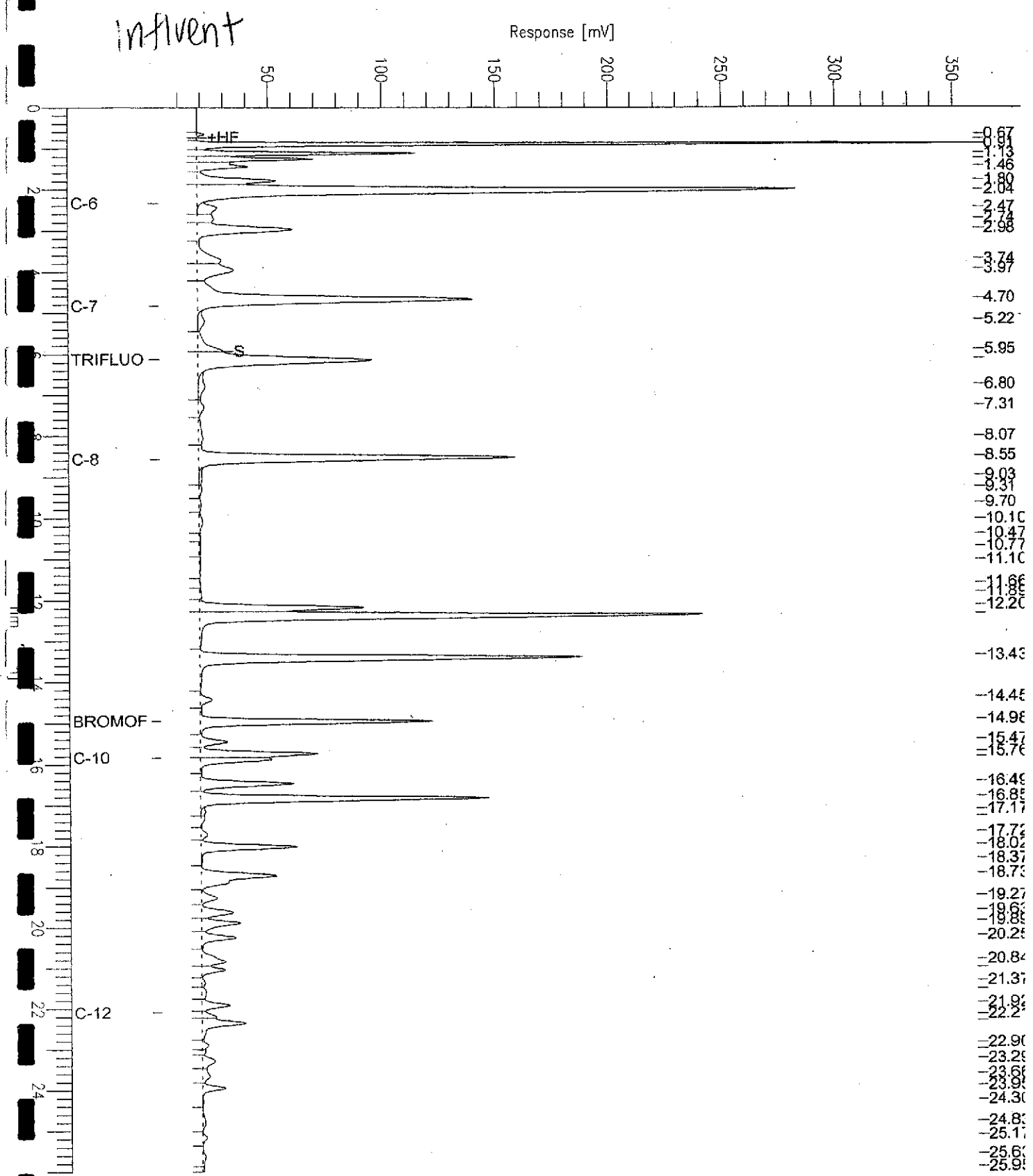
ND= Not Detected

RL= Reporting Limit

File Name : 168910-001.86223  
FileName : G:\GC07\DATA\321A024.raw  
Method : TVHPTXK  
Start Time : 0.00 min  
Scale Factor : 1.0

End Time : 26.00 min  
Plot Offset: 2 mV

Sample #: a1.3  
Date : 11/18/03 08:04 AM  
Time of Injection: 11/17/03 11:41 PM  
Low Point : 1.80 mV  
High Point : 359.23 mV  
Plot Scale: 357.4 mV

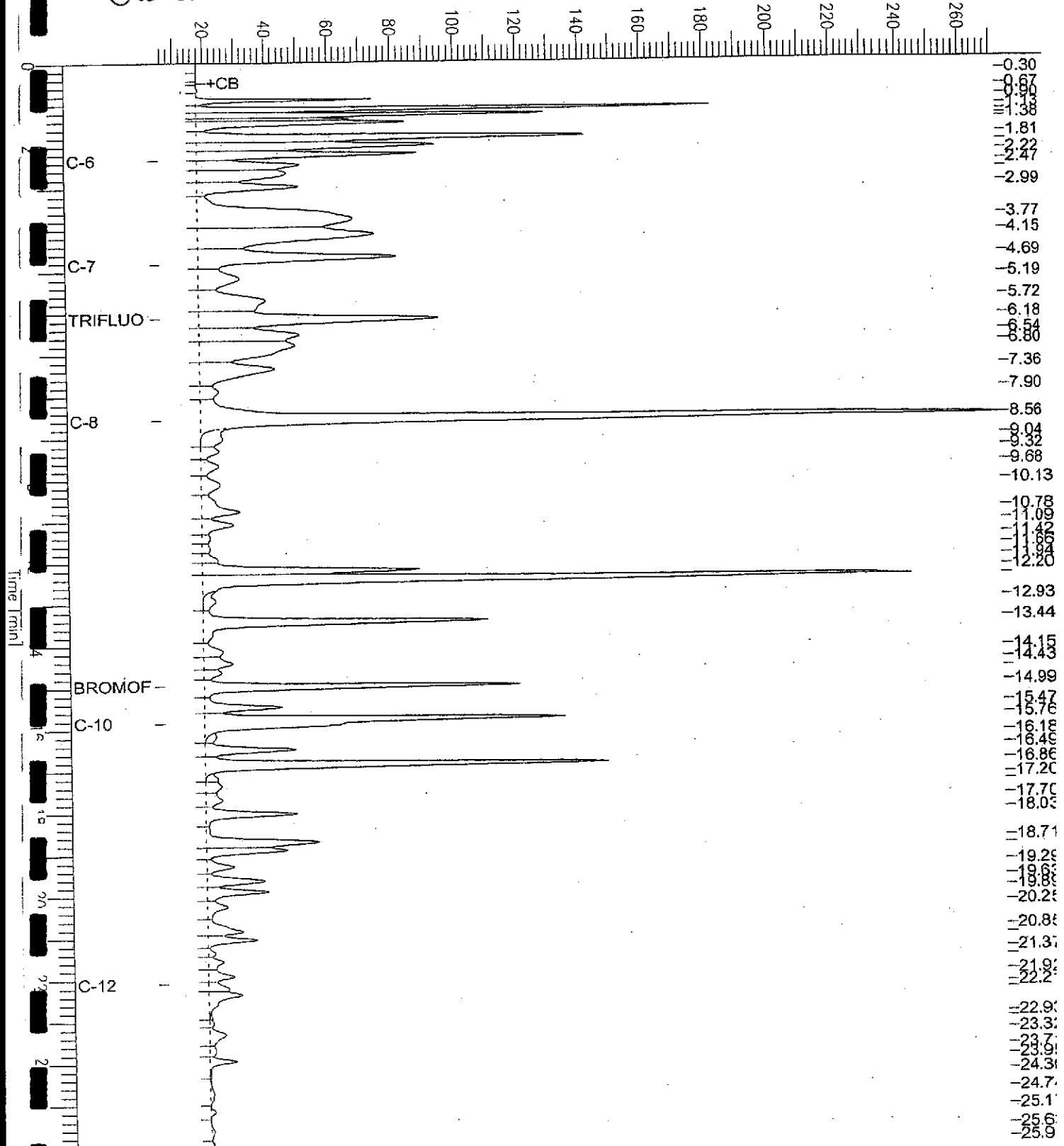


Name : ccv/lcs,qc232383,86223,03ws1767,5/5000  
File Name : G:\GCD7\DATA\321A002.raw  
Method : TVHSTXB  
Start Time : 0.00 min End Time : 26.00 min  
Factor : 1.0 Plot Offset : 5 mV

Sample # :  
Date : 11/17/03 10:54 AM  
Time of Injection: 11/17/03 10:28 AM  
Low Point : 5.26 mV High Point : 271.93 mV  
Plot Scale: 266.7 mV

Gasoline

Response [mV]





Curtis & Tompkins Laboratories Analytical Report

Lab #: 168910	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: QC232382	Batch#: 86223
Matrix: Water	Analyzed: 11/17/03
Units: ug/L	

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
MIBK	20.00	19.55	98	63-133
Benzene	20.00	22.36	112	78-123
Toluene	20.00	21.07	105	79-120
Ethylbenzene	20.00	21.20	106	80-120
m,p-Xylenes	40.00	43.63	109	76-120
o-Xylene	20.00	21.13	106	80-121

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)	76	54-149	
Bromofluorobenzene (PID)	93	58-143	





## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	168910	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:	QC232466	Batch#:	86223
Matrix:	Water	Analyzed:	11/18/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12		NA				
METBE	20.00	18.99	95	63-133	3	27
Benzene	20.00	20.97	105	78-123	6	20
Toluene	20.00	19.70	99	79-120	7	20
Ethylbenzene	20.00	18.96	95	80-120	11	20
m,p-Xylenes	40.00	41.01	103	76-120	6	20
o-Xylene	20.00	19.70	99	80-121	7	20

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		74	54-149
Bromofluorobenzene (PID)		87	58-143

NA= Not Analyzed

RPD= Relative Percent Difference

Page 1 of 1

Curtis & Tompkins Laboratories Analytical Report

Lab #:	168910	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC232383	Batch#:	86223
Matrix:	Water	Analyzed:	11/17/03
Units:	ug/L		

Analyte	Spiked	Result	REC	Limits
Gasoline C7-C12	2,000	1,819	91	80-120
MTBE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	REC	Limits
Trifluorotoluene (FID)		114	57-150
Bromofluorobenzene (FID)		117	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #: 168910	Location: 3609 International Blvd
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2333	Analysis: 8015B
Field ID: ZZZZZZZZZZ	Batch#: 86223
SS Lab ID: 168901-002	Sampled: 11/14/03
Matrix: Water	Received: 11/17/03
Units: ug/L	Analyzed: 11/18/03
Concn Fac: 1.000	

Type: MS Lab ID: QC232437

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<18.00	2,000	1,828	91	76-120
MTBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		104	57-150
Bromofluorobenzene (FID)		111	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC232438

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,933	97	76-120	6	20
MTBE		NA				
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		116	57-150
Bromofluorobenzene (FID)		123	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

RPD= Relative Percent Difference



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

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: 10-FEB-04  
Lab Job Number: 170222  
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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**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	170222	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	01/27/04
Units:	ug/L	Received:	01/27/04
Batch#:	87995	Analyzed:	01/28/04

Field ID:	INFLUENT	Lab ID:	170222-001
Type:	SAMPLE	Diln Fac:	5.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	9,000	250	EPA 8015B
MTBE	680	25	EPA 8021B
Benzene	1,400	25	EPA 8021B
Toluene	190	25	EPA 8021B
Ethylbenzene	58	25	EPA 8021B
m,p-Xylenes	700	25	EPA 8021B
o-Xylene	460	25	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	118	57-150	EPA 8015B
Bromofluorobenzene (FID)	120	65-144	EPA 8015B
Trifluorotoluene (PID)	108	54-149	EPA 8021B
Bromofluorobenzene (PID)	113	58-143	EPA 8021B

Field ID:	GAC-1	Lab ID:	170222-002
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	106	57-150	EPA 8015B
Bromofluorobenzene (FID)	114	65-144	EPA 8015B
Trifluorotoluene (PID)	100	54-149	EPA 8021B
Bromofluorobenzene (PID)	111	58-143	EPA 8021B

ND = Not Detected

RL = Reporting Limit

Page 1 of 2

**Curtis & Tompkins Laboratories Analytical Report**

Lab #:	170222	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333		
Matrix:	Water	Sampled:	01/27/04
Units:	ug/L	Received:	01/27/04
Batch#:	87995	Analyzed:	01/28/04

Field ID:	PSP#1	Lab ID:	170222-003
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	106	57-150	EPA 8015B
Bromofluorobenzene (FID)	117	65-144	EPA 8015B
Trifluorotoluene (PID)	103	54-149	EPA 8021B
Bromofluorobenzene (PID)	117	58-143	EPA 8021B

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC239175		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	91	57-150	EPA 8015B
Bromofluorobenzene (FID)	98	65-144	EPA 8015B
Trifluorotoluene (PID)	86	54-149	EPA 8021B
Bromofluorobenzene (PID)	92	58-143	EPA 8021B

ND= Not Detected

RL= Reporting Limit

Page 2 of 2

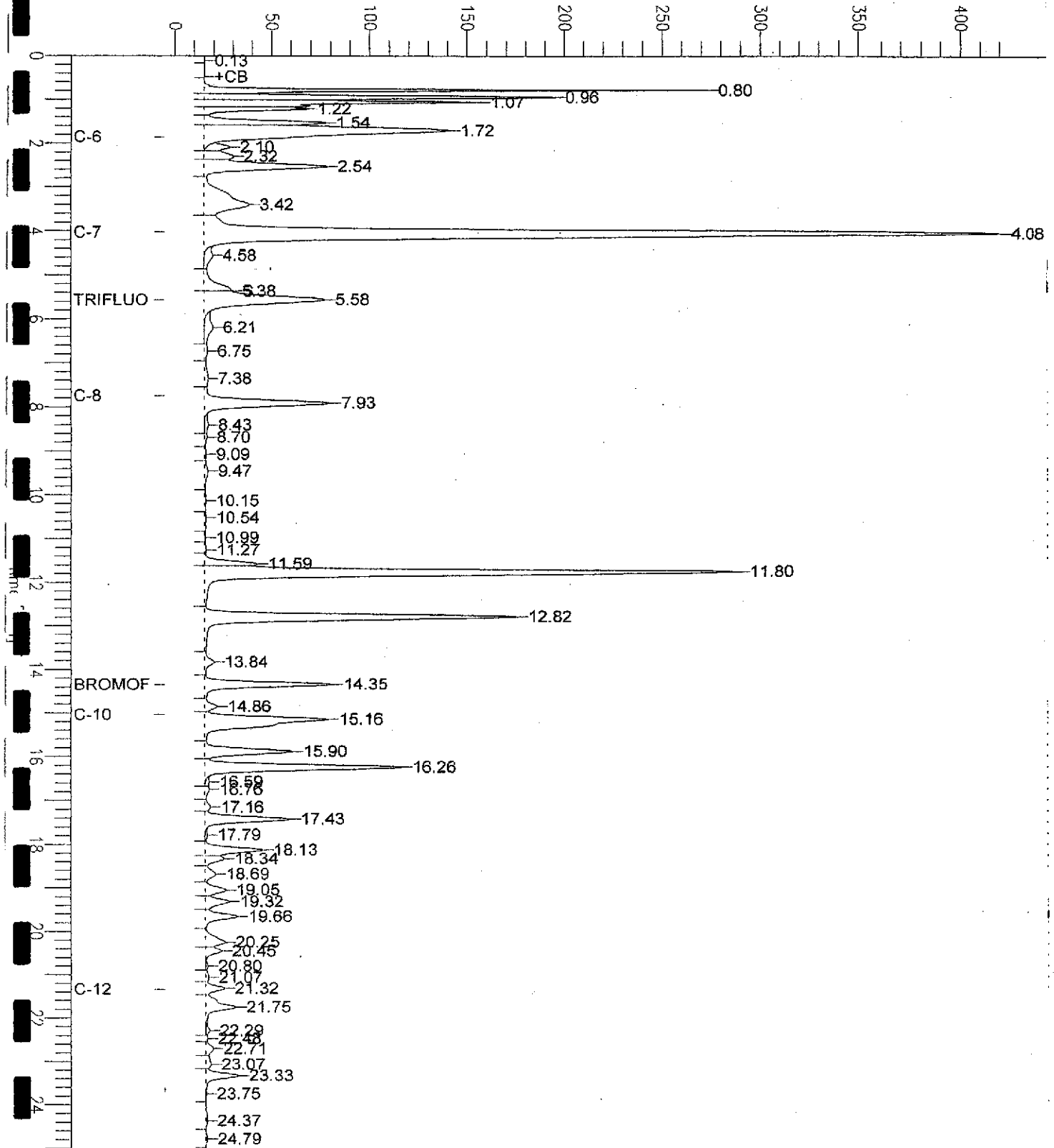
Sample Name : 170222-001,87995  
File Name : G:\GC05\DATA\028G004.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

Sample #: a1.0  
Date : 1/29/04 08:46 AM  
Time of Injection: 1/28/04 12:29 PM  
Low Point : -5.32 mV  
High Point : 420.83 mV  
End Time : 25.00 min  
Plot Offset: -5 mV  
Plot Scale: 426.2 mV

Page 1 of 1

Influent

Response [mV]

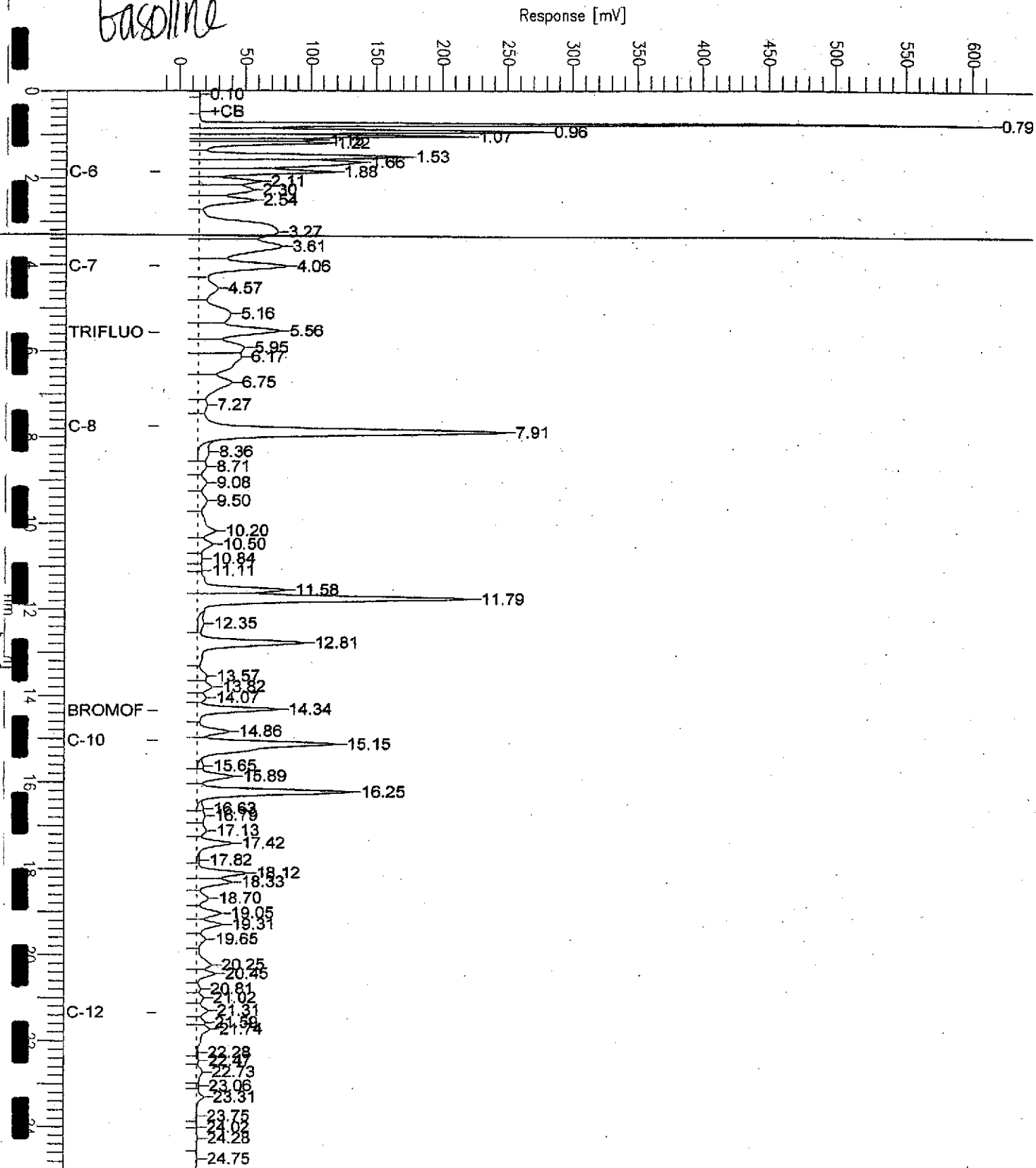




Sample Name : ccv/lcs,qc239176,87995,04ws0146,5/5000  
File Name : G:\GC05\DATA\028G002.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Sample Factor : 1.0

Sample # :  
Date : 1/28/04 11:47 AM  
Time of Injection: 1/28/04 11:22 AM  
Low Point : -14.59 mV  
High Point : 614.29 mV  
Plot Scale: 628.9 mV

*Baseline*



**Curtis & Tompkins Laboratories Analytical Report**

Lab #: 170222	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: QC239176	Batch#: 87995
Matrix: Water	Analyzed: 01/28/04
Units: ug/L	

Analyte	Spiked	Result	UREC	Limits
Gasoline C7-C12	2,000	2,125	106	80-120
BE		NA		
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
p-Xylenes		NA		
m-Xylene		NA		

Surrogate	Result	UREC	Limits
Difluorotoluene (FID)		122	57-150
Bromofluorobenzene (FID)		119	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

**Curtis & Tompkins Laboratories Analytical Report**

Lab #: 170222	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: QC239177	Batch#: 87995
Matrix: Water	Analyzed: 01/28/04
Units: ug/L	

Analyte	Spiked	Result	REC	Limits
Gasoline C7-C12		NA		
MTBE	20.00	17.93	90	63-133
Benzene	20.00	20.12	101	78-123
Toluene	20.00	17.97	90	79-120
Ethylbenzene	20.00	18.62	93	80-120
m,p-Xylenes	40.00	34.38	86	76-120
o-Xylene	20.00	18.63	93	80-121

Surrogate	Result	REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		88	54-149
Bromofluorobenzene (PID)		92	58-143



## Curtis &amp; Tompkins Laboratories Analytical Report

Lab #:	170222	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8015B
Field ID:	PSP#1	Batch#:	87995
SS Lab ID:	170222-003	Sampled:	01/27/04
Matrix:	Water	Received:	01/27/04
Units:	ug/L	Analyzed:	01/28/04
File Fac:	1.000		

Type: MS Lab ID: QC239193

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	14.81	2,000	2,201	109	76-120
MTBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	136		57-150
Bromofluorobenzene (FID)	140		65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC239194

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,233	111	76-120	1	20
MTBE		NA				
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	133		57-150
Bromofluorobenzene (FID)	139		65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

RPD= Relative Percent Difference

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

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

A N A L Y T I C A L   R E P O R T

Prepared for:

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

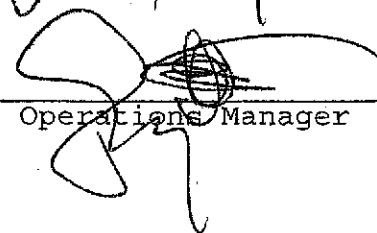
Date: 19-NOV-03  
Lab Job Number: 168577  
Project ID: 2333  
Location: 3609 International Blvd

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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Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #: 168577 Location: 3609 International Blvd  
 Client: SOMA Environmental Engineering Inc. Prep: EPA 5030B  
 Project#: 2333  
 Matrix: Water Sampled: 11/03/03  
 Units: ug/L Received: 11/03/03  
 Batch#: 85870

Field ID: INFLUENT Lab ID: 168577-001  
 Type: SAMPLE

Analyte	Result	RL	Diln Fac	Analyzed	Analysis
Gasoline C7-C12	3,900	50	1.000	11/04/03	8015B
MTBE	1,700	10	2.000	11/05/03	EPA 8021B
Benzene	180	5.0	1.000	11/04/03	EPA 8021B
Toluene	150	5.0	1.000	11/04/03	EPA 8021B
o-Xylbenzene	ND	5.0	1.000	11/04/03	EPA 8021B
m,p-Xylenes	390	10	2.000	11/05/03	EPA 8021B
o-Xylene	230	5.0	1.000	11/04/03	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Analyzed	Analysis
Trifluorotoluene (FID)	134	57-150	1.000	11/04/03	8015B
Bromofluorobenzene (FID)	120	65-144	1.000	11/04/03	8015B
Trifluorotoluene (PID)	88	54-149	1.000	11/04/03	EPA 8021B
Bromofluorobenzene (PID)	94	58-143	1.000	11/04/03	EPA 8021B

Field ID: GAC-1 Diln Fac: 1.000  
 Type: SAMPLE Analyzed: 11/04/03  
 Lab ID: 168577-002

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
o-Xylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	101	57-150	8015B
Bromofluorobenzene (FID)	116	65-144	8015B
Trifluorotoluene (PID)	76	54-149	EPA 8021B
Bromofluorobenzene (PID)	88	58-143	EPA 8021B

Not Detected

Reporting Limit



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #: 168577 Location: 3609 International Blvd  
 Client: SOMA Environmental Engineering Inc. Prep: EPA 5030B  
 Project#: 2333  
 Matrix: Water Sampled: 11/03/03  
 Units: ug/L Received: 11/03/03  
 Batch#: 85870

Field ID: PSP#1 Diln Fac: 1.000  
 Type: SAMPLE Analyzed: 11/05/03  
 Lab ID: 168577-003

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	101	57-150	8015B
Bromofluorobenzene (FID)	115	65-144	8015B
Trifluorotoluene (PID)	76	54-149	EPA 8021B
Bromofluorobenzene (PID)	89	58-143	EPA 8021B

Type: BLANK Diln Fac: 1.000  
 Lab ID: QC231012 Analyzed: 11/04/03

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
MTBE	ND	5.0	EPA 8021B
Benzene	ND	5.0	EPA 8021B
Toluene	ND	5.0	EPA 8021B
Ethylbenzene	ND	5.0	EPA 8021B
m,p-Xylenes	ND	5.0	EPA 8021B
o-Xylene	ND	5.0	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	104	57-150	8015B
Bromofluorobenzene (FID)	116	65-144	8015B
Trifluorotoluene (PID)	81	54-149	EPA 8021B
Bromofluorobenzene (PID)	92	58-143	EPA 8021B

Not Detected  
 Reporting Limit



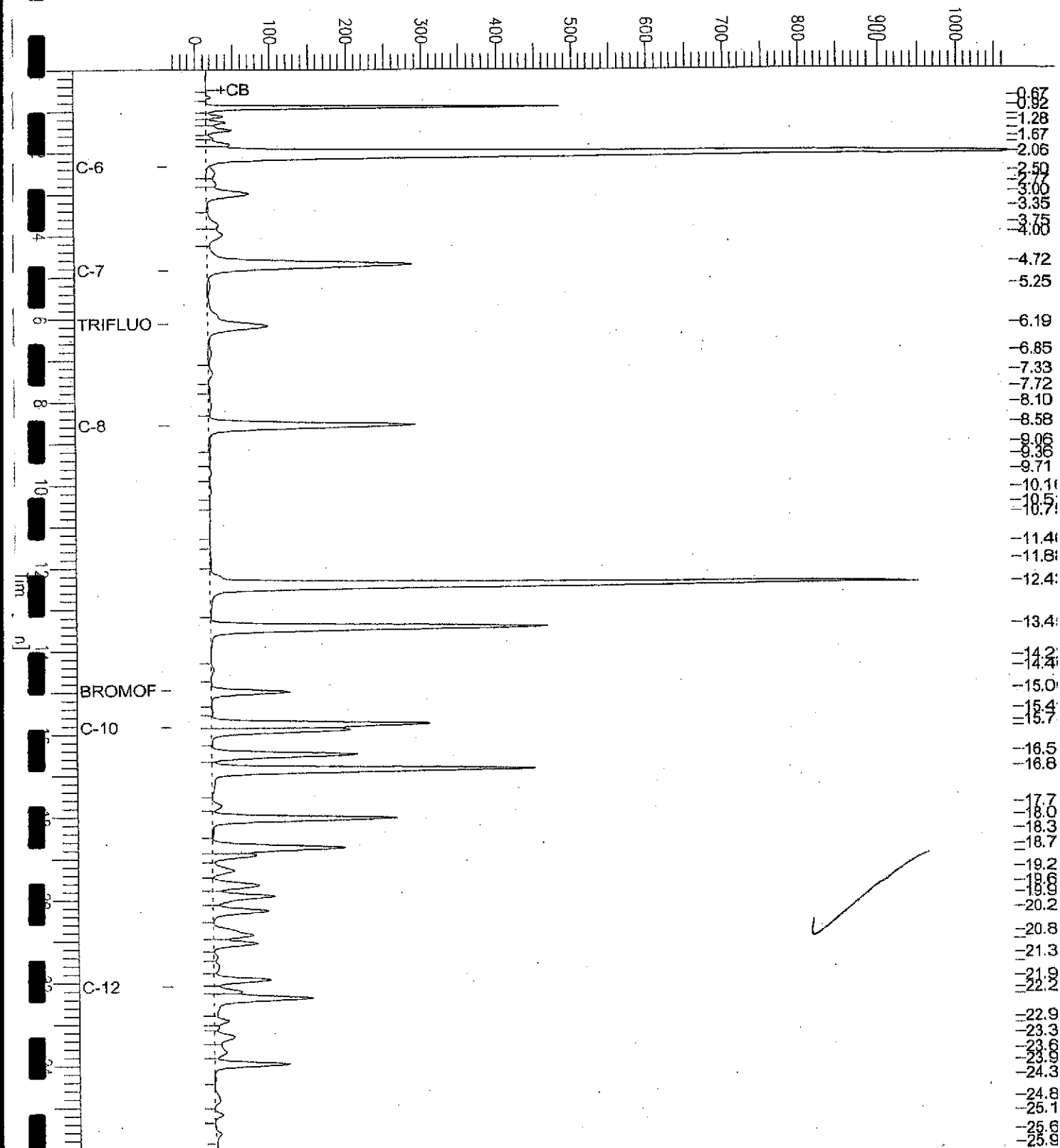
# GC07 TVH 'A' Data File RTX 502

Sample Name : 168577-001,85870,eff  
 Name : G:\GC07\DATA\308A007.raw  
 Method : TVHBTXE  
 Start Time : 0.00 min      End Time : 26.00 min  
 Scale Factor : 1.0      Plot Offset : -38 mV

Sample #: a1.0      Page 1 of 1  
 Date : 11/4/03 07:29 PM  
 Time of Injection: 11/4/03 07:03 PM  
 Low Point : -38.00 mV      High Point : 1066.95 mV  
 Plot Scale: 1104.9 mV

*Influent*

Response [mV]



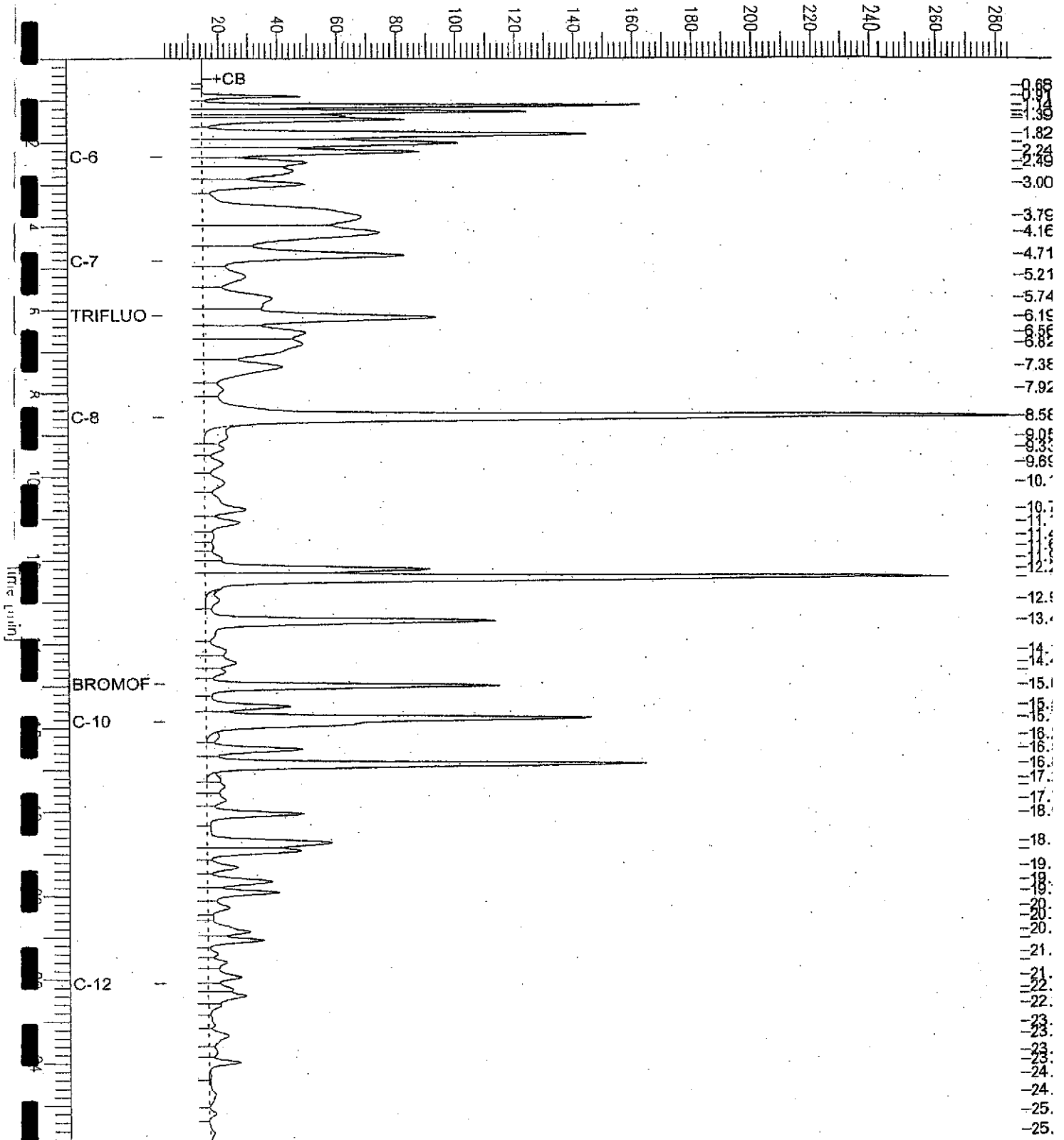
GC07 TVH 'A' Data File RTX 502

Sample Name : ccv/lcs,qc231014,85870,03ws1767,5/5000  
File Name : G:\GC07\DATA\308A002.raw  
Method : TVHBTXE  
Start Time : 0.00 min  
Scale Factor : 1.0

Sample # :  
Date : 11/4/03 04:17 PM  
Time of Injection: 11/4/03 03:51 PM  
Low Point : 0.87 mV  
Plot Scale: 284.3 mV  
High Point : 285.20 mV

*Gasoline*

Response [mV]





**Curtis & Tompkins Laboratories Analytical Report**

Lab #: 168577	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: QC231013	Batch#: 85870
Matrix: Water	Analyzed: 11/04/03
Units: ug/L	

Analyte	Spiked	Result	REC	Limits
Gasoline C7-C12		NA		
MTBE	20.00	18.97	95	63-133
Benzene	20.00	20.45	102	78-123
Toluene	20.00	19.06	95	79-120
o-Xylenes	20.00	18.03	90	80-120
m,p-Xylenes	40.00	40.22	101	76-120
o-Xylene	20.00	18.96	95	80-121

Surrogate	Result	REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		71	54-149
Bromofluorobenzene (PID)		79	58-143



**Curtis & Tompkins Laboratories Analytical Report**

Lab #: 168577	Location: 3609 International Blvd
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2333	Analysis: 8015B
Type: LCS	Diln Fac: 1.000
Lab ID: QC231014	Batch#: 85870
Matrix: Water	Analyzed: 11/04/03
Units: ug/L	

Analyte	Spiked	Result	REC	Limit
Gasoline C7-C12	2,000	2,020	101	80-120
THB		NA		
Benzene		NA		
Toluene		NA		
Methylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	REC	Limit
Trifluorotoluene (FID)		118	57-150
Bromofluorobenzene (FID)		114	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		



**Curtis & Tompkins Laboratories Analytical Report**

Lab #: 168577	Location: 3609 International Blvd
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2333	Analysis: 8015B
Field ID: ZZZZZZZZZZ	Diln Fac: 1.000
MS Lab ID: 168575-001	Batch#: 85870
Matrix: Water	Sampled: 11/03/03
Units: ug/L	Received: 11/03/03

Type: MS Analyzed: 11/04/03  
 Lab ID: QC231015

Analyte	MSS Result	Spiked	Result	REC	Limits
Gasoline C7-C12	<18.00	2,000	1,977	99	76-120
TBE			NA		
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	REC	Limits
Trifluorotoluene (FID)		119	57-150
Bromofluorobenzene (FID)		119	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Analyzed: 11/05/03  
 Lab ID: QC231016

Analyte	Spiked	Result	REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,965	98	76-120	1	20
TBE		NA				
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	REC	Limits
Trifluorotoluene (FID)		125	57-150
Bromofluorobenzene (FID)		126	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

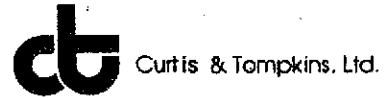
NA = Not Analyzed  
 RPD = Relative Percent Difference

Purgeable Aromatics by GC/MS

Lab #:	168577	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8260B
Field ID:	INFLUENT	Batch#:	86000
Lab ID:	168577-001	Sampled:	11/03/03
Matrix:	Water	Received:	11/03/03
Units:	ug/L	Analyzed:	11/08/03
Diln Fac:	12.50		

Analyte	Result	RI
MTBE	1,700	6.3

Surrogate	REC	Limits
1,2-Dichloroethane-d4	107	77-129
Toluene-d8	96	80-120
Bromofluorobenzene	97	80-123



Purgeable Aromatics by GC/MS

Lab #:	168577	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC231522	Batch#:	86000
Matrix:	Water	Analyzed:	11/08/03
Units:	ug/L		

Analyte	Result	RL
BE	ND	0.5

Surrogate	%REC	Limits
2-Dichloroethane-d4	110	77-129
Toluene-d8	97	80-120
Bromofluorobenzene	106	80-123

Purgeable Aromatics by GC/MS

Lab #:	168577	Location:	3609 International Blvd
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2333	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	86000
Units:	ug/L	Analyzed:	11/08/03
Injection Fac:	1.000		

Type: BS Lab ID: QC231514

Analyte	Spiked	Result	%REC	Limits
TBE	50.00	48.17	96	69-124
Surrogate	%REC	Limits		
1,2-Dichloroethane-d4	104	77-129		
Toluene-d8	98	80-120		
Bromofluorobenzene	96	80-123		

Type: BSD Lab ID: QC231515

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
TBE	50.00	48.16	96	69-124	0	20
Surrogate	%REC	Limits				
1,2-Dichloroethane-d4	105	77-129				
Toluene-d8	101	80-120				
Bromofluorobenzene	99	80-123				