RO-348

ENVIRONMENTAL ENGINEERING, INC
2680 Bishop Drive • Suite 203 • San Ramon, CA 94583
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OFF-SITE
SOIL & GROUNDWATER INVESTIGATION

CHEVRON GASOLINE SERVICE STATION
3519 Castro Valley Boulevard
Castro Valley, California

December 29, 2003

Project 2762

Prepared for

Mr. Mirazim Shakoori
2519 Castro Valley Boulevard
Castro Valley, California

Prepared by

SOMA Environmental Engineering, Inc.
2680 Bishop Drive, Suite 203
San Ramon, California

RO-346

ENVIRONMENTAL ENGINEERING, INC
2680 Bishop Drive • Suite 203 • San Ramon, CA 94583
TEL (925) 244-6600 • FAX (925) 244-6601

December 29, 2003

Ms. Eva Chu
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: **#RO0000346**
Site Address: 3519 Castro Valley Boulevard, Castro Valley, CA
Castro Valley Gasoline Service Station

Dear Ms. Chu:

Enclosed for your review is SOMA's "Off-Site Soil & Groundwater Investigation" 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

REGISTERED PROFESSIONAL ENGINEER
MANSOUR SEPEHR
No. C042928
Exp. 3-31-04
CIVIL
STATE OF CALIFORNIA

Enclosure

cc: Mr. Azim Shakoori w/enclosure

CERTIFICATION

This report has been prepared by SOMA Environmental Engineering, Inc. on behalf of Mr. Mirazim Shakoori, the property owner of 3519 Castro Valley Boulevard, Castro Valley, California to comply with the Alameda County Health Care Services' workplan request letter, dated October 22, 2003.

Mansour Sepehr, Ph.D., P.E.
Principal Hydrogeologist

TABLE OF CONTENTS

List of Tables

List of Figures

List of Appendices

1.0 INTRODUCTION

This report has been prepared by SOMA Environmental Engineering, Inc., (SOMA) on behalf of Mr. Mirazim Shakoori, the property owner of 3519 Castro Valley Boulevard, Castro Valley, California, (the "Site") as shown in Figure 1. This investigation has been conducted in accordance with the approved workplan dated October 22, 2003. The workplan was prepared to respond and comply with the Alameda County Health Care Services (ACHCS) letter dated October 22, 2003.

The Site is an active Chevron station located within in a mixed commercial/residential area of Castro Valley on the southeast corner of Castro Valley Boulevard and Redwood Road. The elevation of the subject property is approximately 178 feet above mean sea level, and the Site's topography slopes gently to the south. During recent remedial work at the Site three single-walled fiberglass underground storage tanks (USTs) with volumes of 6,000, 8,000, and 10,000 gallons and a waste-oil tank (WOT) with a volume of 1,000 gallons were removed. Two large USTs were installed in the northwest portion of the Site to replace the smaller tanks.

In a letter dated June 16, 2003, Eva Chu of the ACHCS required an additional investigation to delineate the horizontal and vertical extent of the off-site MtBE plume. This report has been prepared in response to the ACHCS directive.

The previous consultant, URS Corporation (URS), provided relevant project documents with a Site Background and Document Transfer letter, dated July 14, 2003. The following two sections are based on the information provided by URS.

1.1 Background

Prior to 1989, the Site was a Mobil service station. In 1984, three single-walled fiberglass gasoline USTs with capacities of 6,000, 8,000, and 10,000 gallons were installed in the southeast portion of the Site. In 1988, a 1,000 gallon double-walled WOT was also installed to replace a 380 gallon single-walled steel WOT.

In 1989, the subject property was transferred from Mobil to British Petroleum (BP). In March 1994, the subject property was transferred to Mr. Mirazim Shakoori who operated the Site as a Chevron station.

In September 2003, the existing USTs were excavated from the southeast portion of the Site. These USTs were replaced with one 12,000 gallon UST and one 20,000 gallon UST in the northwest portion of the Site.

1.2 Previous Activities

In September 1988, Kaprealian Engineering, Inc. (KEI) removed the original 380 gallon WOT and observed holes in this UST. Confirmation soil samples from the bottom of the excavation pit, at 8.5 feet below ground surface (bgs), contained benzene at 6.8 micrograms per kilogram (ug/Kg or parts per billion) and toluene at 9.5 ug/Kg. The laboratory analysis did not detect total petroleum hydrocarbons (TPH) or total oil and grease (TOG). In March 1989, an Unauthorized Release Report (URR) was submitted to the ACHCS.

In September and October 1992, Environmental Science & Engineering, Inc. (ESE) drilled five soil boreholes and converted the boreholes into monitoring wells (ESE-1 through ESE-5) that ranged in depth from approximately 23 to 30 feet bgs. The maximum level of soil contamination was detected in monitoring well borehole ESE-5 at a depth of 10.5 feet bgs with 220,000 ug/Kg total petroleum hydrocarbons as gasoline (TPH-g), 1,400 ug/Kg benzene, 8,200 ug/Kg toluene, 3,300 ug/Kg ethylbenzene, and 18,000 ug/Kg xylenes. ESE encountered

petroleum hydrocarbon contaminants in all the monitoring wells with maximum levels detected in ESE-1, which is located west of, and adjacent to the three USTs. This well contained TPH-g at 2,300 ug/L, benzene at 370 ug/L, toluene at 160 ug/L, ethylbenzene at 17 ug/L, and xylenes at 110 ug/L. A URR for this documented release was submitted to the ACHCS in March 1993.

In December 1994, ACC Environmental Consultants, Inc. (ACC) conducted an investigation along the western edge of the property for the Redwood Boulevard road-widening project. ACC drilled five boreholes to a maximum depth of 10 feet bgs. The maximum level of petroleum hydrocarbon contaminants detected in the road-widening boreholes was 59,000 ug/Kg TPH-g, 5,890 ug/Kg benzene, 220,000 ug/Kg ethylbenzene, and 540,000 ug/Kg xylenes.

In July 1995, Alisto Engineering (AE) installed three additional monitoring wells. AE installed two of the wells, MW-6 and MW-8, on-site, and the third well, MW-7, on the adjacent property southeast of the Site. In February and March 1996, AE also advanced several hand-augered boreholes in the vicinity of the former western pump island and product lines. The boreholes were hand-augered to a maximum depth of 8.5 feet bgs. AE reported that petroleum hydrocarbon contamination increased with depth and the highest concentration was encountered at the capillary fringe. Subsequently, in the following month, April 1996, AE decommissioned well MW-8 on the western margin of the Site to accommodate the road-widening project along Redwood Boulevard.

Since 1992, quarterly monitoring has been conducted at the Site. In 1999, the sampling schedule was modified to include semi-annual sampling of ESE-5 and ESE-7. Prior to SOMA, URS Corporation, Cambria Environmental Technology, Inc., Blaine Technical Services, AE, and ESE conducted these monitoring and sampling events.

Based on joint monitoring events with the adjacent former Shell station to the west, the groundwater flow direction varied from north/northwest to south/southeast and primarily to the northeast. Based on the monitoring events since the cessation of the joint monitoring, the groundwater flow direction has usually been to the south and east. For the last four years, MtBE has been detected in off-site well MW-7 at 95 to 4,400 ug/L, however most of these detections were above 1,000 ug/L. Consistent with the on-site groundwater flow direction toward the southeast/south, contaminated groundwater has been migrating off-site towards the adjacent commercial property located south of the Site.

1.3 Regional Geology

The California Department of Conservation, California Geologic Survey, mapped the Site as Late Mesozoic (latest Jurassic and Cretaceous) shelf and slope sedimentary rocks.

Based on the off-site borehole logs, underlying sediments generally consists of soft to hard silty clay and clayey silt with intervening layers of medium dense to very dense sand/gravel sediments.

In developed urban areas such as the Bay Area, earthwork construction often involves the emplacement of artificial fill derived from nearby cuts or quarries. Artificial fill is emplaced over native earth materials to provide level building pads and base rock for roadways.

1.4 Nature and Extent of Groundwater Contamination

Based on SOMA's prior investigation, the most contaminated on-site plumes exist along the southeastern boundary of the Site. Quarterly monitoring events have documented that the on-site groundwater flows to the southeast/east.

With elevated concentrations of the Site's related contaminants at such close proximity to the southern property lines, it was concluded that the groundwater plume had probably migrated off-site to the south/southeast. The results of the initial investigation did not delineate the downgradient extent of the groundwater chemical plumes. Due to the high solubility and mobility of MtBE, it is expected that the MtBE plume has already migrated beyond the Site's southern boundary.

2.0 SCOPE OF WORK

Based on the results of the past investigative results and the ACHCS directive, the proposed scope of work included delineating the off-site extent of the groundwater petroleum contaminants emanating from the subject site. SOMA organized the scope of the proposed investigation into the following tasks:

Task 1: **Permit Acquisition, Off-Site Access Arrangement, and Preparation of a Site Health and Safety Plan and Utility Clearance**

Task 2: **Drilling Temporary Well Boreholes and Collecting Soil and Grab Groundwater Samples**

Task 3: **Laboratory Analysis**

Task 4: **Report Preparation**

3.0 FIELD ACTIVITIES

Prior to commencing field activities, SOMA obtained drilling permits and arranged for off-site access. SOMA obtained a drilling permit from the ACHCS and obtained an access agreement from each of the off-site property owners before the fieldwork began. The permits are attached as Appendix A.

A Site Health and Safety Plan (HASP) was prepared to address safety provisions during field activities and provided procedures to protect the field crew from physical and chemical hazards resulting from drilling and sampling.

SOMA contacted Underground Service Alert (USA) to clear the drilling areas of underground utilities. Following the USA clearance, a private utility locator surveyed the drilling areas, locating additional subsurface conduits.

3.1 Drilling Temporary Well Boreholes and Collecting Soil and Grab Groundwater Samples

The results of previous groundwater sampling events indicate that petroleum hydrocarbon contamination has migrated off-site to the south/southeast. To delineate the off-site groundwater plume extending from the Site, on December 2, 2003, five temporary well boreholes, TWB-1 through TWB-5, were advanced at the locations shown in Figure 2. Field observations noted during the investigation, including the total depth of each borehole, the initial encountered water depths, and additional remarks are presented in the borehole logs attached as Appendix B.

The drilling crew used a Power Probe drill rig that advanced the boreholes using direct-push technology (DPT). During this process, a hollow steel sampler lined with plastic tubing was hydraulically driven to the designated depth while collecting continuous soil cores in four-foot long sections.

The drilling crew advanced five boreholes to approximately 30 feet bgs. After splitting the plastic tubing to reveal the soil core, SOMA's field geologist logged the borehole lithology, looked for any evidence of petrochemical and/or solvent contamination (i.e., odor or peculiar colors), and field-screened the soil cores with a photo-ionization detector (PID). Appendix B includes the boring logs.

3.1.1 Soil Sampling

At least two soil samples were collected from each borehole – one from the vadose zone and one from the water-bearing zone below. The field geologist cut a section of the soil-filled tubing with a clean hacksaw, covered the ends of the

soil sample with Teflon tape and capped the ends of the core liner. Each sample was then labeled with sample identity, date, time, and the sampler's initials. Once sealed and labeled, the soil samples were placed on ice in a cooler pending laboratory analysis. The geologist maintained the samples under proper chain of custody (COC) procedures. Appendix C includes the laboratory reports and COC form for the soil samples.

3.1.2 Groundwater Sampling

After advancing each DPT borehole to the designated depth, the drilling crew installed a temporary one-inch diameter PVC well casing with ten feet of 0.010" slotted screen inside each borehole. This procedure kept the hole open during the recharge period to collect grab groundwater samples from each borehole. As noted earlier, Appendix B includes the borehole logs.

Due to a relatively rapid groundwater recharge rate at the investigation area, groundwater samples were collected following the completion of each borehole to its designated depth. A ½-inch diameter disposable bailer was then used to collect grab groundwater samples. The groundwater sample collected from each borehole was then immediately transferred into 40-milliliter (mL) VOA vials, pre-preserved with hydrochloric acid. The field geologist verified the 40-mL vials were sealed properly to prevent the inclusion of air bubbles within the headspace of the vial. The samples were stored in a cooler with ice pending delivery to a California State certified analytical laboratory. Appendix D includes the laboratory reports and COC form for the groundwater samples.

After the geologist collected the groundwater samples, the temporary well boreholes were tremie grouted to surface grade with a cement-bentonite grout mixture.

4.0 RESULTS

The following is a brief description of the analytical results from the investigation conducted at the Site.

4.1 Analytical Results

Soil and grab groundwater samples were submitted to Curtis & Tompkins, Ltd., Analytical Laboratories. The samples were analyzed for TPH-g, BTEX, and MtBE using EPA Method 8015B and 8260B. The soil and groundwater analytical results are attached as Appendices C and D, respectively.

4.1.1 Soil Analytical Results

As shown in Table 1, soil analytical results indicate non-detectable levels of TPH-g in all of the soil samples submitted from each of the borehole locations. In borehole TWB-1, MtBE, benzene, toluene, chlorobenzene, ethylbenzene, m,p-xylenes and o-xylene were not detected above laboratory reporting limits of 4.7 µg/Kg. TWB-1 is located closest to the most contaminated portion of the Site, which is approximately 100 feet southeast of the southern property line.

In borehole TWB-2, the lab detected MtBE in samples TWB-2, 24FT, TWB-2, 27FT, and TWB-2, 29 FT at 27, 15, and 19 µg/Kg, respectively. Benzene, toluene, chlorobenzene, ethylbenzene, m,p-xylenes and o-xylene were not detected above laboratory reporting limits of 4.8 µg/Kg. TWB-2 is located approximately 135 feet southeast of the southern property line.

In boreholes TWB-3 and TWB-4, MtBE, benzene, toluene, chlorobenzene, ethylbenzene, m,p xylenes and o-xylene were not detected above laboratory reporting limits of 4.9 µg/Kg and 4.8 µg/Kg, respectively. TWB-3 is located approximately 200 feet southeast of the southern property line. TWB-4 is located approximately 135 feet south of the southern property line.

In borehole TWB-5, sample TWB-5, 16FT, benzene was detected at 18 µg/Kg; chlorobenzene at 41 µg/Kg; m,p-xylenes at 150 µg/Kg and o-xylene at 37 µg/Kg. MtBE, toluene, and ethylbenzene were not detected above laboratory reporting limits of 4.5 µg/Kg. In sample TWB-5, 29FT, chlorobenzene and m,p-xylene were detected at 5.1 and 18 µg/Kg, respectively. TWB-5 is located approximately 135 feet south of the southern property line.

4.2.2 Groundwater Analytical Results

As shown in Table 2, groundwater analytical results indicate that petroleum hydrocarbons were detected in only one of the five temporary well boreholes-TWB-5. In this temporary well the lab detected TPH-g at 32,000 ug/L. Figures 3, 4, and 5 are contour maps that show the distribution of TPH-g, MtBE, and benzene concentrations in the groundwater, respectively.

In temporary well borehole TWB-1, the lab detected MtBE at 8.5 µg/L and m,p-xylenes at 0.8 µg/L. Benzene, toluene, chlorobenzene, ethylbenzene, and o-xylene were not detected above laboratory reporting limits of 0.5 µg/L.

In temporary well boreholes TWB-2 and TWB-3, the lab detected only MtBE at 89 µg/L and 37 µg/L, respectively. Benzene, toluene, chlorobenzene, ethylbenzene, m,p-xylenes and o-xylene were not detected above laboratory reporting limits of 0.5 µg/L.

The lab detected m,p-xylenes and o-xylenes in temporary well borehole TWB-4 at 1.6 µg/L and 0.7 µg/L. No other analytes were detected above laboratory reporting limits of 0.5 µg/L.

In temporary well borehole TWB-5, the lab detected MtBE at 9.5 µg/L; benzene at 500 µg/L; toluene at 13 µg/L; ethylbenzene at 540 µg/L; and m,p-xylenes at 1,900

µg/L and o-xylene at 250 µg/L, respectively. Chlorobenzene was not detected above laboratory reporting limits of 3.1 µg/L.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The results of SOMA's current and prior soil and groundwater investigations confirm the existence of an off-site petroleum hydrocarbon plume. Based on the results of this investigation, groundwater contaminants have migrated off-site at least 150 feet to the south and 225 feet to the southeast of the Site.

Due to the presence of at least one distinct water-bearing zone in the on- and off-site areas, SOMA recommends installing off-site groundwater monitoring wells to evaluate and monitor the extent of the groundwater plumes. The results will help verify the groundwater flow direction and determine the stability of the chemical plumes.

During the UST removal and soil excavation activities in September 2003, 2 of the on-site groundwater monitoring wells, namely ESE-3 and ESE-4, were decommissioned by SOMA. SOMA proposes re-installing two on-site monitoring wells near these decommissioned wells, which will help determine plume stability and other relevant parameters. SOMA will then use all the available data to evaluate the most effective and economical mode of remediation, if warranted.

6.0 REFERENCES

Alameda County Health Care Services, October 3, 2003. A Letter in Connection with Request for Conducting Subsurface Investigation.

SOMA Environmental Engineering, Inc., September 25, 2003. "Workplan to Conduct Off-Site Soil and Groundwater Investigation at Chevron Gasoline Service Station, 3519 Castro Valley Boulevard, Castro Valley, California".

SOMA Environmental Engineering, Inc., October 8, 2003. "Revised Workplan to Conduct Off-Site Soil and Groundwater Investigation at Chevron Gasoline Service Station, 3519 Castro Valley Boulevard, Castro Valley, California".

California Department of Conservation, California Geological Survey, *Geologic Map of California*, Copyright 2002.

Tables

TABLE 1
Soil Analytical Data
Chevron Gasoline Service Station
3519 Castro Valley Boulevard, Castro Valley, CA

Borehole Field ID	Date	TPH-g (µg/Kg)	MtBE (µg/Kg)	Benzene (µg/Kg)	Toluene (µg/Kg)	Ethyl benzene (µg/Kg)	Chloro benzene (µg/Kg)	m,p-Xylenes (µg/Kg)	o-Xylene (µg/Kg)
TWB-1, 22FT	2-Dec-03	ND<1.0	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4	ND<4.4
TWB-1, 25FT	2-Dec-03	ND<0.94	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7
TWB-2, 22FT	2-Dec-03	ND<1.1	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7
TWB-2, 24FT	2-Dec-03	ND<1.0	**27**	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8
TWB-2, 27FT	2-Dec-03	ND<1.1	**15**	ND<4.3	ND<4.3	ND<4.3	ND<4.3	ND<4.3	ND<4.3
TWB-2, 29FT	2-Dec-03	ND<1.0	**19**	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7
TWB-3, 22FT	2-Dec-03	ND<0.95	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9	ND<4.9
TWB-3, 25FT	2-Dec-03	ND<1.0	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8
TWB-3, 29FT	2-Dec-03	ND<1.0	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7
TWB-4, 10FT	2-Dec-03	ND<0.93	ND<4.5	ND<4.5	ND<4.5	ND<4.5	ND<4.5	ND<4.5	ND<4.5
TWB-4, 27FT	2-Dec-03	ND<1.1	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7	ND<4.7
TWB-4, 29FT	2-Dec-03	ND<0.98	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8	ND<4.8
TWB-5, 16FT	2-Dec-03	ND<1.0	ND<4.5	**18**	ND<4.5	ND<4.5	**41**	**150**	**37**
TWB-5, 18FT	2-Dec-03	ND<0.93	ND<4.5	ND<4.5	ND<4.5	ND<4.5	ND<4.5	ND<4.5	ND<4.5
TWB-5, 29FT	2-Dec-03	ND<0.97	ND<4.5	ND<4.5	ND<4.5	ND<4.5	**5.1**	**18**	ND<4.5

Notes: (1) µg/Kg = micrograms per Kilogram (2) ND< denotes Not Detected at or above the laboratory reporting limit stated

TABLE 2
Groundwater Analytical Data
Chevron Gasoline Service Station
3519 Castro Valley Boulevard, Castro Valley, CA

Borehole Field ID	Date	TPH-g (µg/L)	MtBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Chloro benzene (µg/L)	Ethyl benzene (µg/L)	m,p-Xylenes (µg/L)	o-Xylene (µg/L)
TWB-1	2-Dec-03	ND<50	**8.5**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**0.8**	ND<0.5
TWB-2	2-Dec-03	ND<50	**89**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
TWB-3	2-Dec-03	ND<50	**37**	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
TWB-4	2-Dec-03	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**1.6**	**0.7**
TWB-5	2-Dec-03	**32,000**	**9.5**	**500**	**13**	ND<3.1	**540**	**1,900**	**250**

Notes:
(1) µg/L = micrograms per Kilogram
(2) ND< denotes Not Detected at or above the laboratory reporting limit stated

Figures

Figure 1: Site vicinity map.

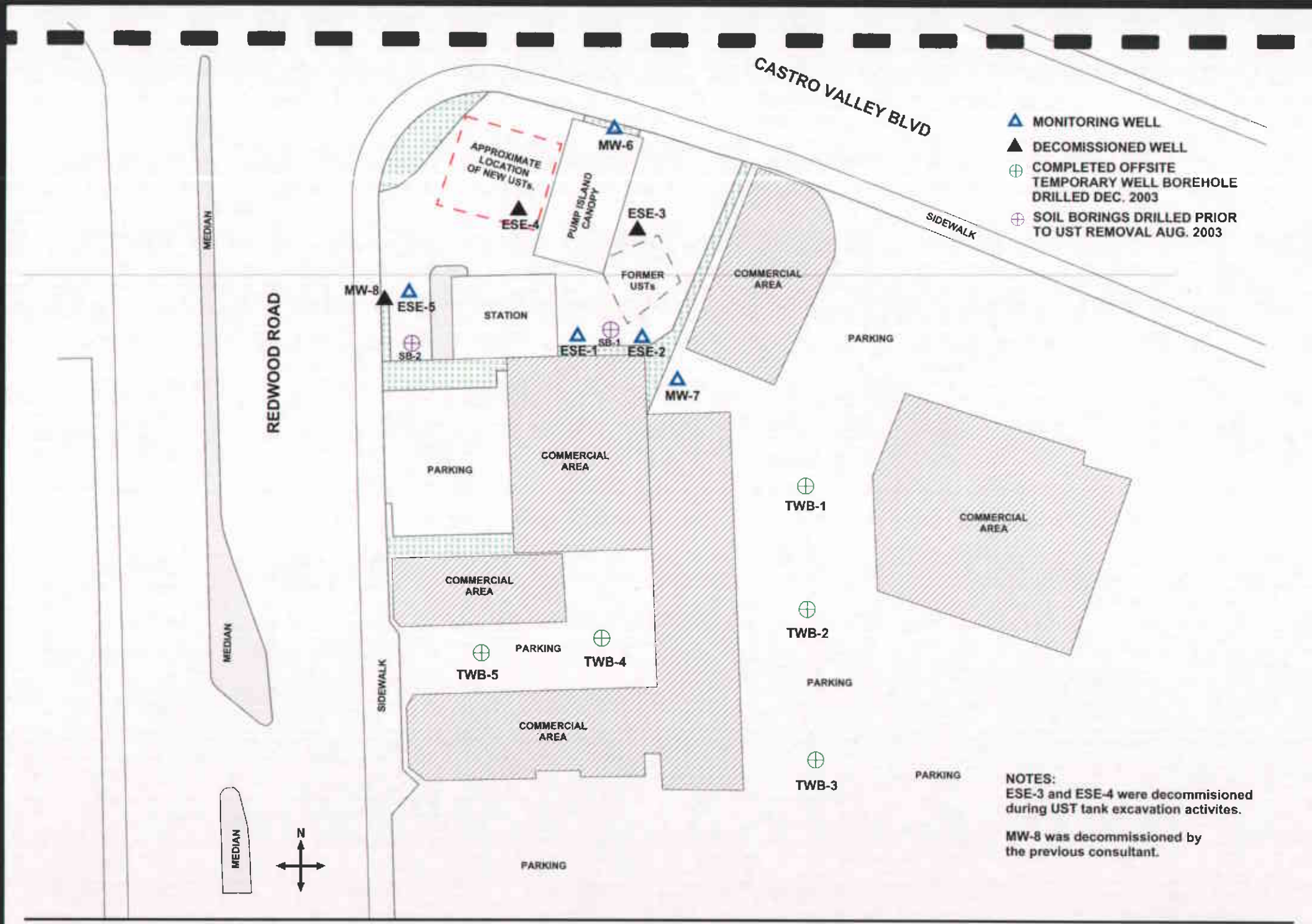


Figure 2: Site map showing locations of existing monitoring wells, decomissioned wells, and locations of offsite temporary well boreholes.

SOMA ENVIRONMENTAL ENGINEERING, INC.

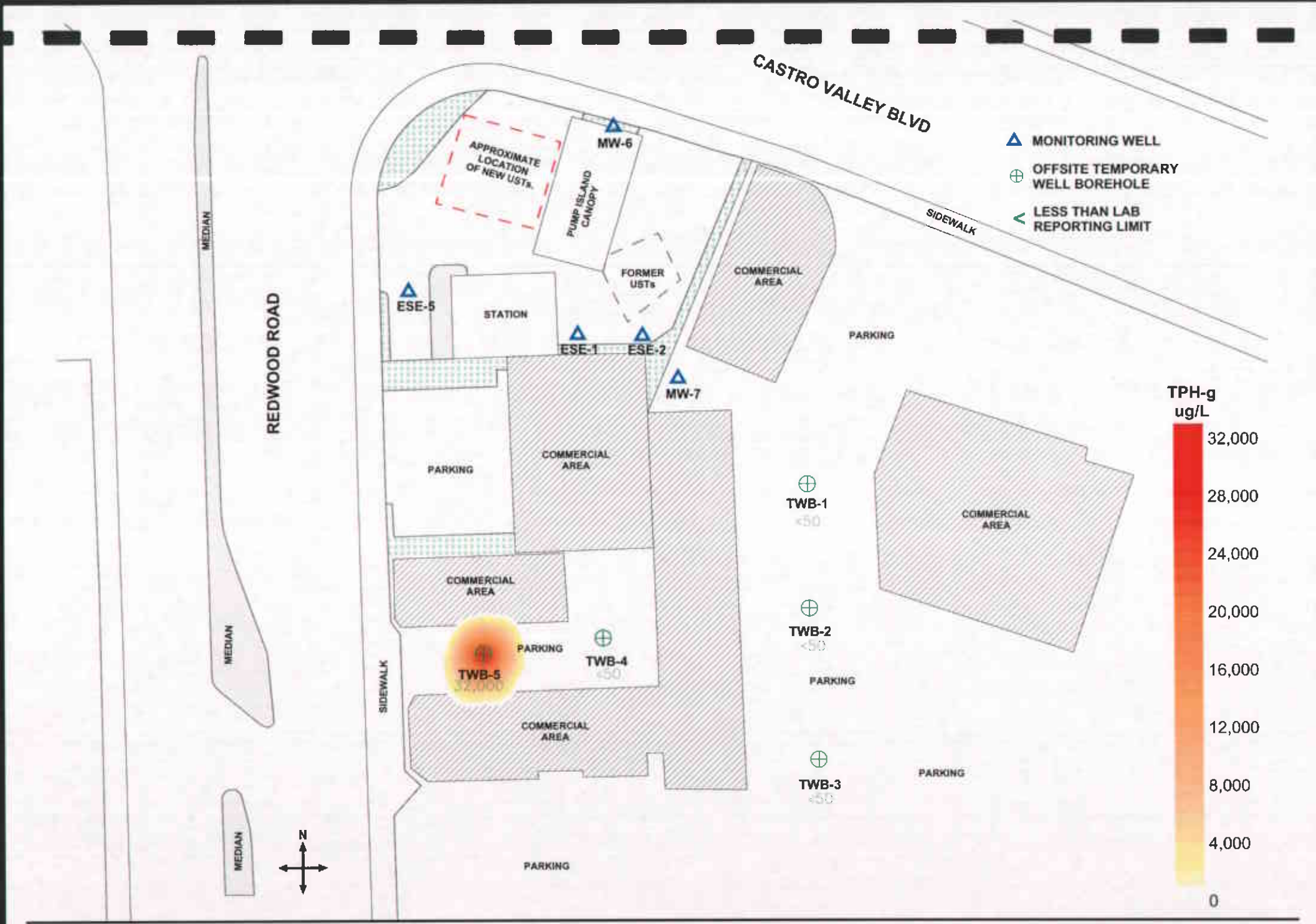


Figure 3: Contour map showing TPH-g concentrations in the groundwater.
December 2, 2003.

SOMA ENVIRONMENTAL ENGINEERING, INC.

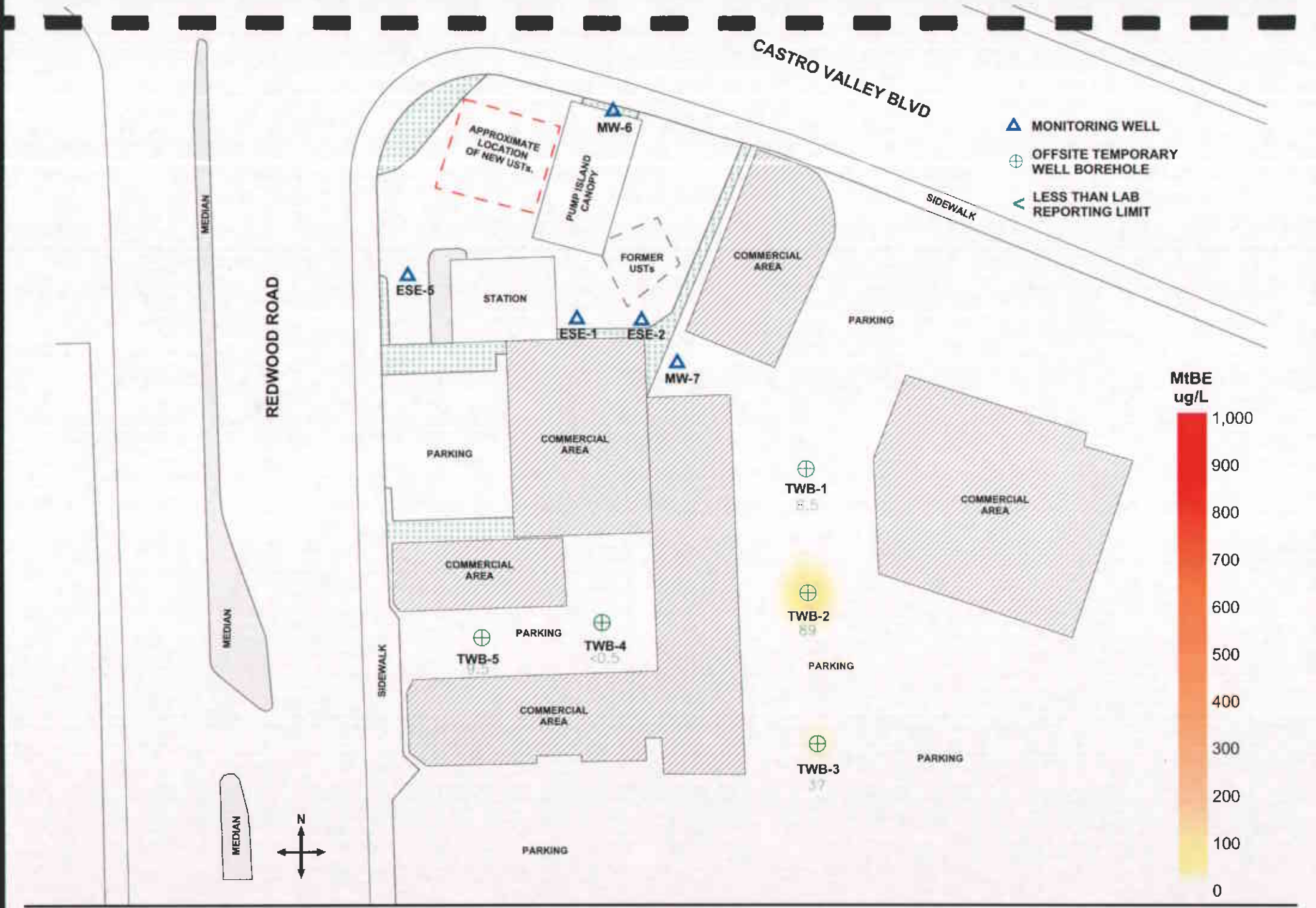
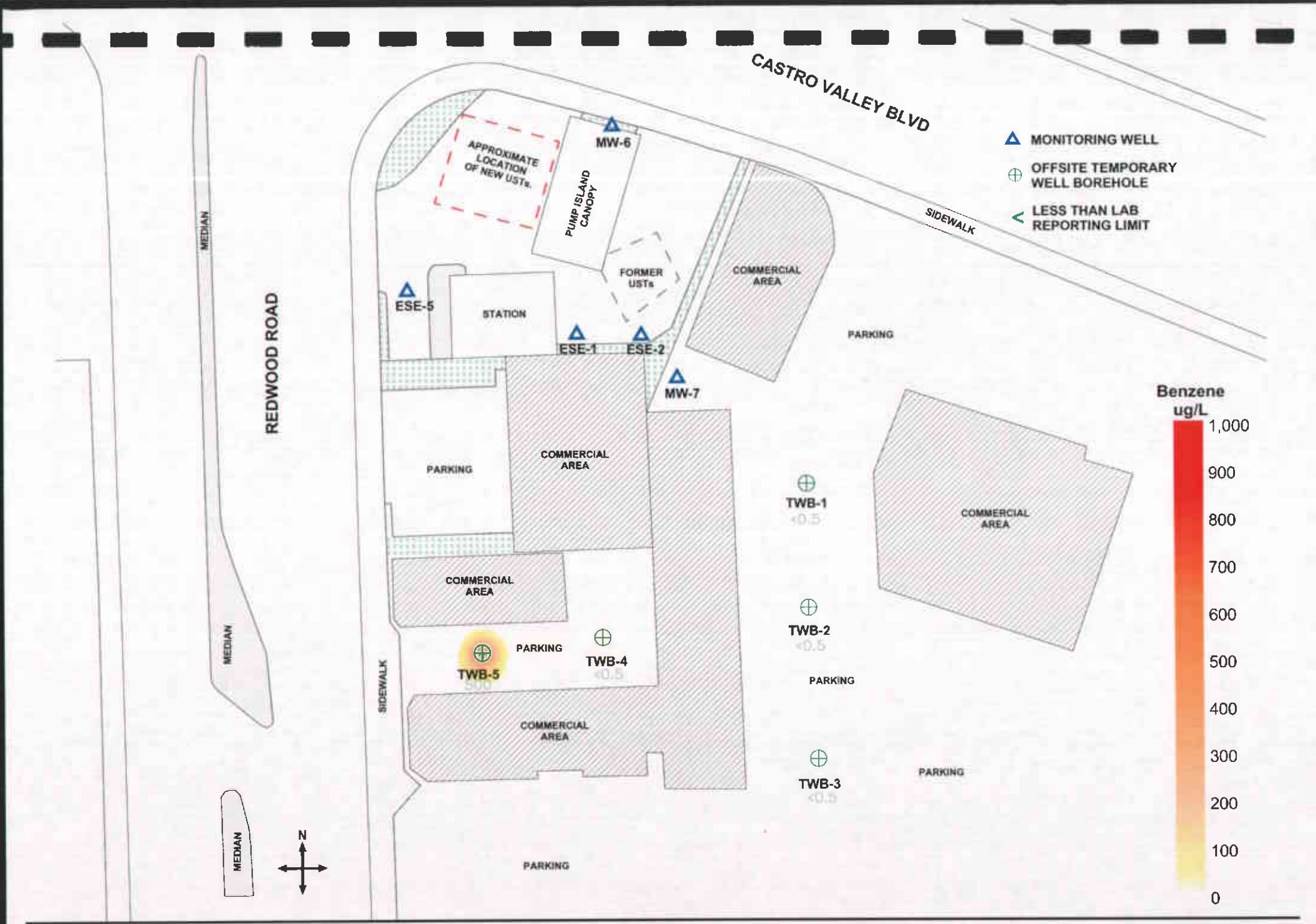


Figure 4: Contour map showing MtBE concentrations in the groundwater.
December 2, 2003.



approximate scale in feet

0 40 80

Figure 5: Contour map showing Benzene concentrations in the groundwater. December 2, 2003.

SOMA ENVIRONMENTAL ENGINEERING, INC.

Appendix A

Drilling and Encroachment Permits

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-6633 James Yoo
FAX (510)782-1939
APPLICANTS: PLEASE ATTACH A SITE MAP FOR ALL DRILLING PERMIT APPLICATIONS
DESTRUCTION OF WELLS OVER 45 FEET REQUIRES A SEPARATE PERMIT APPLICATION

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Chevron Station
3519 Castro Valley Blvd
Castro Valley, CA

CLIENT
Name Mirazim Shakoori Phone
Address 3519 CV Blvd Zip
City Castro Valley

APPLICANT
Name Eric Jennings Fax 510.244.6601
Address SOMA Env. Eng. Phone 510.244.6600
City 2680 Bishop Dr. Zip 94583
San Ramon

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	X
Monitoring	☐	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☐
Cable	☐	Other	X	DPT	

DRILLER'S NAME Vironex

DRILLER'S LICENSE NO. C57 705 927

WELL PROJECTS
Drill Hole Diameter ___ in. Maximum
Casing Diameter ___ in. Depth ___ ft.
Surface Seal Depth ___ ft. Owner's Well Number ___

GEOTECHNICAL PROJECTS
Number of Borings 5
Hole Diameter 2 in. Maximum Depth 30 ft.

ESTIMATED STARTING DATE Dec 2, 2003
ESTIMATED COMPLETION DATE Dec 3, 2003

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [signature] DATE 10-Nov-2003

PLEASE PRINT NAME ERIC JENNINGS Rev.1-04-02

FOR OFFICE USE
PERMIT NUMBER W03-1053
WELL NUMBER
APN

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-inches may be replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole inside zone with concrete placed by tremie.

F. WELL DESTRUCTION
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED [signature] DATE 11-12-03

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD, CA. 94544-1395
PHONE (510) 670-6633 James Yoo FAX (510) 782-1939

PERMIT NO. W03-1053

WATER RESOURCES SECTION
GROUNDWATER PROTECTION ORDINANCE
B#1-GENERAL CONDITIONS: GEOTECHNICAL & CONTAMINATION BOREHOLES

1. Prior to any drilling activities shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that Federal, State, County or to the City and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained.

2. Boreholes shall not be left open for a period of more than **24 hours**. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permitte, permittee's, contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statues regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on-or off site storm sewers, dry wells, or waterways or be allowed to move off the property where wok is being completed.

4. Permit is valid only for the purpose specified herein **December 2 to December 3, 2003**. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

5. Drilling Permit(s) can be voided/ canceled only in writing. It is the applicants responsibilities to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

6. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

Appendix B

Borehole Logs

SOMA ENVIRONMENTAL ENGINEERING, INC.	GEOLOGIC LOG OF BOREHOLE TWB-1	Page 1 of 2

Boring Location:

See Site Map.

Project: 2762
Site Location: 5516 Castro Valley Blvd
Castro Valley CA
Drilling Method: DPT
Driller: Vironex
Logged By: E. Jennings

Date Drilled: Dec. 2, 2003
Casing Elevation: NA
Depth to 1st Groundwater: 20-23 ft
Approved By: M Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	SAMPLED (core / split spoon)	GW LEVEL	WELL DIAGRAM
				4" concrete over 6" base rock.			
			CL	Hand augered cutting.			
	5		CL	SILTY CLAY: dark brown; soft; non plastic to slightly plastic; low to medium permeability (LEK-MEK). No petroleum hydrocarbon (PHC) odor.			
				As above becoming light grayish brown w/ some reddish brown staining; soft to medium stiff. LEK.			
	10			2 to 4" stringer of fine sand and gravelly silt clay lense at 10.5'.			
			CL	SILTY CLAY w/ some Fine Sand: light grayish brown to reddish brown; soft to medium stiff; damp; <30% fine sand. LEK-MEK. No PHC odor.			
	15			As above becoming moist with depth.			
			ML-SM	SANDY SILT/SILTY SAND w/ some Clay: reddish brown; medium dense; moist; 40-60% fines sand. MEK. No PHC odor.			
	20					▼	
			CL/ ML-SM	SILTY CLAY interbedded w/ Sandy Silt/Silty Sand: reddish brown and light grayish brown; moist to wet; w/ trace gravel fragments			
	25						NO TEMPORARY WELL CASING INSTALLED

ENVIRONMENTAL ENGINEERING, INC.

GEOLOGIC LOG OF BOREHOLE TWB-1

Boring Location:

See Site Map.

Project: 2552

Site Location: 5519 Castro Valley Blvd
Castro Valley CA

Drilling Method: DPT

Driller: Vironex

Logged By: E Jennings

Date Drilled: Dec. 2, 2003

Casing Elevation: NA

Depth to 1st Groundwater: 20-23 ft

Approved By: M Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	SAMPLED (core / split spoon)	GW LEVEL	WELL DIAGRAM
				No recovery			
	30						
	35						
	40						
	45						
	50			Total Depth: 30 ft bgs. First encountered groundwater: 20-23 ft bgs. Hand augered to 5 ft bgs to clear utilities.			

ENVIRONMENTAL ENGINEERING, INC.

GEOLOGIC LOG OF BOREHOLE TWB-2

Boring Location:

See Site Map.

Project: 2762
Site Location: 5516 Castro Valley Blvd
Castro Valley CA
Drilling Method: DPT
Driller: Vironex
Logged By: E. Jennings

Date Drilled: Dec. 2, 2003
Casing Elevation: NA
Depth to 1st Groundwater: 21-23 ft
Approved By: M Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	SAMPLED (core / split spoon)	GW LEVEL	WELL DIAGRAM
				4" concrete over 6" base rock.			
			CL	Hand augered cutting.			
	5		CL	SILTY CLAY w/ some Fine Sand: dark brown to reddish brown; soft to medium stiff; damp; non plastic; <15% fine sand; low to medium estimated permeability (LEK-MEK). No petroleum hydrocarbon (PHC) odor.			NO TEMPORARY WELL CASING INSTALLED
	10			As above becoming stiff to very stiff; slighty plastic.			
	15			As above becoming very stiff to hard; moist with depth.			
	20		CL	SILTY CLAY: brown; soft to stiff; moist; slightly plastic to plastic. LEK-MEK. No PHC odor.		▼	
			ML-SM	SANDY SILT/SILTY SAND w/ some Clay: brown to reddish brown; medium dense; 40-60% fine sand. MEK. No PHC odor.			
	25						

ENVIRONMENTAL ENGINEERING, INC.

GEOLOGIC LOG OF BOREHOLE TWB-2

Boring Location:

See Site Map.

Project: 2552

Site Location: 5519 Castro Valley Blvd
Castro Valley CA

Drilling Method: DPT

Driller: Vironex

Logged By: E Jennings

Date Drilled: Dec. 2, 2003

Casing Elevation: NA

Depth to 1st Groundwater: 20-23 ft

Approved By: M Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	SAMPLED (core / split spoon)	GW LEVEL	WELL DIAGRAM
			CL	SILTY CLAY w/ some Fine Sand: brown; soft to medium stiff; moist; plastic; <30% fine sand. MEK. No PHC odor.			
	30						
	35						
	40						
	45						
	50						

Total Depth: 30 ft bgs.
First encountered groundwater: 21-23 ft bgs.
Hand augered to 5 ft bgs to clear utilities.

SOMA ENVIRONMENTAL ENGINEERING, INC.

GEOLOGIC LOG OF BOREHOLE TWB-3

Boring Location:

See Site Map.

Project: 2762

Site Location: 5516 Castro Valley Blvd
Castro Valley CA

Drilling Method: DPT

Driller: Vironex

Logged By: E. Jennings

Date Drilled: Dec. 2, 2003

Casing Elevation: NA

Depth to 1st Groundwater: 23 ft

Approved By: M Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	SAMPLED (core / split spoon)	GW LEVEL	WELL DIAGRAM
				4" concrete over 6" base rock.			
			CL	Hand augered cutting.			
	5		CL	SILTY CLAY w/ some Fine Sand: brown to reddish brown; soft to medium stiff; damp; non plastic to slightly plastic; <30% fine sand. Low to medium estimated permeability (LEK-MEK). No petroleum hydrocarbon (PHC) odor.			NO TEMPORARY WELL CASING INSTALLED
	10			As above becoming moist with depth; plastic.			
	15			As above becoming soft and moist with depth.			
				2" stringer of fine sand and gravelly, silty clay lense at 17.5'.			
			CL	SILTY CLAY: reddish brown; stiff to very stiff; moist; plastic. LEK. No PHC odor.			
	20			As above becoming dark reddish brown to reddish brown; soft to medium stiff; plastic. LEK-MEK. No PHC odor.		▼	
	25			As above becoming reddish brown to brown.			

SOMA ENVIRONMENTAL ENGINEERING, INC.	GEOLOGIC LOG OF BOREHOLE TWB-3	Page 2 of 2

Boring Location:

See Site Map.

Project: 2552
Site Location: 5519 Castro Valley Blvd
Castro Valley CA
Drilling Method: DPT
Driller: Vironex
Logged By: E Jennings

Date Drilled: Dec. 2, 2003
Casing Elevation: NA
Depth to 1st Groundwater: 23 ft
Approved By: M Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	SAMPLED: core	SAMPLED: split spoon	GW LEVEL	WELL DIAGRAM
			CL	SILTY CLAY: reddish brown to brown; very soft to soft; moist to saturated; MEK-HEK. No PHC odor.				
	30							
	35							
	40							
	45							
	50			Total Depth: 30 ft bgs. First encountered groundwater: 23 ft bgs. Hand augered to 5 ft bgs to clear utilities.				

ENVIRONMENTAL ENGINEERING, INC.

GEOLOGIC LOG OF BOREHOLE TWB-4

Boring Location:

See Site Map.

Project: 2762
Site Location: 5516 Castro Valley Blvd
Castro Valley CA
Drilling Method: DPT
Driller: Vironex
Logged By: E. Jennings

Date Drilled: Dec. 2, 2003
Casing Elevation: NA
Depth to 1st Groundwater: 25-28 ft
Approved By: M Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	SAMPLED (core / split spoon)	GW LEVEL	WELL DIAGRAM
				4" concrete over 6" base rock.			
			CL	Hand augured cutting.			
0	5		CL	CLAYEY SILT/SILTY CLAY w/ some Sand: brown; medium stiff; damp; slightly plastic. Low to medium estimated permeability (LEK-MEK). No petroleum hydrocarbon (PHC) odor.			NO TEMPORARY WELL CASING INSTALLED
80	10			As above becoming brown to grayish brown; medium stiff to very stiff. LEK. Moderate PHC odor.			
60							
10	15						
4			CL	SILTY CLAY: brown; stiff; damp; plastic. LEK. No PHC odor.			
				6" stringer of fine sand and gravelly, silty clay lense at 18'.			
0	20			6" stringer of sand and gravelly, silty clay lense at 21'.			
3							
0	25			As above becoming soft to medium stiff; increasing moisture with depth.			

ENVIRONMENTAL ENGINEERING, INC.

GEOLOGIC LOG OF BOREHOLE TWB-4

Boring Location:

See Site Map.

Project: 2552

Site Location: 5519 Castro Valley Blvd
Castro Valley CA

Drilling Method: DPT

Driller: Vironex

Logged By: E Jennings

Date Drilled: Dec. 2, 2003

Casing Elevation: NA

Depth to 1st Groundwater: 25-28 ft

Approved By: M Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	SAMPLED: core	SAMPLED: split spoon	GW LEVEL	WELL DIAGRAM
			CL	SILTY CLAY: brown; soft; moist; plastic. LEK-MEK. No PHC odor.			▼	

30

35

40

45

50

Total Depth: 30 ft bgs.
First encountered groundwater: 25-28 ft bgs.
Hand augered to 5 ft bgs to clear utilities.

ENVIRONMENTAL ENGINEERING, INC.

GEOLOGIC LOG OF BOREHOLE TWB-5

Boring Location:

See Site Map.

Project: 2762
Site Location: 5516 Castro Valley Blvd
Castro Valley CA
Drilling Method: DPT
Driller: Vironex
Logged By: E. Jennings

Date Drilled: Dec. 2, 2003
Casing Elevation: NA
Depth to 1st Groundwater: 17 ft
Approved By: M Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	SAMPLED (core / split spoon)	GW LEVEL	WELL DIAGRAM
				4" concrete over 6" base rock.			
			CL	Hand augured cutting.			
0	5		CL	CLAYEY SILT/SILTY CLAY: grayish brown; medium stiff; damp; slightly plastic; low estimated permeability (LEK). No petroleum hydrocarbon (PHC) odor.			
191	10			As above w/ strong PHC odor.			
				As above becoming reddish brown; stiff to very stiff. Strong PHC odor.			
				As above becoming grayish brown; soft to medium stiff; moist. Slight PHC odor.			
0	15		CL	SILTY CLAY w/ some Fine Sand: reddish brown; soft to medium stiff; moist to wet; <20% fine sand. LEK. Slight PHC odor.		▼	
				2-4" stringer of fine sand and gravelly, silty clay lense; well sorted and poorly graded.			
0	20			As above becoming medium stiff to very stiff.			
				As above becoming soft; saturated. MEK-HEK.			
0	25						NO TEMPORARY WELL CASING INSTALLED

ENVIRONMENTAL ENGINEERING, INC.	GEOLOGIC LOG OF BOREHOLE TWB-5	Page 2 of 2

Boring Location:

See Site Map.

Project: 2552
Site Location: 5519 Castro Valley Blvd
Castro Valley CA
Drilling Method: DPT
Driller: Vironex
Logged By: E Jennings

Date Drilled: Dec. 2, 2003
Casing Elevation: NA
Depth to 1st Groundwater: 25-28 ft
Approved By: M Sepehr

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	SAMPLED (core / split spoon)	GW LEVEL	WELL DIAGRAM
			CL	SILTY CLAYw/ some Fine Sand: reddish brown; soft to medium stiff; wet to saturated; <30% fine sand. MEK-HEK. No PHC odor.		▼	
	30						
	35						
	40						
	45						
	50			Total Depth: 30 ft bgs. First encountered groundwater: 17 ft bgs. Hand augered to 5 ft bgs to clear utilities.			

Appendix C

Laboratory Reports of Soil Analytical and Chain of Custody Form

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

A N A L Y T I C A L R E P O R T

Prepared for:

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

Date: 15-DEC-03
Lab Job Number: 169190
Project ID: 2762
Location: Castro Valley Chevron

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: _____ for LD
Project Manager

Reviewed by: _____
Operations Manager

Curtis & Tompkins, Ltd.

Laboratory Numbers: **169190**
Client: **SOMA Environmental Engineering Inc.**
Project #: **2762**
Location: **Castro Valley Chevron**

Sample Date: **12/02/03**
Receipt Date: **12/03/03**

CASE NARRATIVE

This hardcopy data package contains sample and QC results for five water samples and fifteen soil samples, which were requested for analysis on December 03, 2003.

TVH by (EPA 8015B):
High Trifluorotoluene surrogate recovery was observed for sample TWB-5 (CT# 169190-013) as a result of the surrogate co-eluting with hydrocarbons with the sample. No other analytical problems were encountered.

VOCs by (EPA 8260B):
No analytical problems were encountered.

CHAIN OF CUSTODY FORM

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

C&T LOGIN # 169190

Sampler: ERIC JENNINGS

Project No: 2762

Report To: MANSOUR SEPEHR

Project Name: CASTRO VALLEY CHEVRON

Company: SOMA ENVIRONMENTAL

Project P.O.: 2762

Telephone: 925-244-6600

Turnaround Time: STANDARD

Fax: 925-244-6601

Laboratory Number	Sample ID.	Sampling Date Time	Matrix: Soil	Matrix: Water	Matrix: Waste	# of Containers	Preservative: HCL	Preservative: H_2SO	Preservative: HNO_3	Preservative: ICE	Field Notes	Analyses: EPA METHOD 5030/8015 GC/FID	Analyses: EPA METHOD 8260
-1	TWB-5, 16FT	DEL 7:20	X			1				X		X	X
-2	TWB-5, 18FT	7:25	X			1				X		X	X
-3	TWB-5, 21FT	10:55	X			1				X		X	X
-4	TWB-4, 10FT	8:40	X			1				X		X	X
-5	TWB-4, 27FT	9:35	X			1				X		X	X
-6	TWB-4, 29FT	9:40	X			1				X		X	X
-7	TWB-1, 22FT	12:15	X			1				X		X	X
-8	TWB-1, 25FT	12:25	X			1				X		X	X
-9	TWB-2, 22FT	3:30	X			1				X		X	X
-10	TWB-2, 24FT	3:25	X			1				X		X	X
-11	TWB-2, 27FT	3:40	X			1				X		X	X
-12	TWB-2, 29FT	3:45	X			1				X		X	X
N/A													

Notes: TPH-g MEASURED USING EPA METHOD 5030/8015 GC/FID. BTEX AND MTBE USING EPA METHOD 8260.

RELINQUISHED BY:	RECEIVED BY:
12-3-03 9:00 DATE/TIME	12/3/03 0920 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

Signature

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	8015B
Matrix:	Soil	Batch#:	86628
Units:	mg/Kg	Sampled:	12/02/03
Basis:	as received	Received:	12/03/03
Diln Fac:	1.000		

Field ID: TWB-5, 16FT
Type: SAMPLE
Lab ID: 169190-001
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	98	56-144
Bromofluorobenzene (FID)	103	51-142

Field ID: TWB-5, 18FT
Type: SAMPLE
Lab ID: 169190-002
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	0.93

Surrogate	%REC	Limits
Trifluorotoluene (FID)	92	56-144
Bromofluorobenzene (FID)	97	51-142

Field ID: TWB-5, 29FT
Type: SAMPLE
Lab ID: 169190-003
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	0.97

Surrogate	%REC	Limits
Trifluorotoluene (FID)	90	56-144
Bromofluorobenzene (FID)	93	51-142

Field ID: TWB-4, 10FT
Type: SAMPLE
Lab ID: 169190-004
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	0.93

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	56-144
Bromofluorobenzene (FID)	106	51-142

ND = Not Detected
RL = Reporting Limit

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	8015B
Matrix:	Soil	Batch#:	86628
Units:	mg/Kg	Sampled:	12/02/03
Basis:	as received	Received:	12/03/03
Diln Fac:	1.000		

Field ID: TWB-4, 27FT
Type: SAMPLE
Lab ID: 169190-005
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	100	56-144
Bromofluorobenzene (FID)	104	51-142

Field ID: TWB-4, 29FT
Type: SAMPLE
Lab ID: 169190-006
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	0.98

Surrogate	%REC	Limits
Trifluorotoluene (FID)	102	56-144
Bromofluorobenzene (FID)	103	51-142

Field ID: TWB-1, 22FT
Type: SAMPLE
Lab ID: 169190-007
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	56-144
Bromofluorobenzene (FID)	98	51-142

Field ID: TWB-1, 25FT
Type: SAMPLE
Lab ID: 169190-008
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	0.94

Surrogate	%REC	Limits
Trifluorotoluene (FID)	95	56-144
Bromofluorobenzene (FID)	97	51-142

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	8015B
Matrix:	Soil	Batch#:	86628
Units:	mg/Kg	Sampled:	12/02/03
Basis:	as received	Received:	12/03/03
Diln Fac:	1.000		

Field ID: TWB-2, 22FT
Type: SAMPLE
Lab ID: 169190-009
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	56-144
Bromofluorobenzene (FID)	105	51-142

Field ID: TWB-2, 24FT
Type: SAMPLE
Lab ID: 169190-010
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	95	56-144
Bromofluorobenzene (FID)	98	51-142

Field ID: TWB-2, 27FT
Type: SAMPLE
Lab ID: 169190-011
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	1.1

Surrogate	%REC	Limits
Trifluorotoluene (FID)	80	56-144
Bromofluorobenzene (FID)	83	51-142

Field ID: TWB-2, 29FT
Type: SAMPLE
Lab ID: 169190-012
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	94	56-144
Bromofluorobenzene (FID)	95	51-142

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	8015B
Matrix:	Soil	Batch#:	86628
Units:	mg/Kg	Sampled:	12/02/03
Basis:	as received	Received:	12/03/03
Diln Fac:	1.000		

Field ID: TWB-3, 22FT
Type: SAMPLE
Lab ID: 169190-018
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	0.95

Surrogate	%REC	Limits
Trifluorotoluene (FID)	94	56-144
Bromofluorobenzene (FID)	94	51-142

Field ID: TWB-3, 25FT
Type: SAMPLE
Lab ID: 169190-019
Analyzed: 12/04/03

Analyte	Result	RL
Gasoline C7-C12	ND	0.95

Surrogate	%REC	Limits
Trifluorotoluene (FID)	92	56-144
Bromofluorobenzene (FID)	94	51-142

Field ID: TWB-3, 29FT
Type: SAMPLE
Lab ID: 169190-020
Analyzed: 12/04/03

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	94	56-144
Bromofluorobenzene (FID)	101	51-142

Type: BLANK
Lab ID: QC233972
Analyzed: 12/03/03

Analyte	Result	RL
Gasoline C7-C12	ND	1.0

Surrogate	%REC	Limits
Trifluorotoluene (FID)	96	56-144
Bromofluorobenzene (FID)	102	51-142

ND = Not Detected
RL = Reporting Limit

1.2

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	8015B
Type:	LCS	Basis:	as received
Lab ID:	QC233974	Diln Fac:	1.000
Matrix:	Soil	Batch#:	86628
Units:	mg/Kg	Analyzed:	12/03/03

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	10.00	10.38	104	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	120	56-144
Bromofluorobenzene (FID)	114	51-142

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	8015B
Field ID:	TWB-5, 18FT	Diln Fac:	1.000
MSS Lab ID:	169190-002	Batch#:	86628
Matrix:	Soil	Sampled:	12/02/03
Units:	mg/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/04/03

Type: MS Lab ID: QC234062

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<0.05800	9.524	8.816	93	24-134

Surrogate	%REC	Limits
Trifluorotoluene (FID)	116	56-144
Bromofluorobenzene (FID)	111	51-142

Type: MSD Lab ID: QC234063

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.99	10.47	95	24-134	3	32

Surrogate	%REC	Limits
Trifluorotoluene (FID)	117	56-144
Bromofluorobenzene (FID)	111	51-142

RPD= Relative Percent Difference

3.1

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-5, 16FT	Diln Fac:	0.9091
Lab ID:	169190-001	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/04/03

Analyte	Result	RL
MTBE	ND	4.5
Benzene	18	4.5
Toluene	ND	4.5
Chlorobenzene	ND	4.5
Ethylbenzene	41	4.5
m,p-Xylenes	150	4.5
o-Xylene	37	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	76-130
Toluene-d8	101	80-120
Bromofluorobenzene	97	76-125

ND= Not Detected
RL= Reporting Limit

7.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-5, 18FT	Diln Fac:	0.9091
Lab ID:	169190-002	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	ND	4.5
Benzene	ND	4.5
Toluene	ND	4.5
Chlorobenzene	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	76-130
Toluene-d8	104	80-120
Bromofluorobenzene	100	76-125

ND= Not Detected
RL= Reporting Limit

8.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-5, 29FT	Diln Fac:	0.8929
Lab ID:	169190-003	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	ND	4.5
Benzene	ND	4.5
Toluene	ND	4.5
Chlorobenzene	ND	4.5
Ethylbenzene	5.1	4.5
m,p-Xylenes	18	4.5
o-Xylene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	76-130
Toluene-d8	103	80-120
Bromofluorobenzene	102	76-125

ND= Not Detected
RL= Reporting Limit

9.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-4, 10FT	Diln Fac:	0.9091
Lab ID:	169190-004	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	ND	4.5
Benzene	ND	4.5
Toluene	ND	4.5
Chlorobenzene	ND	4.5
Ethylbenzene	ND	4.5
m,p-Xylenes	ND	4.5
o-Xylene	ND	4.5
1,3-Dichlorobenzene	ND	4.5
1,4-Dichlorobenzene	ND	4.5
1,2-Dichlorobenzene	ND	4.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	76-130
Toluene-d8	102	80-120
Bromofluorobenzene	102	76-125

ND= Not Detected
RL= Reporting Limit

10.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-4, 27FT	Diln Fac:	0.9434
Lab ID:	169190-005	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	76-130
Toluene-d8	104	80-120
Bromofluorobenzene	99	76-125

ND= Not Detected
RL= Reporting Limit

11.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-4, 29FT	Diln Fac:	0.9615
Lab ID:	169190-006	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	ND	4.8
Benzene	ND	4.8
Toluene	ND	4.8
Chlorobenzene	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	ND	4.8
1,3-Dichlorobenzene	ND	4.8
1,4-Dichlorobenzene	ND	4.8
1,2-Dichlorobenzene	ND	4.8

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	76-130
Toluene-d8	102	80-120
Bromofluorobenzene	100	76-125

ND= Not Detected
RL= Reporting Limit

12.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-1, 22FT	Diln Fac:	0.8772
Lab ID:	169190-007	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	ND	4.4
Benzene	ND	4.4
Toluene	ND	4.4
Chlorobenzene	ND	4.4
Ethylbenzene	ND	4.4
m,p-Xylenes	ND	4.4
o-Xylene	ND	4.4
1,3-Dichlorobenzene	ND	4.4
1,4-Dichlorobenzene	ND	4.4
1,2-Dichlorobenzene	ND	4.4

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	76-130
Toluene-d8	103	80-120
Bromofluorobenzene	98	76-125

ND= Not Detected
RL= Reporting Limit

13.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-1, 25FT	Diln Fac:	0.9434
Lab ID:	169190-008	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	76-130
Toluene-d8	103	80-120
Bromofluorobenzene	101	76-125

ND= Not Detected
RL= Reporting Limit

14.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-2, 22FT	Diln Fac:	0.9434
Lab ID:	169190-009	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	76-130
Toluene-d8	102	80-120
Bromofluorobenzene	102	76-125

ND= Not Detected
RL= Reporting Limit

15.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-2, 24FT	Diln Fac:	0.9615
Lab ID:	169190-010	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	27	4.8
Benzene	ND	4.8
Toluene	ND	4.8
Chlorobenzene	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	ND	4.8
1,3-Dichlorobenzene	ND	4.8
1,4-Dichlorobenzene	ND	4.8
1,2-Dichlorobenzene	ND	4.8

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	76-130
Toluene-d8	104	80-120
Bromofluorobenzene	101	76-125

ND= Not Detected
RL= Reporting Limit

16.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-2, 27FT	Diln Fac:	0.8621
Lab ID:	169190-011	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	15	4.3
Benzene	ND	4.3
Toluene	ND	4.3
Chlorobenzene	ND	4.3
Ethylbenzene	ND	4.3
m,p-Xylenes	ND	4.3
o-Xylene	ND	4.3
1,3-Dichlorobenzene	ND	4.3
1,4-Dichlorobenzene	ND	4.3
1,2-Dichlorobenzene	ND	4.3

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	76-130
Toluene-d8	104	80-120
Bromofluorobenzene	99	76-125

ND= Not Detected
RL= Reporting Limit

17.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-2, 29FT	Diln Fac:	0.9434
Lab ID:	169190-012	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	19	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	76-130
Toluene-d8	103	80-120
Bromofluorobenzene	103	76-125

ND= Not Detected
RL= Reporting Limit

18.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-3, 22FT	Diln Fac:	0.9804
Lab ID:	169190-018	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	ND	4.9
Benzene	ND	4.9
Toluene	ND	4.9
Chlorobenzene	ND	4.9
Ethylbenzene	ND	4.9
m,p-Xylenes	ND	4.9
o-Xylene	ND	4.9
1,3-Dichlorobenzene	ND	4.9
1,4-Dichlorobenzene	ND	4.9
1,2-Dichlorobenzene	ND	4.9

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	76-130
Toluene-d8	102	80-120
Bromofluorobenzene	101	76-125

ND= Not Detected
RL= Reporting Limit

19.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-3, 25FT	Diln Fac:	0.9615
Lab ID:	169190-019	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/04/03

Analyte	Result	RL
MTBE	ND	4.8
Benzene	ND	4.8
Toluene	ND	4.8
Chlorobenzene	ND	4.8
Ethylbenzene	ND	4.8
m,p-Xylenes	ND	4.8
o-Xylene	ND	4.8
1,3-Dichlorobenzene	ND	4.8
1,4-Dichlorobenzene	ND	4.8
1,2-Dichlorobenzene	ND	4.8

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	76-130
Toluene-d8	104	80-120
Bromofluorobenzene	100	76-125

ND= Not Detected
RL= Reporting Limit

20.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-3, 29FT	Diln Fac:	0.9434
Lab ID:	169190-020	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/04/03

Analyte	Result	RL
MTBE	ND	4.7
Benzene	ND	4.7
Toluene	ND	4.7
Chlorobenzene	ND	4.7
Ethylbenzene	ND	4.7
m,p-Xylenes	ND	4.7
o-Xylene	ND	4.7
1,3-Dichlorobenzene	ND	4.7
1,4-Dichlorobenzene	ND	4.7
1,2-Dichlorobenzene	ND	4.7

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	76-130
Toluene-d8	104	80-120
Bromofluorobenzene	102	76-125

ND= Not Detected
RL= Reporting Limit

21.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC234019	Diln Fac:	1.000
Matrix:	Soil	Batch#:	86641
Units:	ug/Kg	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	105	76-130
Toluene-d8	102	80-120
Bromofluorobenzene	101	76-125

ND= Not Detected
RL= Reporting Limit

22.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Type:	BLANK	Basis:	as received
Lab ID:	QC234020	Diln Fac:	1.000
Matrix:	Soil	Batch#:	86641
Units:	ug/Kg	Analyzed:	12/03/03

Analyte	Result	RL
MTBE	ND	5.0
Benzene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
1,3-Dichlorobenzene	ND	5.0
1,4-Dichlorobenzene	ND	5.0
1,2-Dichlorobenzene	ND	5.0

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	76-130
Toluene-d8	103	80-120
Bromofluorobenzene	102	76-125

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Type:	LCS	Basis:	as received
Lab ID:	QC234018	Diln Fac:	1.000
Matrix:	Soil	Batch#:	86641
Units:	ug/Kg	Analyzed:	12/03/03

Analyte	Spiked	Result	%REC	Limits
Benzene	50.00	49.43	99	78-120
Toluene	50.00	49.45	99	79-120
Chlorobenzene	50.00	49.57	99	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	104	76-130
Toluene-d8	98	80-120
Bromofluorobenzene	102	76-125

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-1, 25FT	Diln Fac:	1.000
MSS Lab ID:	169190-008	Batch#:	86641
Matrix:	Soil	Sampled:	12/02/03
Units:	ug/Kg	Received:	12/03/03
Basis:	as received	Analyzed:	12/03/03

Type: MS Lab ID: QC234060

Analyte	MSS Result	Spiked	Result	%REC	Limits
Benzene	<0.05400	50.00	48.71	97	55-121
Toluene	<0.1700	50.00	48.16	96	44-129
Chlorobenzene	<0.07300	50.00	47.82	96	48-121

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	76-130
Toluene-d8	99	80-120
Bromofluorobenzene	99	76-125

Type: MSD Lab ID: QC234061

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	50.00	48.08	96	55-121	1	20
Toluene	50.00	48.39	97	44-129	0	20
Chlorobenzene	50.00	47.66	95	48-121	0	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	76-130
Toluene-d8	101	80-120
Bromofluorobenzene	100	76-125

RPD= Relative Percent Difference

Appendix D

Laboratory Reports of Groundwater Analytical and Chain of Custody Form

CHAIN OF CUSTODY FORM

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

C&T LOGIN # 169190

Sampler: ERIC JENNINGS
Report To: MANSOUR SEPEHR
Company: SOMA ENVIRONMENTAL
Telephone: 925-244-6600
Fax: 925-244-6601

Project No: 2762
Project Name: CASTRO VALLEY CHEVRON
Project P.O.: 2762
Turnaround Time: STANDARD

	Laboratory Number	Sample ID.	Sampling Date Time	Matrix: Soil	Water	Waste	# of Containers	Preservative: HCL	H_2SO	HNO_3	ICE	Field Notes	Analyses: EPA METHOD 5030/8015 MCFID	EPA METHOD 8260
-13		TWB-5	DEC 2 735		X		3	X			X		X	X
-14		TWB-4	1000		X		3	X			X		X	X
-15		TWB-1	1230		X		3	X			X		X	X
-16		TWB-2	320		X		3	X			X		X	X
-17		TWB-3	450		X		3	X			X		X	X
N/A														
-18		TWB-3,22FT	445	X			1				X		X	X
-19		TWB-3,25FT	455	X			1				X		X	X
-20		TWB-3,29FT	500	X			1				X			

Notes: TPH-g MEASURED USING EPA METHOD 5030/8015 MCFID. BTEX AND MTBE ~~USING AND~~ USING EPA METHOD 8260.

RELINQUISHED BY:	RECEIVED BY:
12-3-03 920 DATE/TIME	12/3/03 0920 DATE/TIME
DATE/TIME	DATE/TIME
DATE/TIME	DATE/TIME

Signature

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	8015B
Matrix:	Water	Sampled:	12/02/03
Units:	ug/L	Received:	12/03/03
Batch#:	86630	Analyzed:	12/03/03

Field ID:	TWB-5	Lab ID:	169190-013
Type:	SAMPLE	Diln Fac:	10.00

Analyte	Result	RL
Gasoline C7-C12	32,000	500

Surrogate	%REC	Limits
Trifluorotoluene (FID)	152 *	57-150
Bromofluorobenzene (FID)	130	65-144

Field ID:	TWB-4	Lab ID:	169190-014
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	113	57-150
Bromofluorobenzene (FID)	120	65-144

Field ID:	TWB-1	Lab ID:	169190-015
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	113	57-150
Bromofluorobenzene (FID)	121	65-144

* = Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

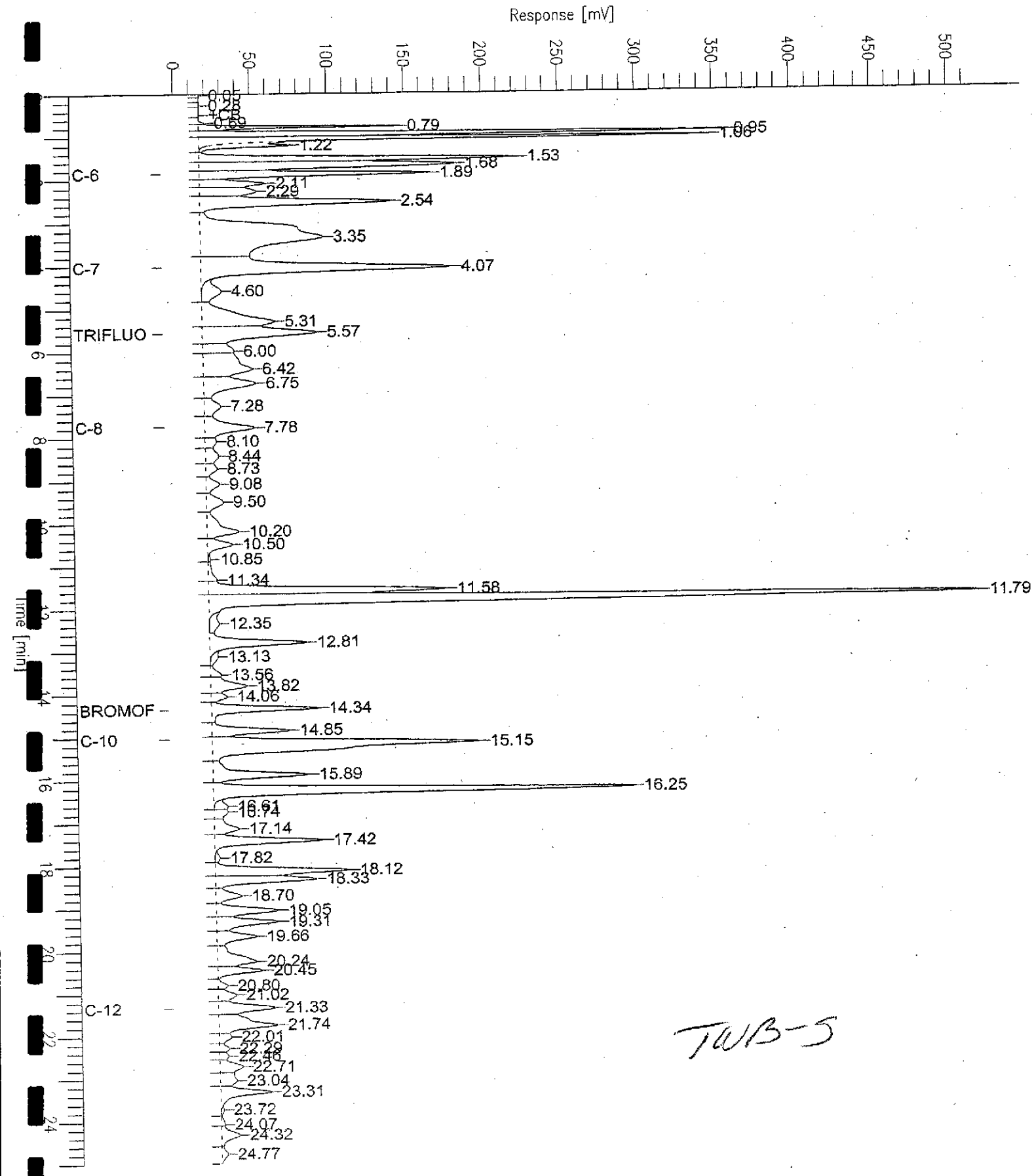
4.0

Chromatogram

013 mmp 12/4/03

Sample Name : 169190-~~013~~,86630,tvh only
FileName : G:\GC05\DATA\337G010.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -8 mV

Sample #: a1.6
Date : 12/3/03 03:17 PM
Time of Injection: 12/3/03 02:52 PM
Low Point : -8.09 mV High Point : 517.11 mV
Plot Scale: 525.2 mV

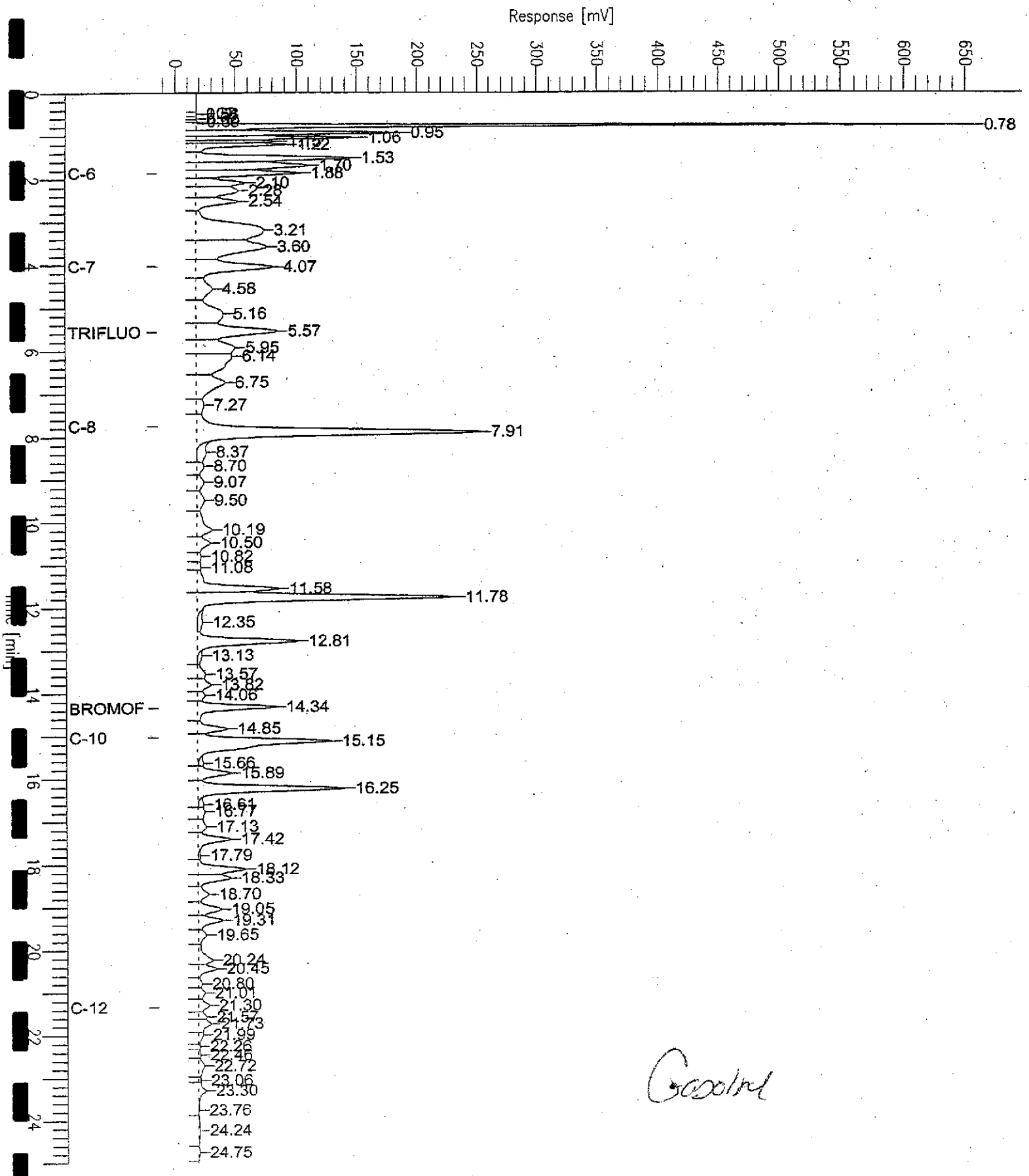


TVB-5

Chromatogram

Sample Name : ccv/lcs,qc233981,86630,03wb1767,5/5000
FileName : G:\GC05\DATA\337G002.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 25.00 min
Scale Factor: 1.0 Plot Offset: -14 mV

Sample #: Page 1 of 1
Date : 12/3/03 10:34 AM
Time of Injection: 12/3/03 10:09 AM
Low Point : -14.46 mV High Point : 657.35 mV
Plot Scale: 671.8 mV



Good

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	8015B
Matrix:	Water	Sampled:	12/02/03
Units:	ug/L	Received:	12/03/03
Batch#:	86630	Analyzed:	12/03/03

Field ID: TWB-2 Lab ID: 169190-016
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	113	57-150
Bromofluorobenzene (FID)	122	65-144

Field ID: TWB-3 Lab ID: 169190-017
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	115	57-150
Bromofluorobenzene (FID)	122	65-144

Type: BLANK Diln Fac: 1.000
Lab ID: QC233979

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Trifluorotoluene (FID)	103	57-150
Bromofluorobenzene (FID)	103	65-144

= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

4.0

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC233981	Batch#:	86630
Matrix:	Water	Analyzed:	12/03/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,114	106	80-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	130	57-150
Bromofluorobenzene (FID)	125	65-144

5.0

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	8015B
Field ID:	ZZZZZZZZZZ	Batch#:	86630
MSS Lab ID:	169185-003	Sampled:	12/02/03
Matrix:	Water	Received:	12/02/03
Units:	ug/L	Analyzed:	12/04/03
Diln Fac:	1.000		

Type: MS Lab ID: QC233997

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	20.50	2,000	2,101	104	76-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	132	57-150
Bromofluorobenzene (FID)	125	65-144

Type: MSD Lab ID: QC233998

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,105	104	76-120	0	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	133	57-150
Bromofluorobenzene (FID)	130	65-144

RPD= Relative Percent Difference

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Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-5	Batch#:	86676
Lab ID:	169190-013	Sampled:	12/02/03
Matrix:	Water	Received:	12/03/03
Units:	ug/L	Analyzed:	12/04/03
Dil'n Fac:	6.250		

Analyte	Result	RL
MTBE	9.5	3.1
Benzene	500	3.1
Toluene	13	3.1
Chlorobenzene	ND	3.1
Ethylbenzene	540	3.1
m,p-Xylenes	1,900	3.1
o-Xylene	250	3.1
1,3-Dichlorobenzene	ND	3.1
1,4-Dichlorobenzene	ND	3.1
1,2-Dichlorobenzene	ND	3.1

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	94	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	93	80-123

ND= Not Detected
RL= Reporting Limit

26.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-4	Batch#:	86648
Lab ID:	169190-014	Sampled:	12/02/03
Matrix:	Water	Received:	12/03/03
Units:	ug/L	Analyzed:	12/04/03
Dil'n Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	1.6	0.5
o-Xylene	0.7	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	106	80-123

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-1	Batch#:	86648
Lab ID:	169190-015	Sampled:	12/02/03
Matrix:	Water	Received:	12/03/03
Units:	ug/L	Analyzed:	12/03/03
Dil'n Fac:	1.000		

Analyte	Result	RL
MTBE	8.5	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	0.8	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	111	80-123

ND= Not Detected
RL= Reporting Limit

28.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-2	Batch#:	86709
Lab ID:	169190-016	Sampled:	12/02/03
Matrix:	Water	Received:	12/03/03
Units:	ug/L	Analyzed:	12/05/03
Dln Fac:	1.000		

Analyte	Result	RL
MTBE	89	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	77-129
Toluene-d8	96	80-120
Bromofluorobenzene	106	80-123

ND= Not Detected
RL= Reporting Limit

29.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	TWB-3	Batch#:	86709
Lab ID:	169190-017	Sampled:	12/02/03
Matrix:	Water	Received:	12/03/03
Units:	ug/L	Analyzed:	12/05/03
Dil'n Fac:	1.000		

Analyte	Result	RL
MTBE	37	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	77-129
Toluene-d8	97	80-120
Bromofluorobenzene	106	80-123

ND= Not Detected
RL= Reporting Limit

30.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC234048	Batch#:	86648
Matrix:	Water	Analyzed:	12/03/03
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	77-129
Toluene-d8	97	80-120
Bromofluorobenzene	104	80-123

ND= Not Detected
RL= Reporting Limit

31.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC234092	Batch#:	86648
Matrix:	Water	Analyzed:	12/03/03
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	102	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	108	80-123

ND= Not Detected
RL= Reporting Limit

32.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC234153	Batch#:	86676
Matrix:	Water	Analyzed:	12/04/03
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	101	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	108	80-123

ND= Not Detected
RL= Reporting Limit

33.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC234279	Batch#:	86709
Matrix:	Water	Analyzed:	12/05/03
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	104	80-123

ND = Not Detected
RL = Reporting Limit

34.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC234282	Batch#:	86709
Matrix:	Water	Analyzed:	12/05/03
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	105	80-123

ND= Not Detected
RL= Reporting Limit

35.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC234047	Batch#:	86648
Matrix:	Water	Analyzed:	12/03/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	47.99	96	69-124
Benzene	50.00	47.59	95	80-120
Toluene	50.00	49.37	99	80-120
Chlorobenzene	50.00	51.45	103	80-120
Ethylbenzene	50.00	50.19	100	80-120
m,p-Xylenes	100.0	104.4	104	80-121
o-Xylene	50.00	52.77	106	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	94	80-123

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Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	86676
Units:	ug/L	Analyzed:	12/04/03
Dil'n Fac:	1.000		

Type: BS Lab ID: QC234151

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	42.51	85	69-124
Benzene	50.00	44.89	90	80-120
Toluene	50.00	46.14	92	80-120
Chlorobenzene	50.00	48.23	96	80-120
Ethylbenzene	50.00	47.03	94	80-120
m,p-Xylenes	100.0	94.96	95	80-121
o-Xylene	50.00	48.36	97	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	97	80-123

Type: BSD Lab ID: QC234152

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	50.00	44.94	90	69-124	6	20
Benzene	50.00	45.36	91	80-120	1	20
Toluene	50.00	46.41	93	80-120	1	20
Chlorobenzene	50.00	47.01	94	80-120	3	20
Ethylbenzene	50.00	44.97	90	80-120	4	20
m,p-Xylenes	100.0	93.43	93	80-121	2	20
o-Xylene	50.00	47.58	95	80-120	2	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	102	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	96	80-123

RPD= Relative Percent Difference

38.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC234278	Batch#:	86709
Matrix:	Water	Analyzed:	12/05/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	45.19	90	69-124
Benzene	50.00	45.40	91	80-120
Toluene	50.00	45.43	91	80-120
Chlorobenzene	50.00	47.39	95	80-120
Ethylbenzene	50.00	46.26	93	80-120
m,p-Xylenes	100.0	95.68	96	80-121
o-Xylene	50.00	47.68	95	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	77-129
Toluene-d8	96	80-120
Bromofluorobenzene	92	80-123

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Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	86648
MSS Lab ID:	169185-003	Sampled:	12/02/03
Matrix:	Water	Received:	12/02/03
Units:	ug/L	Analyzed:	12/03/03
Diln Fac:	1.000		

Type: MS Lab ID: QC234049

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1300	50.00	48.65	97	67-127
Benzene	<0.1900	50.00	47.10	94	80-120
Toluene	<0.1500	50.00	49.16	98	76-121
Chlorobenzene	<0.1700	50.00	49.64	99	80-120
Ethylbenzene	<0.1800	50.00	49.04	98	79-123
m,p-Xylenes	<0.2700	100.0	100.9	101	80-121
o-Xylene	<0.1400	50.00	52.16	104	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	96	80-123

Type: MSD Lab ID: QC234050

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	50.00	47.44	95	67-127	3	20
Benzene	50.00	46.74	93	80-120	1	20
Toluene	50.00	48.03	96	76-121	2	20
Chlorobenzene	50.00	48.92	98	80-120	1	20
Ethylbenzene	50.00	47.13	94	79-123	4	20
m,p-Xylenes	100.0	100.5	100	80-121	0	20
o-Xylene	50.00	49.97	100	80-120	4	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	77-129
Toluene-d8	100	80-120
Bromofluorobenzene	93	80-123

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	169190	Location:	Castro Valley Chevron
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2762	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	86709
MSS Lab ID:	169245-001	Sampled:	12/04/03
Matrix:	Water	Received:	12/04/03
Units:	ug/L	Analyzed:	12/05/03
Dil'n Fac:	1.000		

Type: MS Lab ID: QC234280

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1300	50.00	45.03	90	67-127
Benzene	<0.1900	50.00	45.32	91	80-120
Toluene	<0.1500	50.00	46.06	92	76-121
Chlorobenzene	<0.1700	50.00	46.78	94	80-120
Ethylbenzene	<0.1800	50.00	45.30	91	79-123
m,p-Xylenes	<0.2700	100.0	94.55	95	80-121
o-Xylene	<0.1400	50.00	48.08	96	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	77-129
Toluene-d8	101	80-120
Bromofluorobenzene	95	80-123

Type: MSD Lab ID: QC234281

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	50.00	46.15	92	67-127	2	20
Benzene	50.00	43.95	88	80-120	3	20
Toluene	50.00	43.49	87	76-121	6	20
Chlorobenzene	50.00	47.22	94	80-120	1	20
Ethylbenzene	50.00	45.38	91	79-123	0	20
m,p-Xylenes	100.0	93.94	94	80-121	1	20
o-Xylene	50.00	48.07	96	80-120	0	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	77-129
Toluene-d8	97	80-120
Bromofluorobenzene	95	80-123

RPD= Relative Percent Difference

40.0