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Fourth Quarter 2003
Groundwater Monitoring Report
Castro Valley Gasoline Service Station
3519 Castro Valley Boulevard
Castro Valley, California

December 30, 2003

Project 2761

Prepared for
Mr. Mirazim Shakoori
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Castro Valley, California 94546

Prepared by
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December 31, 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

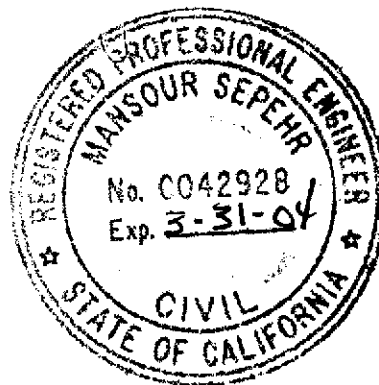
Dear Ms. Chu:

Enclosed for your review is SOMA's "Fourth Quarter 2003 Groundwater Monitoring Report" 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. 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' requirements for the Fourth Quarter 2003 groundwater monitoring event.



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

Principal Hydrogeologist



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1.0 Introduction

This report has been prepared by SOMA Environmental Engineering, Inc. (SOMA) on behalf of Mr. Mirazim Shakoori the property owner of the Former BP Station located at 3519 Castro Valley Boulevard, Castro Valley, California, (the "Site"), as shown in Figure 1.

The Site is located at the southeast corner of the intersection of Castro Valley Boulevard and Redwood Road in a mixed commercial/residential area of Castro Valley, California at an elevation of 178 feet above mean sea level (msl).

This report summarizes the results of the groundwater monitoring event conducted on December 9, 2003 at the Site. It includes the physical and chemical properties measured in the field for each groundwater sample. The physical and chemical properties consisted of measurements of pH, temperature, and electrical conductivity (EC). Also included in this report are the results of the laboratory analyses for each groundwater sample, which was analyzed for:

- Total petroleum hydrocarbons as gasoline (TPH-g)
- Benzene, toluene, ethylbenzene, total xylenes (collectively referred to as BTEX)
- Methyl tertiary Butyl Ether (MtBE)
- Gasoline Oxygenates, which included tertiary butyl alcohol (TBA), isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE) and methyl tertiary amyl ether (TAME), Ethanol; and
- Lead scavengers, which included 1,2-Dichlorethane (1,2-DCA) and 1,2-Dibromoethane (EDB)

These activities were performed in accordance with the general guidelines of the Alameda County Health Care Services (ACHCS).

1.1 Previous Activities

In 1984, it appears that three single-walled fiberglass underground storage tanks (USTs) with capacities of 6,000 gallons, 8,000 gallons, and 10,000 gallons were installed in the southeastern portion of the Site. A former dispenser island reportedly existed on the west side of the Site; however, there was no available information on the date of the dispenser removal.

In 1988, a 1,000-gallon double-walled fiberglass waste oil tank (WOT) was installed to replace the previous waste oil UST. 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 - 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. Further lab 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.

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

In September and October 1992, Environmental Science & Engineering, Inc. (ESE) drilled five soil boreholes and converted them into monitoring wells (ESE-1 through ESE-5). They ranged in depth from approximately 23 to 30 feet bgs. The results of this site investigation are as follows.

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 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 of the monitoring wells with the maximum groundwater concentration detected in ESE-1, 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 TPH-g and BTEX soil concentrations detected in the road-widening boreholes were 59,000 ug/Kg of TPH-g, 5,890 ug/Kg of benzene, 220,000 ug/Kg of ethylbenzene, and 540,000 ug/Kg of xylenes.

In July 1995, Alisto Engineering (AE) installed three additional monitoring wells. AE installed two on-site wells, MW-6 and MW-8, and one off-site 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 concentrations increased with depth and the highest concentration was encountered at the capillary fringe. It was concluded that a dissolved phase plume migrated from an upgradient source. 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 MW-7. Prior to SOMA, URS Corporation, Cambria Environmental Technology, Inc., Blaine Technical Services, AE, and ESE conducted these monitoring and sampling events.

In May 2000, an apparently leaking shear valve was discovered in the southern dispenser island piping. A URR was submitted to the ACHCS.

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.

On August 20, 2003, prior to the UST removal activities, SOMA oversaw the drilling of two boreholes by Vironex. The two boreholes were drilled in order to characterize the soil for landfill acceptance criteria. The borehole location is shown in Figure 2.

In September 2003, in order to comply with the UST upgrade regulations, three single-walled fiberglass USTs, with capacities of 6,000 gallons, 8,000 gallons, and 10,000 gallons were removed and replaced with new double-walled fuel tanks. The new USTs consisted of double-walled fiberglass tanks with capacities of 12,000 gallons and 20,000 gallons. In addition to the removal and replacement of the USTs, the dispensers, product lines, and vent lines were also removed and replaced. W.A. Craig removed and replaced the former USTs, product lines, and dispensers. The on-site participating agency was the ACHCS.

During the Third Quarter 2003, two monitoring wells, ESE-3 and ESE-4, were decommissioned due to the construction activities.

In December 2003, SOMA oversaw the drilling of off-site temporary well boreholes. The boreholes were drilled to determine the extent of petroleum hydrocarbon impactation to the off-site groundwater. The locations of the temporary boreholes are displayed in Figure 2.

1.2 General Hydrogeology

Based on joint monitoring events with the adjacent Xtra (Shell) station to the west, from January 1995 to April 1998, the groundwater flow direction varied from north/northwest to south/southeast, but primarily to the northeast. Based on monitoring events since the cessation of the joint events, the groundwater flow direction has usually been to the south and east. The on-site groundwater flow has been consistently to the southeast/south.

2.0 Field Activities

On December 9, 2003, SOMA's field crew conducted a groundwater monitoring event in accordance with the procedures and guidelines of the ACHCS. During this groundwater monitoring event, four on-site monitoring wells (ESE-1, ESE-2, ESE-5, and MW-6) and one off-site monitoring well (MW-7) were monitored. Figure 2 illustrates the locations of the wells.

The depth to groundwater at each monitoring well was measured from the top of the casing to the nearest 0.01 foot using an electric sounder. The top of the casing elevation data and the depth to groundwater at each monitoring well were used to calculate the groundwater elevation.

During the monitoring event, each well was purged using a battery operated 2-inch diameter pump (Model ES-60 DC) prior to the collection of samples. In order to ensure that the final samples were in equilibrium with (and representative of) the surrounding groundwater, during purging several samples were taken for field measurements of pH, temperature and EC. The field parameters were measured using a Hanna pH, conductivity, and temperature meter. The equipment was calibrated at the Site using standard solutions and procedures provided by the manufacturer.

Appendix A details the field measurements taken during the monitoring event.

The purging of the wells continued until the parameters for pH, temperature and EC stabilized or three casing volumes were purged. Once the purging at each location was complete, a groundwater sample was collected. The groundwater samples were transferred into four 40-mL VOA vials and preserved with hydrochloric acid. The vials were then sealed to prevent the development of air bubbles within the headspace. After the groundwater samples were collected, they were placed into an ice-filled cooler. A chain of custody (COC) form was written for all of the samples and was submitted to the laboratory along with the groundwater samples. SOMA's field crew delivered the groundwater samples to Curtis & Tompkins Laboratory in Berkeley, California, on December 9, 2003.

3.0 Laboratory Analysis

Curtis & Tompkins, Ltd., a state certified laboratory, analyzed the groundwater samples for TPH-g, BTEX, MtBE, gasoline oxygenates, and lead scavengers. Samples for TPH-g measurement were prepared using EPA Method 5030B and analyzed using Method EPA 8015B. Samples for BTEX measurements were prepared using EPA Method 5030B and analyzed using EPA Method 8021B.

Samples for MtBE, gasoline oxygenates, and lead scavengers were prepared using EPA Method 5030B and analyzed using EPA Method 8260B.

4.0 Results

The following sections provide the results of the field measurements and laboratory analyses for the December 9, 2003 groundwater monitoring event.

4.1 Field Measurements

Table 1 presents the calculated groundwater elevations at each monitoring well. As shown in Table 1, the depth to groundwater ranged from 7.32 feet in monitoring well ESE-5 to 9.97 feet in monitoring well ESE-2. The corresponding groundwater elevations, ranged from 167.56 feet in monitoring well MW-7 to 169.58 feet in monitoring well MW-6.

The groundwater elevation contour map is displayed in Figure 3. The groundwater flow direction is south to slightly southeast across the Site. The groundwater gradient is approximately 0.012 feet/foot. The groundwater flow direction and gradient are consistent with the previous monitoring event (Third Quarter 2003).

Table 2 presents the historical groundwater elevations at different groundwater monitoring wells. The groundwater elevations have increased since the previous monitoring event in wells ESE-5, MW-6, and MW-7. Due to construction activities, which included the removal and replacement of the USTs and product dispensers, wells ESE-1 and ESE-2 were inaccessible. Variations in groundwater elevations are typically due to seasonal fluctuations and also local recharge rates at each well location. The weather was rainy during this monitoring event, therefore, the watertable ascended towards the ground surface.

Table 3 summarizes the field measurements of the physical and chemical properties of the groundwater samples collected from the monitoring wells at the time of sampling. The pH measurements were at 6.80 throughout the site, with the exception of well ESE-2, which was at 6.79. The temperature measurements ranged from 18.50°C in monitoring well MW-7 to 20.30°C in monitoring well ESE-5. EC ranged from 930 $\mu\text{S}/\text{cm}$ in well MW-6 to 1,260 $\mu\text{S}/\text{cm}$ in well ESE-5.

4.2 Laboratory Analyses

Table 4 presents the results of the TPH-g, BTEX, and MtBE laboratory analyses on the groundwater samples. Table 5 presents the results of the gasoline oxygenates and lead scavengers laboratory analyses on the groundwater samples. Tables 6 and 7, present the historical groundwater analytical data since SOMA began monitoring the Site in the Third Quarter 2003.

As shown in Table 4, TPH-g was below the laboratory reporting limit for monitoring wells ESE-2, MW-6, and MW-7. TPH-g was detected in wells ESE-1 and ESE-5 at 1,400 $\mu\text{g}/\text{L}$ and 700 $\mu\text{g}/\text{L}$, respectively.

Figure 4 displays the contour map of TPH-g concentrations in the groundwater on December 9, 2003. As displayed in Figure 4, the highest TPH-g concentration was detected in well ESE-1, which is located adjacent to the former USTs. The next highest TPH-g concentration was detected in well ESE-5, in the western section of the Site. In 1996, in the vicinity of the former western pump, petroleum hydrocarbons were encountered. The TPH-g concentration detected in well ESE-1 can be attributed to a possible earlier leak in the vicinity of the western pump islands and migration of the plume due to the southeasterly groundwater flow direction.

As shown in Table 4, all BTEX analytes were below the laboratory reporting limit in wells ESE-2, MW-6, and MW-7. The lowest detectable benzene, ethylbenzene, and total xylenes concentrations were detected in well ESE-5 at 6.5 µg/L, 3.1 µg/L, and 2.7 µg/L, respectively. Toluene was below the laboratory reporting limit in well ESE-5. The highest BTEX concentrations were detected in well ESE-1 at 390 µg/L, 12 µg/L, 14 µg/L, and 26.1 µg/L, respectively. However, based on the laboratory results, the reported total xylene concentration in ESE-5 may not be representative due to matrix interferences encountered during the analytical testing; the laboratory indicated this interference by a "C" flag, (see the "C" flag designation in the lab report included as Appendix B).

Figure 5 displays the contour map of benzene concentrations in the groundwater on December 9, 2003. The benzene concentration, like the TPH-g concentration, was detected at the highest level in well ESE-1. This can possibly be attributed to an earlier leak in the vicinity of the western former pump island and the southeasterly migration of the benzene plume with the groundwater.

MtBE, when analyzed using EPA Method 8260B, was below the laboratory reporting limit in well MW-6. Detectable MtBE concentrations, ranged from 34 µg/L in well ESE-5 to 3,400 µg/L in well ESE-2.

The contour map of MtBE concentrations in the groundwater, as analyzed using EPA Method 8260B, during the Fourth Quarter 2003, is displayed in Figure 6. The results of the recent monitoring event showed that the highest MtBE concentration was in monitoring well ESE-2. This well (ESE-2) is directly south of the former USTs. MtBE was detected as high as 36,000 µg/L in well ESE-2 in 1998. The high MtBE concentrations in well ESE-2, can be attributed a possible earlier release in the vicinity of the former UST cavity. The migration of the MtBE plume can be attributed to the south/southeasterly groundwater flow direction, and the high solubility of MtBE in the groundwater. MtBE has also impacted off-

site well MW-7.

As shown in Table 5, TBA was below the laboratory reporting limit in wells ESE-5, MW-6, and MW-7. TBA was detected in wells ESE-1 and ESE-2 at 290 $\mu\text{g/L}$ and 500 $\mu\text{g/L}$, respectively. The contour map of TBA concentrations in the groundwater, during the Fourth Quarter 2003, is displayed in Figure 7. The highest TBA concentration, like the MtBE concentration, was detected in the southeastern section of the Site, in well ESE-2.

Gasoline oxygenates DIPE, ETBE, and Ethanol, and lead scavengers 1,2-DCA and EDB were below the laboratory reporting limit in all of the groundwater samples collected during the Fourth Quarter 2003.

TAME was below the laboratory reporting limit in wells ESE-5 and MW-6. TAME was detected in the southeastern section of the Site in wells ESE-1 and ESE-2, and off-site well MW-7. The highest TAME concentration was detected in well ESE-2 at 77 $\mu\text{g/L}$. The contour map of TAME concentrations in the groundwater, during the Fourth Quarter 2003, is displayed in Figure 8. The highest TAME concentration, like the MtBE concentration, was detected in the southeastern section of the Site, in well ESE-2.

The historical groundwater TPH-g, BTEX, and MtBE analytical data, since SOMA began monitoring the Site in the Third Quarter 2003, is shown in Table 6. Due to the construction activities in the Third Quarter 2003, which included the removal and replacement of the USTs and product dispensers, wells ESE-1 and ESE-2 were inaccessible. The following TPH-g, BTEX, and MtBE concentration trends were observed, since the previous monitoring event, for wells ESE-5, MW-6, and MW-7.

- TPH-g decreased in well ESE-5. TPH-g remained below the laboratory reporting limit in wells MW-6 and MW-7.
- In well ESE-5, benzene and total xylenes slightly decreased, toluene remained below the laboratory reporting limit, and ethylbenzene increased. However, benzene was "C" flagged in the Third Quarter 2003, and total xylenes were "C" flagged this quarter, see the laboratory report for both quarters for further clarification. In wells MW-6 and MW-7, all BTEX analytes remained below the laboratory reporting limit.
- MtBE remained constant at 34 µg/L in well ESE-5. MtBE remained below the laboratory reporting limit in well MW-6. In well MW-7, MtBE decreased.

The historical groundwater gasoline oxygenate and lead scavenger analytical data, since SOMA began monitoring the Site in the Third Quarter 2003, is shown in Table 7. As previously mentioned ESE-1 and ESE-2 were inaccessible in the Third Quarter 2003. The following gasoline oxygenate and lead scavenger concentration trends were observed, since the previous monitoring event, for wells ESE-5, MW-6, and MW-7.

- All gasoline oxygenates and lead scavengers remained below the laboratory reporting limit in wells ESE-5 and MW-6.
- In well MW-7, TAME slightly decreased, all other gasoline oxygenates and lead scavengers remained below the laboratory reporting limit.

Appendix B displays the analytical results for each groundwater sample collected during the Fourth Quarter 2003 monitoring event.

Appendix C displays the historical groundwater elevations and the historical groundwater analytical data for the Site.

5.0 Conclusions & Recommendations

The findings of the Fourth Quarter 2003, groundwater monitoring event can be summarized as follows:

- The groundwater flow direction is south to southeasterly across the Site. The lowest groundwater elevation was measured at off-site well MW-7. The groundwater gradient is approximately 0.012 feet/feet. The groundwater flow direction and gradient are consistent with the previous, Third Quarter 2003, monitoring event.
- TPH-g and benzene were detected at maximum concentrations in well ESE-1 at 1,400 µg/L and 390 µg/L, respectively. The high concentrations detected in this well, can be attributed to a possible earlier release in the western section of the Site in the former pump islands and migration of the plumes. The migration of the TPH-g and benzene plumes can be attributed to the southeasterly groundwater flow direction. However, in well ESE-1, TPH-g has been detected as high as 15,000 µg/L and benzene has been detected as high as 3,400 µg/L during the Second Quarter 1998.
- The highest MtBE and gasoline oxygenates (TBA and TAME) concentrations were detected in southeastern section of the Site, in well ESE-2. This can be attributed to the location of this well in respect to the location of the former UST cavity. However, in well ESE-2, MtBE has been detected as high as 36,000 µg/L during the Second Quarter 1998.
- Based on the solubility of MtBE, and the southeast to south groundwater flow direction, MtBE has migrated off-site and impacted well MW-7. Impacted on-site groundwater, due to the groundwater flow direction, appears to be migrating off-site towards the adjacent commercial property located south of the Site.
- The only constituents detected in off-site well MW-7, during this monitoring event, were MtBE and a trace concentration of TAME. Both

MtBE and TAME concentrations have decreased since the Third Quarter 2003, in well MW-7.

- As previously mentioned, the former USTs in the southeastern section of the Site, as well as, the fuel dispensers and associated piping were removed in the Third Quarter 2003. During this period, ESE-3 and ESE-4 were decommissioned. SOMA proposes re-installing these wells at their previous locations.
- In December 2003, SOMA conducted an off-site investigation to delineate the extent of petroleum hydrocarbon impact to the off-site groundwater. The report describing the results of this investigation was prepared on December 29, 2003. Based on the results of this investigation, SOMA proposed installing additional off-site groundwater monitoring wells.

6.0 References

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Kaprealian Engineering, Inc., October 17, 1988, "Soil Sampling Report, 3519 Castro Valley Blvd., Castro Valley, California".

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Alisto Engineering Group, May 1, 1996, "Groundwater Monitoring Well Destruction Report, 3519 Castro Valley Blvd., Castro Valley, California".

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URS Corp., July 18, 2003, "Second Quarter Monitoring Report, 3519 Castro Valley Blvd., Castro Valley, California".

SOMA Environmental Engineering, Inc., October 14, 2003. "Third Quarter 2003 Groundwater Monitoring Report, Castro Valley Gasoline Service Station, 3519 Castro Valley Blvd., Castro Valley, California".

Tables

Table 1
Groundwater Elevations in feet
December 9, 2003
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Top of casing elevation ¹ (feet)	Depth to Water (feet)	Groundwater Elevation (feet)
ESE-1	177.69	9.32	168.37
ESE-2	178.23	9.97	168.26
ESE-5	176.26	7.32	168.94
MW-6	179.24	9.66	169.58
MW-7	176.55	8.99	167.56

Table 2
Historical Groundwater Elevations in feet
3519 Castro Valley Blvd, Castro Valley, CA

Date	ESE-1	ESE-2	ESE-5	MW-6	MW-7
Dec-03	168.37	168.26	168.94	169.58	167.56
Sep-03	NM	NM	167.78	169.03	167.03

notes:

NM: Not Measured. Due to construction activities in the Third Quarter 2003, which consisted of the replacement of the USTs and dispensers, wells ESE-1 & ESE-2 were inaccessible.

The Third Quarter 2003 was the first time SOMA monitored this site.

Table 3
Field Measurements of Physical and Chemical
Properties of Groundwater at Time of Sampling
December 9, 2003
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	pH	Temp (°C)	EC (uS/cm)
ESE-1	6.80	19.00	1150
ESE-2	6.79	18.60	1090
ESE-5	6.80	20.30	1260
MW-6	6.80	19.70	930
MW-7	6.80	18.50	950

Table 4
Groundwater Analytical Data
TPH-g, BTEX, MtBE

December 9, 2003

3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-1	1400	390	12	14	26.1	260
ESE-2	<50	<0.5	<0.5	<0.5	<0.5	3400
ESE-5	700	6.5	<0.5	3.1	2.7 C	34
MW-6	<50	<0.5	<0.5	<0.5	<0.5	<0.5
MW-7	<50	<0.5	<0.5	<0.5	<0.5	420

Notes:

< : Not detected above laboratory reporting limit.

C: Presence confirmed, but RPD between columns exceeds 40%.

Table 5
Groundwater Analytical Data
Gasoline Oxygenates & Lead Scavengers
December 9, 2003
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
ESE-1	290	<1.0	<1.0	9.5	<2,000	<1.0	<1.0
ESE-2	500	<13	<13	77	<25,000	<13	<13
ESE-5	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
MW-6	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
MW-7	<25	<1.3	<1.3	8.1	<2,500	<1.3	<1.3

Notes:

< : Not detected above laboratory reporting limit.

Gasoline Oxygenates:

TBA: tertiary butyl alcohol

DIPE: isopropyl ether

ETBE: ethyl tertiary butyl ether

TAME: methyl tertiary amyl ether

Ethanol

Lead Scavengers:

1,2-DCA: 1,2-Dichloroethane

EDB: 1,2-Dibromoethane

The Third Quarter 2003 was the first time that SOMA analyzed groundwater samples at the Site.

Table 6
Historical Groundwater Analytical Data
TPH-g, BTEX, MtBE
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-1	Dec-03	1400	390	12	14	26.1	260
	Sep-03	NA	NA	NA	NA	NA	NA
ESE-2	Dec-03	<50	<0.5	<0.5	<0.5	<0.5	3400
	Sep-03	NA	NA	NA	NA	NA	NA
ESE-5	Dec-03	700	6.5	<0.5	3.1	2.7 C	34
	Sep-03	970	10 C	<0.5	<0.5	5.3	34
MW-6	Dec-03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	Sep-03	<50	<0.5	<0.5	<0.5	<0.5	<2.0
MW-7	Dec-03	<50	<0.5	<0.5	<0.5	<0.5	420
	Sep-03	<50	<0.5	<0.5	<0.5	<0.5	460

Notes:

< : Not detected above laboratory reporting limit.

C: Presence confirmed, but RPD between columns exceeds 40%.

NA: Not Analyzed. Due to construction activities in the Third Quarter 2003, which consisted of the replacement of the USTs and dispensers, wells ESE-1 & ESE-2 were inaccessible. The Third Quarter 2003 was the first time that SOMA analyzed groundwater samples

Table 7
Historical Groundwater Analytical Data
Gasoline Oxygenates & Lead Scavengers
3519 Castro Valley Blvd, Castro Valley, CA

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
ESE-1	Dec-03	290	<1.0	<1.0	9.5	<2,000	<1.0	<1.0
	Sep-03	NA	NA	NA	NA	NA	NA	NA
ESE-2	Dec-03	500	<13	<13	77	<25,000	<13	<13
	Sep-03	NA	NA	NA	NA	NA	NA	NA
ESE-5	Dec-03	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	Sep-03	<10	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
MW-6	Dec-03	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	Sep-03	<10	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
MW-7	Dec-03	<25	<1.3	<1.3	8.1	<2,500	<1.3	<1.3
	Sep-03	<10	<0.5	<0.5	9.8	<1000	<0.5	<0.5

Notes:

< : Not detected above laboratory reporting limit.

NA: Not Analyzed. Due to construction activities in the Third Quarter 2003, which consisted of the replacement of the USTs and dispensers, wells ESE-1 & ESE-2 were inaccessible. The Third Quarter 2003 was the first time that SOMA analyzed groundwater samples at the Site.

Figures



Figure 1: Site vicinity map.

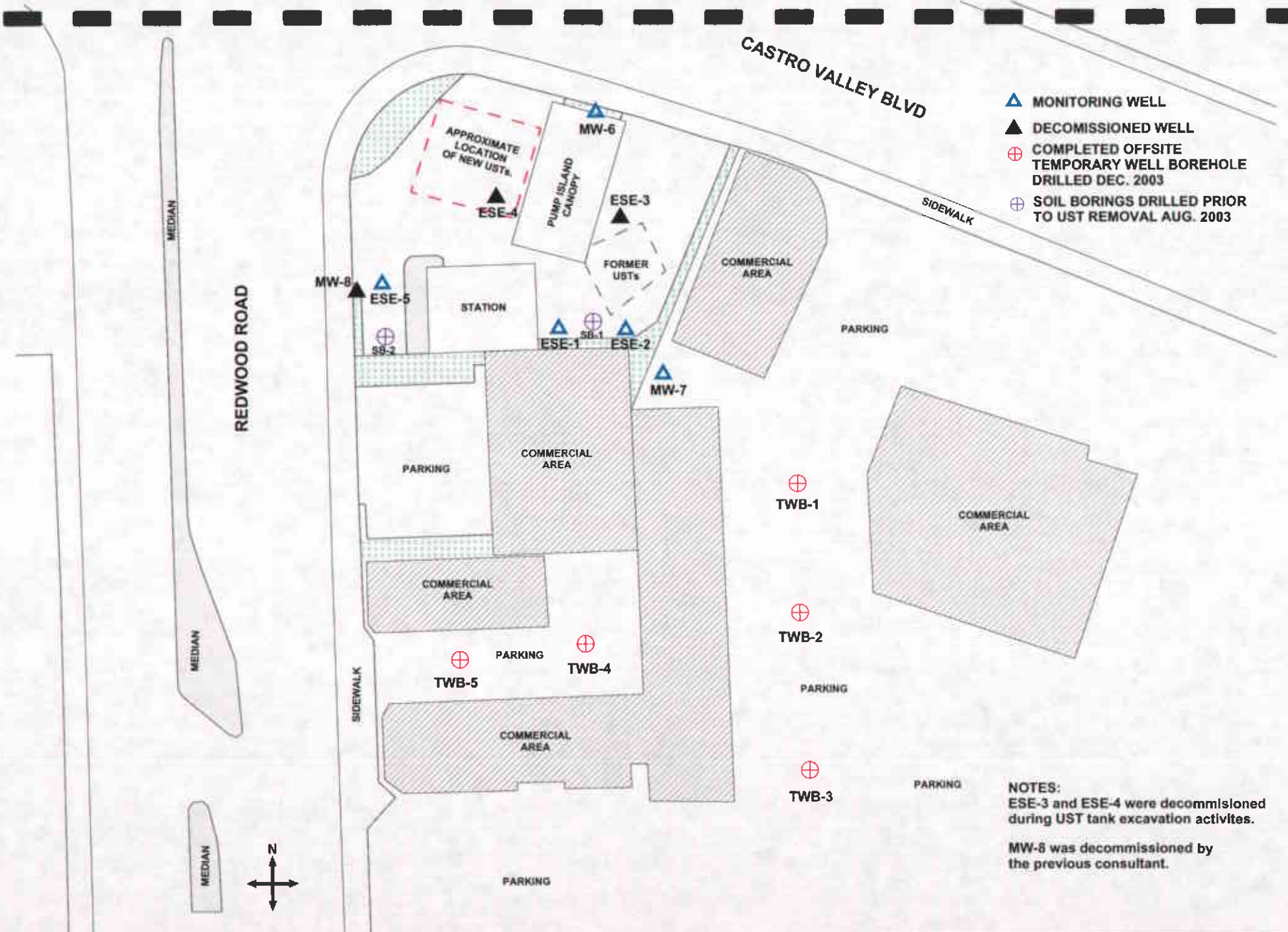


Figure 2: Site map showing locations of existing monitoring wells, decommissioned wells, and locations of proposed offsite temporary well boreholes.

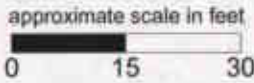
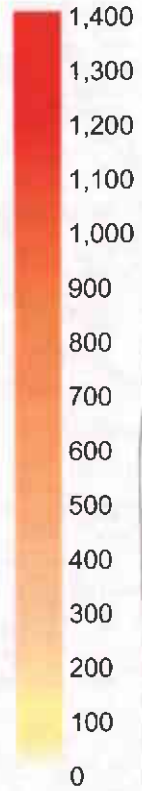


Figure 3: Groundwater elevation contour map in feet. December 9, 2003.

TPH-g
ug/L



REDWOOD ROAD

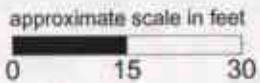
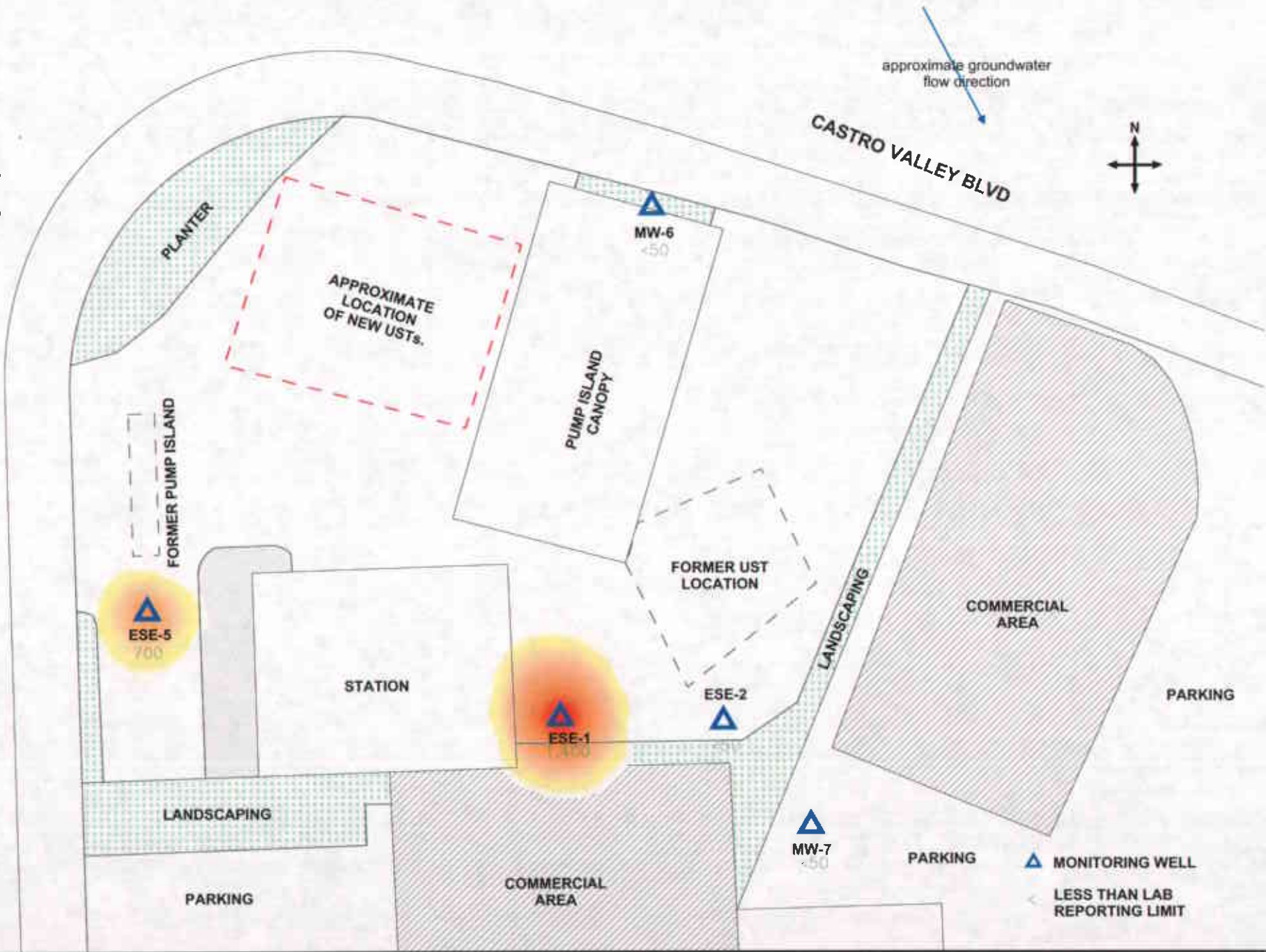
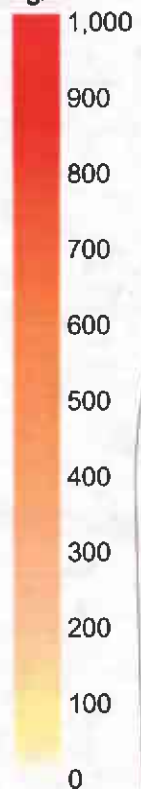


Figure 4: Contour map of TPH-g concentrations in the groundwater. December 9, 2003.

Benzene
ug/L



REDWOOD ROAD

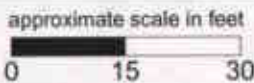
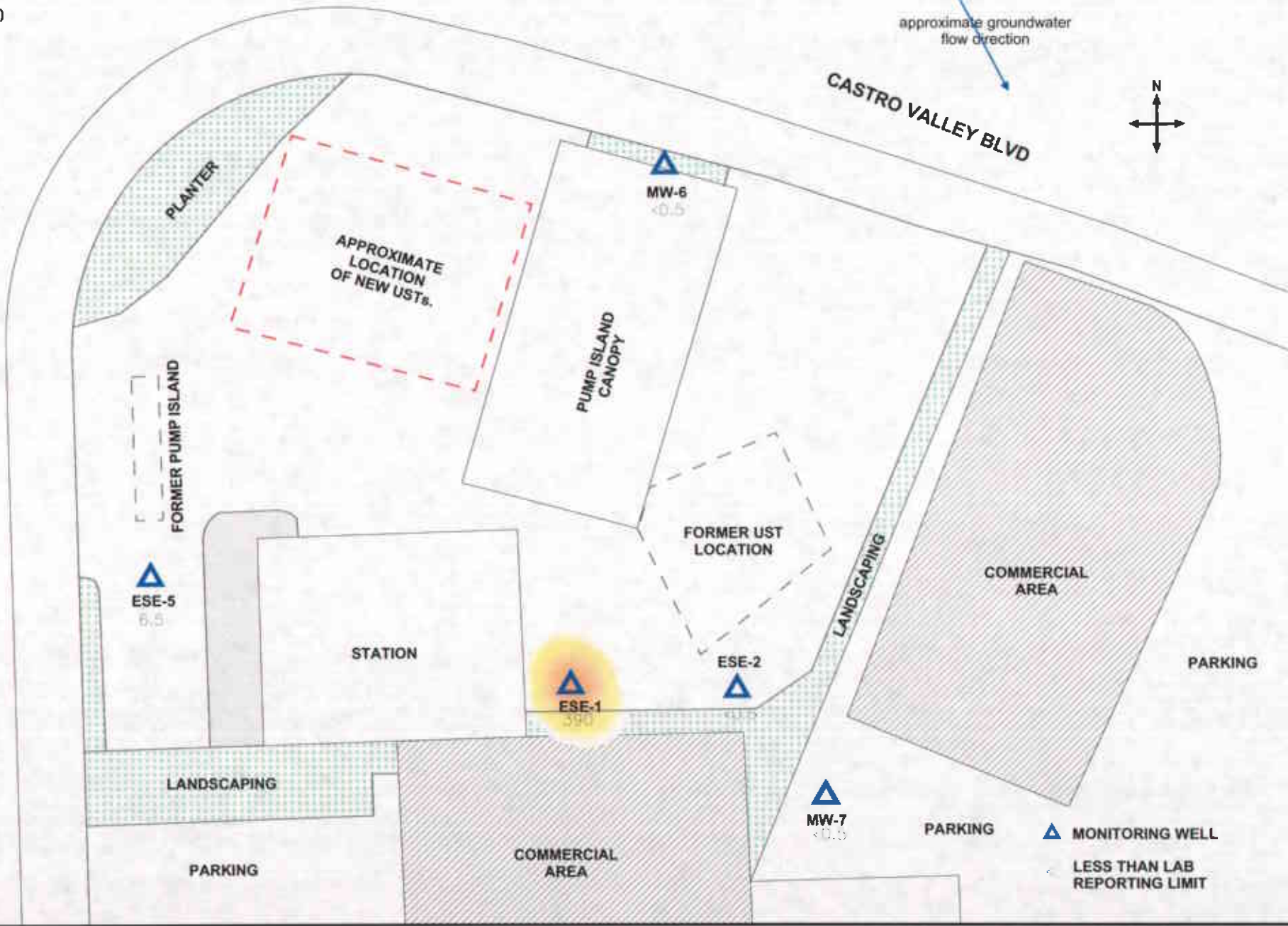
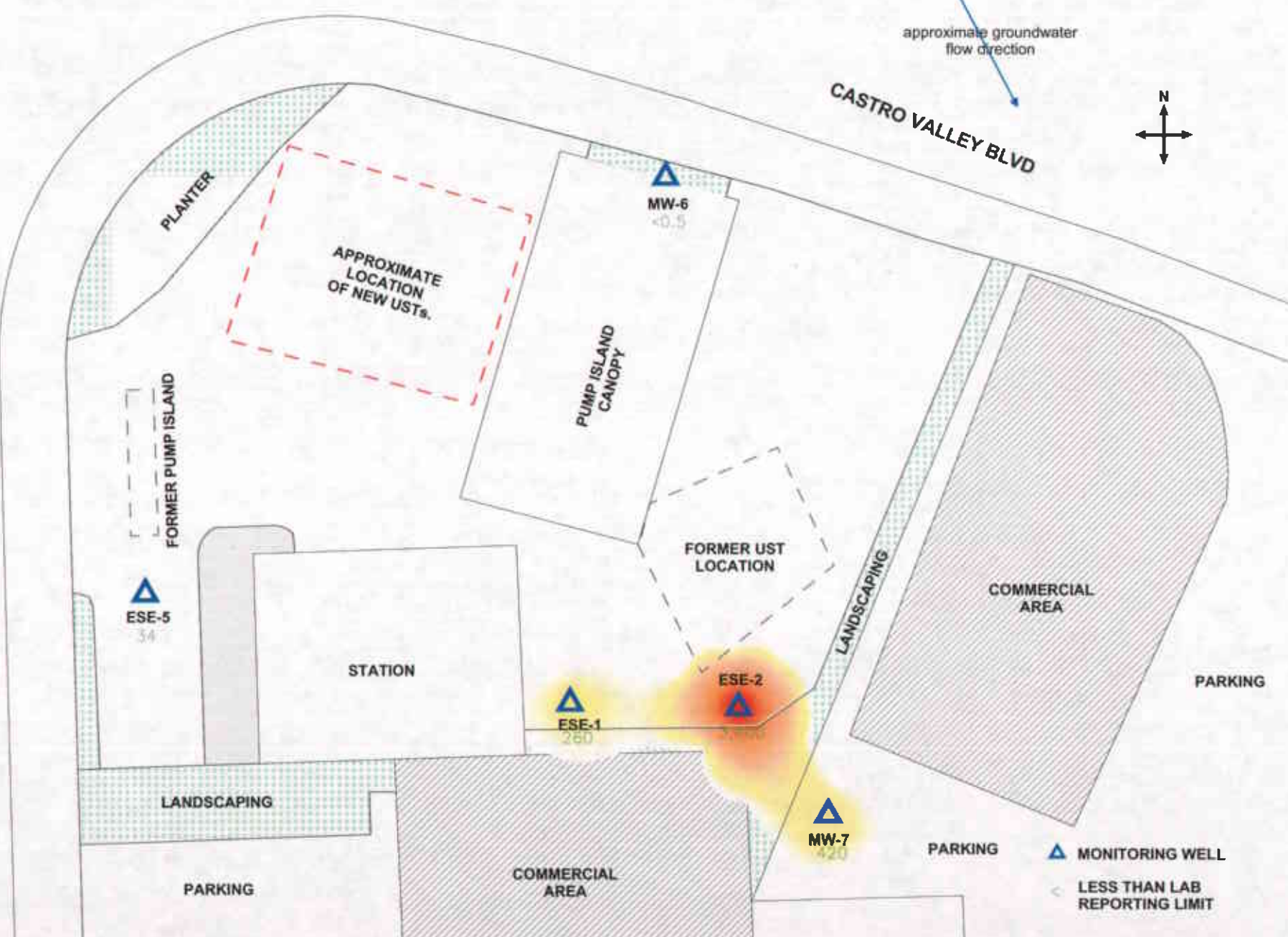


Figure 5: Contour map of Benzene concentrations in the groundwater. December 9, 2003.

MtBE
ug/L



REDWOOD ROAD



▲ MONITORING WELL
< LESS THAN LAB REPORTING LIMIT

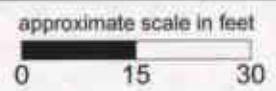


Figure 6: Contour map of MtBE concentrations in the groundwater (EPA Method 8260B). December 9, 2003.



TBA
ug/L



REDWOOD ROAD

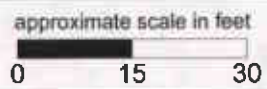
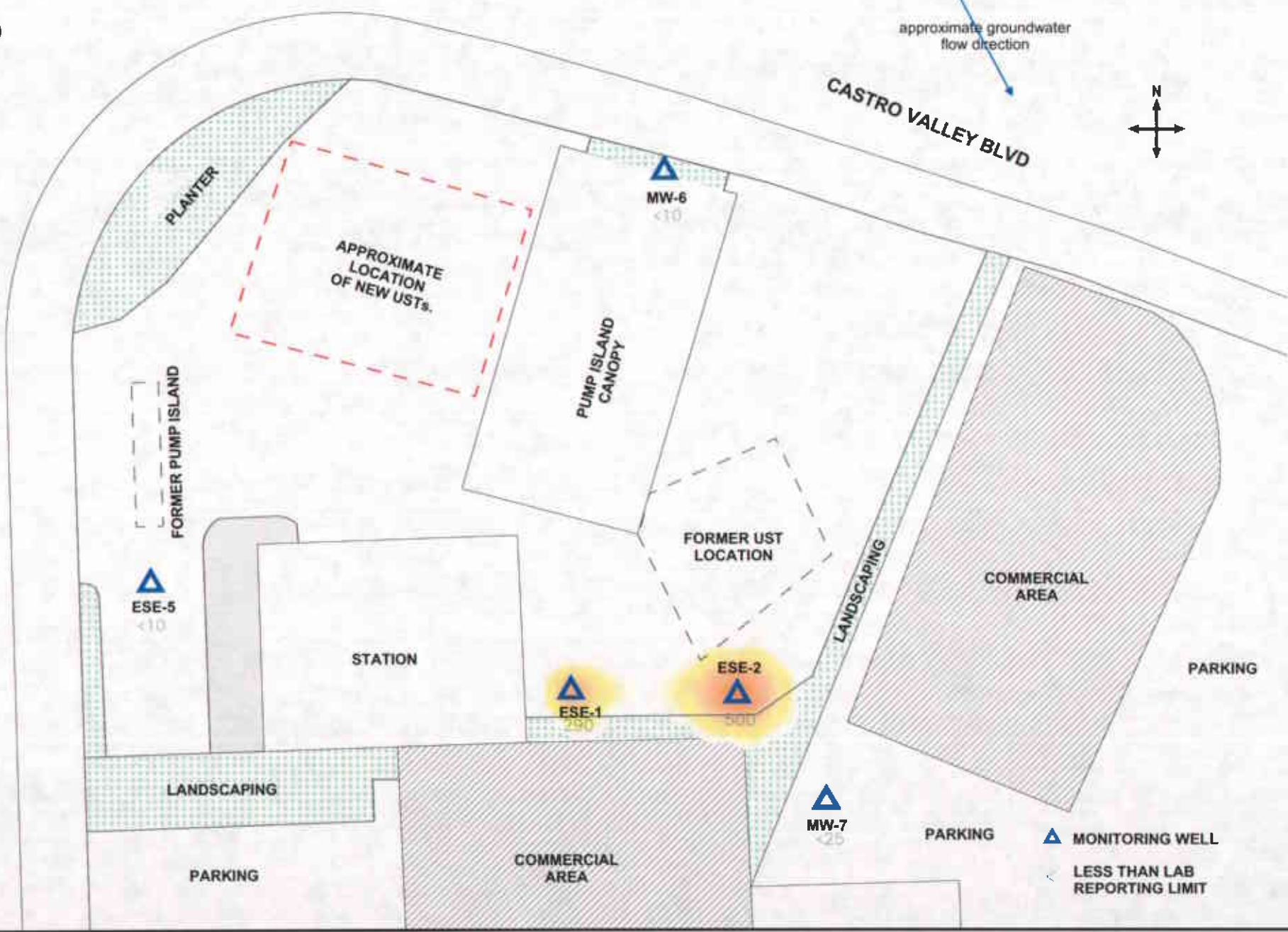
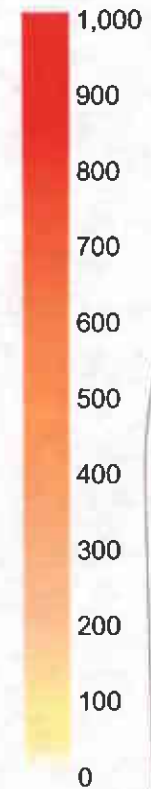


Figure 7: Contour map of TBA concentrations in the groundwater. December 9, 2003.

TAME
ug/L



REDWOOD ROAD

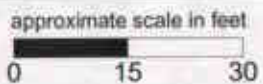


Figure 8: Contour map of TAME concentrations in the groundwater. December 9, 2003.

APPENDIX A

Field measurements of physical and chemical properties of
groundwater samples collected during the
Fourth Quarter 2003



ENVIRONMENTAL ENGINEERING, INC

Well No.: ESE-1
Casing Diameter: 2 inches
Depth of Well: 28 feet
Top of Casing Elevation: 177.69 feet
Depth to Groundwater: 9.32 feet
Groundwater Elevation: 168.37 feet
Water Column Height: 18.68 feet
Purged Volume: 10 gallons

Project No.: 2761
Address: 3519 Castro Valley Blvd
Castro Valley, CA
Date: December 9, 2003
Sampler: Tony Perini

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: No Yes Describe: yellowish

Sheen: No Yes Describe: _____

Odor: No Yes Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
1:22 PM	1.0	6.13	18.00	1130
1:25 PM	4.5	6.79	18.70	1090
1:27 PM	7.0	6.79	18.90	1140
1:30 PM	10	6.80	19.00	1150
1:35 PM	samples			



ENVIRONMENTAL ENGINEERING, INC

Well No.: ESE-2
 Casing Diameter: 2 inches
 Depth of Well: 26.45 feet
 Top of Casing Elevation: 178.23 feet
 Depth to Groundwater: 9.97 feet
 Groundwater Elevation: 168.26 feet
 Water Column Height: 16.48 feet
 Purged Volume: 10 gallons

Project No.: 2761
 Address: 3519 Castro Valley Blvd
 Castro Valley, CA
 Date: December 9, 2003
 Sampler: Tony Perini

Purging Method: Bailer Pump
 Sampling Method: Bailer Pump

Color: No Yes Describe: cloudy
 Sheen: No Yes Describe: _____
 Odor: No Yes Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12:54 PM	1.0	6.43	18.00	1170
12:56 PM	4.5	6.79	18.60	1140
12:58 PM	7.0	6.79	18.80	1130
1 PM	10	6.79	18.60	1090
1:05 PM	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: ESE-5
Casing Diameter: 2 inches
Depth of Well: 23.85 feet
Top of Casing Elevation: 176.26 feet
Depth to Groundwater: 7.32 feet
Groundwater Elevation: 168.94 feet
Water Column Height: 16.53 feet
Purged Volume: 9.0 gallons

Project No.: 2761
Address: 3519 Castro Valley Blvd
Castro Valley, CA
Date: December 9, 2003
Sampler: Tony Perini

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: No Yes Describe: cloudy

Sheen: No Yes Describe: _____

Odor: No Yes Describe: slight petro odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
10:28 AM	1.0	6.35	18.30	1310
10:30 AM	4.0	6.79	20.00	1150
10:32 AM	6.5	6.79	20.40	1170
10:34 AM	9.0	6.80	20.30	1260
10:40 AM	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-6
Casing Diameter: 2 inches
Depth of Well: 30 feet
Top of Casing Elevation: 179.24 feet
Depth to Groundwater: 9.66 feet
Groundwater Elevation: 169.58 feet
Water Column Height: 20.34 feet
Purged Volume: 10 gallons

Project No.: 2761
Address: 3519 Castro Valley Blvd
Castro Valley, CA
Date: December 9, 2003
Sampler: Tony Perini

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: No Yes Describe: _____

Sheen: No Yes Describe: _____

Odor: No Yes Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
11 AM	1.0	6.80	17.70	940
11:02 AM	4.0	6.80	19.30	910
11:04 AM	7.0	6.80	19.50	950
11:06 AM	10	6.80	19.70	930
11:10 AM	sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-7
 Casing Diameter: 2 inches
 Depth of Well: 29.30 feet
 Top of Casing Elevation: 176.55 feet
 Depth to Groundwater: 8.99 feet
 Groundwater Elevation: 167.56 feet
 Water Column Height: 20.31 feet
 Purged Volume: 10 gallons

Project No.: 2761
 Address: 3519 Castro Valley Blvd
 Castro Valley, CA
 Date: December 9, 2003
 Sampler: Tony Perini

Purging Method: Bailer Pump
 Sampling Method: Bailer Pump

Color: No Yes Describe: Brownish
 Sheen: No Yes Describe: _____
 Odor: No Yes Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
11:26 AM	1.0	6.74	16.80	920
11:30 AM	4.5	6.80	17.90	930
11:31 AM	6.5	6.80	18.40	940
11:33 AM	10	6.80	18.50	950
11:35 AM	SAMPLED			

Appendix B

**Chain of Custody Form and Laboratory Report
for the Fourth Quarter 2003 Monitoring Event**




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: 24-DEC-03
Lab Job Number: 169319
Project ID: 2761
Location: 3519 Castro Valley 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.

925-819-5009

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 # 169319

Sampler: Tony Perini

Report To: Tony Perini

Project No: 2761

Project Name: 3519 Castro Valley Blvd., Castro Valley 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 ₂ SO ₄	HNO ₃	ICE
-1	ESE-1	12/9/03	1:35 PM				4-VOAs	✓			✓
-2	ESE-2	↓	1:05 PM				↓	↓			↓
-3	ESE-5	↓	10:40 AM				↓	↓			↓
-4	MW-6	↓	11:10 AM				↓	↓			↓
-5	MW-7	↓	11:35 AM				↓	↓			↓

TPHg 8015	BTEX 8021 GC	Gasoline Oxygenates & Lead Scavengers	Ethanol
✓	✓	✓	✓
↓	↓	↓	↓
↓	↓	↓	↓
↓	↓	↓	↓
↓	↓	↓	↓

Received Cold Ambient On ice Intact

Notes: **EDF OUTPUT REQUIRED**
GASOLINE OXYGENATES: TBA, DIPE, ETBE, TAME and MtBE
LEAD SCAVENGERS: 1,2-DCA, EDB

RELINQUISHED BY:
Tony Perini 2:45 PM
Tony Perini 12/9/03 DATE/TIME
 DATE/TIME
 DATE/TIME

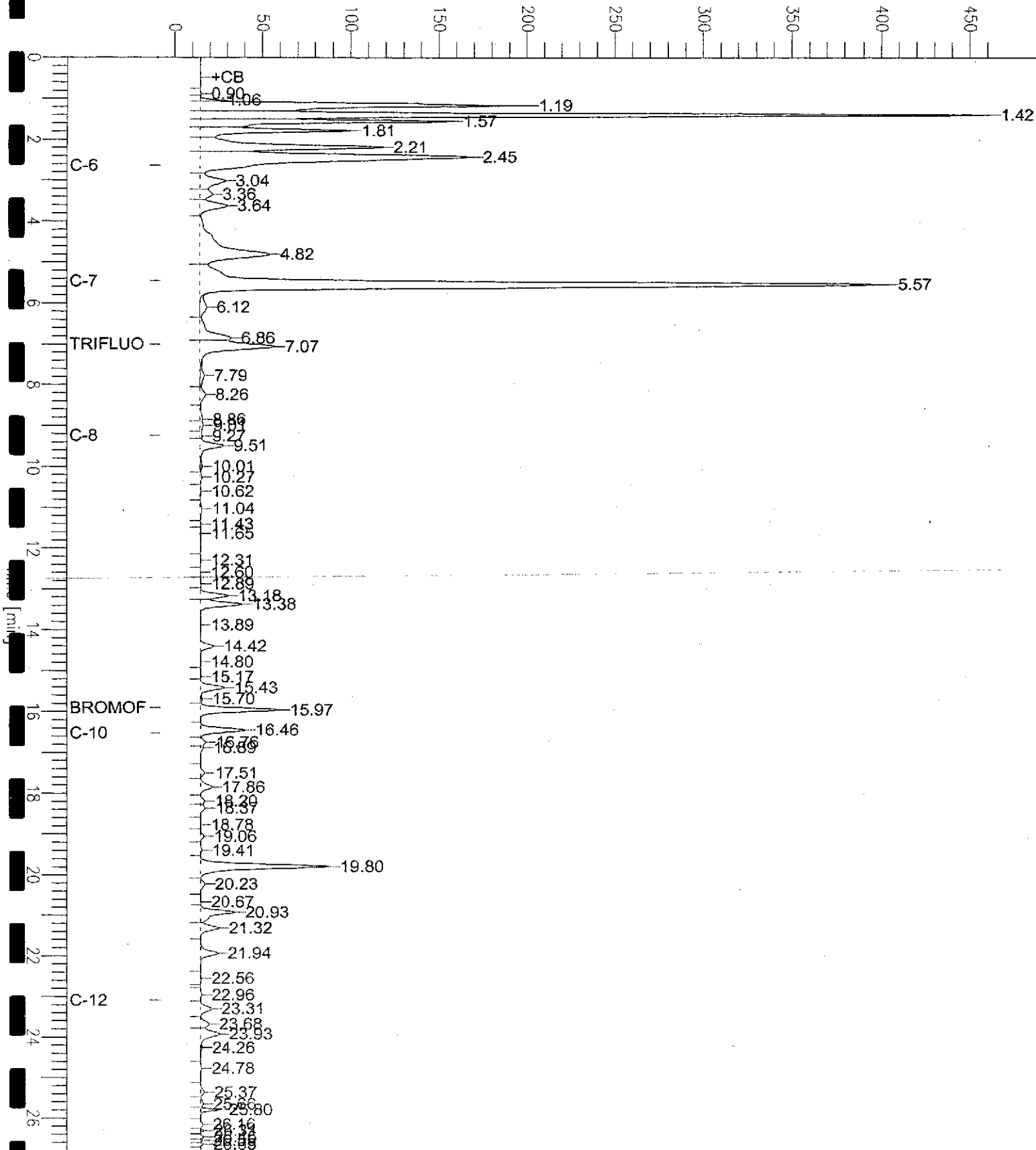
RECEIVED BY:
12-9-03 2:45 PM
 DATE/TIME
 DATE/TIME
 DATE/TIME

Sample Name : 169319-001,86778
FileName : G:\GC19\DATA\343X018.raw
Method : TVHBTXE
Start Time : 0.00 min
Scale Factor : 1.0

Sample #: a1.0
Date : 12/10/03 12:09 AM
Time of Injection: 12/9/03 11:42 PM
Low Point : -7.80 mV
High Point : 461.52 mV
Plot Scale: 469.3 mV

ESE-1

Response [mV]



Sample Name : 169319-003,86809

Sample #: d1.0

Page 1 of 1

FileName : G:\GC07\DATA\344A004.raw

Date : 12/11/03 10:45 AM

Method : TVHBTXE

Time of Injection: 12/10/03 12:57 PM

Start Time : 0.00 min End Time : 26.00 min

Low Point : 11.76 mV

High Point : 123.88 mV

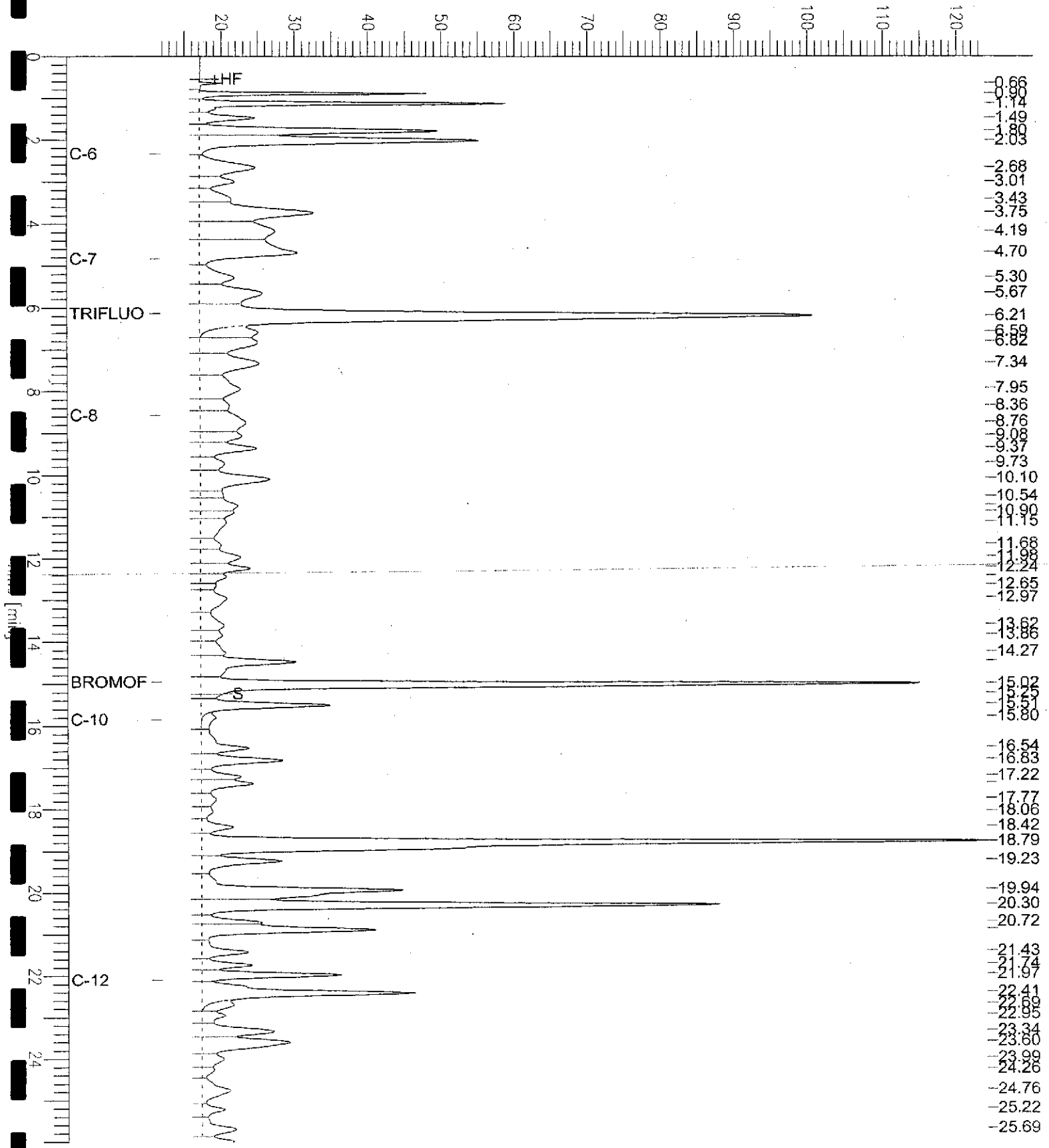
Scale Factor: 1.0

Plot Offset: 12 mV

Plot Scale: 112.1 mV

20-5

Response [mV]





Curtis & Tompkins Laboratories Analytical Report

Lab #: 169319 Location: 3519 Castro Valley Blvd.
 Client: SOMA Environmental Engineering Inc. Prep: EPA 5030B
 Project#: 2761
 Matrix: Water Sampled: 12/09/03
 Units: ug/L Received: 12/09/03

Field ID: MW-6 Diln Fac: 1.000
 Type: SAMPLE Batch#: 86778
 Lab ID: 169319-004 Analyzed: 12/10/03

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
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)	100	57-150	8015B
Bromofluorobenzene (FID)	104	65-144	8015B
Trifluorotoluene (PID)	96	54-149	EPA 8021B
Bromofluorobenzene (PID)	103	58-143	EPA 8021B

Field ID: MW-7 Diln Fac: 1.000
 Type: SAMPLE Batch#: 86778
 Lab ID: 169319-005 Analyzed: 12/10/03

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

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	97	57-150	8015B
Bromofluorobenzene (FID)	105	65-144	8015B
Trifluorotoluene (PID)	94	54-149	EPA 8021B
Bromofluorobenzene (PID)	103	58-143	EPA 8021B

C = Presence confirmed, but RPD between columns exceeds 40%

ND = Not Detected

PL = Reporting Limit



Curtis & Tompkins Laboratories Analytical Report

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761		
Matrix:	Water	Sampled:	12/09/03
Units:	ug/L	Received:	12/09/03

Type:	BLANK	Batch#:	86778
Lab ID:	QC234537	Analyzed:	12/09/03
Diln Fac:	1.000		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
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)	94	57-150	8015B
Bromofluorobenzene (FID)	102	65-144	8015B
Trifluorotoluene (PID)	91	54-149	EPA 8021B
Bromofluorobenzene (PID)	95	58-143	EPA 8021B

Type:	BLANK	Batch#:	86809
Lab ID:	QC234666	Analyzed:	12/10/03
Diln Fac:	1.000		

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B
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)	100	57-150	8015B
Bromofluorobenzene (FID)	105	65-144	8015B
Trifluorotoluene (PID)	69	54-149	EPA 8021B
Bromofluorobenzene (PID)	75	58-143	EPA 8021B

C = Presence confirmed, but RPD between columns exceeds 40%

ND = Not Detected

RL = Reporting Limit

Page 3 of 3

Curtis & Tompkins Laboratories Analytical Report

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC234538	Batch#:	86778
Matrix:	Water	Analyzed:	12/09/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
Benzene	20.00	21.96	110	78-123
Toluene	20.00	21.46	107	79-120
Ethylbenzene	20.00	21.03	105	80-120
m,p-Xylenes	40.00	38.32	96	76-120
o-Xylene	20.00	21.74	109	80-121

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		94	54-149
Bromofluorobenzene (PID)		102	58-143



Curtis & Tompkins Laboratories Analytical Report

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC234539	Batch#:	86778
Matrix:	Water	Analyzed:	12/09/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,058	103	80-120
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		111	57-150
Bromofluorobenzene (FID)		106	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		



Curtis & Tompkins Laboratories Analytical Report

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8021B
Type:	BS	Diln Fac:	1.000
Lab ID:	QC234667	Batch#:	86809
Matrix:	Water	Analyzed:	12/10/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12		NA		
Benzene	20.00	19.45	97	78-123
Toluene	20.00	18.72	94	79-120
Ethylbenzene	20.00	18.38	92	80-120
m,p-Xylenes	40.00	39.74	99	76-120
o-Xylene	20.00	19.04	95	80-121

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		70	54-149
Bromofluorobenzene (PID)		77	58-143

Curtis & Tompkins Laboratories Analytical Report

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC234668	Batch#:	86809
Matrix:	Water	Analyzed:	12/10/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,062	103	80-120
Benzene		NA		
Toluene		NA		
Ethylbenzene		NA		
m,p-Xylenes		NA		
o-Xylene		NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		121	57-150
Bromofluorobenzene (FID)		109	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		



Curtis & Tompkins Laboratories Analytical Report

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8021B
Type:	BSD	Diln Fac:	1.000
Lab ID:	QC234703	Batch#:	86809
Matrix:	Water	Analyzed:	12/10/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12		NA				
Benzene	20.00	21.48	107	78-123	10	20
Toluene	20.00	20.34	102	79-120	8	20
Ethylbenzene	20.00	20.13	101	80-120	9	20
m,p-Xylenes	40.00	42.83	107	76-120	7	20
o-Xylene	20.00	20.75	104	80-121	9	20

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)	NA		
Bromofluorobenzene (FID)	NA		
Trifluorotoluene (PID)		74	54-149
Bromofluorobenzene (PID)		79	58-143

NA= Not Analyzed

RPD= Relative Percent Difference

Page 1 of 1



Curtis & Tompkins Laboratories Analytical Report

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	8015B
Field ID:	ZZZZZZZZZZ	Batch#:	86778
MSS Lab ID:	169318-007	Sampled:	12/09/03
Matrix:	Water	Received:	12/09/03
Units:	ug/L	Analyzed:	12/10/03
Diln Fac:	1.000		

Type: MS Lab ID: QC234599

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	31.77	2,000	1,998	98	76-120
Benzene			NA		
Toluene			NA		
Ethylbenzene			NA		
m,p-Xylenes			NA		
o-Xylene			NA		

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		115	57-150
Bromofluorobenzene (FID)		108	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

Type: MSD Lab ID: QC234600

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,984	98	76-120	1	20
Benzene		NA				
Toluene		NA				
Ethylbenzene		NA				
m,p-Xylenes		NA				
o-Xylene		NA				

Surrogate	Result	%REC	Limits
Trifluorotoluene (FID)		112	57-150
Bromofluorobenzene (FID)		107	65-144
Trifluorotoluene (PID)	NA		
Bromofluorobenzene (PID)	NA		

NA= Not Analyzed

RPD= Relative Percent Difference

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Gasoline Oxygenates by GC/MS

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	12/09/03
Units:	ug/L	Received:	12/09/03

Field ID:	ESE-1	Diln Fac:	2.000
Type:	SAMPLE	Batch#:	86927
Lab ID:	169319-001	Analyzed:	12/16/03

Analyte	Result	RL
Tert-Butyl Alcohol (TBA)	290	20
MTBE	260	1.0
Isopropyl Ether (DIPE)	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	1.0
Methyl tert-Amyl Ether (TAME)	9.5	1.0
1,2-Dichloroethane	ND	1.0
1,2-Dibromoethane	ND	1.0
Ethanol	ND	2,000

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-121
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	108	80-123

Field ID:	ESE-2	Diln Fac:	25.00
Type:	SAMPLE	Batch#:	86968
Lab ID:	169319-002	Analyzed:	12/16/03

Analyte	Result	RL
Tert-Butyl Alcohol (TBA)	500	250
MTBE	3,400	13
Isopropyl Ether (DIPE)	ND	13
Ethyl tert-Butyl Ether (ETBE)	ND	13
Methyl tert-Amyl Ether (TAME)	77	13
1,2-Dichloroethane	ND	13
1,2-Dibromoethane	ND	13
Ethanol	ND	25,000

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-121
1,2-Dichloroethane-d4	106	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	111	80-123

NA= Not Analyzed
 ND= Not Detected
 RL= Reporting Limit
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Gasoline Oxygenates by GC/MS

Lab #: 169319	Location: 3519 Castro Valley Blvd.
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2761	Analysis: EPA 8260B
Matrix: Water	Sampled: 12/09/03
Units: ug/L	Received: 12/09/03

Field ID: ESE-5	Diln Fac: 1.000
Type: SAMPLE	Batch#: 86927
Lab ID: 169319-003	Analyzed: 12/16/03

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	34	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-121
1,2-Dichloroethane-d4	109	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	102	80-123

Field ID: MW-6	Diln Fac: 1.000
Type: SAMPLE	Batch#: 86927
Lab ID: 169319-004	Analyzed: 12/16/03

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-121
1,2-Dichloroethane-d4	102	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	112	80-123

NA= Not Analyzed
 ND= Not Detected
 RL= Reporting Limit
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Gasoline Oxygenates by GC/MS

Lab #: 169319	Location: 3519 Castro Valley Blvd.
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 2761	Analysis: EPA 8260B
Matrix: Water	Sampled: 12/09/03
Units: ug/L	Received: 12/09/03

Field ID: MW-7	Diln Fac: 2.500
Type: SAMPLE	Batch#: 86968
Lab ID: 169319-005	Analyzed: 12/16/03

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	25
MTBE	420	1.3
Isopropyl Ether (DIPE)	ND	1.3
Ethyl tert-Butyl Ether (ETBE)	ND	1.3
Methyl tert-Amyl Ether (TAME)	8.1	1.3
1,2-Dichloroethane	ND	1.3
1,2-Dibromoethane	ND	1.3
Ethanol	ND	2.500

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-121
1,2-Dichloroethane-d4	105	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	111	80-123

Type: BLANK	Batch#: 86927
Lab ID: QC235137	Analyzed: 12/15/03
Diln Fac: 1.000	

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	NA	
MTBE	ND	0.5
Isopropyl Ether (DIPE)	NA	
Ethyl tert-Butyl Ether (ETBE)	NA	
Methyl tert-Amyl Ether (TAME)	NA	
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	NA	

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-121
1,2-Dichloroethane-d4	104	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	108	80-123

NA= Not Analyzed
 ND= Not Detected
 RL= Reporting Limit
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Gasoline Oxygenates by GC/MS

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Matrix:	Water	Sampled:	12/09/03
Units:	ug/L	Received:	12/09/03

Type:	BLANK	Batch#:	86927
Lab ID:	QC235138	Analyzed:	12/15/03
File Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-121
1,2-Dichloroethane-d4	104	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	110	80-123

Type:	BLANK	Batch#:	86968
Lab ID:	QC235282	Analyzed:	12/16/03
File Fac:	1.000		

Analyte	Result	RL
tert-Butyl Alcohol (TBA)	ND	10
MTBE	ND	0.5
Isopropyl Ether (DIPE)	ND	0.5
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Methyl tert-Amyl Ether (TAME)	ND	0.5
1,2-Dichloroethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Ethanol	ND	1,000

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-121
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	106	80-123

NA= Not Analyzed
 ND= Not Detected
 RL= Reporting Limit
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Gasoline Oxygenates by GC/MS

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC235136	Batch#:	86927
Matrix:	Water	Analyzed:	12/15/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)		NA		
MTBE	50.00	45.98	92	69-124
Isopropyl Ether (DIPE)		NA		
Ethyl tert-Butyl Ether (ETBE)		NA		
Methyl tert-Amyl Ether (TAME)		NA		

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-121
1,2-Dichloroethane-d4	102	77-129
Toluene-d8	98	80-120
Bromofluorobenzene	93	80-123



Gasoline Oxygenates by GC/MS

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC235143	Batch#:	86927
Matrix:	Water	Analyzed:	12/15/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	250.0	290.0	116	70-130
MTBE	50.00	52.03	104	69-124
Isopropyl Ether (DIPE)	50.00	46.92	94	70-130
Ethyl tert-Butyl Ether (ETBE)	50.00	48.17	96	70-130
Methyl tert-Amyl Ether (TAME)	50.00	44.74	89	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-121
1,2-Dichloroethane-d4	102	77-129
Toluene-d8	97	80-120
Bromofluorobenzene	106	80-123



Gasoline Oxygenates by GC/MS

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	86927
MSS Lab ID:	169231-014	Sampled:	12/03/03
Matrix:	Water	Received:	12/04/03
Units:	ug/L	Analyzed:	12/16/03
Diln Fac:	1.000		

Type: MS Lab ID: QC235180

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1300	50.00	45.84	92	67-127
Surrogate	%REC	Limits			
Dibromofluoromethane	104	80-121			
1,2-Dichloroethane-d4	108	77-129			
Toluene-d8	98	80-120			
Bromofluorobenzene	98	80-123			

Type: MSD Lab ID: QC235181

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	50.00	46.03	92	67-127	0	20
Surrogate	%REC	Limits				
Dibromofluoromethane	100	80-121				
1,2-Dichloroethane-d4	104	77-129				
Toluene-d8	95	80-120				
Bromofluorobenzene	100	80-123				



Gasoline Oxygenates by GC/MS

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC235280	Batch#:	86968
Matrix:	Water	Analyzed:	12/16/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)		NA		
MTBE	50.00	49.85	100	69-124
Isopropyl Ether (DIPE)		NA		
Ethyl tert-Butyl Ether (ETBE)		NA		
Methyl tert-Amyl Ether (TAME)		NA		

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-121
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	93	80-123



Gasoline Oxygenates by GC/MS

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC235281	Batch#:	86968
Matrix:	Water	Analyzed:	12/16/03
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	250.0	288.0	115	70-130
MTBE	50.00	51.52	103	69-124
Isopropyl Ether (DIPE)	50.00	47.24	94	70-130
Ethyl tert-Butyl Ether (ETBE)	50.00	48.82	98	70-130
Methyl tert-Amyl Ether (TAME)	50.00	46.20	92	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-121
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	106	80-123



Gasoline Oxygenates by GC/MS

Lab #:	169319	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	86968
MSS Lab ID:	169399-005	Sampled:	12/10/03
Matrix:	Water	Received:	12/11/03
Units:	ug/L	Analyzed:	12/16/03
Diln Fac:	1.000		

Type: MS Lab ID: QC235426

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1300	50.00	47.87	96	67-127

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-121
1,2-Dichloroethane-d4	107	77-129
Toluene-d8	100	80-120
Bromofluorobenzene	97	80-123

Type: MSD Lab ID: QC235427

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	50.00	46.34	93	67-127	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-121
1,2-Dichloroethane-d4	103	77-129
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-123

Appendix C

Historical Groundwater Elevations
and
Groundwater Analytical Results

Table 1
Groundwater Elevation and Analytical Data
Former BP Service Station #11105
3519 Castro Valley Blvd, Castro Valley, CA

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB	
ESE-1 (c)	10/5/1992	177.69	11.22	166.47	2100	370	150	17	110	---	(f)	---	PACE
ESE-1D (d)	10/5/1992	---	---	---	2300	370	160	16	110	---	(f)	---	PACE
ESE-1	4/1/1993	177.69	8.79	168.90	5900	1500	410	110	390	---	(f)	---	PACE
ESE-1	6/29/1993	177.69	10.34	167.35	7600	2900	390	130	460	---	(f)	---	PACE
ESE-1	9/23/1993	177.69	10.91	166.78	2000	490	40	20	56	600	(e)(f)	---	PACE
QC-1 (d)	9/23/1993	---	---	---	1500	420	39	19	56	550	(e)(f)	---	PACE
ESE-1	12/10/1993	177.69	9.93	167.76	1800	480	42	19	66	921	(e)(f)	3.2	PACE
QC-1 (d)	12/10/1993	---	---	---	1500	380	38	17	55	770	(e)(f)	---	PACE
ESE-1	2/17/1994	177.69	9.64	168.05	1900	380	48	24	80	585	(e)(f)	---	PACE
QC-1 (d)	2/17/1994	---	---	---	2200	430	42	19	65	491	(e)(f)	---	PACE
ESE-1	8/8/1994	177.69	11.72	165.97	2100	450	46	16	50	760	(e)	5.1	PACE
ESE-1	10/12/1994	177.69	10.48	167.21	760	240	16	51	39	230	(e)	3.5	PACE
ESE-1	1/19/1995	177.69	7.77	169.92	840	600	120	22	58	---	---	8.0	ATI
ESE-1	5/2/1995	177.69	8.69	169.00	2000	640	67	24	98	---	---	8.5	ATI
ESE-1	7/28/1995	177.69	10.12	167.57	190	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	7.9	ATI
ESE-1	11/17/1995	177.69	10.57	167.12	200	3.4	ND<1.0	1	ND<2.0	600	---	7.7	ATI
ESE-1	2/7/1996	177.69	7.41	170.28	750	370	23	21	64	680	---	2.5	SPL
ESE-1	4/23/1996	177.69	9.12	168.57	310	100	ND<1	ND<1	ND<1	1500	---	6.3	SPL
ESE-1	7/9/1996	177.69	10.12	167.57	730	230	74	13	63	750	---	2.9	SPL
ESE-1	10/10/1996	177.69	10.80	166.89	420	26	1.6	7.3	12	430	---	7.4	SPL
ESE-1	1/20/1997	177.69	8.52	169.17	660	290	4.2	13	36	450	---	5.9	SPL
ESE-1	4/25/1997	177.69	9.77	167.92	410	ND<0.5	ND<1.0	ND<1.0	ND<1.0	580	---	5.3	SPL
ESE-1	7/18/1997	177.69	10.55	167.14	420	ND<0.5	ND<1.0	ND<1.0	ND<1.0	370	---	5.0	SPL
ESE-1	10/27/1997	177.69	10.36	167.33	300	56	ND<1.0	6.5	ND<1.0	220	---	4.8	SPL
ESE-1	1/22/1998	177.69	7.52	170.17	4200	440	9	15	17.7	1300	---	4.2	SPL
ESE-1	4/23/1998	177.69	8.80	168.89	15000	3400	190	910	900	4900	---	4.2	SPL
QC-1	4/23/1998	---	---	---	15000	2800	140	730	730	4400	---	---	SPL
ESE-1	7/29/1998	177.69	9.73	167.96	---	---	---	---	---	---	---	---	---
ESE-1	7/30/1998	---	---	---	15000	ND<2.5	ND<5.0	ND<5.0	ND<5.0	15000	---	4.0	SPL
ESE-1	12/17/1998	177.69	9.51	168.18	2400	73	1.0	2.8	4.6	2000/2500*	---	---	SPL
ESE-1	3/19/1999	177.69	8.65	169.04	4700	58	ND<1.0	ND>1.0	ND<1.0	4700	---	---	SPL
ESE-1	6/23/1999	177.69	10.51	167.18	600	170	ND<1.0	7.2	5.0	3900	---	---	SPL
ESE-1	9/27/1999	177.69	10.32	167.37	920	200	ND<25	ND<25	ND<25	4900	---	---	SPL
ESE-1	12/9/1999	177.69	10.24	167.45	460	130	1.2	5.2	1.5	5100	---	---	PACE
ESE-1	3/9/2000	177.69	7.72	169.97	3000 (j)	1300	120	80	140	7300	---	---	PACE
ESE-1	6/8/2000	177.69	9.40	168.29	2900	540	9.7	20	17	5200	---	---	PACE
ESE-1	9/18/2000	177.69	10.05	167.64	890	3.4	ND<0.5	1.4	ND<0.5	2800	---	---	PACE

Table 1
Groundwater Elevation and Analytical Data
 Former BP Service Station #11105
 3519 Castro Valley Blvd, Castro Valley, CA

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB
ESE-1	12/14/2000	177.69	8.20	169.49	1600	11.1	ND<0.5	ND<0.5	ND<0.5	2730	---	PACE
ESE-1	3/21/2001	177.69	9.75	167.94	5700	2.28	ND<0.5	0.51	ND<1.5	6810	---	PACE
ESE-1	6/18/2001	177.69	10.21	167.48	2000	152	0.669	3.62	2.34	1980	---	PACE
ESE-1	9/18/2001	177.69	10.30	167.39	2500	57.1	ND<5.0	6.25	ND<15	2090	---	PACE
ESE-1	12/13/2001	177.69	9.82	167.87	2800	208	6.05	8.54	9.66	2030	---	PACE
ESE-1	3/14/2002	177.69	9.10	168.59	1800	140	6.31	4.5	9.41	1970	---	PACE
ESE-1	6/19/2002	177.69	9.92	167.77	1100	220	2.02	4.23	3.8	1280	---	PACE
ESE-1	9/10/02*	177.69	10.21	167.48	490	39	2.9	ND<2.0	4.9	670	---	SEQ
ESE-1	12/16/2002	177.69	8.56	169.13	730	140	6.0	3.2	9.1	670	---	SEQ
ESE-1	3/11/2003	177.69	9.40	168.29	1700	490	21	22	41	530	---	SEQ
ESE-1	6/17/2003 (n)	177.69	9.86	167.83	1300	140	ND<10	ND<10	ND<10	480	---	SEQ

Table 1
Groundwater Elevation and Analytical Data
 Former BP Service Station #11105
 3519 Castro Valley Blvd, Castro Valley, CA

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB	
ESE-2	10/5/1992	178.23	11.68	166.55	300	5.4	16	3.9	45	---	(l)	---	PACE
ESE-2	4/1/1993	178.23	9.17	169.06	240	27	ND<0.5	17	2.6	123	(e)(l)	---	PACE
ESE-2	6/29/1993	178.23	10.88	167.35	1700	260	24	110	23	---	(l)	---	PACE
QC-1 (d)	6/29/1993	---	---	---	1300	240	17	110	25	---	(l)	---	PACE
ESE-2	9/23/1993	178.23	11.56	166.67	240	3.1	0.5	0.6	2.5	643	(e)(l)	---	PACE
ESE-2	12/10/1993	178.23	10.48	167.75	250	2.4	2.4	1.5	11	940	(e)(l)	2.6	PACE
ESE-2	2/17/1994	178.23	10.06	168.17	900	ND<0.5	ND<0.5	ND<0.5	ND<0.5	930	(e)(l)	---	PACE
ESE-2	8/8/1994	178.23	11.11	167.12	750	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1400	(e)	5.1	PACE
ESE-2	10/12/1994	178.23	11.31	166.92	1700	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3000	(e)	3.6	PACE
ESE-2	1/19/1995	178.23	8.25	169.98	300	2	0.9	0.7	1	---	---	8.1	ATI
ESE-2	5/2/1995	178.23	9.21	169.02	1200	4	ND<2.5	ND<2.5	ND<5.0	---	---	8.4	ATI
ESE-2	7/28/1995	178.23	10.64	167.59	2000	ND<2.5	ND<2.5	ND<2.5	ND<5.0	---	---	7.7	ATI
ESE-2	11/17/1995	178.23	11.13	167.10	3600	ND<25	ND<25	ND<25	ND<50	12000	---	7.4	ATI
QC-1 (d)	11/17/1995	---	---	---	3400	ND<25	ND<25	ND<25	ND<50	12000	---	---	ATI
ESE-2	2/7/1996	178.23	7.94	170.29	450	ND<0.5	ND<1	ND<1	ND<1	2300	---	1.8	SPL
ESE-2	4/23/1996	178.23	9.73	168.50	260	0.9	ND<1	ND<1	ND<1	8600	---	7.2	SPL
ESE-2	7/9/1996	178.23	10.70	167.53	780	ND<2.5	ND<5	ND<5	ND<5	13393	---	3.0	SPL
ESE-2	10/10/1996	178.23	11.39	166.84	2900	ND<0.5	ND<1.0	ND<1.0	ND<1.0	12000	---	7.0	SPL
ESE-2	1/20/1997	178.23	9.04	169.19	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	13000	---	6.2	SPL
ESE-2	4/25/1997	178.23	10.31	167.92	2700	ND<0.5	ND<1.0	ND<1.0	ND<1.0	15000	---	5.9	SPL
ESE-2	7/18/1997	178.23	11.02	167.21	11000	ND<5	ND<10	ND<10	ND<10	11000	---	5.0	SPL
ESE-2	10/27/1997	178.23	10.93	167.30	6100	ND<2.5	ND<5.0	ND<5.0	ND<5.0	7100	---	4.8	SPL
QC-1 (d)	10/27/1997	---	---	---	6600	ND<2.5	ND<5.0	ND<5.0	ND<5.0	7400	---	---	SPL
ESE-2	1/22/1998	178.23	7.93	170.30	13000	ND<0.5	ND<1.0	ND<1.0	ND<1.0	10000	---	4.6	SPL
QC-1 (d)	1/22/1998	---	---	---	13000	ND<0.5	ND<1.0	ND<1.0	ND<1.0	10000	---	---	SPL
ESE-2	4/23/1998	178.23	9.34	168.89	19000	ND<5	ND<10	ND<10	ND<10	36000	---	4.2	SPL
ESE-2	7/29/1998	178.23	10.29	167.94	---	---	---	---	---	---	---	---	---
ESE-2	7/30/1998	---	---	---	19000	ND<5	ND<10	ND<10	ND<10	36000	---	4.2	SPL
ESE-2	12/17/1998	178.23	10.20	168.03	12000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	13000/17000*	---	---	SPL
ESE-2	3/19/1999	178.23	9.02	169.21	18000	160	ND<1.0	ND<1.0	ND<1.0	18000	---	---	SPL
ESE-2	6/23/1999	178.23	9.99	168.24	280	ND<1.0	ND<1.0	ND<1.0	ND<1.0	16000	---	---	SPL
ESE-2	9/27/1999	178.23	10.69	167.54	ND<500	ND<25	ND<25	ND<25	ND<25	12000	---	---	SPL
ESE-2	12/9/1999	178.23	11.26	166.97	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.6	12000	---	---	PACE
ESE-2	3/9/2000	178.23	7.95	170.28	ND<50	1.6	ND<0.5	ND<0.5	ND<0.5	7900	---	---	PACE
ESE-2	6/8/2000	178.23	9.66	168.57	1600	ND<0.5	0.73	ND<0.5	2.2	9400	---	---	PACE
ESE-2 (k)	9/18/2000	178.23	---	---	---	---	---	---	---	---	---	---	---
ESE-2	12/14/2000	178.23	11.15	167.08	6000	0.75	ND<0.5	ND<0.5	ND<0.5	11200	---	---	PACE

Table 1
Groundwater Elevation and Analytical Data
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 3519 Castro Valley Blvd, Castro Valley, CA

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB
ESE-2	3/21/2001	178.23	10.35	167.88	6900	786	45.7	37.7	71.5	3790	---	PACE
ESE-2	6/18/2001	178.23	11.24	166.99	6400	ND<2.5	ND<2.5	ND<2.5	ND<7.5	9320	---	PACE
ESE-2	9/18/2001	178.23	11.35	166.88	4800	ND<12.5	ND<12.5	ND<12.5	ND<37.5	6960	---	PACE
ESE-2	12/13/2001	178.23	10.97	167.26	59000	0.592	ND<0.5	ND<0.5	ND<1.0	5940	---	PACE
ESE-2	3/14/2002	178.23	10.13	168.10	4500	76	ND<0.5	ND<0.5	ND<1.0	6660	---	PACE
ESE-2	6/19/2002	178.23	10.91	167.32	250	ND<12.5	ND<12.5	ND<12.5	ND<25	4900	---	PACE
ESE-2	9/10/02*	178.23	10.82	167.41	1500	ND<5.0	ND<5.0	ND<5.0	6.3	3100	---	PACE
ESE-2	12/16/2002	178.23	7.87	170.36	1400	ND<5.0	ND<5.0	ND<5.0	ND<5.0	2400	---	SEQ
ESE-2	3/11/2003	178.23	10.24	167.99	2800	ND<10	ND<10	ND<10	ND<10	4800	---	SEQ
ESE-2	6/17/2003 (n)	178.23	10.19	168.04	10000	ND<100	ND<100	ND<100	ND<100	4400	---	SEQ

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Groundwater Elevation and Analytical Data
 Former BP Service Station #11105
 3519 Castro Valley Blvd, Castro Valley, CA

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB
ESE-3	10/5/1992	178.20	10.58	167.62	430	57	31	3.6	34	---	(I) ---	PACE
ESE-3	4/1/1993	178.20	8.14	170.06	2400	460	220	74	210	---	(I) ---	PACE
ESE-3	6/29/1993	178.20	9.72	168.48	280	56	14	15	13	---	(I) ---	PACE
ESE-3	9/23/1993	178.20	10.46	167.74	72	13	3.5	1.7	4.1	---	(I) ---	PACE
ESE-3	12/10/1993	178.20	9.30	168.90	270	71	32	6.1	33	---	(I) ---	PACE
ESE-3	2/17/1994	178.20	8.97	169.23	520	140	10	20	33	5.74	(I) ---	PACE
ESE-3	8/8/1994	178.20	10.02	168.18	ND<50	8.8	1.6	1.6	2.3	ND<5.0	(I) 6.2	PACE
ESE-3	10/12/1994	178.20	10.32	167.88	470	190	6.4	15	18	ND<5.0	(I) 3.5	PACE
ESE-3	1/19/1995	178.20	7.40	170.80	330	260	27	21	20	---	6.7	ATI
ESE-3	5/2/1995	178.20	8.26	169.94	530	180	30	23	44	---	8.6	ATI
ESE-3	7/28/1995	178.20	9.54	168.66	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	8.8	ATI
ESE-3	11/17/1995	178.20	10.04	168.16	ND<50	1.7	ND<0.50	ND<0.50	ND<1.0	ND<5.0	7.3	ATI
ESE-3	2/7/1996	178.20	7.08	171.12	ND<50	8.6	ND<1	ND<1	ND<1	ND<10	3.9	SPL
ESE-3	4/23/1996	178.20	8.79	169.41	ND<50	7.6	ND<1	ND<1	ND<1	65	6.9	SPL
ESE-3	7/9/1996	178.20	10.09	168.11	ND<50	12	2.6	2	3.9	26	3.4	SPL
ESE-3	10/10/1996	178.20	10.48	167.72	---	---	---	---	---	---	---	---
ESE-3	10/11/1996	178.20	---	---	260	140	ND<1.0	ND<1.0	2.6	ND<10	7.2	SPL
ESE-3	1/20/1997	178.20	8.65	169.55	ND<50	1.5	1.7	ND<1.0	ND<1.0	14	5.7	SPL
ESE-3	4/25/1997	178.20	10.02	168.18	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	14	5.4	SPL
ESE-3	7/18/1997	178.20	10.66	167.54	10000	1400	1400	300	1280	ND<250	5.2	SPL
ESE-3	10/27/1997	178.20	9.83	168.37	ND<250	ND<2.5	ND<5.0	ND<5.0	36	ND<50	5.0	SPL
ESE-3	1/22/1998	178.20	7.06	171.14	130	ND<0.5	ND<1.0	ND<1.0	ND<1.0	120	4.3	SPL
ESE-3	4/23/1998	178.20	8.44	169.76	4800	560	ND<10	15	ND<10	4000	3.9	SPL
ESE-3	7/29/1998	178.20	9.27	168.93	---	---	---	---	---	---	---	---
ESE-3	7/30/1998	---	---	---	1800	6.2	ND<5.0	ND<5.0	ND<5.0	1700	4.1	SPL
ESE-3	12/17/1998	178.20	9.15	169.05	600	54	ND<1.0	2.1	4.9	340/480*	---	SPL
ESE-3	3/19/1999	178.20	8.14	170.06	2000	260	4.4	13	28	870	---	SPL
ESE-3	6/23/1999	178.20	9.44	168.76	290	91	ND<1.0	8.3	16	240	---	SPL
ESE-3	9/27/1999	178.20	9.69	168.51	130	35	ND<1.0	2.7	3.8	100	---	SPL
ESE-3	12/9/1999	178.20	10.99	167.21	380	84	1.7	8.7	6.3	160	---	PACE
ESE-3	3/9/2000	178.20	7.12	171.08	950	190	4.6	39	62	350	---	PACE
ESE-3	6/8/2000	178.20	10.92	167.28	300	37	ND<0.5	2.3	1.3	400	---	PACE
ESE-3	9/18/2000	178.20	11.12	167.08	920	140	1.3	15	4.8	170	---	PACE
ESE-3	12/14/2000	178.20	9.70	168.50	320	64	ND<0.5	6.24	1.76	201	---	PACE
ESE-3	3/21/2001	178.20	10.07	168.13	680	80.5	0.546	21.1	18.2	398	---	PACE
ESE-3	6/18/2001	178.20	11.42	166.78	380	47	ND<0.5	3.11	ND<1.5	242	---	PACE
ESE-3	9/18/2001	178.20	11.55	166.65	340	54.8	ND<0.5	4.36	ND<1.5	79.7	---	PACE

Table 1
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WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB
ESE-3	12/13/2001	178.20	10.12	168.08	270	31.4	ND<0.5	1.31	2.24	129	---	PACE
ESE-3	3/14/2002	178.20	9.84	168.36	670	89.8	0.769	23.4	30.4	413	---	PACE
ESE-3	6/19/2002	178.20	10.57	167.63	130	18.6	ND<0.5	ND<0.5	ND<1.0	166	---	PACE
ESE-3	9/10/02*	178.20	9.90	168.30	88	12	ND<0.5	ND<0.5	ND<0.5	93	---	SEQ
ESE-3	12/16/2002	178.20	9.23	168.97	290	55	17	3.7	14	78	---	SEQ
ESE-3	3/11/2003	178.20	9.05	169.15	100	3.4	ND<0.50	0.54	ND<0.50	140	---	SEQ
ESE-3	6/17/2003 (n)	178.20	9.30	168.90	520	17	ND<5.0	5.3	ND<5.0	130	---	SEQ

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WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB
ESE-4	10/5/1992	177.73	10.33	167.40	98	7.2	1.3	1.1	6.1	--	(l)	PACE
ESE-4	4/1/1993	177.73	7.88	169.85	550	93	20	23	33	--	(l)	PACE
ESE-4	6/29/1993	177.66	8.33	169.33	150	23	0.6	5.4	0.5	54	(e)(l)	PACE
ESE-4	9/23/1993	177.66	10.05	167.61	110	14	1.7	3.2	4.6	--	(l)	PACE
ESE-4	12/10/1993	177.66	8.95	168.71	110	21	7.2	4.2	10	28.75	(l)	PACE
ESE-4	2/17/1994	177.66	8.65	169.01	210	26	1.2	4.7	11	113	(e)(l)	PACE
ESE-4	8/8/1994	177.66	9.76	167.90	76	9.6	ND<0.5	2	ND<0.5	62	(e)	PACE
ESE-4	10/12/1994	177.66	9.62	168.04	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	44	(e)	PACE
ESE-4	1/19/1995	177.66	6.97	170.69	140	56	14	24	23	--	6.9	ATI
ESE-4	5/2/1995	177.66	7.85	169.81	130	21	2.8	8.6	8.2	--	9.1	ATI
ESE-4	7/28/1995	177.66	9.20	168.46	ND<50	ND<0.5	ND<0.50	ND<0.50	ND<1.0	--	8.1	ATI
ESE-4	11/17/1995	177.66	9.68	167.98	ND<50	ND<0.5	0.6	ND<0.50	ND<1.0	18	5.7	ATI
ESE-4	2/7/1996	177.66	6.59	171.07	100	2.6	ND<1	1.6	4.1	42	2.0	SPL
ESE-4	4/23/1996	177.66	8.30	169.36	160	37	15	16	31	43	5.4	SPL
ESE-4	7/9/1996	177.66	9.21	168.45	60	17	1.5	6.8	11.6	27	3.9	SPL
ESE-4	10/10/1996	177.66	9.97	167.69	--	--	--	--	--	--	--	--
ESE-4	10/11/1996	177.66	--	--	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	18	5.5	SPL
ESE-4	1/20/1997	177.66	7.68	169.98	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	130	4.9	SPL
ESE-4	4/25/1997	177.66	9.15	168.51	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	4.3	SPL
ESE-4	7/18/1997	177.66	9.71	167.95	ND<50	15	ND<10	ND<10	ND<10	ND<100	4.5	SPL
ESE-4	10/27/1997	177.66	9.38	168.28	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	4.9	SPL
ESE-4	1/22/1997	177.66	6.59	171.07	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.3	SPL
ESE-4	4/23/1998	177.66	7.90	169.76	ND<250	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	4.0	SPL
ESE-4	7/29/1998	177.66	8.96	168.70	--	--	--	--	--	--	--	--
ESE-4	7/30/1998	--	--	--	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.2	SPL
ESE-4	12/17/1998	177.66	8.32	169.34	--	--	--	--	--	--	--	--
ESE-4	3/19/1999	177.66	7.71	169.95	--	--	--	--	--	--	--	--
ESE-4	6/23/1999	177.66	8.78	168.88	--	--	--	--	--	--	--	--
ESE-4	9/27/1999	177.66	9.27	168.39	--	--	--	--	--	--	--	--
ESE-4	12/9/1999	177.66	9.21	168.45	--	--	--	--	--	--	--	--
ESE-4	3/9/2000	177.66	6.82	170.84	--	--	--	--	--	--	--	--
ESE-4	6/8/2000	177.66	8.72	168.94	--	--	--	--	--	--	--	--
ESE-4	9/18/2000	177.66	9.02	168.64	--	--	--	--	--	--	--	--
ESE-4	12/14/2000	177.66	8.61	169.05	--	--	--	--	--	--	--	--
ESE-4	3/21/2001	177.66	8.61	169.05	--	--	--	--	--	--	--	--
ESE-4	6/18/2001	177.66	9.24	168.42	--	--	--	--	--	--	--	--
ESE-4	9/18/2001	177.66	9.35	168.31	--	--	--	--	--	--	--	--

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WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB
ESE-4	12/13/2001	177.66	8.53	169.13	---	---	---	---	---	---	---	---
ESE-4	3/14/2002	177.66	8.44	169.22	---	---	---	---	---	---	---	---
ESE-4	6/19/2002	177.66	10.97	166.69	---	---	---	---	---	---	---	---
ESE-4	9/10/02*	177.66	9.27	168.39	---	---	---	---	---	---	---	---
ESE-4	12/16/2002	177.66	6.90	170.76	---	---	---	---	---	---	---	---
ESE-4	3/11/2003	177.66	8.83	168.83	---	---	---	---	---	---	---	---
ESE-4	6/17/2003	177.66	8.84	168.82	---	---	---	---	---	---	---	---

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WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E- (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB	
ESE-5	10/5/1992	176.08	9.22	166.86	1300	200	3.8	1.2	18	---	(l)	---	PACE
ESE-5	4/1/1993	176.08	7.02	169.06	13000	2200	26	730	1000	---	(l)	---	PACE
QC-1 (d)	4/1/1993	---	---	---	13000	2500	25	740	1100	---	(l)	---	PACE
ESE-5	6/29/1993	176.08	10.21	165.87	7600	1500	9.3	170	100	---	(l)	---	PACE
ESE-5	9/23/1993	176.08	10.64	165.44	560	19	1.2	0.9	1.8	---	(l)	---	PACE
ESE-5	12/10/1993	176.08	9.42	166.66	1700	300	3	76	110	14.07	(l)	2.5	PACE
ESE-5	2/7/1994	176.08	9.35	166.73	3500	640	7.8	90	130	45.13	(l)	---	PACE
ESE-5	8/8/1994	176.08	8.76	167.32	2600	210	4.6	9.4	4.4	33	(e)	5.8	PACE
QC-1 (d)	8/8/1994	---	---	---	2500	230	4.6	13	4.8	32	(e)	---	PACE
ESE-5	10/12/1994	176.08	8.95	167.13	5600	560	9.5	75	21	79.2	(l)	3.6	PACE
QC-1 (d)	10/12/1994	---	---	---	6000	550	10	78	22	77	(e)	---	PACE
ESE-5	1/19/1995	176.08	5.40	170.68	1900	620	ND<5	95	15	---	---	7.6	ATI
QC-1 (d)	1/19/1995	---	---	---	1600	620	ND<5	93	17	---	---	---	ATI
ESE-5	5/2/1995	176.08	6.48	169.60	5700	1100	ND<10	180	58	---	---	8.2	ATI
QC-1 (d)	5/2/1995	---	---	---	5300	1100	ND<10	180	58	---	---	---	ATI
ESE-5	7/28/1995	176.08	7.97	168.11	520	15	ND<0.50	1.7	1.3	---	---	---	ATI
QC-1 (d)	7/28/1995	---	---	---	460	7.2	ND<0.50	1.9	1.5	---	---	8.2	ATI
ESE-5	11/17/1995	176.08	8.39	167.69	850	39	1.8	7.6	2.7	24	---	---	ATI
ESE-5	2/7/1996	176.08	4.71	171.37	4100	670	6	190	140	ND<50	---	6.3	ATI
ESE-5	4/23/1996	176.08	7.35	168.73	3000	570	ND<5	79	100	84	---	1.5	SPL
ESE-5	7/9/1996	176.08	9.40	166.68	620	150	1.7	9.3	6.4	25	---	6.5	SPL
ESE-5	10/10/1996	176.08	9.04	167.04	1100	29	ND<5.0	ND<5.0	ND<5.0	25	---	3.7	SPL
QC-1 (d)	10/10/1996	---	---	---	1100	31	ND<5.0	ND<5.0	ND<5.0	ND<50	---	6.3	SPL
ESE-5	1/20/1997	176.08	5.82	170.26	2100	980	ND<25	280	80	ND<250	---	---	SPL
QC-1 (d)	1/20/1997	---	---	---	2700	910	8.8	280	84	180	---	5.4	SPL
ESE-5	4/25/1997	176.08	7.24	168.84	---	---	---	---	---	---	---	---	SPL
ESE-5	4/28/1997	176.08	---	---	ND<250	7.9	ND<5.0	ND<5.0	ND<5.0	---	---	---	---
ESE-5	7/18/1997	176.08	7.86	168.22	1200	ND<5	ND<10	ND<10	ND<10	ND<100	---	4.9	SPL
QC-1 (d)	7/18/1997	---	---	---	630	31	ND<5.0	ND<5.0	ND<5.0	---	---	5.0	SPL
ESE-5	10/27/1997	176.08	7.91	168.17	ND<250	5.4	ND<5.0	ND<5.0	ND<5.0	130	---	---	SPL
ESE-5	1/22/1998	176.08	4.64	171.44	170	7.7	ND<1.0	ND<1.0	ND<1.0	ND<50	---	5.2	SPL
ESE-5	4/23/1998	176.08	6.31	169.77	720	79	ND<5.0	9.0	ND<5.0	130	---	4.6	SPL
ESE-5	7/29/1998	176.08	7.43	168.65	---	---	---	---	---	180	---	4.6	SPL
ESE-5	7/30/1998	---	---	---	---	---	---	---	---	---	---	---	---
ESE-5	12/17/1998	176.08	7.05	169.03	840	9.8	ND<1.0	4.0	ND<1.0	710	---	4.3	SPL
ESE-5	3/19/1999	176.08	5.00	171.08	---	---	---	---	---	---	---	---	---
ESE-5	6/23/1999	176.08	7.77	168.31	ND<250	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	---	---	SPL
					---	---	---	---	---	---	---	---	SPL

Table 1
Groundwater Elevation and Analytical Data
 Former BP Service Station #11105
 3519 Castro Valley Blvd, Castro Valley, CA

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB
ESE-5	9/27/1999	176.08	8.11	167.97	450	10	ND<5.0	6.3	ND<5.0	220	---	SPL
ESE-5	12/9/1999	176.08	7.66	168.42	---	---	---	---	---	---	---	---
ESE-5	3/9/2000	176.08	5.08	171.00	1700	170	2.5	45	6.4	140	---	PACE
ESE-5	6/8/2000	176.08	7.36	168.72	---	---	---	---	---	---	---	---
ESE-5	9/18/2000	176.08	7.71	168.37	130	0.65	ND<0.5	0.71	ND<0.5	51	---	PACE
ESE-5	12/14/2000	176.08	2.36	173.72	---	---	---	---	---	---	---	---
ESE-5	3/21/2001	176.08	7.42	168.66	1000	10.3	ND<2.5	11	ND<7.5	70.8	---	PACE
ESE-5	6/18/2001	176.08	7.92	168.16	---	---	---	---	---	---	---	---
ESE-5	9/18/2001	176.08	8.05	168.03	200	0.868	ND<0.5	0.55	ND<1.5	57.5	---	PACE
ESE-5	12/13/2001	176.26 (m)	7.80	168.46	---	---	---	---	---	---	---	---
ESE-5	3/14/2002	176.26	6.55	169.71	1300	17.1	1.35	15.4	1.42	37.4	---	PACE
ESE-5	6/19/2002	176.26	7.83	168.43	---	---	---	---	---	---	---	---
ESE-5	9/10/02*	176.26	8.22	168.04	680	9.9	ND<5.0	ND<5.0	ND<5.0	44	---	SEQ
ESE-5	12/16/2002	176.26	6.58	169.68	---	---	---	---	---	---	---	---
ESE-5	3/11/2003	176.26	6.77	169.49	2100	14	ND<2.5	15	3.0	80	---	---
ESE-5	6/17/2003	176.26	6.75	169.51	---	---	---	---	---	---	---	---

Table 1
Groundwater Elevation and Analytical Data
 Former BP Service Station #11105
 3519 Castro Valley Blvd, Castro Valley, CA

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB
MW-6	7/28/1995	179.24	10.00	169.24	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	8.1	ATI
MW-6	11/17/1995	179.24	10.44	168.80	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	6.8	ATI
MW-6	2/7/1996	179.24	7.68	171.56	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	2.4	SPL
MW-6	4/23/1996	179.24	9.33	169.91	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	6.6	SPL
MW-6	7/9/1996	179.24	10.10	169.14	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	2.7	SPL
MW-6	10/10/1996	179.24	11.00	168.24	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	6.9	SPL
MW-6	1/20/1997	179.24	8.70	170.54	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.5	SPL
MW-6	4/25/1997	179.24	10.16	169.08	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	5.1	SPL
MW-6	7/18/1997	179.24	10.66	168.58	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.8	SPL
MW-6	10/27/1997	179.24	10.25	168.99	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.8	SPL
MW-6	1/22/1998	179.24	7.76	171.48	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.0	SPL
MW-6	4/23/1998	179.24	9.10	170.14	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	4.2	SPL
MW-6	7/29/1998	179.24	10.40	168.84	---	---	---	---	---	---	---	---
MW-6	7/30/1998	---	---	---	ND<50	ND<0.5	ND<1.0	ND<1.0	ND<1.0	ND<10	3.8	SPL
MW-6	12/17/1998	179.24	9.40	169.84	---	---	---	---	---	---	---	---
MW-6	3/19/1999	179.24	9.10	170.14	---	---	---	---	---	---	---	---
MW-6	6/23/1999	179.24	9.79	169.45	---	---	---	---	---	---	---	---
MW-6	9/27/1999	179.24	10.10	169.14	---	---	---	---	---	---	---	---
MW-6	12/9/1999	179.24	9.97	169.27	---	---	---	---	---	---	---	---
MW-6	3/9/2000	179.24	8.56	170.68	---	---	---	---	---	---	---	---
MW-6	6/8/2000	179.24	9.11	170.13	---	---	---	---	---	---	---	---
MW-6	9/18/2000	179.24	9.77	169.47	---	---	---	---	---	---	---	---
MW-6	12/14/2000	179.24	9.17	170.07	---	---	---	---	---	---	---	---
MW-6	3/21/2001	179.24	9.82	169.42	---	---	---	---	---	---	---	---
MW-6	6/18/2001	179.24	10.19	169.05	---	---	---	---	---	---	---	---
MW-6	9/18/2001	179.24	10.25	168.99	---	---	---	---	---	---	---	---
MW-6	12/13/2001	179.24	9.75	169.49	---	---	---	---	---	---	---	---
MW-6	3/14/2002	179.24	9.53	169.71	---	---	---	---	---	---	---	---
MW-6	6/19/2002	179.24	9.87	169.37	---	---	---	---	---	---	---	---
MW-6	9/10/02*	179.24	9.49	169.75	---	---	---	---	---	---	---	---
MW-6	12/16/2002	179.24	8.39	170.85	---	---	---	---	---	---	---	---
MW-6	3/11/2003	179.24	9.40	169.84	---	---	---	---	---	---	---	---
MW-6	6/17/2003	179.24	9.71	169.53	---	---	---	---	---	---	---	---

Table 1
Groundwater Elevation and Analytical Data
 Former BP Service Station #11105
 3519 Castro Valley Blvd, Castro Valley, CA

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB
MW-7	7/28/1995	176.55	9.25	167.30	ND<50	0.54 (g)	0.54	ND<0.50	ND<1.0	---	7.1	ATI
MW-7	11/17/1995	176.55	9.73	166.82	1100	ND<10	ND<10	ND<10	ND<20	4000	6.3	ATI
MW-7	2/7/1996	176.55	6.48	170.07	610	ND<0.5	ND<1	ND<1	ND<1	2500	4.1	SPL
QC-1 (d)	2/7/1996	---	---	---	280	ND<0.5	ND<1	ND<1	ND<1	2600	---	SPL
MW-7	4/23/1996	176.55	8.37	168.18	110	ND<0.5	ND<1	ND<1	ND<1	3500	6.4	SPL
QC-1 (d)	4/23/1996	---	---	---	230	ND<0.5	ND<1	ND<1	ND<1	3500	---	SPL
MW-7	7/9/1996	176.55	9.24	167.31	230	ND<0.5	ND<1	ND<1	ND<1	4296	3.1	SPL
QC-1 (d)	7/9/1996	---	---	---	220	ND<0.5	ND<1	ND<1	ND<1	4400	---	SPL
MW-7	10/10/1996	176.55	10.05	166.50	---	---	---	---	---	---	---	---
MW-7	10/11/1996	176.55	---	---	1600	ND<0.5	ND<1.0	ND<1.0	ND<1.0	3000	6.9	SPL
MW-7	1/20/1997	176.55	7.51	169.04	ND<50	0.63	1	ND<1.0	ND<1.0	2600	5.7	SPL
MW-7	4/25/1997	176.55	8.79	167.76	---	---	---	---	---	---	---	---
MW-7	4/28/1997	176.55	---	---	1500	ND<0.5	ND<1.0	ND<1.0	ND<1.0	3600	5.1	SPL
QC-1 (d)	4/28/1997	---	---	---	7700	3500	ND<25	74	37	ND<250	---	SPL
MW-7	7/18/1997	176.55	9.50	167.05	1400	ND<0.5	ND<1.0	ND<1.0	ND<1.0	2600	5.2	SPL
MW-7	10/27/1997	176.55	9.19	167.36	420	ND<0.5	ND<1.0	ND<1.0	ND<1.0	560	4.9	SPL
MW-7	1/22/1998	176.55	6.45	170.10	3100	ND<0.5	ND<1.0	ND<1.0	1.4	2300	4.2	SPL
MW-7	4/23/1998	176.55	8.02	168.53	3800	ND<0.5	ND<1.0	ND<1.0	ND<1.0	3800	3.9	SPL
MW-7	7/29/1998	176.55	8.88	167.67	---	---	---	---	---	---	---	---
MW-7	7/30/1998	---	---	---	500	ND<2.5	ND<5.0	ND<5.0	ND<5.0	ND<50	4.1	SPL
QC-1 (d)	7/30/1998	---	---	---	4700	ND<12	ND<25	ND<25	ND<25	4700	---	SPL
MW-7	12/17/1998	176.55	8.62	167.93	---	---	---	---	---	---	---	---
MW-7	3/19/1999	176.55	7.52	169.03	3800	ND<1.0	ND<1.0	ND<1.0	ND<1.0	3800	---	SPL
MW-7	6/23/1999	176.55	9.63	166.92	---	---	---	---	---	---	---	---
MW-7	9/27/1999	176.55	9.39	167.16	140	ND<10	ND<10	ND<10	ND<10	3800	---	SPL
MW-7	12/9/1999	176.55	9.94	166.61	---	---	---	---	---	---	---	---
MW-7	3/9/2000	176.55	6.72	169.83	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1400	---	PACE
MW-7	6/8/2000	176.55	7.38	169.17	---	---	---	---	---	---	---	---
MW-7	9/18/2000	176.55	9.18	167.37	190	ND<0.5	ND<0.5	ND<0.5	ND<0.5	580	---	PACE
MW-7	12/14/2000	176.55	8.13	168.42	---	---	---	---	---	---	---	---
MW-7	3/21/2001	176.55	8.98	167.57	1300	ND<0.5	ND<0.5	ND<0.5	ND<1.5	1460	---	PACE
MW-7	6/18/2001	176.55	9.68	166.87	---	---	---	---	---	---	---	---
MW-7	9/18/2001	176.55	9.80	166.75	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1.5	94.9	---	PACE
MW-7	12/13/2001	176.55	9.26	167.29	---	---	---	---	---	---	---	---
MW-7	3/14/2002	176.55	8.69	167.86	800	ND<0.5	ND<0.5	ND<0.5	ND<1.0	952	---	PACE
MW-7	6/19/2002	176.55	9.06	167.49	---	---	---	---	---	---	---	---
MW-7	9/10/02*	176.55	9.23	167.32	260	ND<2.0	ND<2.0	ND<2.0	ND<2.0	580	---	SEQ

Table 1
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 Former BP Service Station #11105
 3519 Castro Valley Blvd, Castro Valley, CA

WELL ID	DATE OF SAMPLING/MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MIIBE (ug/L)	DO (ppm)	LAB
MW-7	12/16/2002	176.55	7.77	168.78	--	--	--	--	--	--	--	--
MW-7	3/11/2003	176.55	8.30	168.25	620	ND<2.5	ND<2.5	ND<2.5	ND<2.5	1100	--	--
MW-7	6/17/2003	176.55	9.51	167.04	--	--	--	--	--	--	--	--

Table 1
Groundwater Elevation and Analytical Data
 Former BP Service Station #11105
 3519 Castro Valley Blvd, Castro Valley, CA

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION (a) (Feet)	DEPTH TO WATER (Feet)	GROUNDWATER ELEVATION (b) (Feet)	TPH-G (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE (ug/L)	DO (ppm)	LAB
MW-8	7/28/1995	176.34	7.80	168.54	1100	ND<2.5	ND<2.5	ND<2.5	ND<5.0	---	7.2	ATI
MW-8	11/17/1995	176.34	8.29	168.05	8300	75	5.3	670	240	140	7.0	ATI
MW-8	2/7/1996	176.34	4.99	171.35	2300	33	ND<10	190	216	ND<100	1.7	SPL
MW-8	4/23/1996	176.34	6.09	170.25	2000	390	ND<20	150	26	ND<250	5.1	SPL
MW-8 (h)	7/9/1996	---	---	---	---	---	---	---	---	---	---	---
QC-2 (i)	4/1/1993	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	(l)	PACE
QC-2 (i)	6/29/1993	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	(l)	PACE
QC-2 (i)	9/23/1993	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	(l)	PACE
QC-2 (i)	12/10/1993	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	(l)	PACE
QC-2 (i)	2/17/1994	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (i)	8/8/1994	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (i)	10/12/1994	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	---	PACE
QC-2 (i)	1/19/1995	---	---	---	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<1	---	---	ATI
QC-2 (i)	5/2/1995	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2 (i)	7/28/1995	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	---	---	ATI
QC-2 (i)	11/17/1995	---	---	---	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<5.0	---	ATI
QC-2 (i)	2/7/1996	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL
QC-2 (i)	4/23/1996	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL
QC-2 (i)	7/9/1996	---	---	---	ND<50	ND<0.5	ND<1	ND<1	ND<1	ND<10	---	SPL

Table 1
Groundwater Elevation and Analytical Data
Former BP Service Station #11105
3519 Castro Valley Blvd, Castro Valley, CA

ABBREVIATIONS:

TPH-G	Total petroleum hydrocarbons as gasoline
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total xylenes
MTBE	Methyl tert butyl ether
DO	Dissolved oxygen
ug/L	Micrograms per liter
ppm	Parts per million
ND	Not detected above reported detection limit
---	Not applicable/available/measured/analyzed
PACE	Pace, Inc.
ATI	Analytical Technologies, Inc.
SPL	Southern Petroleum Laboratories
SEQ	Sequoia Analytical

Table 1
Groundwater Elevation and Analytical Data
Former BP Service Station #11105
3519 Castro Valley Blvd, Castro Valley, CA

NOTES:

- (a) Top of casing elevations surveyed relative to mean sea level.
- (b) Groundwater elevations in feet relative to mean sea level.
- (c) Additional analysis of the sample collected from ESE-1 on 10/5/92 detected 96 ug/L total petroleum hydrocarbons as diesel and 1.8 ug/L 1,2-dichloroethane.
- (d) Blind duplicate.
- (e) A copy of the documentation for this data is included in Appendix C of Alisto report 10-138-09-004.
- (f) Top of casing lowered by 0.07 foot after the monitoring event on 4/01/93.
- (g) Sample result may be falsely elevated due to matrix interference.
- (h) Well destroyed.
- (i) Travel blank.
- (j) Gasoline does not include MTBE.
- (k) Well Inaccessible.
- (l) A copy of the documentation for this data can be found in Blaine Tech Services report 010618-J-1. MTBE data for the September 28, 1992, September 29, 1992, October 5, 1992, and April 1, 1993 sampling events have been destroyed. No chromatograms could be located for MTBE data from wells sampled on June 29, 1993; wells ESE-1, ESE-3, ESE-4, ESE-5, and the Trip Blank, sampled on September 23, 1993; and wells ESE-1, ESE-2, and ESE-3, sampled on December 10, 1993.
- (m) Top of casing altered due to wellhead maintenance.
- (n) Analyzed for TPH-g, BTEX, MTBE and fuel oxygenates by EPA Method 8260B on 6/17/03 sampling event.
- (*) MTBE by EPA 8020/8260.
- * During the second quarter of 2002, URS Corporation assumed groundwater monitoring activities for BP.

Source: The data within this table collected prior to June 2002 was provided to URS by BP Group Environmental Management company and their previous consultants. URS has not verified the accuracy of this information.

Table 2
Fuel Oxygenates Analytical Data
 Former BP Service Station #11105
 3519 Castro Valley Blvd, Castro Valley, CA

Well Number	Date Sampled	Ethanol (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
ESE-1	06/17/03	ND<2,000	ND<400	480	ND<10	ND<10	18
ESE-2	06/17/03	ND<20,000	ND<4,000	4,400	ND<100	ND<100	ND<100
ESE-3	06/17/03	ND<1,000	ND<200	130	ND<5.0	ND<5.0	ND<5.0

Note = All fuel oxygenate compounds analyzed using EPA Method 8260B
 TBA = tert-Butyl alcohol
 MTBE = Methyl tert-Butyl ether
 DIPE = Di-isopropyl ether
 ETBE = Ethyl tert Butyl ether
 TAME = tert-Amyl Methyl ether
 µg/L = micrograms per liter
 ND< = Not detected at or above specified laboratory method detection limit