DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5647
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R0126

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June 12, 2003

Alameda County
JUN 18 2003
Environmental Health

Mr. Don Hwang, Hazardous Materials Specialist
Environmental Health Services
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Dear Mr. Hwang:

Enclosed you will find the report for the second quarter 2003 groundwater sampling event at the former Thomas A. Short Company site (3430 Wood Street, Oakland, CA 94508). The monitoring well sampling took place on April 14, 2003.

We have scheduled the next quarterly sampling event for June 23, 2003, in order to precede the end of the state's fiscal year. As I'm sure you are aware, after July 1, 2003, funding for projects will be scarce until a budget is approved by the legislature. In the meanwhile, if you have any questions please call me at (510) 286-5647.

Sincerely,

Christopher R. Wilson

Christopher R. Wilson
Senior Engineer
Office of Environmental Engineering

Enclosure

Shaw Environmental, Inc.

SECOND QUARTER 2003 GROUNDWATER MONITORING REPORT
FORMER THOMAS A. SHORT COMPANY PROPERTY
OAKLAND, ALAMEDA COUNTY, CALIFORNIA

June 6, 2003

Prepared for:

California Department of Transportation
Office of Environmental Engineering
P.O. Box 23660
Oakland, California 94623-0660

Prepared By:

Shaw Environmental, Inc.
1326 North Market Boulevard
Sacramento, California 95834

Project No.: 830714.01010000

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SECOND QUARTER 2003 GROUNDWATER MONITORING REPORT
FORMER THOMAS A. SHORT COMPANY PROPERTY
OAKLAND, ALAMEDA COUNTY, CALIFORNIA

Shaw Environmental, Inc. (Shaw), is pleased to submit this report for the second quarterly 2003 groundwater monitoring event conducted at the former Thomas A. Short Company property, Oakland, Alameda County, California. This report is submitted in accordance with Contract No. 43A0078, Task Order No. 04-911052-WB.

The material and data in this report were prepared under the supervision and direction of the undersigned and performed consistent with generally accepted professional consulting principles and practices.

Shaw Environmental, Inc.

Martha Adams

Martha Adams, P.E.
Project Manager

Distribution: Chris Wilson, Caltrans
Project File 830714

1.0 Project History

The Thomas Short property (Figure 1) was purchased by Caltrans in 1994. According to a previous report on this site (Geocon, 2001), one 4,000-gallon gasoline underground storage tank (UST) and one 1,000-gallon diesel UST were located at the site. The USTs were removed in January 1993. Groundwater samples collected from monitoring well MW-1 in February and October 1993, following UST removal, were reported to contain 4.6 and 3.7 milligrams per liter (mg/l) total petroleum hydrocarbons as gasoline (TPHg), respectively (Geocon, 2001).

Three additional monitoring wells were installed in November 1996. The monitoring wells were buried during construction activities before groundwater samples could be collected. The wells have subsequently not been located.

Three more monitoring wells were installed in May 2000. Based on the results from nine quarters of groundwater monitoring, groundwater has been encountered at depths ranging from approximately 2.45 to 5.03 meters (8.03 to 16.5 feet) from top of casing. Groundwater gradient directions have varied from east, southeast, southwest, and west. TPHg concentrations have ranged from below the detection limit to 11 mg/l and total petroleum hydrocarbons as diesel (TPHd) concentrations have ranged from below the detection limit to 3.7 mg/l. Benzene concentrations have ranged from below the detection limit to 191 µg/l. Toluene and ethyl benzene have been detected at levels that do not exceed their respective risk-based screening levels. Xylene concentrations have ranged from below the detection limit to 121 µg/l. Various other volatile organic compounds common to gasoline have been reported. Methyl tertiary butyl ether (MTBE) concentrations have ranged from below the detection limit to 7 µg/l, well below its risk-based screening level of 1,800 µg/l.

2.0 Groundwater Sampling Event

2.1 Groundwater Sampling and Analytical Program

Groundwater sampling for the second quarter of 2003 was conducted on April 14, 2003, by personnel of Shaw. This monitoring event included the collection and analysis of groundwater samples from three on-site monitoring wells. Monitoring procedures are included in Appendix A. Groundwater sample field data sheets are included in Appendix B.

Groundwater samples were analyzed by Sparger Technology, Inc. (Sparger), of Sacramento, California, a California-certified analytical laboratory. Samples were collected, retained, and transported to the laboratory using chain of custody procedures. The analyses were conducted on a normal turn-around basis in general accordance with holding times specified by the U.S. Environmental Protection Agency (EPA). The analyses were performed in general accordance with the following EPA methods listed.

Matrix	Analyses
Water	Total Petroleum Hydrocarbons as Gasoline, EPA Method 8015 modified
Water	Total Petroleum Hydrocarbons as Diesel, EPA Method 8015 modified
Water	Volatile Organic Compounds, EPA Method 8260B
Water	California Assessment Manual (CAM) 17 Metals, EPA 6010/7470

Samples collected for CAM 17 Metals analysis were transferred into unpreserved containers in the field. The samples were filtered and preserved at the laboratory prior to analysis.

2.2 Quality Assurance Program

The quality assurance (QA) program included the collection and analysis of travel blanks. These additional samples were submitted for analysis to assess potential errors introduced during transport of the groundwater samples. A trip blank was carried in the insulated chest with the groundwater samples. The trip blank consisted of two volatile organic analysis (VOA) vials filled at the laboratory with water that had been purged of volatile organic compounds. The trip blank was analyzed for total petroleum hydrocarbons as gasoline and volatile organic compounds (VOCs) in accordance with the methods listed in Section 2.1. A brief assessment of the QA data is presented in this report.

The purpose of the travel blanks was to assess potential "cross contamination" of samples during storage and transport to the laboratory. During this program, one set of travel blanks was analyzed. Total petroleum hydrocarbons as gasoline and VOCs were not reported present in the travel blank set at concentrations exceeding reporting limits of the analytical methods used by the laboratory. Based on the results of the travel blank analysis, the groundwater samples are judged to be free of interferences which may have occurred during storage and transport to the laboratory.

3.0 Monitoring Results

The monitoring results from the groundwater samples collected during the second quarter 2003 sampling event are summarized below. Monitoring well locations are shown on Figure 2. Current and historical groundwater elevation data are presented on Tables 1 and 2. The current groundwater gradient is depicted on Figure 3. Current analytical results are summarized on Tables 3, 4, and 5. Selected compounds are plotted on Figure 4. Historical analytical data are presented on Tables 6, 7, and 8.

3.1 Summary

Site Location:	Former Thomas A. Short Company 3430 Wood Street, Oakland, California, Figure 1
Current Phase of Project:	Monitoring
Frequency of Monitoring:	Quarterly
Separate-Phase Hydrocarbons Present:	None present
Water Purged from Wells This Quarter:	9 gallons (from 3 monitoring wells)
Range of Depth to Groundwater:	9.82 to 13.81 (feet from top of casing), Table 1 2.99 to 4.21 (meters from top of casing)
Groundwater Elevation Change Since Last Quarter:	Groundwater elevations decreased in all wells. Decreases ranged from 1.00 to 1.47 feet 0.30 to 0.45 meters
Groundwater Gradient:	0.001, Figure 3
Groundwater Flow Direction:	Southeast, Figure 3

3.2 Analytical Results

Total petroleum hydrocarbons as diesel was reported by the laboratory in groundwater samples from wells MW-4 and MW-5 at concentrations of 1.4 and 2.3 mg/l, respectively. Total petroleum hydrocarbons as gasoline were not reported by the laboratory in groundwater samples from any of the wells at concentrations above the laboratory analytical method reporting limit of 0.050 mg/l (Table 3).

Benzene, toluene, and m- and p-xylenes were reported in groundwater samples collected from well MW-4. The reported concentrations were 0.018 mg/l, 0.004 mg/l, and 0.0079 mg/l, respectively. Benzene, toluene, and ethylbenzene were reported in groundwater samples

collected from well MW-5. The reported concentrations were 0.150 mg/l, 0.0052 mg/l, and 0.042 mg/l, respectively. Benzene, toluene, ethylbenzene, and xylenes were not reported in the groundwater sample collected from well MW-6 (Table 3).

Additional volatile organic compounds (VOCs) were reported in groundwater samples collected from wells MW-4 and MW-5 (Table 4). The following VOCs and concentration ranges were reported (in mg/l).

1,3,5-trimethylbenzene	0.024 (MW-4)	n-propylbenzene	0.044 (MW-5)
4-isopropyltoluene	0.0068 (MW-4)	sec-butylbenzene	0.0091 (MW-5)
isopropylbenzene	0.005 to 0.027	tert-butylbenzene	0.016 to 0.027

The only metals that groundwater samples were reported to contain were barium and zinc (Table 5). Barium was reported in groundwater samples collected from wells MW-4, MW-5, and MW-6 at concentrations ranging from 0.21 to 0.51 mg/l. Zinc was reported in well MW-4 at a concentration of 0.040 mg/l.

Laboratory analytical reports and chain-of-custody documentation are included in Appendix C.

3.3 Discussion of Analytical Results

Groundwater analytical results from the Second Quarter 2003 sampling event are generally consistent with historical data. Compared to first quarter 2003 data, the TPHg concentrations decreased to nondetect in all three wells (Table 6). This is the first time that all 3 wells have been nondetect concurrently. Total petroleum hydrocarbons as diesel concentrations remained the same (1.4 mg/l) in well MW-4, decreased from 3.7 to 2.3 mg/l in well MW-5, and remained the same, none detected, in well MW-6 (Table 6). Benzene decreased in well MW-4 from 0.024 to 0.018 mg/l, and toluene, ethylbenzene, and xylenes also decreased from the previous quarter to 0.004 mg/l, nondetect, and 0.0079 mg/l, respectively (Table 6). Benzene remained the same in well MW-5, 0.15 mg/l; toluene, ethylbenzene, and xylenes decreased from the previous quarter to 0.0052 and 0.042 mg/l and nondetect, respectively. BTEX results are generally consistent with historical results and trends for wells MW-4, MW-5 and MW-6 (Table 6).

Remaining VOC results are generally comparable to historical compounds and concentrations (Table 7). For MW-4, the compounds 1,3,5-trimethylbenzene, 4-isopropyltoluene, isopropylbenzene, and tert-butylbenzene were reported at concentrations of 24, 6.8, 5.0, and 16 µg/l, respectively. These concentrations are all less than the previous quarter results. For

MW-5, the compounds isopropylbenzene, n-propylbenzene, sec-butylbenzene, and tert-butylbenzene were reported at concentrations of 27, 44, 9.1, and 27 µg/L, respectively. These concentrations are also less than those reported in the previous quarter. For MW-6, the compounds were reported below the method detection limit.

Historically, groundwater samples from the site were reported to contain arsenic, barium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, vanadium and zinc. Current results reported barium, and zinc (Table 8).

3.4 Comparison to Risk-Based Screening Levels

The analytical results will be compared to risk-based screening levels (RBSLs). The RBSLs (RWQCB, 2001) were developed by the Regional Water Quality Control Board, San Francisco Bay Region (RWQCB), to address environmental protection goals as set forth in the Water Quality Control Plan for the San Francisco Bay Basin (RWQCB, 1995). The RBSLs developed for groundwater that is not a current or potential drinking water resource are used for comparison to the current quarter's groundwater data. RBSLs are presented below and in Tables 6, 7, and 8.

Constituent	RBSL (mg/l)	Wells with Groundwater Results Exceeding RBSL
TPHd	0.640	MW-4, MW-5
Benzene	0.046	MW-5
Barium	0.0039	MW-4, MW-5, MW-6
Zinc	0.023	MW-4

4.0 Recommendations

Shaw recommends continued groundwater monitoring to evaluate temporal changes in groundwater quality and benzene concentrations in MW-5.

5.0 References

Caltrans (California Department of Transportation), 2001a, District 4, Office of Environmental Engineering, Task Order No. 04-911052-WB: dated August 2001.

IT (IT Corporation), 2001b, Work plan, groundwater monitoring, former Thomas A. Short Company property, Oakland, Alameda County, California: dated December 19, 2001.

IT, 2001c, Health and Safety plan, groundwater monitoring, former Thomas A. Short Company property, Oakland, Alameda County, California: dated December 19, 2001.

Geocon (Geotechnical & Environmental Consultants), 2001, Monitoring Well Installation and Groundwater Sampling Report: Former Thomas A. Short Co., Oakland, Alameda County, California, Task Order No. 04-190270-RM, Geocon Project No. S8225-06-103: dated June 2001.

RWQCB (Regional Water Quality Control Board, San Francisco Bay Region), 1995, San Francisco Bay basin (region 2), water quality control plan: dated June 21, 1995.

RWQCB, 2001, Application of risk-based screening levels and decision making to sites with impacted soil and groundwater; volume 1: summary tier 1 lookup tables: interim final dated December 2001.

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	3/17/03	APPROVED BY			

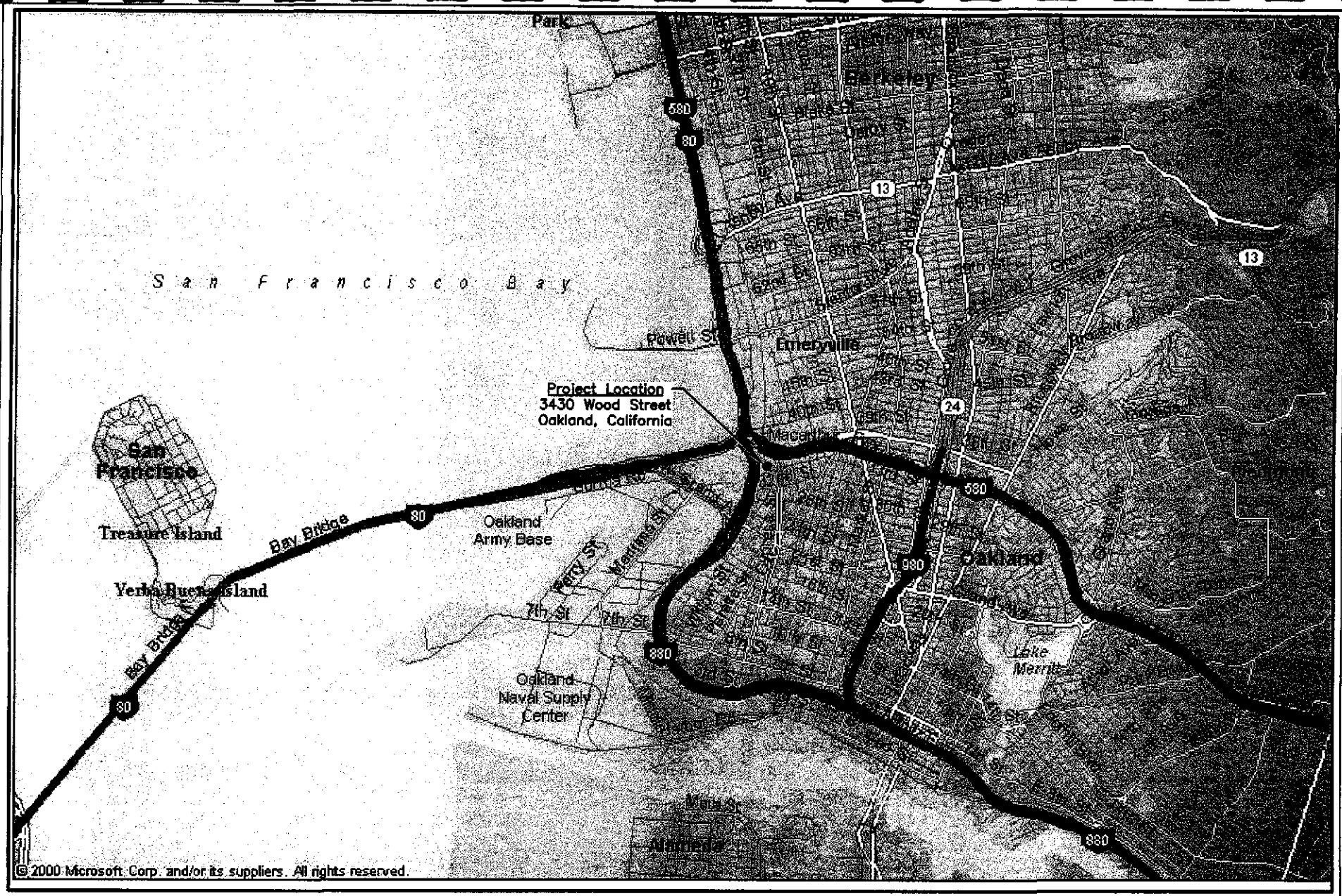

FIGURE 1

SITE LOCATION MAP

SCALE

0 1 2 Miles

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Caltrans – Former Thomas A. Short Co. Property
Oakland, California

N:\ranclp1\Projects\83\830714\Thomas Short\report\cypress (thomas short) site loc.dwg, 03/27/2003 11:46:37 AM

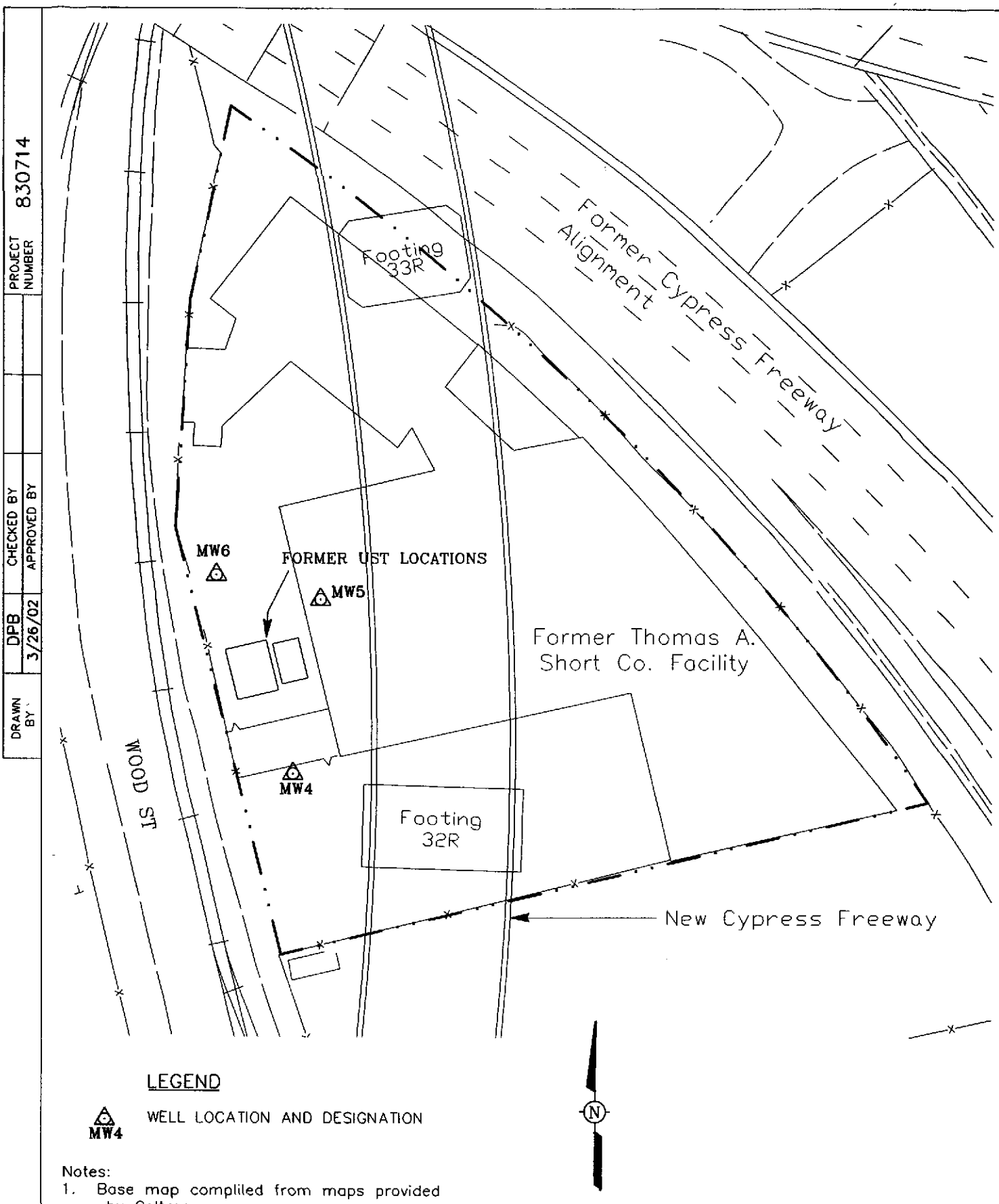
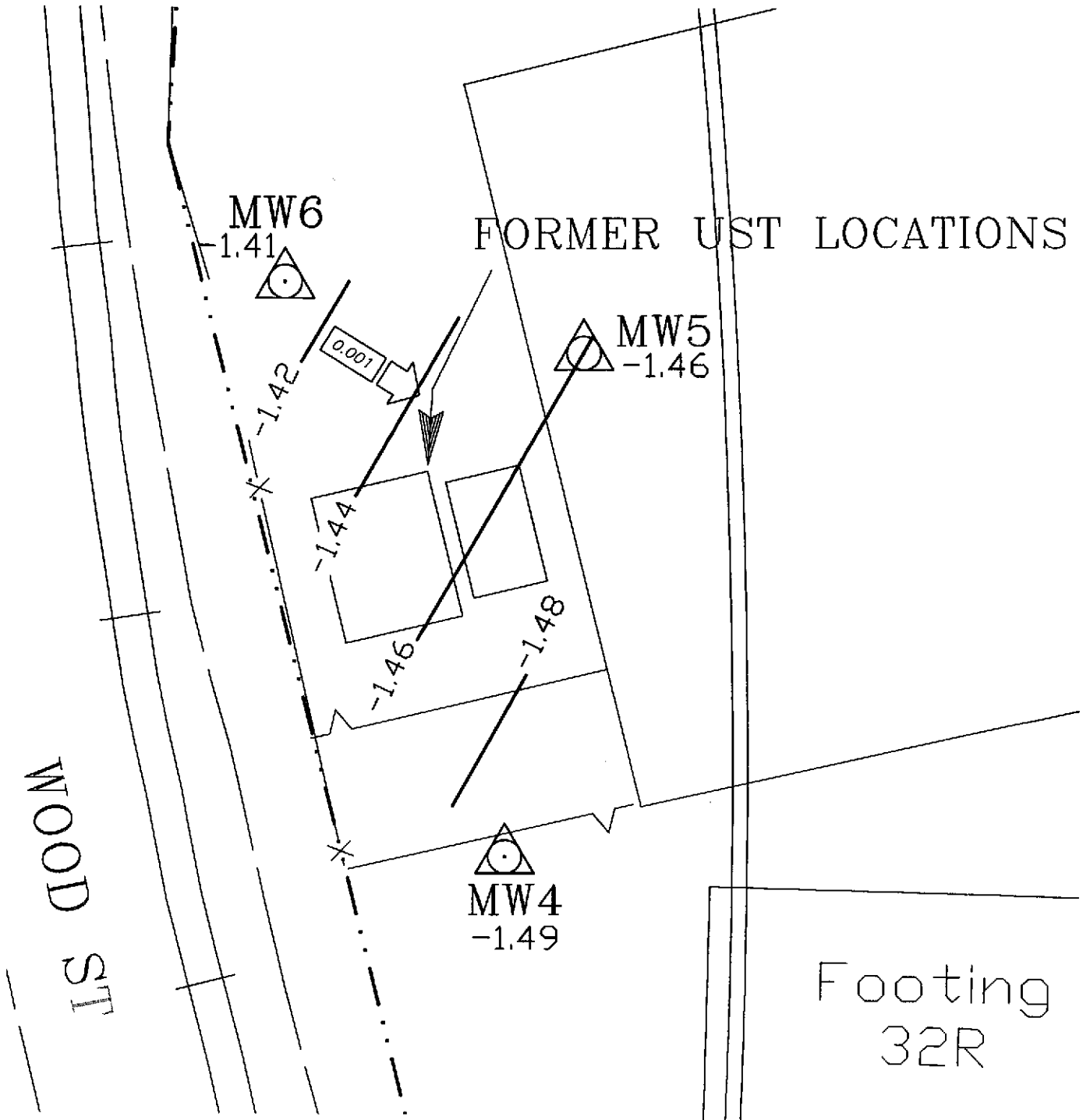


FIGURE 2

MONITORING WELL LOCATIONS

Caltrans – Former Thomas A. Short Co. Property
Oakland, California



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PROJECT NUMBER 830714

LEGEND

MW4 -0.49 — WELL LOCATION, DESIGNATION, AND GROUNDWATER ELEVATION IN FEET

0.001 — APPROXIMATE DIRECTION OF GROUNDWATER FLOW AND GRADIENT

Notes:
1. Base map compliled from maps provided by Caltrans.
2. All locations and dimensions are approximate.
3. Groundwater elevations reported in feet above mean sea level.

SCALE

0 20 40 Feet
0 6 12 Meters

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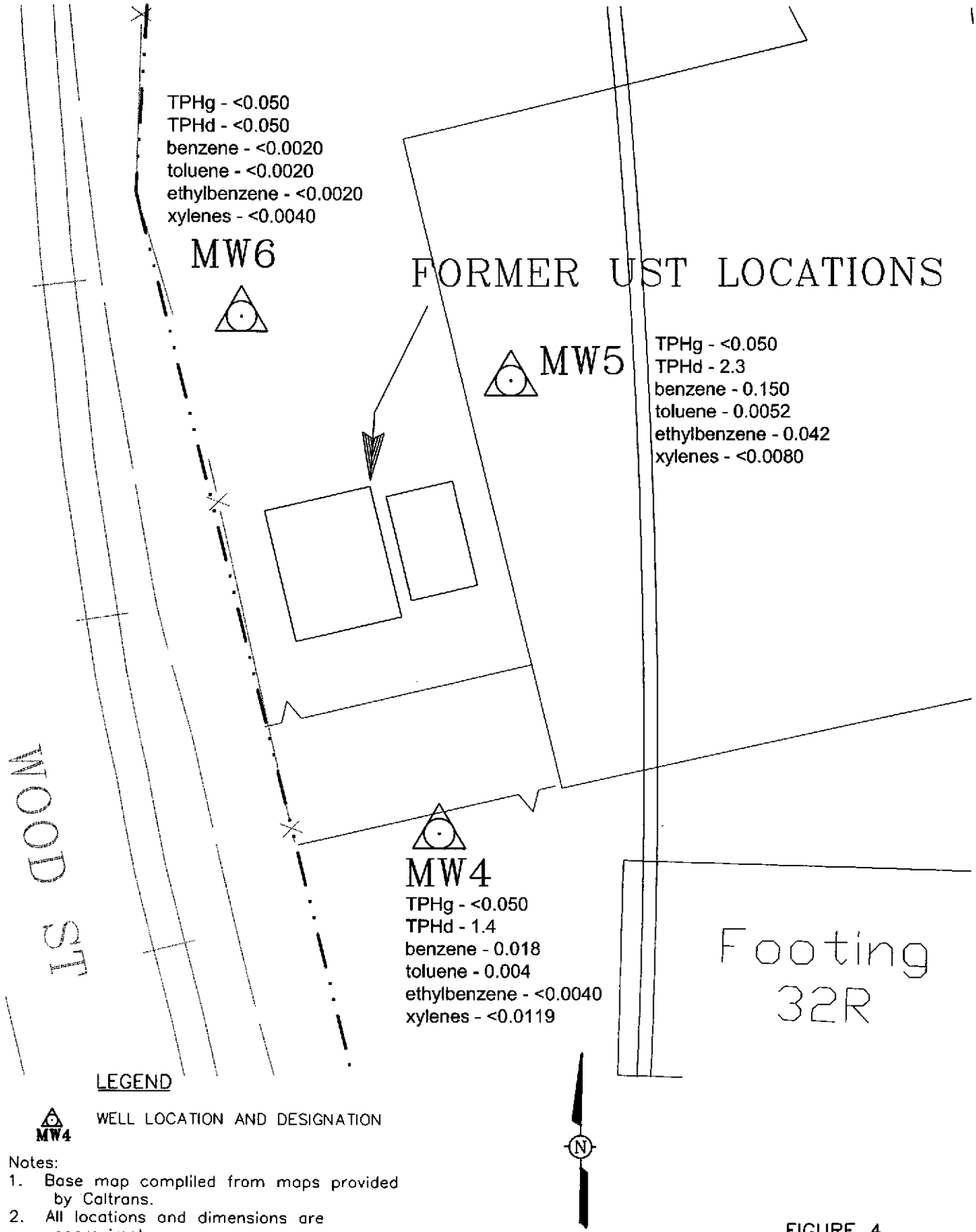
FIGURE 3

PIEZOMETRIC ELEVATION CONTOUR MAP

Caltrans – Former Thomas A. Short Co. Property
Oakland, California



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	3/17/03	APPROVED BY	830714

Notes:
1. Base map compliled from maps provided by Caltrans.
2. All locations and dimensions are approximate.
3. Concentrations reported in milligrams per liter.

SCALE
0 20 40 Feet
0 6 12 Meters

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FIGURE 4

PETROLEUM HYDROCARBON CONCENTRATIONS

Caltrans – Former Thomas A. Short Co. Property
Oakland, California

Table 1
Second Quarter 2003 Groundwater Elevations
Former Thomas Short Company
Oakland, California

Well Number	Well TOC Elevation (feet-MSL)	Screened Interval (feet bgs)	Date Measured	Depth to Groundwater (feet bTOC)	Free Product Thickness (feet)	Groundwater Elevation (feet-MSL)
MW-4	8.33	5 to 15	04/14/03	9.82	0	-1.49
MW-5	12.35	5 to 15	04/14/03	13.81	0	-1.46
MW-6	12.01	5 to 15	04/14/03	13.42	0	-1.41

Notes:
1. MSL = Mean Sea Level
2. TOC = Top of Casing
3. bgs = below ground surface
4. bTOC = below top of casing

Table 2
Historical Groundwater Elevations
Former Thomas Short Company
Oakland, California

Well Number	Well TOC Elevation (feet-MSL)	Screened Interval (feet bgs)	Date Measured	Depth to Groundwater (feet bTOC)	Free Product Thickness (feet)	Groundwater Elevation (feet-MSL)
MW-4	8.33	5 to 15	06/19/00	12.71	0	-4.38
			11/27/00	11.51	0	-3.18
			03/29/01	9.58	0	-1.25
			01/15/02	8.03	0	0.30
			04/19/02	10.42	0	-2.09
	8.33		07/11/02	10.72	0	-2.39
			10/17/02	11.73	0	-3.40
			01/27/03	8.54	0	-0.21
			04/14/03	9.82	0	-1.49
MW-5	12.33	5 to 15	06/19/00	16.5	0	-4.17
			11/27/00	14.72	0	-2.39
			03/29/01	13.30	0	-0.97
			01/15/02	11.92	0	0.41
			04/19/02	14.13	0	-1.80
	12.35		07/11/02	15.02	0	-2.67
			10/17/02	15.33	0	-2.98
			01/27/03	12.34	0	0.01
			04/14/03	13.81	0	-1.46
MW-6	11.49	5 to 15	06/19/00	15.31	0	-3.82
			11/27/00	14.09	0	-2.60
			03/29/01	12.71	0	-1.22
			01/15/02	11.58	0	-0.09
			04/19/02	13.48	0	-1.99
	12.01		07/11/02	14.24	0	-2.23
			10/17/02	15.18	0	-3.17
			01/27/03	12.42	0	-0.41
			04/14/03	13.42	0	-1.41

Notes:
1. MSL = Mean Sea Level
2. TOC = Top of Casing
3. bgs = below ground surface
4. bTOC = below top of casing

Table 3
Second Quarter 2003 Groundwater Analytical Results
Selected Compounds
Former Thomas Short Company
Oakland, California

Sample Designation	MW-4	MW-5	MW-6	Trip Blank
Sampling Date	04/14/03	04/14/03	04/14/03	04/14/03
Petroleum Hydrocarbons, mg/l				
TPH as Gasoline	<0.050	<0.050	<0.050	<0.050
TPH as Diesel	1.4	2.3	<0.050	---
Selected Volatile Organic Compounds, ug/l				
Benzene	18	150	<2.0	<2.0
Toulene	4.0	5.2	<2.0	<2.0
Ethylbenzene	<4.0	42	<2.0	<2.0
M+P Xylene	7.9	<4.0	<2.0	<2.0
o-Xylene	<4.0	<4.0	<2.0	<2.0

Notes:
1. TPH = Total Petroleum Hydrocarbons
2. mg/l = milligrams per liter
3. ug/l = micrograms per liter
4. "<" = not detected at concentrations above the indicated amount.

Table 4
Second Quarter 2003 Groundwater Analytical Results
Additional Volatile Organic Compounds
Former Thomas Short Company
Oakland, California

Sample Designation Sampling Date	MW-4 04/14/03	MW-5 04/14/03	MW-6 04/14/03	Trip Blank 04/14/03
1,3,5-trimethylbenzene	24	<4.0	<2.0	<2.0
isopropylbenzene (Cumene)	5.0	27	<2.0	<2.0
n-propylbenzene	<4.0	44	<2.0	<2.0
sec-butylbenzene	<4.0	9.1	<2.0	<2.0
tert-butylbenzene	16	27	<2.0	<2.0
4-isopropyltoluene	6.8	<4.0	<2.0	<2.0

Notes:
1. Concentrations reported in micrograms per liter.
2. "<" = not detected at concentrations above the indicated amount.

Table 5
Second Quarter 2003 Groundwater Analytical Results
Heavy Metals
Former Thomas Short Company
Oakland, California

Sample Designation Sampling Date	MW-4 04/14/03	MW-5 04/14/03	MW-6 04/14/03
Antimony	<0.060	<0.060	<0.060
Arsenic	<0.080	<0.080	<0.080
Barium	0.35	0.51	0.21
Beryllium	<0.0030	<0.0030	<0.0030
Cadmium	<0.0050	<0.0050	<0.0050
Chromium	<0.010	<0.010	<0.010
Cobalt	<0.050	<0.050	<0.050
Copper	<0.020	<0.020	<0.020
Lead	<0.010	<0.010	<0.010
Mercury	<0.0002	<0.0002	<0.0002
Molybdenum	<0.050	<0.050	<0.050
Nickel	<0.040	<0.040	<0.040
Selenium	<0.10	<0.10	<0.10
Silver	<0.010	<0.010	<0.010
Thallium	<0.10	<0.10	<0.10
Vanadium	<0.050	<0.050	<0.050
Zinc	0.040	<0.0150	<0.0150

Notes:
1. Metals analyses conducted in general accordance with U.S. Environmental Protection Agency (EPA) Methods 6010 and 7470.
2. Concentrations reported in milligrams per liter.
3. "<" = not detected at concentrations above the indicated amount.

Table 6
Historical Groundwater Analytical Results
Petroleum Hydrocarbons
Former Thomas Short Company
Oakland, California

Sample Designation Sampling Date	MW-4 5/26/00	MW-4 11/27/00	MW-4 3/29/01	MW-4 1/15/02	MW-4 4/19/02	MW-4 7/11/02	MW-4 10/17/02	MW-4 1/27/03	MW-4 4/14/03	MW-5 5/26/00	MW-5 11/27/00	MW-5 3/29/01	MW-5 1/15/02	MW-5 4/19/02	MW-5 7/11/02	MW-5 10/17/02	MW-5 1/27/03	MW-5 4/14/03
Petroluem Hydrocarbons, mg/l																		
Total Petroleum Hydrocarbons	---	---	---	<5	<5	<5	<5	---	---	---	---	---	<5	<5	<5	<5	---	---
TPH as Gasoline	**4.8**	**4.2**	**8.1**	<0.050	**11**	**2.9**	**2.1**	**3.8**	<0.050	**4.6**	**1.7**	**2.7**	**7.8**	**1.2**	**4.1**	**1.7**	**4.6**	<0.050
TPH as Diesel	**0.5**	**0.47**	**0.61**	<0.050	**1.17**	**1.26**	**1.1**	**1.4**	**1.4**	**0.6**	**0.45**	**0.96**	<0.050	**0.942**	**2.45**	**1.5**	**3.7**	**2.3**
Selected Volatile Organic Compounds, ug/l																		
Benzene	**122**	**55**	**51**	**47**	**35**	**9.7**	**23**	**24**	**18**	**98**	**39**	**35**	**63**	**53**	**99**	**62**	**150**	**150**
Toulene	**39**	**18**	**23**	**18**	**13**	<2.0	**5.6**	**10**	**4**	**7**	**2**	**1.1**	**3.1**	**2.5**	**4.6**	**2**	**6.3**	**5.2**
Ethylbenzene	**126**	**65**	**160**	**130**	**140**	<2.0	**20**	**84**	<4.0	**35**	**3.8**	**3.5**	**18**	**18**	**43**	**6.9**	**84**	**42**
Total Xylenes	**24.7**	**26.3**	**44.5**	**32.5**	**23**	<4.0	**15.4**	**24.6**	<11.9	**44**	**6.1**	**3.2**	<4.0	<4.0	**5.6**	<4.7	<4.3	<8.0
Fuel Oxygenates, ug/l																		
MTBE	<0.5	**1.2**	<5.0	<2.0	<2.0	<2.0	<2.0	---	---	**7**	**1.5**	<5.0	<2.0	<2.0	<2.0	<2.0	---	---
Total Dissolved Solids, mg/l	---	---	---	---	2240	2280	2830	---	---	---	---	---	---	1410	1440	1820	---	---

Notes:
1. TPH = Total Petroleum Hydrocarbons
2. mg/l = milligrams per liter
3. ug/l = micrograms per liter
4. "<" = not detected at concentrations above the indicated amount.
5. Risk-based screening levels (RBSLs) for groundwater that is not a current or potential drinking water source.
6. Bold results exceed RBSLs.

Table 6
Historical Groundwater Analytical Results
Petroleum Hydrocarbons
Former Thomas Short Company
Oakland, California

Sample Designation / Sampling Date	MW-6 5/26/00	MW-6 11/27/00	MW-6 3/29/01	MW-6 1/15/02	MW-6 4/19/02	MW-6 7/11/02	MW-6 10/17/02	MW-6 1/27/03	MW-6 4/14/03	Risk-Based Screening Levels
Petroluem Hydrocarbons, mg/l										
Total Petroleum Hydrocarbons	---	---	---	<5	<5	<5	<5	---	---	
TPH as Gasoline	**4.4**	0.32	0.26	**3.5**	<0.050	<0.050	<0.050	<0.050	<0.050	0.500
TPH as Diesel	0.4	0.18	0.42	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.640
Selected Volatile Organic Compounds, ug/l										
Benzene	**191**	16	**52**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	46
Toulene	14	0.51	0.62	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	130
Ethylbenzene	110	1.1	1.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	290
Total Xylenes	**121**	0.88	<0.50	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	13
Fuel Oxygenates, ug/l										
MTBE	7	1.8	<5.0	<2.0	<2.0	<2.0	<2.0	---	---	1800
Total Dissolved Solids, mg/l	---	---	---	---	2820	3060	4360	---	---	---

Notes:
1. TPH = Total Petroleum Hydrocarbons
2. mg/l = milligrams per liter
3. ug/l = micrograms per liter
4. "<" = not detected at concentrations above the indicated amount.
5. Risk-based screening levels (RBSLs) for groundwater that is not a current or potential drinking water source.
6. Bold results exceed RBSLs.

Table 7
Historical Groundwater Analytical Results
Additional Volatile Organic Compounds
Former Thomas Short Company
Oakland, California

Well Number / Date Sampled	MW-4 5/26/00	MW-4 11/27/00	MW-4 3/29/01	MW-4 1/15/02	MW-4 4/19/02	MW-4 7/11/02	MW-4 10/17/02	MW-4 1/27/03	MW-4 4/14/03	MW-5 5/26/00	MW-5 11/27/00	MW-5 3/29/01	MW-5 1/15/02	MW-5 4/19/02	MW-5 7/11/02	MW-5 10/17/02	MW-5 1/27/03	MW-5 4/14/03
1,1,2-trichloroethane	<5.0	<5.0	<5.0	3.6	<10	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0
1,2,4-trimethylbenzene	<5.0	<5.0	<5.0	<2.0	<10	<2.0	<2.0	<2.0	<4.0	96	<5.0	<5.0	<2.0	<2.0	5.4	2.6	<2.0	<4.0
1,2-dichloroethane	<5.0	<5.0	<5.0	3.9	<10	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	3.9	<2.0	<2.0	<2.0	<2.0	<4.0
1,2-dichloropropane	<5.0	<5.0	<5.0	4.1	<10	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0
1,3,5-trimethylbenzene	12	<5.0	8	<2.0	190	<2.0	14	52	24	51	<5.0	<5.0	<2.0	16	8.4	2.7	10	<4.0
2-butanone	<5.0	<5.0	<5.0	<2.0	<10	7.8	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<2.0	<2.0	8.8	<2.0	<2.0	<4.0
2-chloroethylvinyl ether	<5.0	<5.0	<5.0	<2.0	<10	30	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0
2-hexanone	<5.0	<5.0	<5.0	<2.0	<10	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<2.0	<2.0	10	<2.0	<2.0	<4.0
4-chlorotoluene	<5.0	<5.0	<5.0	<2.0	<10	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0
4-isopropyltoluene	5	<5.0	8	3.6	<10	<2.0	3.7	9.6	6.8	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0
acetone	<5.0	<5.0	<5.0	<2.0	<10	13	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0
acrolein	<5.0	<5.0	<5.0	<2.0	<10	100	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0
bromodichloromethane	<5.0	<5.0	<5.0	6.8	<10	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0
chloroform	<5.0	<5.0	<5.0	23	<10	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0
isopropylbenzene (cumene)	141	70	180	180	190	<2.0	52	160	5.0	29	<5.0	7.1	25	16	49	18	80	27
napthalene	**101**	<5.0	**45**	12	<10	<2.0	<2.0	<2.0	<4.0	**14**	<5.0	15	**38**	<2.0	<2.0	<2.0	**130**	<4.0
n-butylbenzene	18	7.3	26	17	22	<2.0	<2.0	<2.0	<4.0	21	<5.0	<5.0	21	9.8	64	<2.0	<2.0	<4.0
n-propylbenzene	170	63	280	<2.0	300	<2.0	68	230	<4.0	31	<5.0	11	45	26	97	39	190	44
sec-butylbenzene	0.6	<5.0	12	11	13	<2.0	4.4	12	<4.0	8.2	<5.0	<5.0	5.1	4.2	12	5.6	24	9.1
tert-butylbenzene	14	9.9	21	20	25	4.0	11	23	16	11	<5.0	14	16	16	21	9.8	30	27
trichloroethene	<5.0	<5.0	<5.0	6.7	<10	5.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<2.0	<2.0	2.2	<2.0	<2.0	<4.0

Notes:
1. Concentrations reported in micrograms per liter.
2. "<" = not detected at concentrations above the indicated amount.
3. Risk-based screening levels (RBSLs) for groundwater that is not a current or potential drinking water source.
4. Bold results exceed RBSLs.

Table 7
Historical Groundwater Analytical Results
Additional Volatile Organic Compounds
Former Thomas Short Company
Oakland, California

Well Number / Date Sampled	MW-6 5/26/00	MW-6 11/27/00	MW-6 3/29/01	MW-6 1/15/02	MW-6 4/19/02	MW-6 7/11/02	MW-6 10/17/02	MW-6 1/27/03	MW-6 4/14/03	Risk-Based Screening Levels
1,1,2-trichloroethane	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	930
1,2,4-trimethylbenzene	149	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
1,2-dichloroethane	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	500
1,2-dichloropropane	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	100
1,3,5-trimethylbenzene	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
2-butanone	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	14000
2-chloroethylvinyl ether	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
2-hexanone	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
4-chlorotoluene	7.4	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
4-isopropyltoluene	6.6	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
acetone	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	1500
acrolein	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
bromodichloromethane	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	420
chloroform	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	28
isopropylbenzene (cumene)	25	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
napthalene	44	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	19	<2.0	24
n-butylbenzene	17	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
n-propylbenzene	36	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	2.9	<2.0	
sec-butylbenzene	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
tert-butylbenzene	5.4	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
trichloroethene	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	360

Notes:
1. Concentrations reported in micrograms per liter.
2. "<" = not detected at concentrations above the indicated amount.
3. Risk-based screening levels (RBSLs) for groundwater that is not a current or potential drinking water source.
4. Bold results exceed RBSLs.

Table 8
Historical Groundwater Analytical Results
Heavy Metals
Former Thomas Short Company
Oakland, California

Sample Designation Sampling Date	MW-4 5/26/00	MW-4 11/27/00	MW-4 3/29/01	MW-4 1/15/02	MW-4 4/19/02	MW-4 7/11/02	MW-4 10/17/02	MW-4 1/27/03	MW-4 4/14/03	MW-5 5/26/00	MW-5 11/27/00	MW-5 3/29/01	MW-5 1/15/02	MW-5 4/19/02	MW-5 7/11/02	MW-5 10/17/02	MW-5 1/27/03	MW-5 4/14/03
Antimony	--	<0.0050	<0.0050	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	--	<0.0050	<0.0050	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
Arsenic	--	0.01	0.009	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	--	0.030	0.010	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
Barium	--	**0.47**	**0.33**	**0.34**	**0.30**	**0.31**	<0.020	**0.24**	**0.35**	--	**1.2**	**0.20**	**0.19**	**0.32**	**0.42**	<0.020	**0.28**	**0.51**
Beryllium	--	<0.0010	<0.0010	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	--	<0.0010	<0.0010	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Cadmium	--	<0.0030	<0.0030	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	--	<0.0030	<0.0030	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chromium	--	0.0032	<0.003	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	0.05	<0.003	<0.010	**0.22**	<0.010	<0.010	<0.010	<0.010
Cobalt	--	<0.003	<0.003	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	--	**0.01**	<0.003	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Copper	--	**0.01**	**0.010**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	--	**0.05**	**0.010**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Lead	**0.20**	**0.0077**	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	**0.33**	**0.020**	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Mercury	--	<0.004	<0.004	<0.00020	<0.00020	<0.00020	**0.00063**	<0.00020	<0.00020	--	<0.004	<0.004	<0.00020	<0.00020	<0.00020	**0.00055**	<0.00020	<0.00020
Molybdenum	--	0.0064	0.0060	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	--	0.010	<0.005	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Nickel	--	**0.030**	0.0056	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	--	**0.010**	0.0062	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Selenium	--	<0.0050	**0.0058**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--	<0.0050	<0.0050	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Silver	--	**0.020**	**0.010**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	--	**0.010**	**0.0013**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Thallium	--	<0.0050	<0.0050	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--	<0.0050	<0.0050	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Vanadium	--	0.0034	0.003	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	--	**0.050**	<0.003	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Zinc	--	**0.070**	0.020	<0.015	0.015	0.02	<0.0150	<0.0150	**0.040**	--	0.010	**0.030**	0.020	**0.16**	**0.041**	<0.0150	<0.0150	<0.0150

Notes:
1. Metals analyses conducted in general accordance with U.S. Environmental Protection Agency (EPA) Methods 6010 and 7470.
2. Concentrations reported in milligrams per liter.
3. "<" = not detected at concentrations above the indicated amount.
4. Risk-based screening levels (RBSLs) for groundwater that is not a current or potential drinking water source.
5. Bold results exceed RBSLs.

Table 8
Historical Groundwater Analytical Results
Heavy Metals
Former Thomas Short Company
Oakland, California

Sample Designation / Sampling Date	MW-6 5/26/00	MW-6 11/27/00	MW-6 3/29/01	MW-6 1/15/02	MW-6 4/19/02	MW-6 7/11/02	MW-6 10/17/02	MW-6 1/27/03	MW-6 4/14/03	Risk-Based Screening Levels
Antimony	--	<0.0050	<0.0050	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	0.030
Arsenic	--	0.0091	0.0091	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	0.036
Barium	--	**0.20**	**0.11**	**0.092**	**0.12**	**0.21**	<0.020	**0.16**	**0.21**	0.0039
Beryllium	--	<0.0010	<0.0010	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0051
Cadmium	--	<0.0030	<0.0030	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0011
Chromium	--	<0.003	<0.003	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.180
Cobalt	--	**0.0049**	**0.0040**	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.0030
Copper	--	**0.010**	**0.020**	<0.020	**0.23**	<0.020	<0.020	<0.020	<0.020	0.0031
Lead	**0.40**	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0032
Mercury	--	<0.004	<0.004	<0.00020	<0.00020	<0.00020	**0.00041**	**0.00023**	<0.00020	0.000012
Molybdenum	--	0.010	0.0054	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.240
Nickel	--	**0.040**	**0.010**	<0.040	**0.10**	<0.040	<0.040	<0.040	<0.040	0.0082
Selenium	--	<0.0050	<0.0050	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.0050
Silver	--	**0.010**	**0.001**	**<0.010**	<0.010	<0.010	<0.010	<0.010	<0.010	0.00012
Thallium	--	<0.0050	<0.0050	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.040
Vanadium	--	0.0036	0.003	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.019
Zinc	--	**0.050**	**0.37**	**0.031**	0.02	**0.043**	<0.0150	**0.027**	<0.0150	0.023

Notes:
1. Metals analyses conducted in general accordance with U.S. Environmental Protection Agency (EPA) Methods 6010 and 7471.
2. Concentrations reported in milligrams per liter.
3. "<" = not detected at concentrations above the indicated amount.
4. Risk-based screening levels (RBSLs) for groundwater that is not a current or potential drinking water source.
5. Bold results exceed RBSLs.

Appendix A
Groundwater Monitoring Procedures

The procedures that were used for collecting the groundwater samples are presented below.

- General safety procedures were reviewed with the field investigation staff prior to commencement of field activities.

Groundwater Sampling Procedures

- Field activities and equipment utilization were recorded on field report forms.
- Water levels within each well casing were measured to the nearest 0.01-foot and the presence of free-phase petroleum product evaluated. The water level meter was rinsed with deionized water between wells.
- Purging was conducted using dedicated, disposable, polyethylene bailers. A minimum of three well casing volumes of water was removed from each well during purging. Wells that purge dry were purged dry twice, if at least three casing volumes of water could not be removed. Well purging activities were recorded on groundwater sample collection forms.
- The temperature, conductivity, and pH of the groundwater removed during purging of the wells was monitored.
- Water removed from the wells was contained in 208-liter (55-gallon) drums. Labels were placed on the drums with the contents, date, well number, and job number recorded on the label. The drums were stored at the site pending disposal/recycling.
- All wells were purged before any of the samples were collected. Groundwater sample collection followed in the order that the wells were purged.
- Groundwater samples were collected following recovery of water levels within the wells to at least 90 percent (%) of the pre-purge levels. A water level measurement was made prior to sample collection to confirm the recovery of water levels within the wells.
- A dedicated, disposable, polyethylene bottom valve bailer was used for collection of each groundwater sample. Polyethylene bailers were discarded after each sample was collected. New nylon rope was used to lower the bailers into the wells. The nylon rope was discarded after each well.
- Groundwater samples were placed into laboratory-supplied containers containing preservatives, except samples retained for heavy metal analyses.

- Groundwater was discharged from the bailer via a bottom-emptying device. Discharge to the containers was conducted in a manner to minimize bubbling and agitation of the liquid. The volatile organic analysis vials were filled to the top forming a meniscus to minimize the headspace.

- Groundwater samples were collected in the following order for the indicated analyses: volatile organic compounds and fuel oxygenate compounds, total petroleum hydrocarbons as gasoline, total petroleum hydrocarbons as diesel, total recoverable petroleum hydrocarbons, and heavy metals. Groundwater grab samples collected for heavy metals analyses were not filtered in the field, but were filtered at the laboratory prior to analysis.

Sample Retention and Analysis Procedures

- Chain of custody procedures, including the use of chain of custody forms, were used to document sample handling and transport from collection to delivery to the laboratory for analysis.

- The samples were placed on ice in an insulated chests overnight in the custody of an IT Corporation (IT) employee. The samples were picked up within approximately 24 hours of collection of the last sample by a courier supplied by the laboratory, or were delivered to the laboratory by IT personnel within approximately 24 hours of collection of the last sample. The samples were transported to the laboratory in a motor vehicle.

- Groundwater samples were labeled with the well number followed by the date.

- Laboratory quality assurance/quality control procedures are summarized below:

  - Method Blank Frequency = one per 20 samples
  - Matrix Spike/Matrix Spike Duplicate = one per 20 samples
  - Laboratory Control Sample/Laboratory Control Sample Duplicate = one per 20 samples

FIELD REPORT
WATER LEVEL / FLOATING PRODUCT
SURVEY

SHAW Environmental & Infrastructure, Inc.
1326 North Market Boulevard
Sacramento, California 95834

PROJECT NO : 830714 / 01010000 **LOCATION : 3430 Wood Street, Oakland**

DATE: 4-14-03

CLIENT : Caltrans
Former Thomas Short Co. Property

SAMPLER : Paul Weinhardt

WELL ID	TIME	TOTAL DEPTH (Feet)	DEPTH TO WATER (Feet)	DEPTH TO FLOATING PRODUCT (Feet)	FLOATING PRODUCT THICKNESS (Feet)	COMMENTS
MW-4	822	15.00	9.82	—	—	
MW-5	816	19.20	13.81	—	—	
MW-6	819	18.70	13.42	—	—	

Comments :

Paul Weinhardt
Signature

Rev. 1/97

WATER SAMPLE FIELD DATA SHEET

PROJECT NO : 830714 / 01010000 — SAMPLE ID : MW4

PURGED BY : Paul Weinhardt — CLIENT NAME : Caltrans - Former Thomas Short Co.

SAMPLED BY : Paul Weinhardt — LOCATION : 3430 Wood Street, Oakland, CA

TYPE: Groundwater X — Surface Water ____ — Leachate ____ — Other ____

CASING DIAMETER (inches): 2 X (.163) — 3 ____ (.367) — 4 ____ (.652) — 4.5 ____ (.826) — 6 ____ (1.47) — Other ____ (1"-.041 / 8"-2.61)

CASING ELEVATION (feet/MSL) : ____ — VOLUME IN CASING (gal.) : .88

DEPTH OF WELL (feet) : 15.0 — CALCULATED PURGE (gal.) : 2.64

DEPTH TO WATER (feet) : 9.82 — ACTUAL PURGE VOL. (gal.) : 3.00

DATE PURGED : 4-14-03 — END PURGE : 857

DATE SAMPLED : 4-14-03 — SAMPLING TIME : 9:27

DTW AT SAMPLE TIME: 11.21

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
851	1.0	6.29	3802	14.90	Cloudy	Mod
854	2.0	6.18	3876	15.1	Cloudy	Mod
857	3.0	6.11	3964	15.0	Cloudy	Mod

OTHER: ____ — ODOR: ____ — (COBALT 0-100) — (NTU 0-200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1) : ____

PURGING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Centrifugal Pump — ____ Bailer (PVC)
____ Submersible Pump — ____ Bailer (Stainless Steel)
X Dispo Bailer — ____ Dedicated
Other: ____

SAMPLING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Bomb Sampler — ____ Bailer (Stainless Steel)
____ Dipper — ____ Submersible Pump
X Dispo Bailer — ____ Dedicated
Other: ____

WELL INTEGRITY: Good — LOCK: NO

REMARKS: ____

pH, E.C., Temp. Meter Calibration: Date: ____ Time: ____ Meter Serial No.: ____

E.C. 1000 ____ / ____ — pH 7 ____ / ____ — pH 10 ____ / ____ — pH 4 ____ / ____

Temperature °C ____

SIGNATURE: Paul Weinhardt — REVIEWED BY: ____ — PAGE 1 OF 3

Rev. 1/97

WATER SAMPLE FIELD DATA SHEET

PROJECT NO : 830714 / 01010000 — SAMPLE ID : MW5

PURGED BY : Paul Weinhardt — CLIENT NAME : Caltrans - Former Thomas Short Co.

SAMPLED BY : Paul Weinhardt — LOCATION : 3430 Wood Street, Oakland, CA

TYPE: Groundwater X — Surface Water ____ — Leachate ____ — Other ____

CASING DIAMETER (inches): 2 X (.163) — 3 ____ (.367) — 4 ____ (.652) — 4.5 ____ (.826) — 6 ____ (1.47) — Other ____ (1"-.041 / 8"-2.61)

CASING ELEVATION (feet/MSL) : ____ — VOLUME IN CASING (gal.) : .91

DEPTH OF WELL (feet) : 19.20 — CALCULATED PURGE (gal.) : 2.74

DEPTH TO WATER (feet) : 13.81 — ACTUAL PURGE VOL. (gal.) : 3.00

DATE PURGED : 4-14-03 — END PURGE : 833

DATE SAMPLED : 4-14-03 — SAMPLING TIME : 912

DTW AT SAMPLE TIME: 13.78

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
827	1.0	6.42	3132	13.9°	cloudy	MOD
830	2.0	6.09	2842	15.4°	cloudy	MOD
833	3.0	6.03	2761	15.8°	cloudy	MOD

OTHER: ____ — ODOR: ____ — (COBALT 0-100) — (NTU 0-200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1) : ____

PURGING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Centrifugal Pump — ____ Bailer (PVC)
____ Submersible Pump — ____ Bailer (Stainless Steel)
X Dispo Bailer — ____ Dedicated
Other: ____

SAMPLING EQUIPMENT

____ 2" Bladder Pump — ____ Bailer (Teflon)
____ Bomb Sampler — ____ Bailer (Stainless Steel)
____ Dipper — ____ Submersible Pump
X Dispo Bailer — ____ Dedicated
Other: ____

WELL INTEGRITY: Good — LOCK: Dolphin

REMARKS: ____

pH, E.C., Temp. Meter Calibration: Date: ____ Time: ____ Meter Serial No.: ____

E.C. 1000 ____ / ____ — pH 7 ____ / ____ — pH 10 ____ / ____ — pH 4 ____ / ____

Temperature °C ____

SIGNATURE: Paul Weinhardt — REVIEWED BY: ____ — PAGE 2 OF 3

Rev. 1/97

WATER SAMPLE FIELD DATA SHEET

PROJECT NO : 830714 / 01010000 — SAMPLE ID : MW6

PURGED BY : Paul Weinhardt — CLIENT NAME : Caltrans - Former Thomas Short Co.

SAMPLED BY : Paul Weinhardt — LOCATION : 3430 Wood Street, Oakland, CA

TYPE: Groundwater X — Surface Water ____ — Leachate ____ — Other ____

CASING DIAMETER (inches): 2 X (.163) — 3 ____ (.367) — 4 ____ (.652) — 4.5 ____ (.826) — 6 ____ (1.47) — Other ____ (1"-.041 / 8"-2.61)

CASING ELEVATION (feet/MSL) : ____ — VOLUME IN CASING (gal.) : .89

DEPTH OF WELL (feet) : 18.70 — CALCULATED PURGE (gal.) : 2.69

DEPTH TO WATER (feet) : 13.42 — ACTUAL PURGE VOL. (gal.) : 3.00

DATE PURGED : 4-14-03 — END PURGE : 843

DATE SAMPLED : 4-14-03 — SAMPLING TIME : 919

DTW AT SAMPLE TIME: 13.33

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
837	1.0	6.41	3286	15.0°	cloudy	MOD
840	2.0	6.36	3614	15.1°	cloudy	MOD
843	3.0	6.31	4227	15.4°	cloudy	MOD

OTHER: ____ — ODOR: ____ — (COBALT 0-100) — (NTU 0-200)

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1) : ____

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
____ 2" Bladder Pump	____ Bailer (Teflon)	____ 2" Bladder Pump	____ Bailer (Teflon)
____ Centrifugal Pump	____ Bailer (PVC)	____ Bomb Sampler	____ Bailer (Stainless Steel)
____ Submersible Pump	____ Bailer (Stainless Steel)	____ Dipper	____ Submersible Pump
X Dispo Bailer	____ Dedicated	X Dispo Bailer	____ Dedicated
Other: ____		Other: ____	

WELL INTEGRITY: Good — LOCK: Yes

REMARKS: ____

pH, E.C., Temp. Meter Calibration: Date: ____ Time: ____ Meter Serial No.: ____

E.C. 1000 ____ / ____ pH 7 ____ / ____ pH 10 ____ / ____ pH 4 ____ / ____

Temperature °C ____

SIGNATURE: Paul Weinhardt REVIEWED BY: ____ PAGE 3 OF 3

Drum Inventory Record

830714 / 01010000 **Project No**	Former Thomas Short Co. Property 3430 Wood Street, Oakland **Location**	4-14-03 **Date**
Caltrans **Client**	Paul Weinhardt **Sampler**	Mon **Day of Week**

DRUM NUMBER OR ID	WELL OR SOURCE ID(s)	TYPE OF MATERIAL	AMOUNT OF MATERIAL IN DRUM	DATE ACCUMULATED OR GENERATED
1 DRUM	ON SITE	W/ 27	GAL FROM	
THOMAS	SHOR			
1 DRUM	EMPTY	FROM	Churchs	Chicken

Sketch locations of drums, include drum ID's

COMMENTS:

Number of Drums From This Event 1

Total Number of Drums At Site 2

Sparger Technology, Inc.
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Mobile Laboratory Division
Scientific Division

Martha Adams
Shaw Environmental & Infrastructure
1326 N. Market Blvd.
Sacramento, CA 95834

Client	Shaw Environmental & Infrastructure
Workorder	15545 Caltrans, 830714
Received	04/15/03

The samples were received in EPA specified containers. The samples were transported and received under documented chain of custody and stored at four (4) degrees C until analysis was performed.

Sparger Technology, Inc. ID Suffix Keys - These descriptors will follow the Sparger Technology, Inc. ID numbers and help identify the specific sample and clarify the report.

DUP - Matrix Duplicate
MS - Matrix Spike
MSD - Matrix Spike Duplicate
LCS - Lab Control Sample
LCSD - Lab Control Sample Duplicate
RPD - Relative Percent Difference
QC - Additional Quality Control
DIL - Results from a diluted sample
ND - None Detected
RL - Reporting Limit

Note: In an effort to conserve paper, the results are printed on both sides of the paper.

Ray James
Laboratory Director

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545001	**Received**	04/14/03
Sample ID	MW-4	**Reported**	05/09/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel[1]	04/17/03	04/21/03	1400	50	ug/L	1:1

1 - Non-typical TPH pattern in diesel range.

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545001	**Received**	04/14/03
Sample ID	MW-4	**Reported**	05/09/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	04/21/03	04/21/03	ND	50	ug/L	1:1

Surrogates	Result	Recovery	Limits
Trifluorotoluene	19.5 ug/L	98 %	(65 - 135)

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545001	**Received**	04/14/03
Sample ID	MW-4	**Reported**	05/09/03
Matrix	Water		

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	04/30/03	04/30/03	ND	0.00020	mg/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545001	**Received**	04/14/03
Sample ID	MW-4	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Chloromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Vinyl chloride	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Bromomethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Chloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Trichlorofluoromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Acrolein	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,1-Dichloroethene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Acetone	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Methyl iodide	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Carbon disulfide	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Dichloromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Acrylonitrile	04/17/03	04/17/03	ND	4.0	ug/L	1:2
trans-1,2-Dichloroethene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,1-Dichloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Vinyl acetate	04/17/03	04/17/03	ND	4.0	ug/L	1:2
cis-1,2-Dichloroethene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
2-Butanone (MEK)	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Bromochloromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Chloroform	04/17/03	04/17/03	ND	4.0	ug/L	1:2
2,2-dichloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,1,1-Trichloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,1-dichloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Carbon tetrachloride	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Benzene	**04/17/03**	**04/17/03**	**18**	**4.0**	**ug/L**	**1:2**
1,2-Dichloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Dibromomethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Bromodichloromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,2-Dichloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Trichloroethene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
2-Chloroethylvinyl ether	04/17/03	04/17/03	ND	4.0	ug/L	1:2
cis-1,3-Dichloropropene	04/17/03	04/17/03	ND	4.0	ug/L	1:2

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545001	**Received**	04/14/03
Sample ID	MW-4	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B (continued)

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	04/17/03	04/17/03	ND	4.0	ug/L	1:2
trans-1,3Dichloropropene	04/17/03	04/17/03	ND	4.0	ug/L	1:
1,1,2-Trichloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:
Toluene	**04/17/03**	**04/17/03**	**4.0**	**4.0**	**ug/L**	**1:2**
1,2-Dibromoethane (EDB)	04/17/03	04/17/03	ND	4.0	ug/L	1:
1,3-Dichloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:
2-Hexanone	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Dibromochloromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Tetrachloroethene	04/17/03	04/17/03	ND	4.0	ug/L	1:
1,1,1,2Tetrachloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:
Chlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Ethylbenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:
M+P-Xylene	**04/17/03**	**04/17/03**	**7.9**	**4.0**	**ug/L**	**1:**
Bromoform	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Styrene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
o-Xylene	04/17/03	04/17/03	ND	4.0	ug/L	1:
1,1,2,2Tetrachloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:
1,2,3-Trichloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Isopropylbenzene (Cumene)	**04/17/03**	**04/17/03**	**5.0**	**4.0**	**ug/L**	**1:**
Bromobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:
n-Propylbenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
2-Chlorotoluene	04/17/03	04/17/03	ND	4.0	ug/L	1:
4-Chlorotoluene	04/17/03	04/17/03	ND	4.0	ug/L	1:
1,3,5-Trimethylbenzene	**04/17/03**	**04/17/03**	**24**	**4.0**	**ug/L**	**1:2**
tert-Butylbenzene	**04/17/03**	**04/17/03**	**16**	**4.0**	**ug/L**	**1:2**
1,2,4-Trimethylbenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:
sec-Butylbenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:
1,3-Dichlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,4-Dichlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:
4-Isopropyltoluene	**04/17/03**	**04/17/03**	**6.8**	**4.0**	**ug/L**	**1:**
1,2-Dichlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
n-Butylbenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545001	**Received**	04/14/03
Sample ID	MW-4	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B (continued)

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2Dibromo3chloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,2,4-Trichlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Naphthalene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Hexachlorobutadiene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,2,3-Trichlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	52.9 ug/L	106 %	(76 - 135)
Toluene d8	50.7 ug/L	101 %	(88 - 118)
4-Bromofluorobenzene	55.4 ug/L	111 %	(86 - 121)

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545001	**Received**	04/14/03
Sample ID	MW-4	**Reported**	05/09/03
Matrix	Water		

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	04/16/03	04/17/03	ND	0.060	mg/L	1:1
Arsenic	04/16/03	04/17/03	ND	0.080	mg/L	1:1
Barium	**04/16/03**	**04/17/03**	**0.35**	**0.020**	**mg/L**	**1:1**
Beryllium	04/16/03	04/17/03	ND	0.0030	mg/L	1:1
Cadmium	04/16/03	04/17/03	ND	0.0050	mg/L	1:1
Chromium	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Cobalt	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Copper	04/16/03	04/17/03	ND	0.020	mg/L	1:1
Lead	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Molybdenum	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Nickel	04/16/03	04/17/03	ND	0.040	mg/L	1:1
Selenium	04/16/03	04/17/03	ND	0.10	mg/L	1:1
Silver	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Thallium	04/16/03	04/17/03	ND	0.10	mg/L	1:1
Vanadium	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Zinc	**04/16/03**	**04/17/03**	**0.040**	**0.015**	**mg/L**	**1:1**

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545002	**Received**	04/14/03
Sample ID	MW-5	**Reported**	05/09/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel[1]	04/17/03	04/21/03	2300	50	ug/L	1:1

1 - Non-typical TPH pattern in diesel range.

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545002	**Received**	04/14/03
Sample ID	MW-5	**Reported**	05/09/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	04/21/03	04/21/03	ND	50	ug/L	1:1

Surrogates	Result	Recovery	Limits
Trifluorotoluene	18.8 ug/L	94 %	(65 - 135)

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545002	**Received**	04/14/03
Sample ID	MW-5	**Reported**	05/09/03
Matrix	Water		

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	04/30/03	04/30/03	ND	0.00020	mg/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545002	**Received**	04/14/03
Sample ID	MW-5	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Chloromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Vinyl chloride	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Bromomethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Chloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Trichlorofluoromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Acrolein	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,1-Dichloroethene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Acetone	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Methyl iodide	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Carbon disulfide	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Dichloromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Acrylonitrile	04/17/03	04/17/03	ND	4.0	ug/L	1:2
trans-1,2-Dichloroethene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,1-Dichloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Vinyl acetate	04/17/03	04/17/03	ND	4.0	ug/L	1:2
cis-1,2-Dichloroethene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
2-Butanone (MEK)	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Bromochloromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Chloroform	04/17/03	04/17/03	ND	4.0	ug/L	1:2
2,2-dichloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,1,1-Trichloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,1-dichloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Carbon tetrachloride	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Benzene	**04/17/03**	**04/17/03**	**150**	**4.0**	**ug/L**	**1:2**
1,2-Dichloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Dibromomethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Bromodichloromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,2-Dichloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Trichloroethene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
2-Chloroethylvinyl ether	04/17/03	04/17/03	ND	4.0	ug/L	1:2
cis-1,3-Dichloropropene	04/17/03	04/17/03	ND	4.0	ug/L	1:2

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545002	**Received**	04/14/03
Sample ID	MW-5	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B (continued)

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	04/17/03	04/17/03	ND	4.0	ug/L	1:2
trans-1,3Dichloropropene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,1,2-Trichloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Toluene	**04/17/03**	**04/17/03**	**5.2**	**4.0**	**ug/L**	**1:2**
1,2-Dibromoethane (EDB)	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,3-Dichloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
2-Hexanone	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Dibromochloromethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Tetrachloroethene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,1,1,2Tetrachloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Chlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Ethylbenzene	**04/17/03**	**04/17/03**	**42**	**4.0**	**ug/L**	**1:2**
M+P-Xylene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Bromoform	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Styrene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
o-Xylene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,1,2,2Tetrachloroethane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,2,3-Trichloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
Isopropylbenzene (Cumene)	**04/17/03**	**04/17/03**	**27**	**4.0**	**ug/L**	**1:2**
Bromobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
n-Propylbenzene	**04/17/03**	**04/17/03**	**44**	**4.0**	**ug/L**	**1:2**
2-Chlorotoluene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
4-Chlorotoluene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,3,5-Trimethylbenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
tert-Butylbenzene	**04/17/03**	**04/17/03**	**27**	**4.0**	**ug/L**	**1:2**
1,2,4-Trimethylbenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
sec-Butylbenzene	**04/17/03**	**04/17/03**	**9.1**	**4.0**	**ug/L**	**1:2**
1,3-Dichlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,4-Dichlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
4-Isopropyltoluene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,2-Dichlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
n-Butylbenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:2

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545002	**Received**	04/14/03
Sample ID	MW-5	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B (continued)

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2Dibromo3chloropropane	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,2,4-Trichlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:
Naphthalene	04/17/03	04/17/03	ND	4.0	ug/L	1:
Hexachlorobutadiene	04/17/03	04/17/03	ND	4.0	ug/L	1:2
1,2,3-Trichlorobenzene	04/17/03	04/17/03	ND	4.0	ug/L	1:

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	51.2 ug/L	102 %	(76 - 135)
Toluene d8	50.9 ug/L	102 %	(88 - 118)
4-Bromofluorobenzene	53.9 ug/L	108 %	(86 - 121)

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545002	**Received**	04/14/03
Sample ID	MW-5	**Reported**	05/09/03
Matrix	Water		

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	04/16/03	04/17/03	ND	0.060	mg/L	1:1
Arsenic	04/16/03	04/17/03	ND	0.080	mg/L	1:1
Barium	**04/16/03**	**04/17/03**	**0.51**	**0.020**	**mg/L**	**1:1**
Beryllium	04/16/03	04/17/03	ND	0.0030	mg/L	1:1
Cadmium	04/16/03	04/17/03	ND	0.0050	mg/L	1:1
Chromium	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Cobalt	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Copper	04/16/03	04/17/03	ND	0.020	mg/L	1:1
Lead	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Molybdenum	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Nickel	04/16/03	04/17/03	ND	0.040	mg/L	1:1
Selenium	04/16/03	04/17/03	ND	0.10	mg/L	1:1
Silver	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Thallium	04/16/03	04/17/03	ND	0.10	mg/L	1:1
Vanadium	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Zinc	04/16/03	04/17/03	ND	0.015	mg/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545003	**Received**	04/14/03
Sample ID	MW-6	**Reported**	05/09/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	04/17/03	04/21/03	ND	50	ug/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545003	**Received**	04/14/03
Sample ID	MW-6	**Reported**	05/09/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	04/21/03	04/21/03	ND	50	ug/L	1:1

Surrogates	Result	Recovery	Limits
Trifluorotoluene	19.7 ug/L	98 %	(65 - 135)

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545003	**Received**	04/14/03
Sample ID	MW-6	**Reported**	05/09/03
Matrix	Water		

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	04/30/03	04/30/03	ND	0.00020	mg/L	1:1

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Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545003	**Received**	04/14/03
Sample ID	MW-6	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Chloromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Vinyl chloride	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromomethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Chloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Trichlorofluoromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Acrolein	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1-Dichloroethene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Acetone	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Methyl iodide	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Carbon disulfide	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Dichloromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Acrylonitrile	04/17/03	04/17/03	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1-Dichloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Vinyl acetate	04/17/03	04/17/03	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2-Butanone (MEK)	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromochloromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Chloroform	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2,2-dichloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1-dichloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Carbon tetrachloride	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Benzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2-Dichloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Dibromomethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromodichloromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2-Dichloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Trichloroethene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	04/17/03	04/17/03	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	04/17/03	04/17/03	ND	2.0	ug/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545003	**Received**	04/14/03
Sample ID	MW-6	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B (continued)

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	04/17/03	04/17/03	ND	2.0	ug/L	1:1
trans-1,3Dichloropropene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Toluene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2-Dibromoethane (EDB)	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,3-Dichloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2-Hexanone	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Dibromochloromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Tetrachloroethene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1,1,2Tetrachloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Chlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Ethylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
M+P-Xylene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromoform	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Styrene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
o-Xylene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1,2,2Tetrachloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Isopropylbenzene (Cumene)	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
n-Propylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2-Chlorotoluene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
4-Chlorotoluene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
tert-Butylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,4-Trimethylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
sec-Butylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
4-Isopropyltoluene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
n-Butylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545003	**Received**	04/14/03
Sample ID	MW-6	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B (continued)

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2Dibromo3chloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Naphthalene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Hexachlorobutadiene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	51.6 ug/L	103 %	(76 - 135)
Toluene d8	49.4 ug/L	99 %	(88 - 118)
4-Bromofluorobenzene	54.7 ug/L	109 %	(86 - 121)

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545003	**Received**	04/14/03
Sample ID	MW-6	**Reported**	05/09/03
Matrix	Water		

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	04/16/03	04/17/03	ND	0.060	mg/L	1:1
Arsenic	04/16/03	04/17/03	ND	0.080	mg/L	1:1
Barium	**04/16/03**	**04/17/03**	**0.21**	**0.020**	**mg/L**	**1:1**
Beryllium	04/16/03	04/17/03	ND	0.0030	mg/L	1:1
Cadmium	04/16/03	04/17/03	ND	0.0050	mg/L	1:1
Chromium	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Cobalt	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Copper	04/16/03	04/17/03	ND	0.020	mg/L	1:1
Lead	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Molybdenum	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Nickel	04/16/03	04/17/03	ND	0.040	mg/L	1:1
Selenium	04/16/03	04/17/03	ND	0.10	mg/L	1:1
Silver	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Thallium	04/16/03	04/17/03	ND	0.10	mg/L	1:1
Vanadium	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Zinc	04/16/03	04/17/03	ND	0.015	mg/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545004	**Received**	04/14/03
Sample ID	Trip Blank	**Reported**	05/09/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	04/21/03	04/21/03	ND	50	ug/L	1:1

Surrogates	Result	Recovery	Limits
Trifluorotoluene	20.2 ug/L	101 %	(65 - 135)

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545004	**Received**	04/14/03
Sample ID	Trip Blank	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Chloromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Vinyl chloride	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromomethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Chloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Trichlorofluoromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Acrolein	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1-Dichloroethene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Acetone	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Methyl iodide	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Carbon disulfide	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Dichloromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Acrylonitrile	04/17/03	04/17/03	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1-Dichloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Vinyl acetate	04/17/03	04/17/03	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2-Butanone (MEK)	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromochloromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Chloroform	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2,2-dichloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1-dichloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Carbon tetrachloride	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Benzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2-Dichloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Dibromomethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromodichloromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2-Dichloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Trichloroethene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	04/17/03	04/17/03	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	04/17/03	04/17/03	ND	2.0	ug/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545004	**Received**	04/14/03
Sample ID	Trip Blank	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B (continued)

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	04/17/03	04/17/03	ND	2.0	ug/L	1:1
trans-1,3Dichloropropene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Toluene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2-Dibromoethane (EDB)	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,3-Dichloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2-Hexanone	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Dibromochloromethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Tetrachloroethene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1,1,2Tetrachloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Chlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Ethylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
M+P-Xylene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromoform	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Styrene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
o-Xylene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1,2,2Tetrachloroethane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Isopropylbenzene (Cumene)	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
n-Propylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2-Chlorotoluene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
4-Chlorotoluene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
tert-Butylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,4-Trimethylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
sec-Butylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
4-Isopropyltoluene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
n-Butylbenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, 830714
Workorder #	15545	**Sampled**	04/14/03
Laboratory ID	15545004	**Received**	04/14/03
Sample ID	Trip Blank	**Reported**	05/09/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B (*continued*)

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2Dibromo3chloropropane	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Naphthalene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Hexachlorobutadiene	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	04/17/03	04/17/03	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	52 ug/L	104 %	(76 - 135)
Toluene d8	49.2 ug/L	98 %	(88 - 118)
4-Bromofluorobenzene	52.6 ug/L	105 %	(86 - 121)

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54272
Sample ID	MB for HBN 182492 [SGXV/1902]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	04/17/03	04/21/03	ND	50	ug/L	1:1

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54273
Sample ID	LCS for HBN 182492 [SGXV/1902]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	04/17/03	04/21/03	460	50	ug/L	1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54274
Sample ID	LCSD for HBN 182492 [SGXV/1902
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	04/17/03	04/21/03	450	50	ug/L	1:1

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Method Blank Report

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, 830714
Laboratory ID 54415
Sample ID MB for HBN 182752 [VMXV/2201]
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
Chloromethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Vinyl chloride	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
Bromomethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
Chloroethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Trichlorofluoromethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Acrolein	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
1,1-Dichloroethene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
Acetone	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Methyl iodide	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
Carbon disulfide	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
Dichloromethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Acrylonitrile	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
trans-1,2-Dichloroethene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
1,1-Dichloroethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
Vinyl acetate	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
2-Butanone (MEK)	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
Bromochloromethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Chloroform	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
2,2-dichloropropane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
1,1,1-Trichloroethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1-dichloropropane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Carbon tetrachloride	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
Benzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
1,2-Dichloroethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Dibromomethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
Bromodichloromethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
1,2-Dichloropropane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Trichloroethene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
2-Chloroethylvinyl ether	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
cis-1,3-Dichloropropene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1
4-Methyl-2-pentanone	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54415
Sample ID	MB for HBN 182752 [VMXV/2201]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
(continued)							
trans-1,3Dichloropropene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Toluene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2-Dibromoethane (EDB)	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,3-Dichloropropane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2-Hexanone	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Dibromochloromethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Tetrachloroethene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1,1,2Tetrachloroethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Chlorobenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Ethylbenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
M+P-Xylene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromoform	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Styrene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
o-Xylene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,1,2,2Tetrachloroethane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Isopropylbenzene (Cumene)	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Bromobenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
n-Propylbenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
2-Chlorotoluene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
4-Chlorotoluene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
tert-Butylbenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,4-Trimethylbenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
sec-Butylbenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
4-Isopropyltoluene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
n-Butylbenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54415
Sample ID	MB for HBN 182752 [VMXV/2201]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
(continued)							
1,2Dibromo3chloropropane	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Naphthalene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
Hexachlorobutadiene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	8260B	04/17/03	04/17/03	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	52.3 ug/L	105 %	(76 - 135)
Toluene d8	49.1 ug/L	98 %	(88 - 118)
4-Bromofluorobenzene	53.8 ug/L	108 %	(86 - 121)

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54416
Sample ID	LCS for HBN 182752 [VMXV/2201]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/17/03	04/17/03	48	2.0	ug/L	1:1
Benzene	8260B	04/17/03	04/17/03	52	2.0	ug/L	1:1
Trichloroethene	8260B	04/17/03	04/17/03	48	2.0	ug/L	1:1
Toluene	8260B	04/17/03	04/17/03	51	2.0	ug/L	1:1
Chlorobenzene	8260B	04/17/03	04/17/03	51	2.0	ug/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54417
Sample ID	LCSD for HBN 182752 [VMXV/2201
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/17/03	04/17/03	43	2.0	ug/L	1:1
Benzene	8260B	04/17/03	04/17/03	48	2.0	ug/L	1:1
Trichloroethene	8260B	04/17/03	04/17/03	43	2.0	ug/L	1:1
Toluene	8260B	04/17/03	04/17/03	46	2.0	ug/L	1:1
Chlorobenzene	8260B	04/17/03	04/17/03	45	2.0	ug/L	1:1

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Matrix Spike Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54418
Sample ID	MS for HBN 182752 [VMXV/2201]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/17/03	04/17/03	46	2.0	ug/L	1:1
Benzene	8260B	04/17/03	04/17/03	51	2.0	ug/L	1:1
Trichloroethene	8260B	04/17/03	04/17/03	47	2.0	ug/L	1:1
Toluene	8260B	04/17/03	04/17/03	50	2.0	ug/L	1:1
Chlorobenzene	8260B	04/17/03	04/17/03	49	2.0	ug/L	1:1

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Matrix Spike Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54419
Sample ID	MSD for HBN 182752 [VMXV/2201]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/17/03	04/17/03	45	2.0	ug/L	1:1
Benzene	8260B	04/17/03	04/17/03	51	2.0	ug/L	1:1
Trichloroethene	8260B	04/17/03	04/17/03	46	2.0	ug/L	1:1
Toluene	8260B	04/17/03	04/17/03	49	2.0	ug/L	1:1
Chlorobenzene	8260B	04/17/03	04/17/03	49	2.0	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54450
Sample ID	MB for HBN 182773 [VGXV/2466]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/21/03	04/21/03	ND	50	ug/L	1:1

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54451
Sample ID	LCS for HBN 182773 [VGXV/2466]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/21/03	04/21/03	930	50	ug/L	1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54452
Sample ID	LCSD for HBN 182773 [VGXV/2466
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/21/03	04/21/03	940	50	ug/L	1:1

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Matrix Spike Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54453
Sample ID	MS for HBN 182773 [VGXV/2466]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/21/03	04/21/03	970	50	ug/L	1

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Matrix Spike Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54454
Sample ID	MSD for HBN 182773 [VGXV/2466]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/21/03	04/21/03	920	50	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54743
Sample ID	MB for HBN 183489 [DIGV/1425]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/30/03	04/30/03	ND	0.00020	mg/L	1

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54744
Sample ID	LCS for HBN 183489 [DIGV/1425]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/30/03	04/30/03	0.00100	.00020	mg/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54745
Sample ID	LCSD for HBN 183489 [DIGV/1425
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/30/03	04/30/03	0.00100	0.00020	mg/L	1:

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Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54746
Sample ID	DUP for HBN 183489 [DIGV/1425]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/30/03	04/30/03	ND	0.00020	mg/L	1:1

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Matrix Spike Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54747
Sample ID	MS for HBN 183489 [DIGV/1425]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/30/03	04/30/03	0.00098	0.00020	mg/L	1:

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Matrix Spike Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54748
Sample ID	MSD for HBN 183489 [DIGV/1425]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/30/03	04/30/03	0.00100	0.00020	mg/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54755
Sample ID	MB for HBN 183574 [ICPV/4379]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/16/03	04/17/03	ND	0.060	mg/L	1:1
Arsenic	6010B	04/16/03	04/17/03	ND	0.080	mg/L	1:1
Barium	6010B	04/16/03	04/17/03	ND	0.020	mg/L	1:1
Beryllium	6010B	04/16/03	04/17/03	ND	0.0030	mg/L	1:1
Cadmium	6010B	04/16/03	04/17/03	ND	0.0050	mg/L	1:1
Chromium	6010B	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Cobalt	6010B	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Copper	6010B	04/16/03	04/17/03	ND	0.020	mg/L	1:1
Lead	6010B	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Molybdenum	6010B	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Nickel	6010B	04/16/03	04/17/03	ND	0.040	mg/L	1:1
Selenium	6010B	04/16/03	04/17/03	ND	0.10	mg/L	1:1
Silver	6010B	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Thallium	6010B	04/16/03	04/17/03	ND	0.10	mg/L	1:1
Vanadium	6010B	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Zinc	6010B	04/16/03	04/17/03	ND	0.015	mg/L	1:1

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Lab Control Sample Report

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, 830714
Laboratory ID 54756
Sample ID LCS for HBN 183574 [ICPV/4379]
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/16/03	04/17/03	0.45	0.060	mg/L	1:1
Arsenic	6010B	04/16/03	04/17/03	0.51	0.080	mg/L	1:1
Barium	6010B	04/16/03	04/17/03	0.54	0.020	mg/L	1:1
Beryllium	6010B	04/16/03	04/17/03	0.10	0.0030	mg/L	1:1
Cadmium	6010B	04/16/03	04/17/03	0.19	0.0050	mg/L	1:1
Chromium	6010B	04/16/03	04/17/03	0.54	0.010	mg/L	1:1
Cobalt	6010B	04/16/03	04/17/03	0.20	0.050	mg/L	1:1
Copper	6010B	04/16/03	04/17/03	0.54	0.020	mg/L	1:1
Lead	6010B	04/16/03	04/17/03	0.54	0.010	mg/L	1:1
Molybdenum	6010B	04/16/03	04/17/03	0.53	0.050	mg/L	1:1
Nickel	6010B	04/16/03	04/17/03	0.90	0.040	mg/L	1:1
Selenium	6010B	04/16/03	04/17/03	0.46	0.10	mg/L	1:1
Silver	6010B	04/16/03	04/17/03	0.054	0.010	mg/L	1:1
Thallium	6010B	04/16/03	04/17/03	0.52	0.10	mg/L	1:1
Vanadium	6010B	04/16/03	04/17/03	0.21	0.050	mg/L	1:1
Zinc	6010B	04/16/03	04/17/03	0.56	0.015	mg/L	1:1

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Lab Control Sample Duplicate Report

Client ID *Shaw Environmental & Infrastructure*
Workorder ID Caltrans, 830714
Laboratory ID 54757
Sample ID LCSD for HBN 183574 [ICPV/4379
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/16/03	04/17/03	0.50	0.060	mg/L	1:1
Arsenic	6010B	04/16/03	04/17/03	0.54	0.080	mg/L	1:1
Barium	6010B	04/16/03	04/17/03	0.59	0.020	mg/L	1:1
Beryllium	6010B	04/16/03	04/17/03	0.11	0.0030	mg/L	1:1
Cadmium	6010B	04/16/03	04/17/03	0.21	0.0050	mg/L	1:1
Chromium	6010B	04/16/03	04/17/03	0.59	0.010	mg/L	1:1
Cobalt	6010B	04/16/03	04/17/03	0.21	0.050	mg/L	1:1
Copper	6010B	04/16/03	04/17/03	0.59	0.020	mg/L	1:1
Lead	6010B	04/16/03	04/17/03	0.56	0.010	mg/L	1:1
Molybdenum	6010B	04/16/03	04/17/03	0.54	0.050	mg/L	1:1
Nickel	6010B	04/16/03	04/17/03	1.0	0.040	mg/L	1:1
Selenium	6010B	04/16/03	04/17/03	0.50	0.10	mg/L	1:1
Silver	6010B	04/16/03	04/17/03	0.058	0.010	mg/L	1:1
Thallium	6010B	04/16/03	04/17/03	0.56	0.10	mg/L	1:1
Vanadium	6010B	04/16/03	04/17/03	0.22	0.050	mg/L	1:1
Zinc	6010B	04/16/03	04/17/03	0.58	0.015	mg/L	1:1

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Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54758
Sample ID	DUP for HBN 183574 [ICPV/4379]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/16/03	04/17/03	ND	0.060	mg/L	1:1
Arsenic	6010B	04/16/03	04/17/03	ND	0.080	mg/L	1:1
Barium	6010B	04/16/03	04/17/03	0.34	0.020	mg/L	1:1
Beryllium	6010B	04/16/03	04/17/03	ND	0.0030	mg/L	1:1
Cadmium	6010B	04/16/03	04/17/03	ND	0.0050	mg/L	1:1
Chromium	6010B	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Cobalt	6010B	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Copper	6010B	04/16/03	04/17/03	ND	0.020	mg/L	1:1
Lead	6010B	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Molybdenum	6010B	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Nickel	6010B	04/16/03	04/17/03	ND	0.040	mg/L	1:1
Selenium	6010B	04/16/03	04/17/03	ND	0.10	mg/L	1:1
Silver	6010B	04/16/03	04/17/03	ND	0.010	mg/L	1:1
Thallium	6010B	04/16/03	04/17/03	ND	0.10	mg/L	1:1
Vanadium	6010B	04/16/03	04/17/03	ND	0.050	mg/L	1:1
Zinc	6010B	04/16/03	04/17/03	0.038	0.015	mg/L	1:1

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Matrix Spike Report

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, 830714
Laboratory ID 54759
Sample ID MS for HBN 183574 [ICPV/4379]
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/16/03	04/17/03	0.45	0.060	mg/L	1:1
Arsenic	6010B	04/16/03	04/17/03	0.53	0.080	mg/L	1:1
Barium	6010B	04/16/03	04/17/03	0.87	0.020	mg/L	1:1
Beryllium	6010B	04/16/03	04/17/03	0.11	0.0030	mg/L	1:1
Cadmium	6010B	04/16/03	04/17/03	0.20	0.0050	mg/L	1:1
Chromium	6010B	04/16/03	04/17/03	0.54	0.010	mg/L	1:1
Cobalt	6010B	04/16/03	04/17/03	0.20	0.050	mg/L	1:1
Copper	6010B	04/16/03	04/17/03	0.56	0.020	mg/L	1:1
Lead	6010B	04/16/03	04/17/03	0.50	0.010	mg/L	1:1
Molybdenum	6010B	04/16/03	04/17/03	0.52	0.050	mg/L	1:1
Nickel	6010B	04/16/03	04/17/03	0.42	0.040	mg/L	1:1
Selenium	6010B	04/16/03	04/17/03	0.46	0.10	mg/L	1:1
Silver	6010B	04/16/03	04/17/03	0.053	0.010	mg/L	1:1
Thallium	6010B	04/16/03	04/17/03	0.50	0.10	mg/L	1:1
Vanadium	6010B	04/16/03	04/17/03	0.21	0.050	mg/L	1:1
Zinc	6010B	04/16/03	04/17/03	0.59	0.015	mg/L	1:1

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Matrix Spike Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, 830714
Laboratory ID	54760
Sample ID	MSD for HBN 183574 [ICPV/4379]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/16/03	04/17/03	0.45	0.060	mg/L	1:1
Arsenic	6010B	04/16/03	04/17/03	0.50	0.080	mg/L	1:1
Barium	6010B	04/16/03	04/17/03	0.87	0.020	mg/L	1:1
Beryllium	6010B	04/16/03	04/17/03	0.10	0.0030	mg/L	1:1
Cadmium	6010B	04/16/03	04/17/03	0.20	0.0050	mg/L	1:1
Chromium	6010B	04/16/03	04/17/03	0.54	0.010	mg/L	1:1
Cobalt	6010B	04/16/03	04/17/03	0.19	0.050	mg/L	1:1
Copper	6010B	04/16/03	04/17/03	0.56	0.020	mg/L	1:1
Lead	6010B	04/16/03	04/17/03	0.50	0.010	mg/L	1:1
Molybdenum	6010B	04/16/03	04/17/03	0.52	0.050	mg/L	1:1
Nickel	6010B	04/16/03	04/17/03	0.43	0.040	mg/L	1:1
Selenium	6010B	04/16/03	04/17/03	0.47	0.10	mg/L	1:1
Silver	6010B	04/16/03	04/17/03	0.052	0.010	mg/L	1:1
Thallium	6010B	04/16/03	04/17/03	0.51	0.10	mg/L	1:1
Vanadium	6010B	04/16/03	04/17/03	0.21	0.050	mg/L	1:1
Zinc	6010B	04/16/03	04/17/03	0.59	0.015	mg/L	1:1

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QC SUMMARY

Client ID	Shaw Environmental & Infrastructure		
Workorder ID	Caltrans, 830714		
QC Batch	DIG 1430	**Original**	15548001
Matrix	Water	**Sample**	Duplicate [54746]

Parameter	RPD	RPD Limits
Mercury	0000	(35)

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QC SUMMARY

Client ID	Shaw Environmental & Infrastructure		
Workorder ID	Caltrans, 830714		
QC Batch	ICPP 4409	**Original**	15545001
Matrix	Water	**Sample**	Duplicate [54758]

Parameter	RPD	RPD Limits
Antimony	00	(35)
Arsenic	00	(35)
Barium	2.3	(35)
Beryllium	00	(35)
Cadmium	00	(35)
Chromium	00	(35)
Cobalt	00	(35)
Copper	00	(35)
Lead	00	(35)
Molybdenum	00	(35)
Nickel	00	(35)
Selenium	00	(35)
Silver	00	(35)
Thallium	00	(35)
Vanadium	00	(35)
Zinc	4.9	(35)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, 830714
QC Batch VMX 2245
Matrix Water

Original Samples 15545004
Matrix Spike [54418]
Matrix Spike Duplicate [54419]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
1,1-Dichloroethene	92	90	(61-145)	2.2	(20 MAX)
Benzene	102	102	(76-127)	00	(20 MAX)
Trichloroethene	94	92	(71-135)	2.2	(20 MAX)
Toluene	100	98	(76-130)	2.0	(20 MAX)
Chlorobenzene	98	98	(75-130)	00	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, 830714
QC Batch VGX 2575
Matrix Water

Original Samples 15545004
Matrix Spike [54453]
Matrix Spike Duplicate [54454]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	97	92	(65-135)	5.3	(20 MAX)

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QC SUMMARY

Client ID	Shaw Environmental & Infrastructure		
Workorder ID	Caltrans, 830714		
QC Batch	DIG 1430	**Original**	15548001
Matrix	Water	**Samples**	Matrix Spike [54747]
			Matrix Spike Duplicate [54748]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Mercury	98.0	100	(75-125)	2.02	(35 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, 830714
QC Batch ICPP 4409
Matrix Water

Original Samples 15545001
Matrix Spike [54759]
Matrix Spike Duplicate [54760]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Antimony	90	90	(25-125)	00	(35 MAX)
Arsenic	107	100	(75-125)	6.8	(35 MAX)
Barium	103	104	(75-125)	1.0	(35 MAX)
Beryllium	106	103	(75-125)	2.9	(35 MAX)
Cadmium	100	98	(75-125)	2.0	(35 MAX)
Chromium	109	108	(75-125)	0.90	(35 MAX)
Cobalt	99	97	(75-125)	2.0	(35 MAX)
Copper	111	113	(75-125)	1.8	(35 MAX)
Lead	100	100	(75-125)	00	(35 MAX)
Molybdenum	104	103	(75-125)	1.0	(35 MAX)
Nickel	42	43	(75-125)	2.4	(35 MAX)
Selenium	93	94	(75-125)	1.1	(35 MAX)
Silver	106	105	(25-125)	0.90	(35 MAX)
Thallium	99	101	(50-125)	2.0	(35 MAX)
Vanadium	104	104	(75-125)	00	(35 MAX)
Zinc	110	110	(75-125)	00	(35 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, 830714
QC Batch SGX 1937
Matrix Water

Samples Lab Control Sample [54273]
Lab Control Sample Duplicate [54274]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHdiesel	92	90	(65-135)	2.2	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, 830714
QC Batch VMX 2245
Matrix Water

Samples Lab Control Sample [54416]
Lab Control Sample Duplicate [54417]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
1,1-Dichloroethene	96	86	(65-145)	11	(20 MAX)
Benzene	104	96	(71-127)	8.0	(20 MAX)
Trichloroethene	96	86	(75-135)	11	(20 MAX)
Toluene	102	92	(76-135)	10	(20 MAX)
Chlorobenzene	102	90	(76-135)	13	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, 830714
QC Batch VGX 2575
Matrix Water

Samples Lab Control Sample [54451]
Lab Control Sample Duplicate [54452]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	93	94	(65-135)	1.1	(20 MAX)

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Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, 830714
QC Batch DIG 1430
Matrix Water

Samples Lab Control Sample [54744]
Lab Control Sample Duplicate [54745]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Mercury	102	100	(80-120)	1.98	(20 MAX)

3050 Fite Circle, Suite 112 • Sacramento, California 95827 • (916) 362-8947 • FAX (916) 362-0947

Sparger Technology, Inc.
Environmental Laboratories

QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, 830714
QC Batch ICPP 4409
Matrix Water

Samples Lab Control Sample [54756]
Lab Control Sample Duplicate [54757]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Antimony	90	100	(70-120)	11	(20 MAX)
Arsenic	102	107	(80-120)	4.8	(20 MAX)
Barium	107	117	(80-120)	8.9	(20 MAX)
Beryllium	102	113	(80-120)	10	(20 MAX)
Cadmium	94	103	(80-120)	9.1	(20 MAX)
Chromium	108	118	(80-120)	8.8	(20 MAX)
Cobalt	100	107	(80-120)	6.8	(20 MAX)
Copper	109	118	(80-120)	7.9	(20 MAX)
Lead	108	112	(80-120)	3.6	(20 MAX)
Molybdenum	105	109	(80-120)	3.7	(20 MAX)
Nickel	90	101	(80-120)	12	(20 MAX)
Selenium	91	100	(80-120)	9.4	(20 MAX)
Silver	109	115	(60-120)	5.4	(20 MAX)
Thallium	104	112	(80-120)	7.4	(20 MAX)
Vanadium	103	108	(80-120)	4.7	(20 MAX)
Zinc	112	116	(80-120)	3.5	(20 MAX)

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Workorder Data Sheet / Acodes

Sparger Technology, Inc.

WO: 15545 [15545]
Work ID: Caltrans, 830714
Description: B10D/R2-1 JH
WO Status: CO **Created:** 4/15/03 8:45

Client: Shaw - Shaw Environmental & Infrastructure
Profile: 10213 - CaltransStan - Caltrans Standard
PO: 189348
Report: REPORT_WO **Type:** CM **QA:**

Lab ID / Sample ID	Sample Type	Matrix	Status	Collected	Due
1 15545001 MW-4	SAMPLE	Water	RP	4/14/03 0:00	4/28/03 17:00
		Analyses			TAT
		8015M_G W	TPH Gas WATR		10
		8015M_D W	TPHdiesel Water		10
		CAM16WATR	6010B ELEMENTS CAM16 WATER		10
		8260 WATR	8260B GCMS VOLATILES WATR		10
2 15545002 MW-5	SAMPLE	Water	RP	4/14/03 0:00	4/28/03 17:00
		Analyses			TAT
		8015M_G W	TPH Gas WATR		10
		8015M_D W	TPHdiesel Water		10
		CAM16WATR	6010B ELEMENTS CAM16 WATER		10
		8260 WATR	8260B GCMS VOLATILES WATR		10
3 15545003 MW-6	SAMPLE	Water	RP	4/14/03 0:00	4/28/03 17:00
		Analyses			TAT
		8015M_G W	TPH Gas WATR		10
		8015M_D W	TPHdiesel Water		10
		CAM16WATR	6010B ELEMENTS CAM16 WATER		10
		8260 WATR	8260B GCMS VOLATILES WATR		10
4 15545004 Trip Blank	SAMPLE	Water	RP	4/14/03 0:00	4/28/03 17:00
		Analyses			TAT
		8015M_G W	TPH Gas WATR		10
		8260 WATR	8260B GCMS VOLATILES WATR		10

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

BTOD / R2

SHAW Environmental & Infrastructure, Inc.
1326 North Market Boulevard, Sacramento, CA 95834

Purchase Order: **# 189348**
Lab: **Sparger Technology, Sacto**

Project Name: **Caltrans, Former Thomas Short Property**
Project Number: **830714 / 01010000**
Project Manager: **Martha Adams**
Company: **SHAW Environmental & Infrastructure, Inc.**
Address: **1326 North Market Boulevard**
Sacramento, CA 95834
Dir. Ph: **(916) 565-4183** FAX: **(916) 565-4356**

Sampler's Signature: Paul Weinhardt

Analysis Requested

Sample I.D.	Date	Time	LAB I.D.	Sample Matrix	Number of Containers	VOCs by 8260B; TPH as gas by 8015M	TPH as Diesel by 8015M	CAM Metals by 6010/7470 LAB TO FILTER/PRES.	REMARKS
						1	6	5	Container Types
						HCl	NP	NP	Preservations
MW-4	4-4	927		Water	6	4	1	1	
MW-5		9R		Water	6	4	1	1	
MW-6		919		Water	6	4	1	1	
Trip Blank		N/A		Water	2	2			

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Paul Weinhardt	Signature: Jennifer Riley	Signature	Signature
Printed Name: Paul Weinhardt	Printed Name: Sparger	Printed Name	Printed Name
Firm: SHAW EFI	Firm: 4/4/03 15:25	Firm	Firm
Date/Time: 4-4-03	Date/Time	Date/Time	Date/Time

TURNAROUND REQUIREMENTS
24 hr ____ 48 hr ____ 5 day
X Standard (~10-15 working days)
____ Provide Verbal Preliminary Results
____ Provide FAX Preliminary Results
Requested Report Date: ____

REPORT REQUIREMENTS
X I. Routine Report
____ II. Report (includes DUP, MS MSD, as required, may be charged as samples)
____ III. Data Validation Report (includes All Raw Data)
____ RWQCB (MDLs/PQLs/TRACE#)

RELINQUISHED BY	RECEIVED BY
Signature	Signature
Printed Name	Printed Name
Firm	Firm
Date/Time	Date/Time

Special Instructions/Comments:

CAM 17 Metals to be filtered / preserved in the lab.

Sparger Technology
3050 Fite Circle, St. 112
Sacto, Ca 95827
916-362-8947 / Fx 362-0947
Contact: Will Fleming

Container Types Key:

40 ml VOA:	1
250 ml LPE:	2
500 ml LPE:	3
1 liter HDPE:	4
500 ml glass:	5
1 liter glass:	6
2x6 s/s ring:	7
glass jar:	8