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

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Alameda County
APR 18 2003
Environmental Health

April 11, 2003

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 first quarter 2003 groundwater sampling event at the former Thomas A. Short Company site (3430 Wood Street, Oakland, CA 94508). The monitor well sampling took place on January 27, 2003.

The groundwater study at this site is scheduled to continue with the next sampling event on April 14, 2003, which will be for the second quarter of 2003. When the report for the second quarter is completed it will be forwarded to you. 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.

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

April 2, 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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FIRST 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 first 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 eight 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 first quarter of 2003 was conducted on January 27, 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 first 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 and 7.

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:	10.5 gallons (from 3 monitoring wells)
Range of Depth to Groundwater:	8.54 to 12.42 (feet from top of casing), Table 1 2.6 to 3.8 (meters from top of casing)
Groundwater Elevation Change Since Last Quarter:	Groundwater elevations increased in all wells. Increases ranged from 2.76 to 3.19 feet 0.84 to 0.97 meters
Groundwater Gradient:	0.011, Figure 3
Groundwater Flow Direction:	West, Figure 3

3.2 Analytical Results

Total petroleum hydrocarbons as gasoline was reported by the laboratory in groundwater samples from wells MW-4 and MW-5 at concentrations 3.8 and 4.6 mg/l, respectively. 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 3.7 mg/l, respectively. Total petroleum hydrocarbons as gasoline and total petroleum hydrocarbons as diesel were not reported in the groundwater sample from well MW-6 at concentrations above the laboratory analytical method reporting limit of 0.050 mg/l (Table 3).

Benzene, toluene, ethylbenzene, and xylenes were reported in groundwater samples collected from wells MW-4 and MW-5. The reported concentrations were 0.024 mg/l, 0.010 mg/l, 0.084 mg/l, and 0.0246 mg/l, respectively in well MW-4 and 0.15 mg/l, 0.0063 mg/l, 0.084 mg/l, and 0.0023 mg/l, respectively in well MW-5. 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).

Naphthalene	0.019 to 0.13	N-propylbenzene	0.19 to 0.23
1,3,5-trimethylbenzene	0.01 to 0.052	Sec-butylbenzene	0.012 to 0.024
4-Isopropyltoluene	0.0096 (MW-4)	Tert-butylbenzene	0.023 to 0.03
Isopropylbenzene	0.08 to 0.16		

The only metals that groundwater samples were reported to contain were barium, zinc, and mercury (Table 5). Barium was reported in groundwater samples collected from wells MW-4, MW-5, and MW-6 at concentrations ranging from 0.16 to 0.28 mg/l. Mercury and zinc were also reported in well MW-6 at concentrations of 0.00023 and 0.027 mg/l, respectively.

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

3.3 *Discussion of Analytical Results*

Groundwater analytical results from the First Quarter 2003 sampling event are generally consistent with historical data. Compared to fourth quarter 2002 data, the TPHg concentration increased from 2.1 to 3.8 mg/l in well MW-4, increased from 1.7 to 4.6 mg/l in well MW-5, and remained the same, none detected, in well MW-6 (Table 6). Total petroleum hydrocarbons as diesel concentrations increased from 1.1 to 1.4 mg/l in well MW-4, increased from 1.5 to 3.7 mg/l in well MW-5, and remained the same, none detected, in well MW-6 (Table 6). Benzene increased in well MW-4 from 0.023 to 0.024 mg/l, and toluene, ethylbenzene, and xylenes also increased from the previous quarter to 0.010 mg/l, 0.084 mg/l, and 0.0246 mg/l, respectively (Table 6). Benzene increased in well MW-5 from 0.062 to 0.15 mg/l. Toluene and ethylbenzene also increased from the previous quarter to 0.0063 and 0.084 mg/l, respectively. Xylenes decreased from the previous quarter to 0.0023 mg/l. 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, isopropylbenzene, n-propylbenzene, sec-butylbenzene, tert-butylbenzene, and 4-isopropyltoluene increased from the previous quarter to 52, 160, 230, 12, 23, and 9.6 µg/l, respectively. For MW-5, the compounds 1,3,5-trimethylbenzene, isopropylbenzene, n-propylbenzene, sec-butylbenzene, and tert-butylbenzene increased in concentration relative to the October 2002 results. Naphthalene increased from below the method detection limit to 130 µg/L. For MW-6, naphthalene and n-propylbenzene increased from below the method detection limit to 19 and 2.9 µg/l, respectively.

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, zinc, and mercury (Table 8). Mercury was first detected in October 2002 in groundwater samples from all three site wells. Mercury was only reported in one groundwater sample collected for the current quarter. The reported concentration was just over the analytical method reporting limit. Additional monitoring should be conducted to confirm any further changes in concentration.

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
TPHg	0.500	MW-4, MW-5
TPHd	0.640	MW-4, MW-5
Benzene	0.046	MW-5
Xylenes	0.013	MW-4
Naphthalene	0.024	MW-5
Barium	0.0039	MW-4, MW-5, MW-6
Mercury	0.000012	MW-6
Zinc	0.023	MW-6

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.

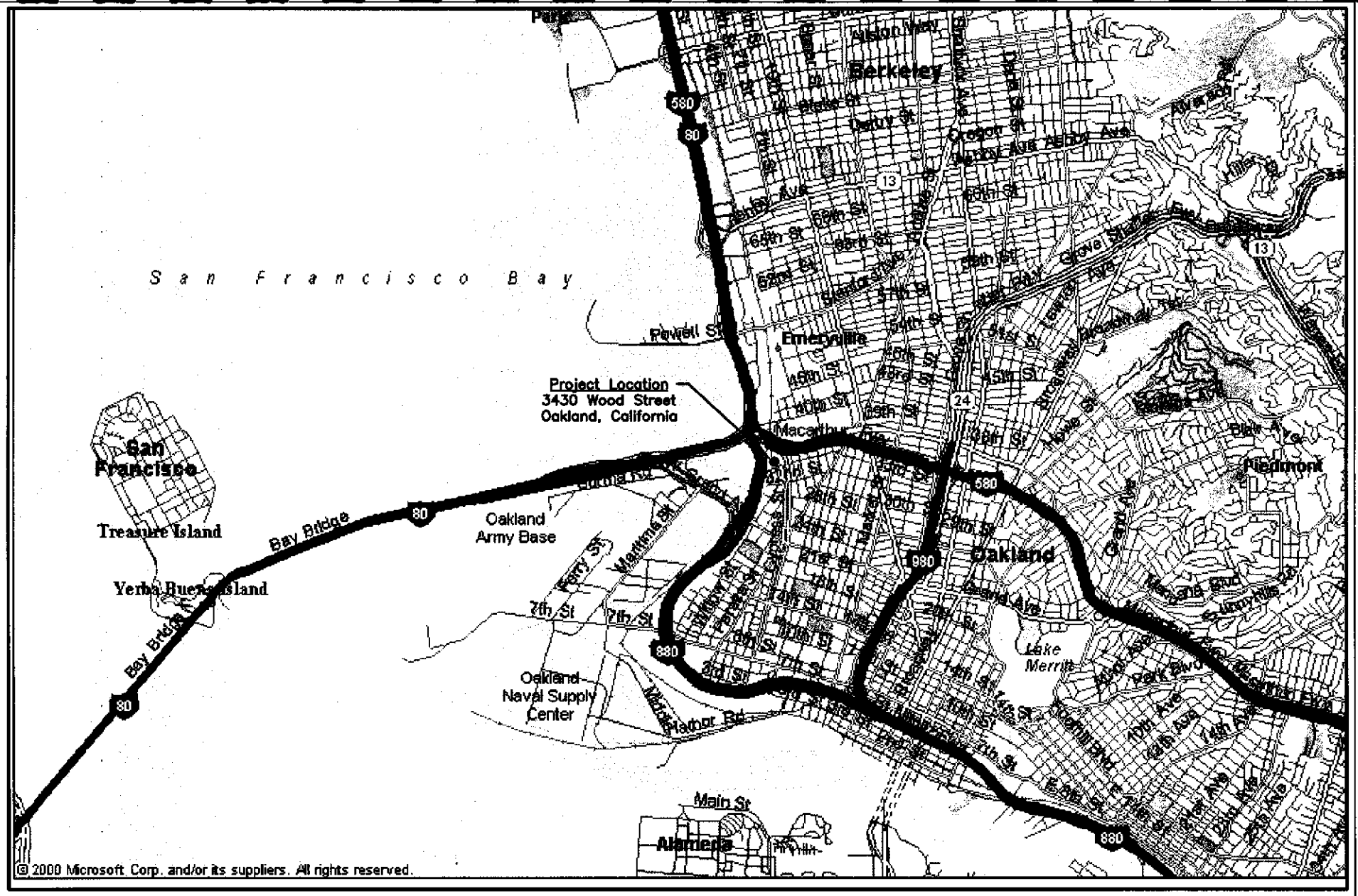

FIGURE 1

SITE LOCATION MAP

SCALE

0 1 2 Miles

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

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	3/17/03	APPROVED BY		830714

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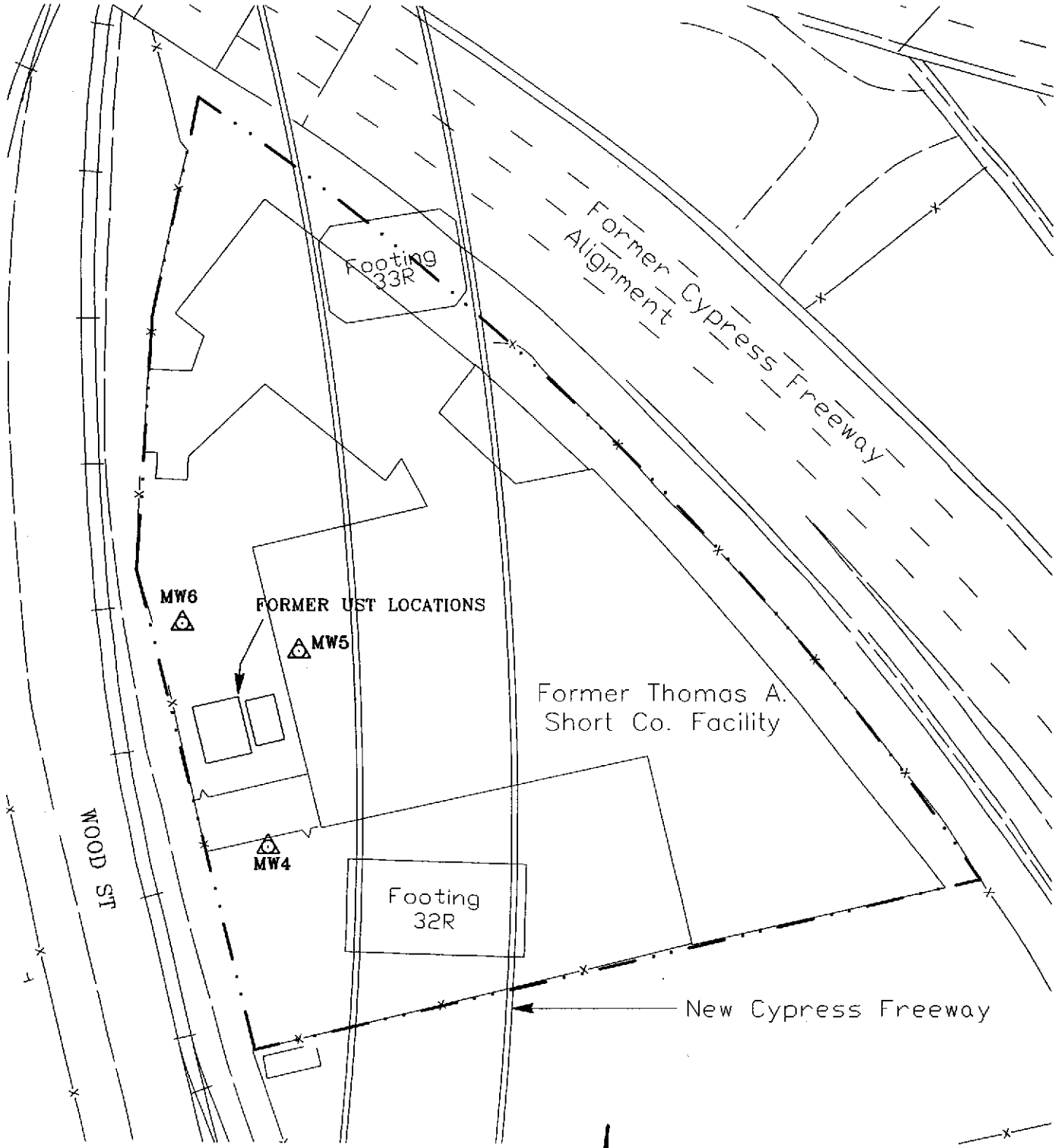

DRAWN BY	DPB	CHECKED BY	
	3/26/02	APPROVED BY	

PROJECT NUMBER 830714

LEGEND

MW4 WELL LOCATION AND DESIGNATION

Notes:
1. Base map compliled from maps provided by Caltrans.
2. All locations and dimensions are approximate.

SCALE

0 50 100 Feet
0 15 30 Meters

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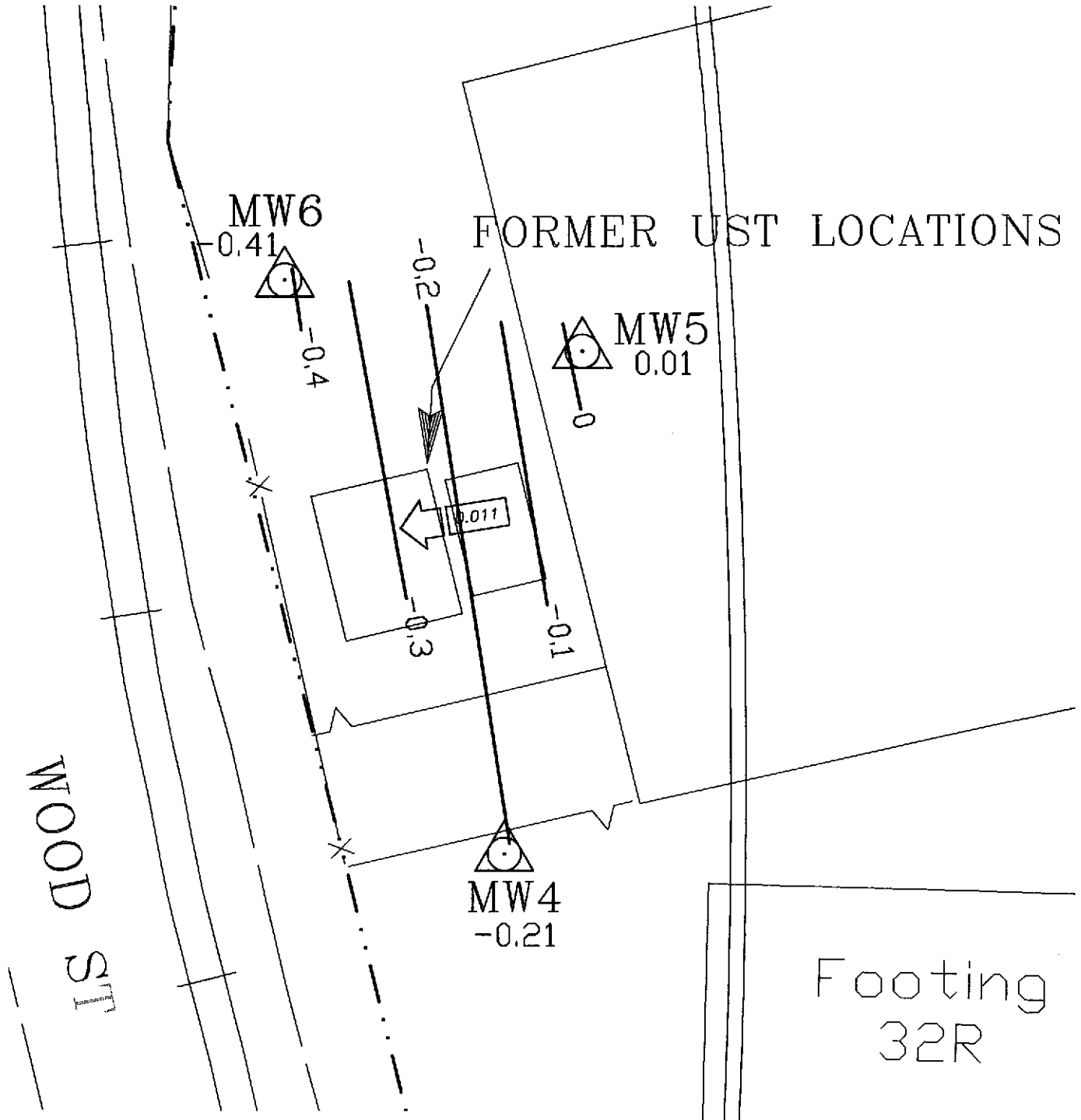
FIGURE 2

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



DRAWN BY	CBD	CHECKED BY	
	3/17/03	APPROVED BY	

PROJECT NUMBER 830714

LEGEND

MW4 -0.41 — 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

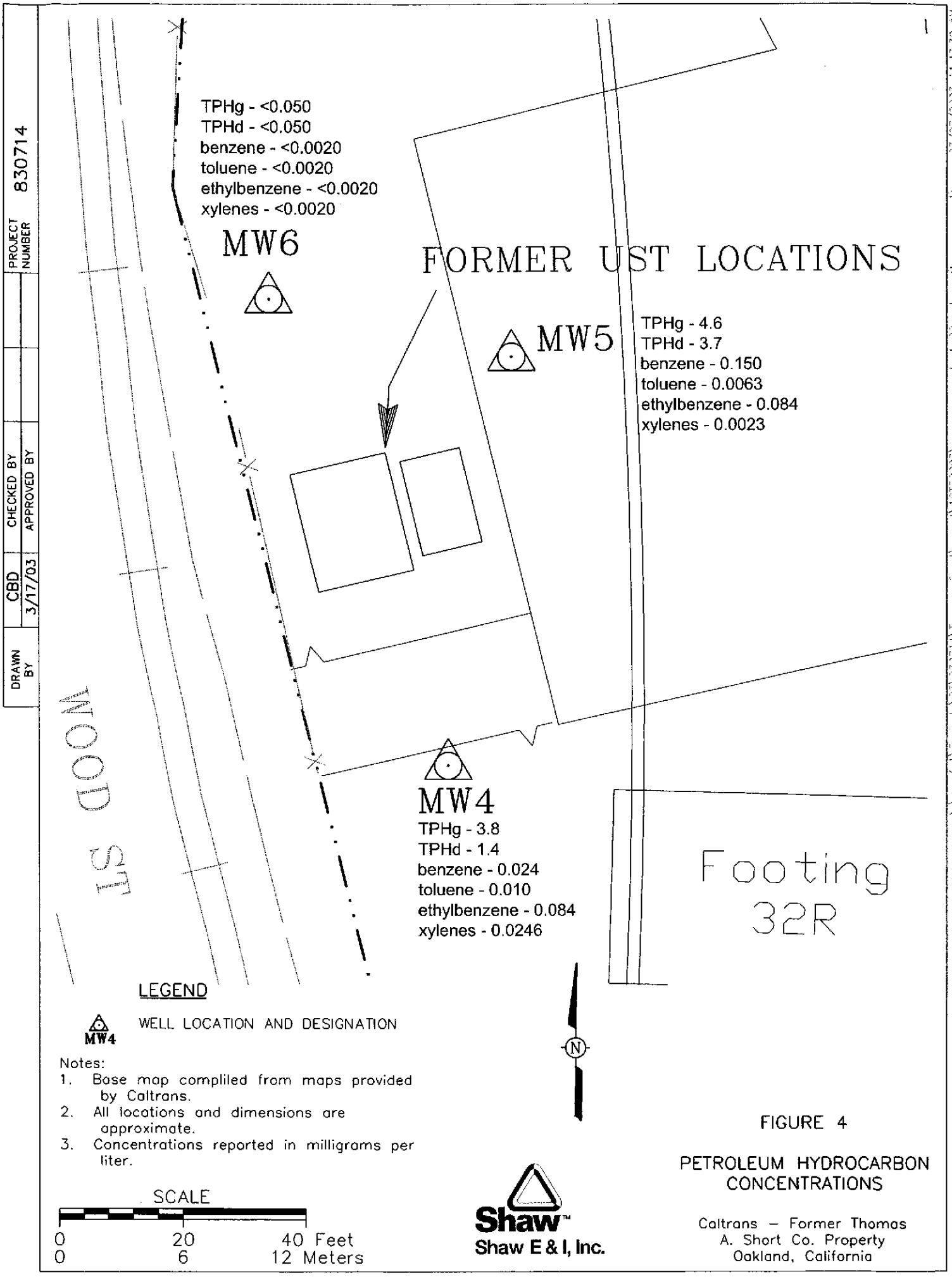

FIGURE 4

PETROLEUM HYDROCARBON CONCENTRATIONS

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

Table 1
First 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	01/27/03	8.54	0	-0.21
MW-5	12.35	5 to 15	01/27/03	12.34	0	0.01
MW-6	12.01	5 to 15	01/27/03	12.42	0	-0.41

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
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
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

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

Table 3
First 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	01/27/03	01/27/03	01/27/03	01/27/03
Petroleum Hydrocarbons, mg/l				
TPH as Gasoline	3.8	4.6	<0.050	<0.050
TPH as Diesel	1.4	3.7	<0.050	---
Selected Volatile Organic Compounds, ug/l				
Benzene	24	150	<2.0	<2.0
Toulene	10	6.3	<2.0	<2.0
Ethylbenzene	84	84	<2.0	<2.0
Total Xylenes	24.6	2.3	<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
First Quarter 2003 Groundwater Analytical Results
Additional Volatile Organic Compounds
Former Thomas Short Company
Oakland, California

Sample Designation Sampling Date	MW-4 01/27/03	MW-5 01/27/03	MW-6 01/27/03	Trip Blank 01/27/03
naphthalene	<2.0	130	19	<2.0
1,3,5-trimethylbenzene	52	10	<2.0	<2.0
isopropylbenzene (Cumene)	160	80	<2.0	<2.0
n-propylbenzene	230	190	2.9	<2.0
sec-butylbenzene	12	24	<2.0	<2.0
tert-butylbenzene	23	30	<2.0	<2.0
4-isopropyltoluene	9.6	<2.0	<2.0	<2.0

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

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

Sample Designation Sampling Date	MW-4 01/27/03	MW-5 01/27/03	MW-6 01/27/03
Antimony	<0.060	<0.060	<0.060
Arsenic	<0.080	<0.080	<0.080
Barium	0.24	0.28	0.16
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	0.00023
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	<0.0150	<0.0150	0.027

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-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
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**	**4.6**	**1.7**	**2.7**	**7.8**	**1.2**	**4.1**	**1.7**	**4.6**
TPH as Diesel	0.5	0.47	0.61	<0.050	**1.17**	**1.26**	**1.1**	**1.4**	0.6	0.45	**0.96**	<0.050	**0.942**	**2.45**	**1.5**	**3.7**
Selected Volatile Organic Compounds, ug/l																
Benzene	**122**	**55**	**51**	**47**	35	9.7	23	24	**98**	39	35	**63**	**53**	**99**	**62**	**150**
Toulene	39	18	23	18	13	<2.0	5.6	10	7	2	1.1	3.1	2.5	4.6	2	6.3
Ethylbenzene	126	65	160	130	140	<2.0	20	84	35	3.8	3.5	18	18	43	6.9	84
Total Xylenes	**24.7**	**26.3**	**44.5**	**32.5**	**23**	<2.0	**15.4**	**24.6**	**44**	6.1	3.2	<2.0	<2.0	5.6	2.7	2.3
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	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	0.500
TPH as Diesel	0.4	0.18	0.42	<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	46
Toulene	14	0.51	0.62	<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	290
Total Xylenes	**121**	0.88	<0.50	<2.0	<2.0	<2.0	<2.0	<2.0	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-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
1,1,2-trichloroethane	<5.0	<5.0	<5.0	3.6	<10	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,2,4-trimethylbenzene	<5.0	<5.0	<5.0	<2.0	<10	<2.0	<2.0	<2.0	96	<5.0	<5.0	<2.0	<2.0	5.4	2.6	<2.0
1,2-dichloroethane	<5.0	<5.0	<5.0	3.9	<10	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	3.9	<2.0	<2.0	<2.0	<2.0
1,2-dichloropropane	<5.0	<5.0	<5.0	4.1	<10	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,3,5-trimethylbenzene	12	<5.0	8	<2.0	190	<2.0	14	52	51	<5.0	<5.0	<2.0	16	8.4	2.7	10
2-Butanone	<5.0	<5.0	<5.0	<2.0	<10	7.8	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	8.8	<2.0	<2.0
2-Chloroethylvinyl ether	<5.0	<5.0	<5.0	<2.0	<10	30	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
2-Hexanone	<5.0	<5.0	<5.0	<2.0	<10	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	10	<2.0	<2.0
4-chlorotoluene	<5.0	<5.0	<5.0	<2.0	<10	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
4-Isopropyltoluene	5	<5.0	8	3.6	<10	<2.0	3.7	9.6	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
Acetone	<5.0	<5.0	<5.0	<2.0	<10	13	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
Acrolein	<5.0	<5.0	<5.0	<2.0	<10	100	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
bromodichloromethane	<5.0	<5.0	<5.0	6.8	<10	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
chloroform	<5.0	<5.0	<5.0	23	<10	<2.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0
isopropylbenzene (Cumene)	141	70	180	180	190	<2.0	52	160	29	<5.0	7.1	25	16	49	18	80
napthalene	**101**	<5.0	**45**	12	<10	<2.0	<2.0	<2.0	14	<5.0	15	**38**	<2.0	<2.0	<2.0	**130**
n-butylbenzene	18	7.3	26	17	22	<2.0	<2.0	<2.0	21	<5.0	<5.0	21	9.8	64	<2.0	<2.0
n-propylbenzene	170	63	280	<2.0	300	<2.0	68	230	31	<5.0	11	45	26	97	39	190
sec-butylbenzene	0.6	<5.0	12	11	13	<2.0	4.4	12	8.2	<5.0	<5.0	5.1	4.2	12	5.6	24
tert-butylbenzene	14	9.9	21	20	25	4.0	11	23	11	<5.0	14	16	16	21	9.8	30
trichloroethene	<5.0	<5.0	<5.0	6.7	<10	5.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	2.2	<2.0	<2.0

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	Risk-Based Screening Levels
1,1,2-trichloroethane	<5.0	<5.0	<5.0	<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	
1,2-dichloroethane	<5.0	<5.0	<5.0	<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	100
1,3,5-trimethylbenzene	<5.0	<5.0	<5.0	<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	14000
2-Chloroethylvinyl ether	<5.0	<5.0	<5.0	<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	
4-chlorotoluene	7.4	<5.0	<5.0	<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	
Acetone	<5.0	<5.0	<5.0	<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	
bromodichloromethane	<5.0	<5.0	<5.0	<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	28
isopropylbenzene (Cumene)	25	<5.0	<5.0	<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	24
n-butylbenzene	17	<5.0	<5.0	<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	
sec-butylbenzene	<5.0	<5.0	<5.0	<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	
trichloroethene	<5.0	<5.0	<5.0	<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-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
Antimony	--	<0.0050	<0.0050	<0.060	<0.060	<0.060	<0.060	<0.060	--	<0.0050	<0.0050	<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	--	0.030	0.010	<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**	--	**1.2**	**0.20**	**0.19**	**0.32**	**0.42**	<0.020	**0.28**
Beryllium	--	<0.0010	<0.0010	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	--	<0.0010	<0.0010	<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	--	<0.0030	<0.0030	<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	--	0.05	<0.003	<0.010	**0.22**	<0.010	<0.010	<0.010
Cobalt	--	<0.003	<0.003	<0.050	<0.050	<0.050	<0.050	<0.050	--	**0.01**	<0.003	<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	--	**0.05**	**0.010**	<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	**0.33**	**0.020**	<0.0050	<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	--	<0.004	<0.004	<0.00020	<0.00020	<0.00020	**0.00055**	<0.00020
Molybdenum	--	0.0064	0.0060	<0.050	<0.050	<0.050	<0.050	<0.050	--	0.010	<0.005	<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	--	**0.010**	0.0062	<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	--	<0.0050	<0.0050	<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**	**0.0013**	<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	--	<0.0050	<0.0050	<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**	<0.003	<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	--	0.010	**0.030**	0.020	**0.16**	**0.041**	<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	Risk-Based Screening Levels
Antimony	--	<0.0050	<0.0050	<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	0.036
Barium	--	**0.20**	**0.11**	**0.092**	**0.12**	**0.21**	<0.020	**0.16**	0.0039
Beryllium	--	<0.0010	<0.0010	<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	0.0011
Chromium	--	<0.003	<0.003	<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	0.0030
Copper	--	**0.010**	**0.020**	<0.020	**0.23**	<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	0.0032
Mercury	--	<0.004	<0.004	<0.00020	<0.00020	<0.00020	**0.00041**	**0.00023**	0.000012
Molybdenum	--	0.010	0.0054	<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	0.0082
Selenium	--	<0.0050	<0.0050	<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	0.00012
Thallium	--	<0.0050	<0.0050	<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	0.019
Zinc	--	**0.050**	**0.37**	**0.031**	0.02	**0.043**	<0.0150	**0.027**	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: 1-27-03

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	853	15.00	8.54	—	—	
MW-5	847	19.20	12.34	—	—	
MW-6	850	19.20	12.42	—	—	

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.) : 1.09

DEPTH OF WELL (feet) : 15.00 — CALCULATED PURGE (gal.) : 3.29

DEPTH TO WATER (feet) : 8.54 — ACTUAL PURGE VOL. (gal.) : 3.00

DATE PURGED : 1-27-03 — END PURGE : 1005

DATE SAMPLED : 1-27-03 — SAMPLING TIME : 1029

DTW AT SAMPLE TIME: 1005

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
959	1.0	7.16	3843	16.2°	cloudy	SMOD
1002	2.0	7.27	3908	16.2°	cloudy	MOD
1005	3.0	7.41	3932	16.3°	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 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.) : 1.16

DEPTH OF WELL (feet) : 19.20 — CALCULATED PURGE (gal.) : 3.49

DEPTH TO WATER (feet) : 12.34 — ACTUAL PURGE VOL. (gal.) : 3.75

DATE PURGED : 1-27-03 — END PURGE : 932

DATE SAMPLED : 1-27-03 — SAMPLING TIME : 1010

DTW AT SAMPLE TIME: 12.65

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
924	1.25	6.91	2508	16.2°	cloudy	MOD
928	2.50	6.95	2631	16.3°	cloudy	MOD
932	3.75	6.99	2671	16.4°	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: 7000 — 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: OK 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.) : 1.15

DEPTH OF WELL (feet) : 19.20 CALCULATED PURGE (gal.) : 3.45

DEPTH TO WATER (feet) : 12.42 ACTUAL PURGE VOL. (gal.) : ____

DATE PURGED : 1.27.03 END PURGE : 948

DATE SAMPLED : 1.27.03 SAMPLING TIME : 1019

DTW AT SAMPLE TIME: 13.49

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
940	1.25	6.96	3292	16.9°	Cloudy	MOD
944	2.50	7.20	3226	16.8°	Cloudy	MOD
948	3.75	7.04	3677	17.2°	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	1 Dispo Bailer	____ Dedicated
Other: ____		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 3 OF 3

Drum Inventory Record

830714 / 01010000 **Project No**	Former Thomas Short Co. Property 3430 Wood Street, Oakland **Location**	1-27-03 **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	MW4 → MW6	WATER	18 GAL	1-27-03
#2	EMPTY	—	—	BROUGHT TO SITE FROM FORMER CHURCH'S CHICKEN

Sketch locations of drums, include drum ID's

COMMENTS: _____

Number of Drums From This Event _____

Total Number of Drums At Site _____

Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

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

Client	Shaw Environmental & Infrastructure
Workorder	15382 830714 Caltrans, Former Thomas
Received	01/27/03

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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Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382001	**Received**	01/27/03
Sample ID	MW-4	**Reported**	02/24/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel[1]	01/28/03	01/29/03	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**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382001	**Received**	01/27/03
Sample ID	MW-4	**Reported**	02/24/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	01/29/03	01/30/03	3800	50	ug/L	1:1

Surrogates	Result	Recovery	Limits
Trifluorotoluene	18.4 ug/L	92 %	(65 - 135)

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382001	**Received**	01/27/03
Sample ID	MW-4	**Reported**	02/24/03
Matrix	Water		

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	02/06/03	02/21/03	ND	0.00020	mg/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382001	**Received**	01/27/03
Sample ID	MW-4	**Reported**	02/24/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Vinyl chloride	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromomethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Trichlorofluoromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acrolein	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acetone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Methyl iodide	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Carbon disulfide	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dichloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acrylonitrile	01/28/03	01/28/03	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-Dichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Vinyl acetate	01/28/03	01/28/03	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Butanone (MEK)	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromochloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloroform	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2,2-dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Carbon tetrachloride	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Benzene	**01/28/03**	**01/28/03**	**24**	**2.0**	**ug/L**	**1:1**
1,2-Dichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dibromomethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromodichloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Trichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	01/28/03	01/28/03	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382001	**Received**	01/27/03
Sample ID	MW-4	**Reported**	02/24/03
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
trans-1,3-Dichloropropene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Toluene	**01/28/03**	**01/28/03**	**10**	**2.0**	**ug/L**	**1:1**
1,2-Dibromoethane (EDB)	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3-Dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Hexanone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dibromochloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Tetrachloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,1,2-Tetrachloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Ethylbenzene	**01/28/03**	**01/28/03**	**84**	**2.0**	**ug/L**	**1:1**
M+P-Xylene	**01/28/03**	**01/28/03**	**22**	**2.0**	**ug/L**	**1:1**
Bromoform	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Styrene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
o-Xylene	**01/28/03**	**01/28/03**	**2.6**	**2.0**	**ug/L**	**1:1**
1,1,2,2-Tetrachloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Isopropylbenzene (Cumene)	**01/28/03**	**01/28/03**	**160**	**2.0**	**ug/L**	**1:1**
Bromobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
n-Propylbenzene	**01/28/03**	**01/28/03**	**230**	**2.0**	**ug/L**	**1:1**
2-Chlorotoluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
4-Chlorotoluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	**01/28/03**	**01/28/03**	**52**	**2.0**	**ug/L**	**1:1**
tert-Butylbenzene	**01/28/03**	**01/28/03**	**23**	**2.0**	**ug/L**	**1:1**
1,2,4-Trimethylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
sec-Butylbenzene	**01/28/03**	**01/28/03**	**12**	**2.0**	**ug/L**	**1:1**
1,3-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
4-Isopropyltoluene	**01/28/03**	**01/28/03**	**9.6**	**2.0**	**ug/L**	**1:1**
1,2-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
n-Butylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

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Sparger Technology, Inc.
Environmental Laboratories

Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382001	**Received**	01/27/03
Sample ID	MW-4	**Reported**	02/24/03
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2-Dibromo-3-chloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Naphthalene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Hexachlorobutadiene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	50.9 ug/L	102 %	(76 - 135)
Toluene d8	52.3 ug/L	105 %	(88 - 118)
4-Bromofluorobenzene	51.1 ug/L	102 %	(86 - 121)

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Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382001	**Received**	01/27/03
Sample ID	MW-4	**Reported**	02/24/03
Matrix	Water		

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	02/14/03	02/17/03	ND	0.060	mg/L	1:1
Arsenic	02/14/03	02/17/03	ND	0.080	mg/L	1:1
Barium	**02/14/03**	**02/17/03**	**0.24**	**0.020**	**mg/L**	**1:**
Beryllium	02/14/03	02/17/03	ND	0.0030	mg/L	1:1
Cadmium	02/14/03	02/17/03	ND	0.0050	mg/L	1:1
Chromium	02/14/03	02/17/03	ND	0.010	mg/L	1:
Cobalt	02/14/03	02/17/03	ND	0.050	mg/L	1:
Copper	02/14/03	02/17/03	ND	0.020	mg/L	1:1
Lead	02/14/03	02/17/03	ND	0.010	mg/L	1:
Molybdenum	02/14/03	02/17/03	ND	0.050	mg/L	1:
Nickel	02/14/03	02/17/03	ND	0.040	mg/L	1:1
Selenium	02/14/03	02/17/03	ND	0.10	mg/L	1:1
Silver	02/14/03	02/17/03	ND	0.010	mg/L	1:
Thallium	02/14/03	02/17/03	ND	0.10	mg/L	1:
Vanadium	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Zinc	02/14/03	02/17/03	ND	0.015	mg/L	1:

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382002	**Received**	01/27/03
Sample ID	MW-5	**Reported**	02/24/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel[1]	01/28/03	01/29/03	3700	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**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382002	**Received**	01/27/03
Sample ID	MW-5	**Reported**	02/24/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	01/29/03	01/30/03	4600	50	ug/L	1:1

Surrogates	Result	Recovery	Limits
Trifluorotoluene	26.4 ug/L	132 %	(65 - 135)

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382002	**Received**	01/27/03
Sample ID	MW-5	**Reported**	02/24/03
Matrix	Water		

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	02/06/03	02/21/03	ND	0.00020	mg/L	1:1

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Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382002	**Received**	01/27/03
Sample ID	MW-5	**Reported**	02/24/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Vinyl chloride	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromomethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Trichlorofluoromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acrolein	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acetone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Methyl iodide	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Carbon disulfide	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dichloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acrylonitrile	01/28/03	01/28/03	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-Dichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Vinyl acetate	01/28/03	01/28/03	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Butanone (MEK)	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromochloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloroform	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2,2-dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Carbon tetrachloride	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Benzene	**01/28/03**	**01/28/03**	**150**	**2.0**	**ug/L**	**1:1**
1,2-Dichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dibromomethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromodichloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Trichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	01/28/03	01/28/03	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382002	**Received**	01/27/03
Sample ID	MW-5	**Reported**	02/24/03
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
trans-1,3-Dichloropropene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Toluene	**01/28/03**	**01/28/03**	**6.3**	**2.0**	**ug/L**	**1:1**
1,2-Dibromoethane (EDB)	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3-Dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Hexanone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dibromochloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Tetrachloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,1,2-Tetrachloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Ethylbenzene	**01/28/03**	**01/28/03**	**84**	**2.0**	**ug/L**	**1:1**
M+P-Xylene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromoform	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Styrene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
o-Xylene	**01/28/03**	**01/28/03**	**2.3**	**2.0**	**ug/L**	**1:1**
1,1,2,2-Tetrachloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Isopropylbenzene (Cumene)	**01/28/03**	**01/28/03**	**80**	**2.0**	**ug/L**	**1:1**
Bromobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
n-Propylbenzene	**01/28/03**	**01/28/03**	**190**	**2.0**	**ug/L**	**1:1**
2-Chlorotoluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
4-Chlorotoluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	**01/28/03**	**01/28/03**	**10**	**2.0**	**ug/L**	**1:1**
tert-Butylbenzene	**01/28/03**	**01/28/03**	**30**	**2.0**	**ug/L**	**1:1**
1,2,4-Trimethylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
sec-Butylbenzene	**01/28/03**	**01/28/03**	**24**	**2.0**	**ug/L**	**1:1**
1,3-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
4-Isopropyltoluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
n-Butylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382002	**Received**	01/27/03
Sample ID	MW-5	**Reported**	02/24/03
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2-Dibromo-3-chloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Naphthalene	**01/28/03**	**01/28/03**	**130**	**2.0**	**ug/L**	**1:1**
Hexachlorobutadiene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	52.5 ug/L	105 %	(76 - 135)
Toluene d8	52.1 ug/L	104 %	(88 - 118)
4-Bromofluorobenzene	50.5 ug/L	101 %	(86 - 121)

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382002	**Received**	01/27/03
Sample ID	MW-5	**Reported**	02/24/03
Matrix	Water		

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	02/14/03	02/17/03	ND	0.060	mg/L	1:1
Arsenic	02/14/03	02/17/03	ND	0.080	mg/L	1:1
Barium	**02/14/03**	**02/17/03**	**0.28**	**0.020**	**mg/L**	**1:1**
Beryllium	02/14/03	02/17/03	ND	0.0030	mg/L	1:1
Cadmium	02/14/03	02/17/03	ND	0.0050	mg/L	1:1
Chromium	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Cobalt	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Copper	02/14/03	02/17/03	ND	0.020	mg/L	1:1
Lead	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Molybdenum	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Nickel	02/14/03	02/17/03	ND	0.040	mg/L	1:1
Selenium	02/14/03	02/17/03	ND	0.10	mg/L	1:1
Silver	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Thallium	02/14/03	02/17/03	ND	0.10	mg/L	1:1
Vanadium	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Zinc	02/14/03	02/17/03	ND	0.015	mg/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382003	**Received**	01/27/03
Sample ID	MW-6	**Reported**	02/24/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	01/28/03	01/29/03	ND	50	ug/L	1:1

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Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382003	**Received**	01/27/03
Sample ID	MW-6	**Reported**	02/24/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	01/29/03	01/29/03	ND	50	ug/L	1:1

Surrogates	Result	Recovery	Limits
Trifluorotoluene	22.1 ug/L	110 %	(65 - 135)

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382003	**Received**	01/27/03
Sample ID	MW-6	**Reported**	02/24/03
Matrix	Water		

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	02/06/03	02/21/03	0.000230	0.00020	mg/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382003	**Received**	01/27/03
Sample ID	MW-6	**Reported**	02/24/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Vinyl chloride	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromomethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Trichlorofluoromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acrolein	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acetone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Methyl iodide	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Carbon disulfide	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dichloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acrylonitrile	01/28/03	01/28/03	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-Dichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Vinyl acetate	01/28/03	01/28/03	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Butanone (MEK)	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromochloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloroform	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2,2-dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Carbon tetrachloride	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Benzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dibromomethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromodichloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Trichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	01/28/03	01/28/03	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382003	**Received**	01/27/03
Sample ID	MW-6	**Reported**	02/24/03
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
trans-1,3-Dichloropropene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Toluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dibromoethane (EDB)	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3-Dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Hexanone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dibromochloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Tetrachloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,1,2-Tetrachloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Ethylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
M+P-Xylene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromoform	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Styrene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
o-Xylene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,2,2-Tetrachloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Isopropylbenzene (Cumene)	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
n-Propylbenzene	**01/28/03**	**01/28/03**	**2.9**	**2.0**	**ug/L**	**1:1**
2-Chlorotoluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
4-Chlorotoluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
tert-Butylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,4-Trimethylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
sec-Butylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
4-Isopropyltoluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
n-Butylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382003	**Received**	01/27/03
Sample ID	MW-6	**Reported**	02/24/03
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2-Dibromo-3-chloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Naphthalene	**01/28/03**	**01/28/03**	**19**	**2.0**	**ug/L**	**1:1**
Hexachlorobutadiene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	52.2 ug/L	104 %	(76 - 135)
Toluene d8	49.9 ug/L	100 %	(88 - 118)
4-Bromofluorobenzene	49.8 ug/L	100 %	(86 - 121)

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382003	**Received**	01/27/03
Sample ID	MW-6	**Reported**	02/24/03
Matrix	Water		

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	02/14/03	02/17/03	ND	0.060	mg/L	1:1
Arsenic	02/14/03	02/17/03	ND	0.080	mg/L	1:1
Barium	**02/14/03**	**02/17/03**	**0.16**	**0.020**	**mg/L**	**1:1**
Beryllium	02/14/03	02/17/03	ND	0.0030	mg/L	1:1
Cadmium	02/14/03	02/17/03	ND	0.0050	mg/L	1:1
Chromium	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Cobalt	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Copper	02/14/03	02/17/03	ND	0.020	mg/L	1:1
Lead	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Molybdenum	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Nickel	02/14/03	02/17/03	ND	0.040	mg/L	1:1
Selenium	02/14/03	02/17/03	ND	0.10	mg/L	1:1
Silver	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Thallium	02/14/03	02/17/03	ND	0.10	mg/L	1:1
Vanadium	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Zinc	**02/14/03**	**02/17/03**	**0.027**	**0.015**	**mg/L**	**1:1**

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382004	**Received**	01/27/03
Sample ID	Trip Blank	**Reported**	02/24/03
Matrix	Water		

8015M DHS TPH LUFT - 8015M DHS

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	01/29/03	01/30/03	ND	50	ug/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382004	**Received**	01/27/03
Sample ID	Trip Blank	**Reported**	02/24/03
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Vinyl chloride	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromomethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Trichlorofluoromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acrolein	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acetone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Methyl iodide	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Carbon disulfide	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dichloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acrylonitrile	01/28/03	01/28/03	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-Dichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Vinyl acetate	01/28/03	01/28/03	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Butanone (MEK)	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromochloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloroform	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2,2-dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Carbon tetrachloride	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Benzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dibromomethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromodichloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Trichloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	01/28/03	01/28/03	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382004	**Received**	01/27/03
Sample ID	Trip Blank	**Reported**	02/24/03
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
trans-1,3-Dichloropropene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Toluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dibromoethane (EDB)	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3-Dichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Hexanone	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dibromochloromethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Tetrachloroethene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,1,2-Tetrachloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Ethylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
M+P-Xylene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromoform	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Styrene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
o-Xylene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,2,2-Tetrachloroethane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Isopropylbenzene (Cumene)	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
n-Propylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Chlorotoluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
4-Chlorotoluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
tert-Butylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,4-Trimethylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
sec-Butylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
4-Isopropyltoluene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
n-Butylbenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15382	**Sampled**	01/27/03
Laboratory ID	15382004	**Received**	01/27/03
Sample ID	Trip Blank	**Reported**	02/24/03
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2-Dibromo-3-chloropropane	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Naphthalene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Hexachlorobutadiene	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	01/28/03	01/28/03	ND	2.0	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52105
Sample ID	MB for HBN 175552 [SGXV/1849]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	01/28/03	01/29/03	ND	50	ug/L	1:1

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52106
Sample ID	LCS for HBN 175552 [SGXV/1849]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	01/28/03	01/29/03	370	50	ug/L	1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52107
Sample ID	LCSD for HBN 175552 [SGXV/1849
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	01/28/03	01/29/03	371	50	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52268
Sample ID	MB for HBN 175856 [VGXV/2427]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	01/29/03	01/30/03	ND	50	ug/L	1

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52269
Sample ID	LCS for HBN 175856 [VGXV/2427]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	01/29/03	01/30/03	1050	50	ug/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52270
Sample ID	LCSD for HBN 175856 [VGXV/2427
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	01/29/03	01/30/03	1040	50	ug/L	1

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Matrix Spike Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52271
Sample ID	Trip Blank(15382004MS)
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	01/29/03	01/30/03	1080	50	ug/L	1:1

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Matrix Spike Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52272
Sample ID	Trip Blank(15382004MSD)
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	01/29/03	01/30/03	1100	50	ug/L	1:

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Method Blank Report

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
Laboratory ID 52288
Sample ID MB for HBN 175869 [VMXV/2146]
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloromethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Vinyl chloride	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromomethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloroethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Trichlorofluoromethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acrolein	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-Dichloroethene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acetone	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Methyl iodide	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Carbon disulfide	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dichloromethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Acrylonitrile	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-Dichloroethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Vinyl acetate	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Butanone (MEK)	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromochloromethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chloroform	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2,2-dichloropropane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1-dichloropropane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Carbon tetrachloride	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Benzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichloroethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dibromomethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromodichloromethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichloropropane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Trichloroethene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
4-Methyl-2-pentanone	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52288
Sample ID	MB for HBN 175869 [VMXV/2146]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
(continued)							
trans-1,3-Dichloropropene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Toluene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dibromoethane (EDB)	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3-Dichloropropane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Hexanone	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Dibromochloromethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Tetrachloroethene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,1,2-Tetrachloroethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Chlorobenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Ethylbenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
M+P-Xylene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromoform	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Styrene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
o-Xylene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,1,2,2-Tetrachloroethane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Isopropylbenzene (Cumene)	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Bromobenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
n-Propylbenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
2-Chlorotoluene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
4-Chlorotoluene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
tert-Butylbenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,4-Trimethylbenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
sec-Butylbenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
4-Isopropyltoluene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
n-Butylbenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1

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Method Blank Report

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
Laboratory ID 52288
Sample ID MB for HBN 175869 [VMXV/2146]
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
(continued)							
1,2-Dibromo-3-chloropropane	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Naphthalene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
Hexachlorobutadiene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	8260B	01/28/03	01/28/03	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	51.2 ug/L	102 %	(76 - 135)
Toluene d8	50 ug/L	100 %	(88 - 118)
4-Bromofluorobenzene	48.8 ug/L	98 %	(86 - 121)

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52289
Sample ID	LCS for HBN 175869 [VMXV/2146]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	01/28/03	01/28/03	40	2.0	ug/L	1:1
Benzene	8260B	01/28/03	01/28/03	46	2.0	ug/L	1:1
Trichloroethene	8260B	01/28/03	01/28/03	43	2.0	ug/L	1:1
Toluene	8260B	01/28/03	01/28/03	46	2.0	ug/L	1:1
Chlorobenzene	8260B	01/28/03	01/28/03	44	2.0	ug/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52290
Sample ID	LCSD for HBN 175869 [VMXV/2146
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	01/28/03	01/28/03	40	2.0	ug/L	1:1
Benzene	8260B	01/28/03	01/28/03	45	2.0	ug/L	1:1
Trichloroethene	8260B	01/28/03	01/28/03	41	2.0	ug/L	1:1
Toluene	8260B	01/28/03	01/28/03	45	2.0	ug/L	1:1
Chlorobenzene	8260B	01/28/03	01/28/03	43	2.0	ug/L	1:1

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Matrix Spike Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52291
Sample ID	Trip Blank(15382004MS)
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	01/28/03	01/28/03	51	2.0	ug/L	1:
Benzene	8260B	01/28/03	01/28/03	60	2.0	ug/L	1:1
Trichloroethene	8260B	01/28/03	01/28/03	54	2.0	ug/L	1:1
Toluene	8260B	01/28/03	01/28/03	59	2.0	ug/L	1:
Chlorobenzene	8260B	01/28/03	01/28/03	56	2.0	ug/L	1:

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Matrix Spike Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	52292
Sample ID	Trip Blank(15382004MSD)
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	01/28/03	01/28/03	51	2.0	ug/L	1:1
Benzene	8260B	01/28/03	01/28/03	58	2.0	ug/L	1:1
Trichloroethene	8260B	01/28/03	01/28/03	54	2.0	ug/L	1:1
Toluene	8260B	01/28/03	01/28/03	58	2.0	ug/L	1:1
Chlorobenzene	8260B	01/28/03	01/28/03	55	2.0	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	53238
Sample ID	MB for HBN 178270 [ICPV/4312]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	02/14/03	02/17/03	ND	0.060	mg/L	1:1
Arsenic	6010B	02/14/03	02/17/03	ND	0.080	mg/L	1:1
Barium	6010B	02/14/03	02/17/03	ND	0.020	mg/L	1:1
Beryllium	6010B	02/14/03	02/17/03	ND	0.0030	mg/L	1:1
Cadmium	6010B	02/14/03	02/17/03	ND	0.0050	mg/L	1:1
Chromium	6010B	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Cobalt	6010B	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Copper	6010B	02/14/03	02/17/03	ND	0.020	mg/L	1:1
Lead	6010B	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Molybdenum	6010B	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Nickel	6010B	02/14/03	02/17/03	ND	0.040	mg/L	1:1
Selenium	6010B	02/14/03	02/17/03	ND	0.10	mg/L	1:1
Silver	6010B	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Thallium	6010B	02/14/03	02/17/03	ND	0.10	mg/L	1:1
Vanadium	6010B	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Zinc	6010B	02/14/03	02/17/03	ND	0.015	mg/L	1:1

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Lab Control Sample Report

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
Laboratory ID 53239
Sample ID LCS for HBN 178270 [ICPV/4312]
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	02/14/03	02/17/03	0.52	0.060	mg/L	1:1
Arsenic	6010B	02/14/03	02/17/03	0.48	0.080	mg/L	1:1
Barium	6010B	02/14/03	02/17/03	0.48	0.020	mg/L	1:1
Beryllium	6010B	02/14/03	02/17/03	0.10	0.0030	mg/L	1:1
Cadmium	6010B	02/14/03	02/17/03	0.19	0.0050	mg/L	1:1
Chromium	6010B	02/14/03	02/17/03	0.47	0.010	mg/L	1:1
Cobalt	6010B	02/14/03	02/17/03	0.18	0.050	mg/L	1:1
Copper	6010B	02/14/03	02/17/03	0.44	0.020	mg/L	1:1
Lead	6010B	02/14/03	02/17/03	0.41	0.010	mg/L	1:1
Molybdenum	6010B	02/14/03	02/17/03	0.44	0.050	mg/L	1:1
Nickel	6010B	02/14/03	02/17/03	0.98	0.040	mg/L	1:1
Selenium	6010B	02/14/03	02/17/03	0.47	0.10	mg/L	1:1
Silver	6010B	02/14/03	02/17/03	0.042	0.010	mg/L	1:1
Thallium	6010B	02/14/03	02/17/03	0.49	0.10	mg/L	1:1
Vanadium	6010B	02/14/03	02/17/03	0.17	0.050	mg/L	1:1
Zinc	6010B	02/14/03	02/17/03	0.46	0.015	mg/L	1:1

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Lab Control Sample Duplicate Report

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
Laboratory ID 53240
Sample ID LCSD for HBN 178270 [ICPV/4312
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	02/14/03	02/17/03	0.51	0.060	mg/L	1:1
Arsenic	6010B	02/14/03	02/17/03	0.48	0.080	mg/L	1:1
Barium	6010B	02/14/03	02/17/03	0.50	0.020	mg/L	1:1
Beryllium	6010B	02/14/03	02/17/03	0.11	0.0030	mg/L	1:1
Cadmium	6010B	02/14/03	02/17/03	0.19	0.0050	mg/L	1:1
Chromium	6010B	02/14/03	02/17/03	0.50	0.010	mg/L	1:1
Cobalt	6010B	02/14/03	02/17/03	0.18	0.050	mg/L	1:1
Copper	6010B	02/14/03	02/17/03	0.46	0.020	mg/L	1:1
Lead	6010B	02/14/03	02/17/03	0.41	0.010	mg/L	1:1
Molybdenum	6010B	02/14/03	02/17/03	0.44	0.050	mg/L	1:1
Nickel	6010B	02/14/03	02/17/03	1.0	0.040	mg/L	1:1
Selenium	6010B	02/14/03	02/17/03	0.48	0.10	mg/L	1:1
Silver	6010B	02/14/03	02/17/03	0.043	0.010	mg/L	1:1
Thallium	6010B	02/14/03	02/17/03	0.49	0.10	mg/L	1:1
Vanadium	6010B	02/14/03	02/17/03	0.16	0.050	mg/L	1:1
Zinc	6010B	02/14/03	02/17/03	0.48	0.015	mg/L	1:1

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Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	53241
Sample ID	DUP for HBN 178270 [ICPV/4312]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	02/14/03	02/17/03	ND	0.060	mg/L	1:1
Arsenic	6010B	02/14/03	02/17/03	ND	0.080	mg/L	1:1
Barium	6010B	02/14/03	02/17/03	0.25	0.020	mg/L	1:1
Beryllium	6010B	02/14/03	02/17/03	ND	0.0030	mg/L	1:1
Cadmium	6010B	02/14/03	02/17/03	ND	0.0050	mg/L	1:1
Chromium	6010B	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Cobalt	6010B	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Copper	6010B	02/14/03	02/17/03	ND	0.020	mg/L	1:1
Lead	6010B	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Molybdenum	6010B	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Nickel	6010B	02/14/03	02/17/03	ND	0.040	mg/L	1:1
Selenium	6010B	02/14/03	02/17/03	ND	0.10	mg/L	1:1
Silver	6010B	02/14/03	02/17/03	ND	0.010	mg/L	1:1
Thallium	6010B	02/14/03	02/17/03	ND	0.10	mg/L	1:1
Vanadium	6010B	02/14/03	02/17/03	ND	0.050	mg/L	1:1
Zinc	6010B	02/14/03	02/17/03	ND	0.015	mg/L	1:1

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Matrix Spike Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	53242
Sample ID	MS for HBN 178270 [ICPV/4312]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	02/14/03	02/17/03	0.50	0.060	mg/L	1:1
Arsenic	6010B	02/14/03	02/17/03	0.50	0.080	mg/L	1:1
Barium	6010B	02/14/03	02/17/03	0.73	0.020	mg/L	1:1
Beryllium	6010B	02/14/03	02/17/03	0.10	0.0030	mg/L	1:1
Cadmium	6010B	02/14/03	02/17/03	0.19	0.0050	mg/L	1:1
Chromium	6010B	02/14/03	02/17/03	0.49	0.010	mg/L	1:1
Cobalt	6010B	02/14/03	02/17/03	0.18	0.050	mg/L	1:1
Copper	6010B	02/14/03	02/17/03	0.47	0.020	mg/L	1:1
Lead	6010B	02/14/03	02/17/03	0.40	0.010	mg/L	1:1
Molybdenum	6010B	02/14/03	02/17/03	0.45	0.050	mg/L	1:1
Nickel	6010B	02/14/03	02/17/03	0.94	0.040	mg/L	1:1
Selenium	6010B	02/14/03	02/17/03	0.46	0.10	mg/L	1:1
Silver	6010B	02/14/03	02/17/03	0.043	0.010	mg/L	1:1
Thallium	6010B	02/14/03	02/17/03	0.47	0.10	mg/L	1:1
Vanadium	6010B	02/14/03	02/17/03	0.15	0.050	mg/L	1:1
Zinc	6010B	02/14/03	02/17/03	0.49	0.015	mg/L	1:1

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Matrix Spike Duplicate Report

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
Laboratory ID 53243
Sample ID MSD for HBN 178270 [ICPV/4312]
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	02/14/03	02/17/03	0.58	0.060	mg/L	1:1
Arsenic	6010B	02/14/03	02/17/03	0.48	0.080	mg/L	1:1
Barium	6010B	02/14/03	02/17/03	0.71	0.020	mg/L	1:1
Beryllium	6010B	02/14/03	02/17/03	0.097	0.0030	mg/L	1:1
Cadmium	6010B	02/14/03	02/17/03	0.18	0.0050	mg/L	1:1
Chromium	6010B	02/14/03	02/17/03	0.46	0.010	mg/L	1:1
Cobalt	6010B	02/14/03	02/17/03	0.17	0.050	mg/L	1:1
Copper	6010B	02/14/03	02/17/03	0.44	0.020	mg/L	1:1
Lead	6010B	02/14/03	02/17/03	0.39	0.010	mg/L	1:1
Molybdenum	6010B	02/14/03	02/17/03	0.43	0.050	mg/L	1:1
Nickel	6010B	02/14/03	02/17/03	0.88	0.040	mg/L	1:1
Selenium	6010B	02/14/03	02/17/03	0.46	0.10	mg/L	1:1
Silver	6010B	02/14/03	02/17/03	0.039	0.010	mg/L	1:1
Thallium	6010B	02/14/03	02/17/03	0.46	0.10	mg/L	1:1
Vanadium	6010B	02/14/03	02/17/03	0.14	0.050	mg/L	1:1
Zinc	6010B	02/14/03	02/17/03	0.45	0.015	mg/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	53306
Sample ID	MB for HBN 178499 [DIGV/1418]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	02/06/03	02/21/03	ND	0.00020	mg/L	1

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	53307
Sample ID	LCS for HBN 178499 [DIGV/1418]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	02/06/03	02/21/03	0.00120	0.00020	mg/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	53308
Sample ID	LCSD for HBN 178499 [DIGV/1418
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilutio
Mercury	EPA 7470A	02/06/03	02/21/03	0.00110	0.00020	mg/L	1

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Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	53309
Sample ID	DUP for HBN 178499 [DIGV/1418]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	02/06/03	02/21/03	ND	0.00020	mg/L	1:1

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Matrix Spike Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	53310
Sample ID	MS for HBN 178499 [DIGV/1418]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	02/06/03	02/21/03	0.000820	0.00020	mg/L	1

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Matrix Spike Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
Laboratory ID	53311
Sample ID	MSD for HBN 178499 [DIGV/1418]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	02/06/03	02/21/03	0.000970	0.00020	mg/L	1:1

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QC SUMMARY

Client ID	Shaw Environmental & Infrastructure		
Workorder ID	830714 Caltrans, Former Thomas		
QC Batch	ICPP 4342	**Original**	15382001
Matrix	Water	**Sample**	Duplicate [53241]

Parameter	RPD	RPD Limits
Antimony	00	(35)
Arsenic	00	(35)
Barium	1.6	(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	00	(35)

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QC SUMMARY

Client ID	Shaw Environmental & Infrastructure		
Workorder ID	830714 Caltrans, Former Thomas		
QC Batch	DIG 1423	**Original**	15413016
Matrix	Water	**Sample**	Duplicate [53309]

Parameter	RPD	RPD Limits
Mercury	0000	(35)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
QC Batch VGX 2536
Matrix Water

Original Samples 15382004
Matrix Spike [52271]
Matrix Spike Duplicate [52272]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	108	110	(65-135)	1.8	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
QC Batch VMX 2190
Matrix Water

Original Samples 15382004
Matrix Spike [52291]
Matrix Spike Duplicate [52292]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
1,1-Dichloroethene	102	102	(61-145)	00	(20 MAX)
Benzene	120	116	(76-127)	3.4	(20 MAX)
Trichloroethene	108	108	(71-135)	00	(20 MAX)
Toluene	118	116	(76-130)	1.7	(20 MAX)
Chlorobenzene	112	110	(75-130)	1.8	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
QC Batch ICPP 4342
Matrix Water

Original Samples 15382001
Matrix Spike [53242]
Matrix Spike Duplicate [53243]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Antimony	101	116	(25-125)	14	(35 MAX)
Arsenic	99	97	(75-125)	2.0	(35 MAX)
Barium	97	92	(75-125)	5.3	(35 MAX)
Beryllium	105	97	(75-125)	7.9	(35 MAX)
Cadmium	94	91	(75-125)	3.2	(35 MAX)
Chromium	98	91	(75-125)	7.4	(35 MAX)
Cobalt	88	85	(75-125)	3.5	(35 MAX)
Copper	93	87	(75-125)	6.7	(35 MAX)
Lead	81	78	(75-125)	3.8	(35 MAX)
Molybdenum	89	87	(75-125)	2.3	(35 MAX)
Nickel	94	88	(75-125)	6.6	(35 MAX)
Selenium	92	93	(75-125)	1.1	(35 MAX)
Silver	86	78	(25-125)	9.8	(35 MAX)
Thallium	94	93	(50-125)	1.1	(35 MAX)
Vanadium	74	70	(75-125)	5.6	(35 MAX)
Zinc	98	91	(75-125)	7.4	(35 MAX)

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QC SUMMARY

Client ID	Shaw Environmental & Infrastructure
Workorder ID	830714 Caltrans, Former Thomas
QC Batch	DIG 1423
Matrix	Water
Original Samples	15413016 Matrix Spike [53310] Matrix Spike Duplicate [53311]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Mercury	82.0	97.0	(75-125)	16.8	(35 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
QC Batch SGX 1885
Matrix Water

Samples Lab Control Sample [52106]
Lab Control Sample Duplicate [52107]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHdiesel	74	74	(65-135)	00	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
QC Batch VGX 2536
Matrix Water

Samples Lab Control Sample [52269]
Lab Control Sample Duplicate [52270]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	105	104	(65-135)	1.0	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
QC Batch VMX 2190
Matrix Water

Samples Lab Control Sample [52289]
Lab Control Sample Duplicate [52290]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
1,1-Dichloroethene	80	80	(65-145)	00	(20 MAX)
Benzene	92	90	(71-127)	2.2	(20 MAX)
Trichloroethene	86	82	(75-135)	4.8	(20 MAX)
Toluene	92	90	(76-135)	2.2	(20 MAX)
Chlorobenzene	88	86	(76-135)	2.3	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
QC Batch ICPP 4342
Matrix Water

Samples Lab Control Sample [53239]
Lab Control Sample Duplicate [53240]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Antimony	105	101	(70-120)	3.9	(20 MAX)
Arsenic	96	96	(80-120)	00	(20 MAX)
Barium	96	101	(80-120)	5.1	(20 MAX)
Beryllium	104	106	(80-120)	1.9	(20 MAX)
Cadmium	94	93	(80-120)	1.1	(20 MAX)
Chromium	95	101	(80-120)	6.1	(20 MAX)
Cobalt	92	90	(80-120)	2.2	(20 MAX)
Copper	88	93	(80-120)	5.5	(20 MAX)
Lead	82	82	(80-120)	00	(20 MAX)
Molybdenum	88	89	(80-120)	1.1	(20 MAX)
Nickel	98	104	(80-120)	5.9	(20 MAX)
Selenium	95	96	(80-120)	1.0	(20 MAX)
Silver	83	87	(60-120)	4.7	(20 MAX)
Thallium	98	97	(80-120)	1.0	(20 MAX)
Vanadium	83	80	(80-120)	3.7	(20 MAX)
Zinc	92	96	(80-120)	4.3	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID 830714 Caltrans, Former Thomas
QC Batch DIG 1423
Matrix Water

Samples Lab Control Sample [53307]
Lab Control Sample Duplicate [53308]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Mercury	120	110	(80-120)	8.70	(20 MAX)

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WORKORDER DATA SHEET
Feb 25, 2003 15:38

ID 15382 WO #15382 830714 Caltrans, Former Thomas STATUS CO
DESC BFloor/R2-3 JR

CREATED	01/27/03 03:24	PO 830714	QA	TYPE CM	ACODE REPORT_WO
CLIENT	Shaw Shaw Environmental & Infrastructure				
PROFILE	10213 CaltransStan Caltrans Standard				

WORKORDER SAMPLES

1 **15382001** 15382001 MW-4

RP	TYPE SAMPLE			MATRIX	Water
COLLECTED	01/27/03 00:00	COMPLETED	02/24/03 09:39	DUE	02/10/03 17:00

Analyses		Turndays
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 **15382002** 15382002 MW-5

RP	TYPE SAMPLE			MATRIX	Water
COLLECTED	01/27/03 00:00	COMPLETED	02/24/03 09:39	DUE	02/10/03 17:00

Analyses		Turndays
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 **15382003** 15382003 MW-6

RP	TYPE SAMPLE			MATRIX	Water
COLLECTED	01/27/03 00:00	COMPLETED	02/24/03 09:39	DUE	02/10/03 17:00

Analyses		Turndays
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 **15382004** 15382004 Trip Blank

RP	TYPE TB			MATRIX	Water
COLLECTED	01/27/03 00:00	COMPLETED	01/31/03 09:07	DUE	02/10/03 17:00

Analyses		Turndays
8015M_G W	TPH Gas WATR	10
8260 WATR	8260B GCMS VOLATILES WATR	10

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

B-Floor/R2-3

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

Purchase Order: # 189348

Lab: **Sparger Technolog**

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 Wenhardt

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 NOT field filtered.	REMARKS
						1	6	6	Container Types
						HCl	NP	NP	Preservations
(1) MW-4	1-27	1027		Water	6	4	1	1	
(2) MW-5	↓	1010		Water	6	3	1	1	1 VOA BROKE
(3) MW-6		1019		Water	6	4	1	1	
(4) Trip Blank	↓	N/A		Water	2	2			

Analysis Requested

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Paul Wenhardt	Signature: Jennifer Riley	Signature	Signature
Printed Name: PAUL WENHARDT	Printed Name: Sparger	Printed Name	Printed Name
Firm: SHAW ETI	Firm: 1/27/03 14:45	Firm	Firm
Date/Time: 1-27-03 14:45	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