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Shaw Environmental, Inc.

FIRST QUARTER 2004 GROUNDWATER MONITORING REPORT
FORMER THOMAS A. SHORT COMPANY PROPERTY
OAKLAND, ALAMEDA COUNTY, CALIFORNIA

June 8, 2004

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 2004 GROUNDWATER MONITORING REPORT
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OAKLAND, ALAMEDA COUNTY, CALIFORNIA

Shaw Environmental, Inc. (Shaw), is pleased to submit this report for the first quarter 2004 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, P.E.
Project Manager

Distribution: Chris Wilson, Caltrans
Project File 830714

1.0 Project History

The Thomas A. Short Company 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 quarterly groundwater monitoring since June 2000, 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. The most common groundwater gradient direction is southwest. TPHg concentrations have ranged from below the detection limit to 11 milligrams per liter (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 micrograms per liter (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 2004 was conducted on April 5, 2004, by Shaw Environmental, Inc. (Shaw) personnel. 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 turnaround 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	TPHg, EPA Method 8015 modified
Water	TPHd, EPA Method 8015 modified
Water	Volatile Organic Compounds (VOCs), 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 VOCs. The trip blank was analyzed for total petroleum hydrocarbons as gasoline and 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. TPHg 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 2004 sampling event are summarized below. Monitoring well locations are shown on Figure 2. Current and historical groundwater elevation data are presented on Tables 1 and 2. The current groundwater gradient is depicted on Figure 3. Current analytical results are summarized on Tables 3, 4, and 5. Selected compounds are plotted on Figure 4. Historical analytical data are presented on Tables 6, 7, and 8.

3.1 Summary

Site Location:	Former Thomas A. Short Company 3430 Wood Street, Oakland, California, Figure 1
Current Phase of Project:	Monitoring
Frequency of Monitoring:	Quarterly
Separate-Phase Hydrocarbons Present:	None present
Water Purged from Wells This Quarter:	9 gallons (from 3 monitoring wells)
Range of Depth to Groundwater:	9.48 to 13.60 feet (from top of casing), Table 1 2.89 to 4.15 meters (from top of casing)
Groundwater Elevation Change Relative to Previous Quarter:	Groundwater elevations increased in all wells. Increases ranged from 2.07 to 2.61 feet (0.63 to 0.80 meters)
Groundwater Gradient:	0.01, Figure 3
Groundwater Flow Direction:	West, Figure 3

3.2 Analytical Results

TPHg was reported by the laboratory in groundwater samples from wells MW-4, MW-5 and MW-6 at concentrations of 2.21, 3.6 and 0.19 mg/l, respectively. TPHd was reported by the laboratory in groundwater samples from wells MW-4 and MW-5 at concentrations of 1.4 and 4 mg/l, respectively. TPHd were not reported present at concentrations exceeding the reporting limit of the analytical method in the groundwater sample collected from well MW-6 (Table 3).

Benzene was detected at concentrations of 0.0095 and 0.067 mg/l in groundwater samples collected from wells MW-4 and MW-5, respectively. Toluene and m+p-xylenes were detected at concentrations of 0.0035 and 0.010 mg/l, respectively, in groundwater samples from well MW-4. Toluene, ethylbenzene, and xylenes were not detected in MW-5; however, the detection limit for VOCs was raised by a factor of 10 to 0.020 mg/l because of the benzene levels. Benzene, toluene, ethylbenzene, and xylenes (BTEX) were not reported present at concentrations exceeding reporting limits of the analytical methods in the groundwater samples collected from well MW-6 (Table 3).

An additional VOC was detected in groundwater samples collected from well MW-4. VOCs did not exceed the reporting limits for wells MW-5 and MW-6 (Table 4). The following VOC concentration was reported in groundwater samples collected from well MW-4.

tert-butylbenzene	0.011 mg/l

Barium was reported in groundwater samples collected from wells MW-4, MW-5, and MW-6 at concentrations of 0.17, 0.35, and 0.13 mg/l, respectively. Zinc was reported in groundwater samples collected from wells MW-4, MW-5, and MW-6 at concentrations of 0.070, 0.052, and 0.046 mg/l, respectively (Table 5).

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 2004 sampling event for TPH are generally consistent with historical data. In a comparison to fourth quarter 2003 data, the TPHg concentrations increased in wells MW-4, MW-5, and MW-6 from 0.37 mg/l to 2.21 mg/l, 1.6 mg/l to 3.6 mg/l, and from 0.078 mg/l to 0.19 mg/l, respectively. TPHd concentrations increased in both well MW-4 (from 0.33 to 1.4 mg/l) and well MW-5 (from 1.2 to 4 mg/l), and remained the same, below the detection limit, in well MW-6.

With the exception of ethylbenzene, which remained below detection limits, BTEX concentrations have increased in well MW-4. Benzene, toluene, and xylenes increased from concentrations below detection limits to 0.0095, 0.0035, and 0.010 mg/l respectively. Benzene increased from 0.0046 to 0.067 mg/l in well MW-5; the detection limit for VOCs in MW-5 was increased by a factor of 10. All other BTEX compounds in MW-5 remained below the increased detection limits. The BTEX concentrations in well MW-6 remained the same at below the detection limits (Table 6).

Remaining VOC results are generally comparable to historical compounds and concentrations (Table 7). Napthalene concentrations decreased to below the detection limit in well MW-4. Tert-butylbenzene was reported in MW-4 at a concentration greater than the previous quarter result. For MW-6, the compounds remained as reported below the detection limits.

Historically, groundwater samples from the site were reported to contain arsenic, barium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, vanadium and zinc. Barium and zinc were reported in MW-4, MW-5, and MW-6 at concentrations that were generally comparable to historical concentrations. The mercury concentration decreased in well MW-5 to below the detection limit. (Table 8).

3.4 Comparison to Environmental Screening Levels

The analytical results will be compared to environmental screening levels (ESLs), formerly called risk-based screening levels. The ESLs (RWQCB, 2003) 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 ESLs developed for groundwater that is not a current or potential drinking water resource are used for comparison to the current quarter's groundwater data. ESLs are presented below and in Tables 6, 7, and 8.

Constituent	ESL (mg/l)	Wells with Groundwater Results Exceeding ESL
TPHg	0.500	MW-4, MW-5
TPHd	0.640	MW-4, MW-5
Benzene	0.046	MW-5

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.

Table 1
First Quarter 2004 Groundwater Elevations
Former Thomas A. Short Company
Oakland, California

Well Number	Well TOC Elevation (feet-MSL)	Screened Interval (feet bgs)	Date Measured	Depth to Groundwater (feet bTOC)	Free Product Thickness (feet)	Groundwater Elevation (feet-MSL)
MW-4	8.33	5 to 15	04/05/04	9.48	0	-1.15
MW-5	12.35	5 to 15	04/05/04	13.46	0	-1.11
MW-6	12.01	5 to 15	04/05/04	13.60	0	-1.59

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 A. Short Company
Oakland, California

Well Number	Well TOC Elevation (feet-MSL)	Screened Interval (feet bgs)	Date Measured	Depth to Groundwater (feet bTOC)	Free Product Thickness (feet)	Groundwater Elevation (feet-MSL)
MW-4	8.33	5 to 15	06/19/00	12.71	0	-4.38
			11/27/00	11.51	0	-3.18
			03/29/01	9.58	0	-1.25
			01/15/02	8.03	0	0.30
			04/19/02	10.42	0	-2.09
	8.33		07/11/02	10.72	0	-2.39
			10/17/02	11.73	0	-3.40
			01/27/03	8.54	0	-0.21
			04/14/03	9.82	0	-1.49
			06/16/03	10.47	0	-2.14
			10/15/03	12.09	0	-3.76
			04/05/04	9.48	0	-1.15
MW-5	12.33	5 to 15	06/19/00	16.5	0	-4.17
			11/27/00	14.72	0	-2.39
			03/29/01	13.30	0	-0.97
			01/15/02	11.92	0	0.41
			04/19/02	14.13	0	-1.80
	12.35		07/11/02	15.02	0	-2.67
			10/17/02	15.33	0	-2.98
			01/27/03	12.34	0	0.01
			04/14/03	13.81	0	-1.46
			06/16/03	14.08	0	-1.73
			10/15/03	15.64	0	-3.29
			04/05/04	13.46	0	-1.11
MW-6	11.49	5 to 15	06/19/00	15.31	0	-3.82
			11/27/00	14.09	0	-2.60
			03/29/01	12.71	0	-1.22
			01/15/02	11.58	0	-0.09
			04/19/02	13.48	0	-1.99
	12.01		07/11/02	14.24	0	-2.23
			10/17/02	15.18	0	-3.17
			01/27/03	12.42	0	-0.41
			04/14/03	13.42	0	-1.41
			06/16/03	13.95	0	-1.94
			10/15/03	15.67	0	-3.66
			04/05/04	13.60	0	-1.59

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 2004 Groundwater Analytical Results
Petroleum Hydrocarbons

Former Thomas A. Short Company
Oakland, California

Sample Designation Sampling Date	MW-4 04/05/04	MW-5 04/05/04	MW-6 04/05/04	Trip Blank 04/05/04
Petroleum Hydrocarbons, mg/l				
TPH as Gasoline	2.21	3.6	0.19	<0.050
TPH as Diesel	1.4	4	<0.050	--
Selected Volatile Organic Compounds, ug/l				
Benzene	9.5	67	<2.0	<2.0
Toluene	3.5	<20	<2.0	<2.0
Ethylbenzene	<2.0	<20	<2.0	<2.0
m+p Xylenes	10	<20	<2.0	<2.0
o-Xylene	<2.0	<20	<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 2004 Groundwater Analytical Results
Volatile Organic Compounds
Former Thomas A. Short Company
Oakland, California

Sample Designation Sampling Date	MW-4 04/05/04	MW-5 04/05/04	MW-6 04/05/04	Trip Blank 04/05/04
tert-butylbenzene	11	<20	<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 2004 Groundwater Analytical Results
Heavy Metals
Former Thomas A. Short Company
Oakland, California

Sample Designation Sampling Date	MW-4 04/05/04	MW-5 04/05/04	MW-6 04/05/04
Antimony	<0.0050	<0.0050	<0.0050
Arsenic	<0.0050	<0.0050	<0.0050
Barium	0.17	0.35	0.13
Beryllium	<0.0010	<0.0010	<0.0010
Cadmium	<0.0030	<0.0030	<0.0030
Chromium	<0.0030	<0.0030	<0.0030
Cobalt	<0.0030	<0.0030	<0.0030
Copper	<0.0030	<0.0030	<0.0030
Lead	<0.0050	<0.0050	<0.0050
Mercury	<0.00020	<0.00020	<0.00020
Molybdenum	<0.0050	<0.0050	<0.0050
Nickel	<0.0030	<0.0030	<0.0030
Selenium	<0.0050	<0.0050	<0.0050
Silver	<0.0016	<0.0016	<0.0016
Thallium	<0.0050	<0.0050	<0.0050
Vanadium	<0.0030	<0.0030	<0.0030
Zinc	0.070	0.052	0.046

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 A. Short Company
Oakland, California

Sample Designation	MW-4												Environmental Screening Levels
Sampling Date	5/26/00	11/27/00	3/29/01	1/15/02	4/19/02	7/11/02	10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	
Petroluem Hydrocarbons, mg/l													
Total Petroleum Hydrocarbons	---	---	---	<5	<5	<5	<5	---	---	---	---	---	
TPH as Gasoline	**4.8**	**4.2**	**8.1**	<0.050	**11**	**2.9**	**2.1**	**3.8**	<0.050	**3.5**	0.37	**2.21**	0.500
TPH as Diesel	0.5	0.47	0.61	<0.050	**1.17**	**1.26**	**1.1**	**1.4**	**1.4**	**0.88**	0.33	**1.4**	0.640
Selected Volatile Organic Compounds, ug/l													
Benzene	**122**	**55**	**51**	**47**	35	9.7	23	24	18	24	<2.0	9.5	46
Toulene	39	18	23	18	13	<2.0	5.6	10	4	7.5	<2.0	3.5	130
Ethylbenzene	126	65	160	130	140	<2.0	20	84	<4.0	36	<2.0	<2.0	290
Total Xylenes	**24.7**	**26.3**	**44.5**	**32.5**	**23**	<4.0	**15.4**	**24.6**	<11.9	10.9	<4.0	<12	13
Fuel Oxygenates, ug/l													
MTBE	<0.5	1.2	<5.0	<2.0	<2.0	<2.0	<2.0	---	---	---	---	---	1800
Total Dissolved Solids, mg/l	---	---	---	---	2240	2280	2830	---	---	---	---	---	---

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 A. Short Company
Oakland, California

Sample Designation:	MW-5												
Sampling Date	5/26/00	11/27/00	3/29/01	1/15/02	4/19/02	7/11/02	10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	Environmental Screening Levels
Petroluem Hydrocarbons, mg/l													
Total Petroleum Hydrocarbons	---	---	---	<5	<5	<5	<5	---	---	---	---	---	
TPH as Gasoline	**4.6**	**1.7**	**2.7**	**7.8**	**1.2**	**4.1**	**1.7**	**4.6**	<0.050	**2.1**	**1.6**	**3.6**	0.500
TPH as Diesel	0.6	0.45	**0.96**	<0.050	**0.942**	**2.45**	**1.5**	**3.7**	**2.3**	**1.7**	**1.2**	**4**	0.640
Selected Volatile Organic Compounds, ug/l													
Benzene	**98**	39	35	**63**	**53**	**99**	**62**	**150**	**150**	**94**	4.6	**67**	46
Toulene	7	2	1.1	3.1	2.5	4.6	2	6.3	5.2	2.5	<2.0	<20	130
Ethylbenzene	35	3.8	3.5	18	18	43	6.9	84	42	3.6	<2.0	<20	290
Total Xylenes	**44**	6.1	3.2	<4.0	<4.0	5.6	<4.7	<4.3	<8.0	<4.0	<4.0	<40	13
Fuel Oxygenates, ug/l													
MTBE	7	1.5	<5.0	<2.0	<2.0	<2.0	<2.0	---	---	---	---	---	1800
Total Dissolved Solids, mg/l	---	---	---	---	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 A. Short Company
Oakland, California

Sample Designation / Sampling Date	5/26/00	11/27/00	3/29/01	1/15/02	MW-6 4/19/02	7/11/02	10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	Environmental Screening Levels
Petroluem Hydrocarbons, mg/l													
Total Petroleum Hydrocarbons	---	---	---	<5	<5	<5	<5	---	---	---	---	---	
TPH as Gasoline	**4.4**	0.32	0.26	**3.5**	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.078	0.19	0.500
TPH as Diesel	0.4	0.18	0.42	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.05	0.640
Selected Volatile Organic Compounds, ug/l													
Benzene	**191**	16	**52**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	46
Toulene	14	0.51	0.62	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	130
Ethylbenzene	**110**	1.1	1.1	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	290
Total Xylenes	**121**	0.88	<0.50	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	13
Fuel Oxygenates, ug/l													
MTBE	7	1.8	<5.0	<2.0	<2.0	<2.0	<2.0	---	---	---	---	---	1800
Total Dissolved Solids, mg/l	---	---	---	---	2820	3060	4360	---	---	---	---	---	---

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

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

Well Number	MW-4												Environmental
Date Sampled	5/26/00	11/27/00	3/29/01	1/15/02	4/19/02	7/11/02	10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	Screening Levels
1,1,2-trichloroethane	<5.0	<5.0	<5.0	3.6	<10	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	350
1,2,4-trimethylbenzene	<5.0	<5.0	<5.0	<2.0	<10	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	
1,2-dichloroethane	<5.0	<5.0	<5.0	3.9	<10	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	200
1,2-dichloropropane	<5.0	<5.0	<5.0	4.1	<10	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	100
1,3,5-trimethylbenzene	12	<5.0	8	<2.0	190	<2.0	14	52	24	24	<2.0	<2.0	
2-butanone	<5.0	<5.0	<5.0	<2.0	<10	7.8	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	14,000
2-chloroethylvinyl ether	<5.0	<5.0	<5.0	<2.0	<10	30	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	
2-hexanone	<5.0	<5.0	<5.0	<2.0	<10	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	
4-chlorotoluene	<5.0	<5.0	<5.0	<2.0	<10	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	
4-isopropyltoluene	5	<5.0	8	3.6	<10	<2.0	3.7	9.6	6.8	8.8	<2.0	<2.0	
acetone	<5.0	<5.0	<5.0	<2.0	<10	13	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	1500
acrolein	<5.0	<5.0	<5.0	<2.0	<10	100	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	
bromodichloromethane	<5.0	<5.0	<5.0	6.8	<10	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	160
chloroform	<5.0	<5.0	<5.0	23	<10	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	340
isopropylbenzene (cumene)	141	70	180	180	190	<2.0	52	160	5.0	130.0	<2.0	<2.0	
napthalene	**101**	<5.0	**45**	12	<10	<2.0	<2.0	<2.0	<4.0	<2.0	3.7	<2.0	24
n-butylbenzene	18	7.3	26	17	22	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	
n-propylbenzene	170	63	280	<2.0	300	<2.0	68	230	<4.0	200	<2.0	<2.0	
sec-butylbenzene	0.6	<5.0	12	11	13	<2.0	4.4	12	<4.0	14	<2.0	<2.0	
tert-butylbenzene	14	9.9	21	20	25	4.0	11	23	16	23	5.1	11	
trichloroethene	<5.0	<5.0	<5.0	6.7	<10	5.0	<2.0	<2.0	<4.0	<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 7
Historical Groundwater Analytical Results
Volatile Organic Compounds
Former Thomas A. Short Company
Oakland, California

Well Number	MW-5												
Date Sampled	5/26/00	11/27/00	3/29/01	1/15/02	4/19/02	7/11/02	10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	Environmental Screening Levels
1,1,2-trichloroethane	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	350
1,2,4-trimethylbenzene	96	<5.0	<5.0	<2.0	<2.0	5.4	2.6	<2.0	<4.0	<2.0	<2.0	<20.0	
1,2-dichloroethane	<5.0	<5.0	<5.0	3.9	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	200
1,2-dichloropropane	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	100
1,3,5-trimethylbenzene	51	<5.0	<5.0	<2.0	16	8.4	2.7	10	<4.0	3.0	<2.0	<20.0	
2-butanone	<5.0	<5.0	<5.0	<2.0	<2.0	8.8	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	14000
2-chloroethylvinyl ether	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	
2-hexanone	<5.0	<5.0	<5.0	<2.0	<2.0	10	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	
4-chlorotoluene	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	
4-isopropyltoluene	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	
acetone	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	1500
acrolein	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	
bromodichloromethane	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	160
chloroform	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	340
isopropylbenzene (cumene)	29	<5.0	7.1	25	16	49	18	80	27	6.3	<2.0	<20.0	
napthalene	14	<5.0	15	**38**	<2.0	<2.0	<2.0	**130**	<4.0	<2.0	6.5	<20.0	24
n-butylbenzene	21	<5.0	<5.0	21	9.8	64	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	
n-propylbenzene	31	<5.0	11	45	26	97	39	190	44	7.4	<2.0	<20.0	
sec-butylbenzene	8.2	<5.0	<5.0	5.1	4.2	12	5.6	24	9.1	2.4	<2.0	<20.0	
tert-butylbenzene	11	<5.0	14	16	16	21	9.8	30	27	19	13	<20.0	
trichloroethene	<5.0	<5.0	<5.0	<2.0	<2.0	2.2	<2.0	<2.0	<4.0	<2.0	<2.0	<20.0	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 7
Historical Groundwater Analytical Results
Volatile Organic Compounds
Former Thomas A. Short Company
Oakland, California

Well Number / Date Sampled	MW-6 5/26/00	11/27/00	3/29/01	1/15/02	4/19/02	7/11/02	10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	Environmental Screening Levels
1,1,2-trichloroethane	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	350
1,2,4-trimethylbenzene	149	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
1,2-dichloroethane	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	200
1,2-dichloropropane	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	100
1,3,5-trimethylbenzene	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
2-butanone	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	14000
2-chloroethylvinyl ether	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
2-hexanone	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
4-chlorotoluene	7.4	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
4-isopropyltoluene	6.6	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
acetone	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	1500
acrolein	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
bromodichloromethane	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	160
chloroform	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	340
isopropylbenzene (cumene)	25	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
napthalene	**44**	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	19	<2.0	<2.0	<2.0	<2.0	24
n-butylbenzene	17	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
n-propylbenzene	36	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	2.9	<2.0	<2.0	<2.0	<2.0	
sec-butylbenzene	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
tert-butylbenzene	5.4	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
trichloroethene	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<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 A. Short Company
Oakland, California

Sample Designation / Sampling Date	5/26/00	11/27/00	3/29/01	1/15/02	4/19/02	MW-4 7/11/02	10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	Environmental Screening Levels
Antimony	--	<0.0050	<0.0050	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.0050	<0.0050	<0.0050	0.030
Arsenic	--	0.01	0.009	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.0050	<0.0050	<0.0050	0.036
Barium	--	0.47	0.33	0.34	0.30	0.31	<0.020	0.24	0.35	0.24	0.50	0.17	1.0
Beryllium	--	<0.0010	<0.0010	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0010	<0.0010	<0.0010	0.0027
Cadmium	--	<0.0030	<0.0030	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0030	<0.0030	<0.0030	0.0022
Chromium	--	0.0032	<0.003	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0030	<0.0030	<0.0030	0.180
Cobalt	--	<0.003	<0.003	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.0030	<0.0030	<0.0030	0.0030
Copper	--	**0.01**	**0.010**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.0030	<0.0030	<0.0030	0.0031
Lead	**0.20**	**0.0077**	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.0050	0.0025
Mercury	--	<0.004	<0.004	<0.00020	<0.00020	<0.00020	**0.00063**	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.000012
Molybdenum	--	0.0064	0.0060	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.0050	<0.0050	<0.0050	0.240
Nickel	--	**0.030**	0.0056	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.0030	<0.0030	<0.0030	0.0082
Selenium	--	<0.0050	**0.0058**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0050	<0.0050	<0.0050	0.0050
Silver	--	**0.020**	**0.010**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0016	<0.0016	<0.0016	0.00019
Thallium	--	<0.0050	<0.0050	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0050	<0.0050	<0.0050	0.020
Vanadium	--	0.0034	0.003	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.0030	<0.0030	<0.0030	0.019
Zinc	--	0.070	0.020	<0.015	0.015	0.02	<0.0150	<0.0150	0.040	0.054	<0.010	0.070	0.081

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 A. Short Company
Oakland, California

Sample Designation / Sampling Date	5/26/00	11/27/00	3/29/01	1/15/02	4/19/02	MW-5 7/11/02	10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	Environmental Screening Levels
Antimony	--	<0.0050	<0.0050	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.0050	<0.0050	<0.0050	0.030
Arsenic	--	0.030	0.010	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.0050	<0.0050	<0.0050	0.036
Barium	--	**1.2**	0.20	0.19	0.32	0.42	<0.020	0.28	0.51	0.41	0.24	0.35	1.0
Beryllium	--	<0.0010	<0.0010	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0010	<0.0010	<0.0010	0.0027
Cadmium	--	<0.0030	<0.0030	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0030	<0.0030	<0.0030	0.0022
Chromium	--	0.05	<0.003	<0.010	**0.22**	<0.010	<0.010	<0.010	<0.010	<0.0030	<0.0030	<0.0030	0.180
Cobalt	--	**0.01**	<0.003	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.0030	<0.0030	<0.0030	0.0030
Copper	--	**0.05**	**0.010**	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.0030	<0.0030	<0.0030	0.0031
Lead	**0.33**	**0.020**	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.0050	0.0025
Mercury	--	<0.004	<0.004	<0.00020	<0.00020	<0.00020	**0.00055**	<0.00020	<0.00020	<0.00020	**0.0040**	<0.00020	0.000012
Molybdenum	--	0.010	<0.005	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.0050	<0.0050	<0.0050	0.240
Nickel	--	**0.010**	0.0062	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.0030	<0.0030	<0.0030	0.0082
Selenium	--	<0.0050	<0.0050	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0050	<0.0050	<0.0050	0.0050
Silver	--	**0.010**	**0.0013**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0016	<0.0016	<0.0016	0.00019
Thallium	--	<0.0050	<0.0050	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0050	<0.0050	<0.0050	0.020
Vanadium	--	**0.050**	<0.003	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.0030	<0.0030	<0.0030	0.019
Zinc	--	0.010	0.030	0.020	**0.16**	0.041	<0.0150	<0.0150	<0.0150	0.058	<0.010	0.052	0.081

Notes:

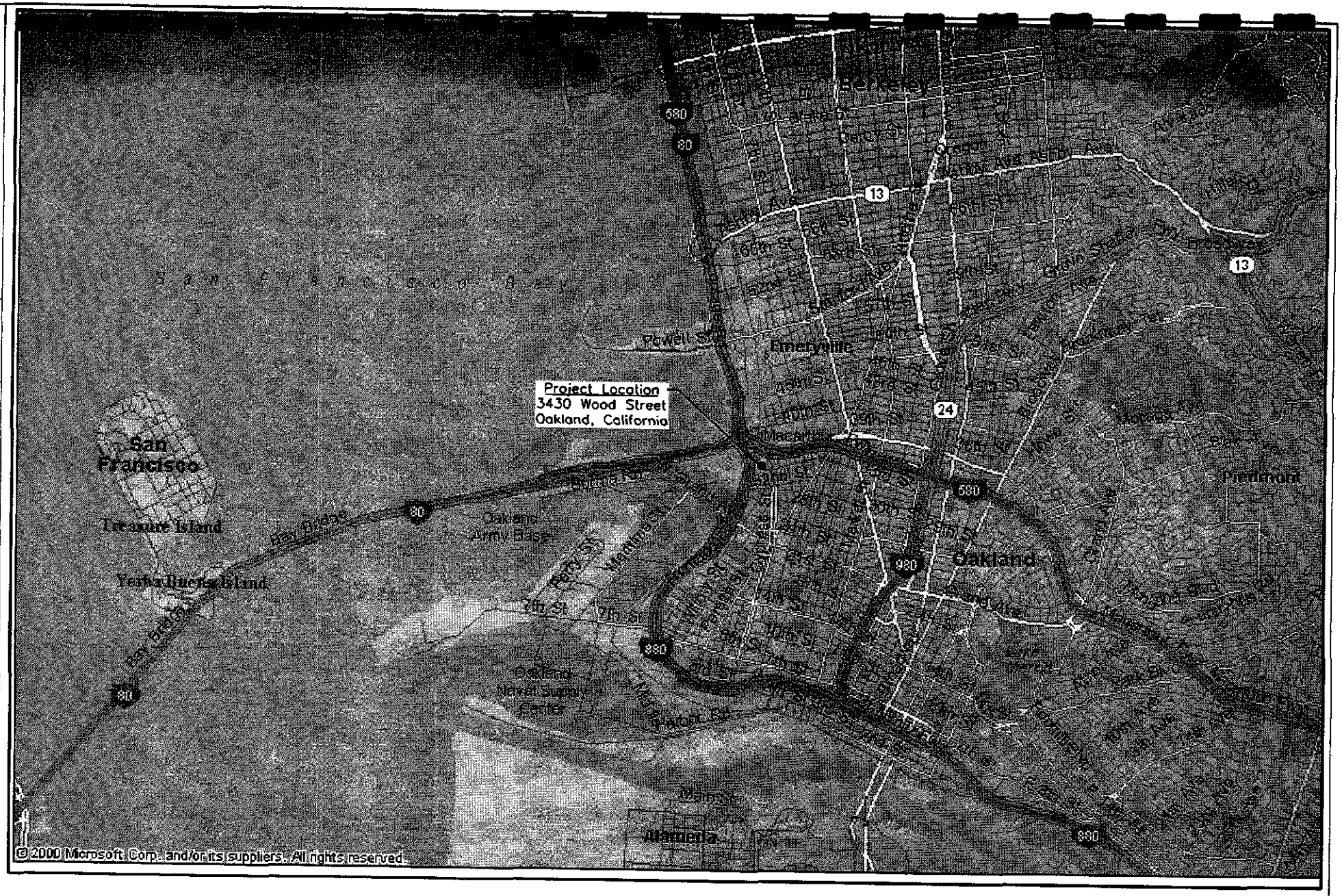
1. *Metals analyses conducted in general accordance with U.S. Environmental Protection Agency (EPA) Methods 6010 and 7470.*
2. *Concentrations reported in milligrams per liter.*
3. *"<" = not detected at concentrations above the indicated amount.*
4. *Risk-based screening levels (RBSLs) for groundwater 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 A. Short Company
Oakland, California

Sample Designation / Sampling Date	MW-6												Environmental Screening Levels
	5/26/00	11/27/00	3/29/01	1/15/02	4/19/02	7/11/02	10/17/02	1/27/03	4/14/03	6/16/03	10/15/03	4/5/04	
Antimony	--	<0.0050	<0.0050	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.0050	<0.0050	<0.0050	0.030
Arsenic	--	0.0091	0.0091	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.0050	<0.0050	<0.0050	0.036
Barium	--	0.20	0.11	0.092	0.12	0.21	<0.020	0.16	0.21	0.18	0.33	0.13	1.0
Beryllium	--	<0.0010	<0.0010	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0010	<0.0010	<0.0010	0.0027
Cadmium	--	<0.0030	<0.0030	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0030	<0.0030	<0.0030	0.0022
Chromium	--	<0.003	<0.003	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0030	<0.0030	<0.0030	0.180
Cobalt	--	**0.0049**	**0.0040**	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.0030	<0.0030	<0.0030	0.0030
Copper	--	**0.010**	**0.020**	<0.020	**0.23**	<0.020	<0.020	<0.020	<0.020	<0.0030	<0.0030	<0.0030	0.0031
Lead	**0.40**	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0050	<0.0050	<0.0050	0.0025
Mercury	--	<0.004	<0.004	<0.00020	<0.00020	<0.00020	**0.00041**	**0.00023**	<0.00020	<0.00020	<0.00020	<0.00020	0.000012
Molybdenum	--	0.010	0.0054	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.0050	<0.0050	<0.0050	0.240
Nickel	--	**0.040**	**0.010**	<0.040	**0.10**	<0.040	<0.040	<0.040	<0.040	<0.0030	<0.0030	<0.0030	0.0082
Selenium	--	<0.0050	<0.0050	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0050	<0.0050	<0.0050	0.0050
Silver	--	**0.010**	**0.001**	**<0.010**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0016	<0.0016	<0.0016	0.00019
Thallium	--	<0.0050	<0.0050	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0050	<0.0050	<0.0050	0.020
Vanadium	--	0.0036	0.003	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.0030	<0.0030	<0.0030	0.019
Zinc	--	0.050	**0.37**	0.031	0.02	0.043	<0.0150	0.027	<0.0150	0.044	<0.010	0.046	0.081

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.*



DRAWN BY	CBD
	3/17/03
CHECKED BY	
APPROVED BY	
PROJECT NUMBER	830714

SCALE

0 1 2 Miles

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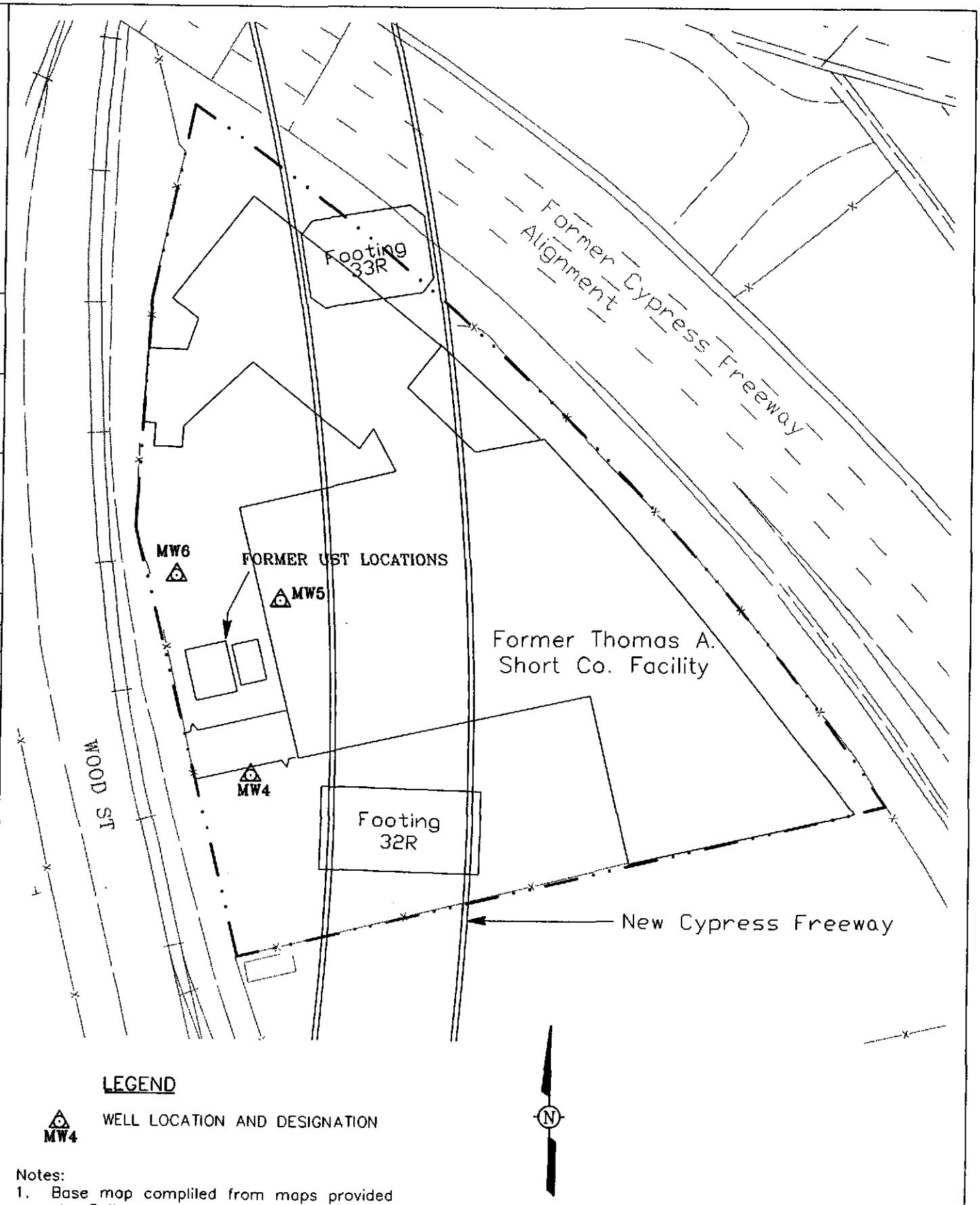
Shaw E & I, Inc.

FIGURE 1

SITE LOCATION MAP

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



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

PROJECT NUMBER 830714

LEGEND

MW4 WELL LOCATION AND DESIGNATION

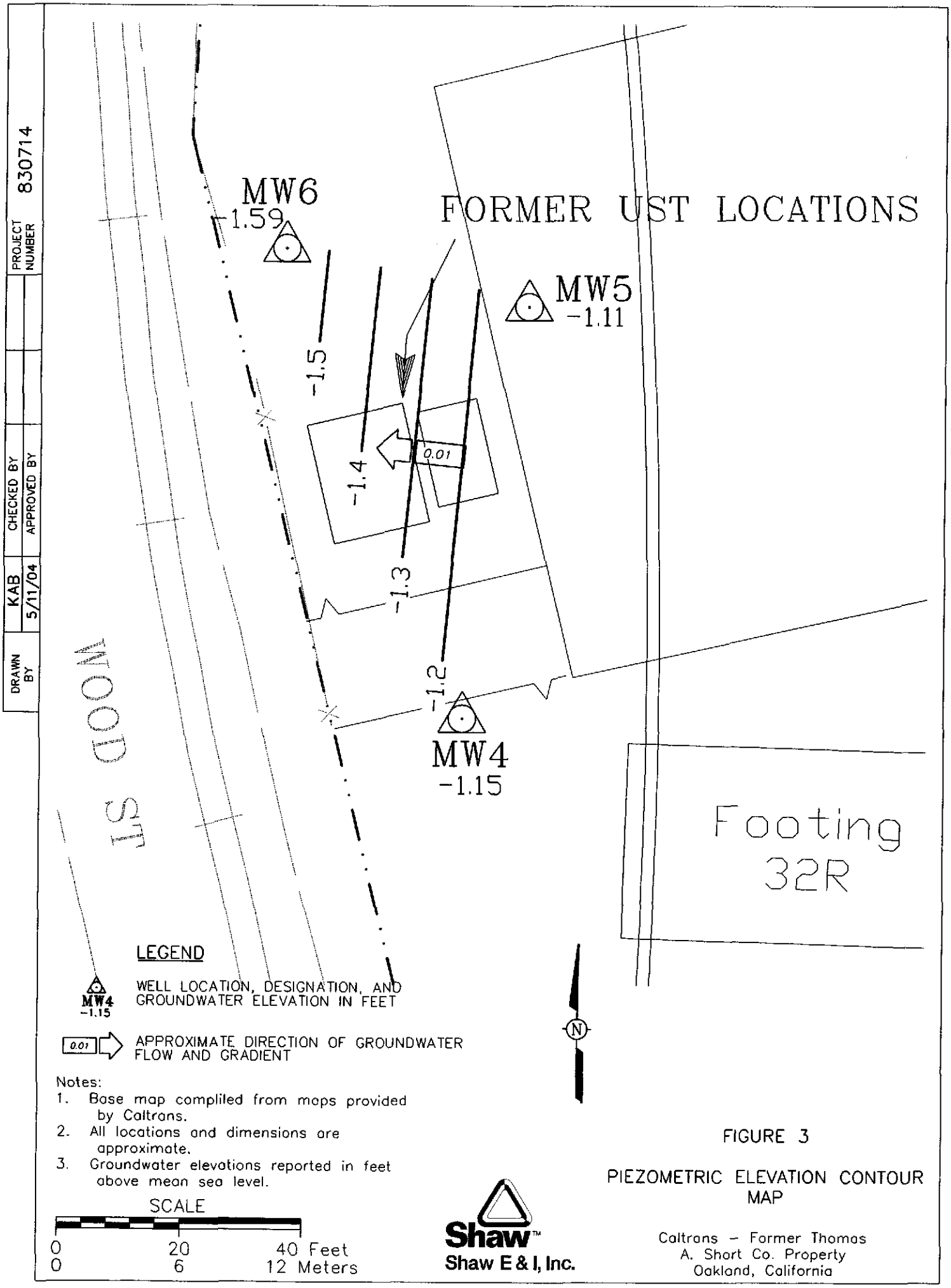
Notes:
1. Base map compliled from maps provided by Caltrans.
2. All locations and dimensions are approximate.

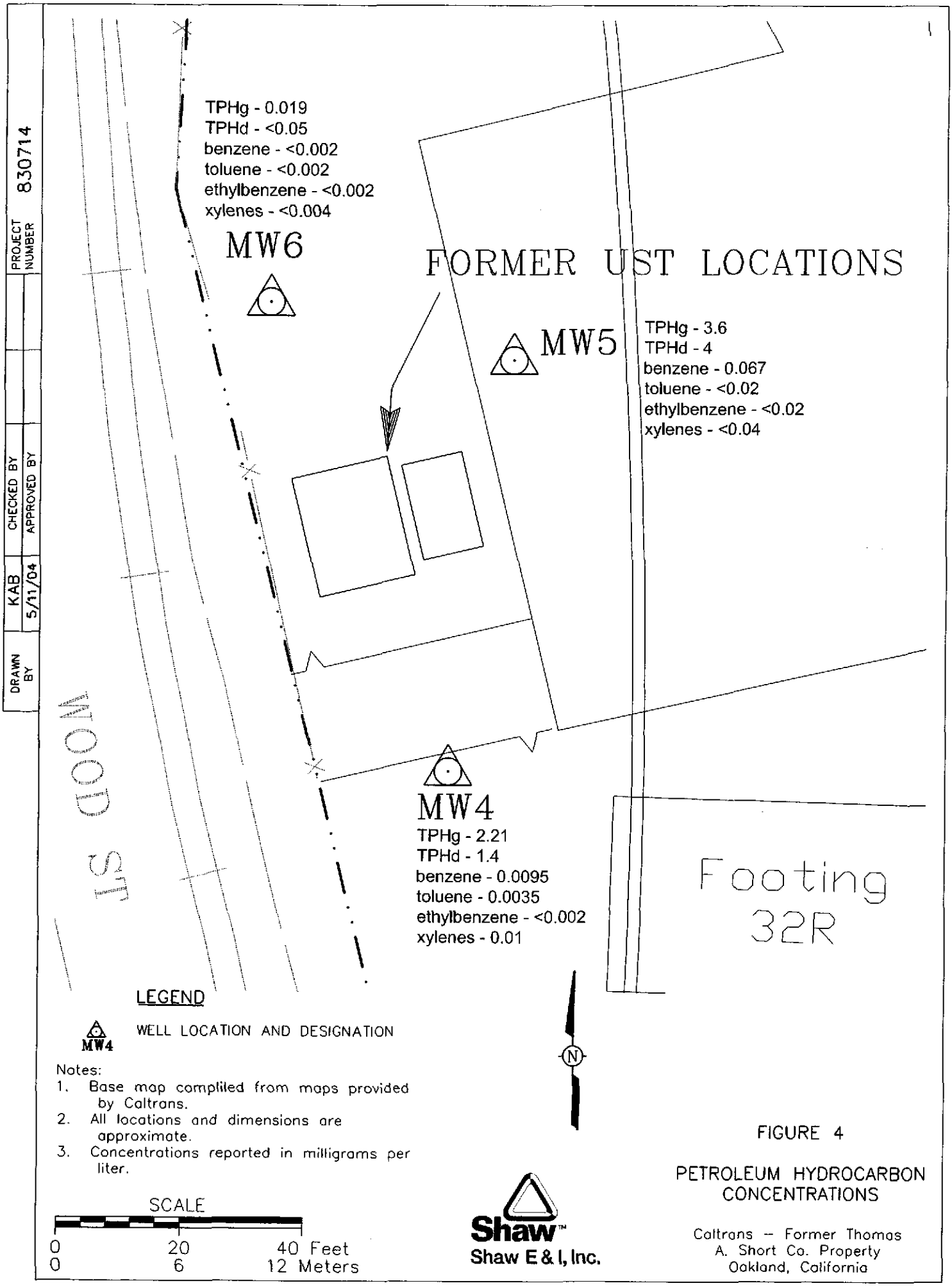
SCALE
0 50 100 Feet
0 15 30 Meters

Shaw™
Shaw E & I, Inc.

FIGURE 2

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


PROJECT NUMBER 830714
DRAWN BY KAB 5/11/04
CHECKED BY
APPROVED BY
MW6
1.59
MW5
-1.11
FORMER UST LOCATIONS
-1.5
-1.4
0.01
-1.3
-1.2
MW4
-1.15
Footing
32R
7th St
Wood St
LEGEND
MW4
-1.15
WELL LOCATION, DESIGNATION, AND GROUNDWATER ELEVATION IN FEET
0.01
APPROXIMATE DIRECTION OF GROUNDWATER FLOW AND GRADIENT
N
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
Shaw™
Shaw E & I, Inc.
FIGURE 3
PIEZOMETRIC ELEVATION CONTOUR MAP
Caltrans – Former Thomas A. Short Co. Property
Oakland, California
N:\ramfp1\Projects\830\830714\Thomas Short\report\1Q04\cypress gw ctr 1-04 piez (thomas short).dwg, 6/9/2004 10:24:26 AM



N:\ranchp1\Projects\83\830714\Thomas Short\report\1Q04\cypress gw qtr 1-04 pet hc (thomas short).dwg, 5/20/2004 4:39:28 PM

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, total petroleum hydrocarbons as gasoline, total petroleum hydrocarbons as diesel, 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 insulated chests overnight in the custody of a Shaw Environmental, Inc. (Shaw) 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 Shaw personnel within approximately 24 hours of collection of the last sample. The samples were transported to the laboratory in a motor vehicle.

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

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

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

FIELD REPORT
WATER LEVEL / FLOATING PRODUCT
SURVEY

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

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

DATE: 4-5-09

CLIENT : Caltrans
Former Thomas Short Co. Property

SAMPLER : Paul Weinhardt

WELL ID	PREVIOUS DEPTH TO WATER 10/15/2003	TOTAL DEPTH (Feet)	DEPTH TO WATER (Feet)	DEPTH TO FLOATING PRODUCT (Feet)	FLOATING PRODUCT THICKNESS (Feet)	COMMENTS
MW-4	12.09	15.00	9.48	—	—	
MW-5	15.64	19.20	13.46	—	—	
MW-6	15.67	18.70	13.60	—	—	

Comments :

Paul Weinhardt
Signature

Rev. 1/97

WATER SAMPLE FIELD DATA SHEET

PROJECT NO : 830714 / 01010000 SAMPLE ID : MW 4

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

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

TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____

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

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

DEPTH OF WELL (feet) : 15.00 CALCULATED PURGE (gal.) : 2.69

DEPTH TO WATER (feet) : 9.48 ACTUAL PURGE VOL. (gal.) : 3.00

DATE PURGED : 9-5-04 END PURGE : 937

DATE SAMPLED : 9-5-04 SAMPLING TIME : 1004

DTW AT SAMPLE TIME: 10.54

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
931	1.0	718	3762	15.40	cloudy	mod
934	2.0	718	3892	15.40	cloudy	mod
937	3.0	716	4104	15.70	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

✓ Dispo Bailer ____ Dedicated

Other: ____

WELL INTEGRITY: NOT GOOD LOCK: NO

REMARKS: ____

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

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

Temperature °C ____

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

Rev. 1/97

WATER SAMPLE FIELD DATA SHEET

PROJECT NO : 830714 / 01010000 SAMPLE ID : MW5

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

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

TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____

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

CASING ELEVATION (feet/MSL) : ____ VOLUME IN CASING (gal.) : .93

DEPTH OF WELL (feet) : 19.20 CALCULATED PURGE (gal.) : 2.80

DEPTH TO WATER (feet) : 13.96 ACTUAL PURGE VOL. (gal.) : 3.0

DATE PURGED : 9.5.04 END PURGE : 922

DATE SAMPLED : 9.5.04 SAMPLING TIME : 952

DTW AT SAMPLE TIME: 1403

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
916	1.0	725	3203	15.5°	Cloudy	MOD
919	2.0	723	3144	15.7°	Cloudy	MOD
922	3.0	724	3165	15.6°	Cloudy	MOD

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

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

PURGING EQUIPMENT

____ 2" Bladder Pump ____ Bailer (Teflon)

____ Centrifugal Pump ____ Bailer (PVC)

____ Submersible Pump ____ Bailer (Stainless Steel)

X Dispo Bailer ____ Dedicated

Other: ____

SAMPLING EQUIPMENT

____ 2" Bladder Pump ____ Bailer (Teflon)

____ Bomb Sampler ____ Bailer (Stainless Steel)

____ Dipper ____ Submersible Pump

X Dispo Bailer ____ Dedicated

Other: ____

WELL INTEGRITY: GOOD LOCK: NO

REMARKS: ____

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

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

Temperature °C ____

SIGNATURE: Paul Weinhardt REVIEWED BY: ____ PAGE 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.) : .83

DEPTH OF WELL (feet) : 18.70 CALCULATED PURGE (gal.) : 2.99

DEPTH TO WATER (feet) : 13.60 ACTUAL PURGE VOL. (gal.) : 3.00

DATE PURGED : 4.5.04 END PURGE : 908

DATE SAMPLED : 4.5.04 SAMPLING TIME : 944

DTW AT SAMPLE TIME: 14.06

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°c)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
902	1.0	751	3525	15.2°	cloudy	moo
905	2.0	738	3704	15.7°	cloudy	moo
908	3.0	733	4024	15.9°	cloudy	moo

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

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

PURGING EQUIPMENT

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

SAMPLING EQUIPMENT

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

WELL INTEGRITY: Good LOCK: NO

REMARKS: ____

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

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

Temperature °C ____

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

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	16210 Caltrans, Former Thomas Short
Received	04/05/04

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

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

Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210001	**Received**	04/05/04
Sample ID	MW-4	**Reported**	04/22/04
Matrix	Water		

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	04/09/04	04/12/04	ND	0.00020	mg/L	1:1

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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**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210001	**Received**	04/05/04
Sample ID	MW-4	**Reported**	04/22/04
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Vinyl chloride	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromomethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Trichlorofluoromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acrolein	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-Dichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acetone	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Methyl iodide	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Carbon disulfide	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dichloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acrylonitrile	04/06/04	04/06/04	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-Dichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Vinyl acetate	04/06/04	04/06/04	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Butanone (MEK)	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromochloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloroform	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2,2-dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Carbon tetrachloride	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Benzene	**04/06/04**	**04/06/04**	**9.5**	**2.0**	**ug/L**	**1:1**
1,2-Dichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dibromomethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromodichloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Trichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	04/06/04	04/06/04	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	04/06/04	04/06/04	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**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	*16210001*	**Received**	04/05/04
Sample ID	MW-4	**Reported**	04/22/04
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	04/06/04	04/06/04	ND	2.0	ug/L	1:1
trans-1,3Dichloropropene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Toluene	**04/06/04**	**04/06/04**	**3.5**	**2.0**	**ug/L**	**1:1**
1,2-Dibromoethane (EDB)	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3-Dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Hexanone	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dibromochloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Tetrachloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,1,2Tetrachloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Ethylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
M+P-Xylene	**04/06/04**	**04/06/04**	**10**	**2.0**	**ug/L**	**1:1**
Bromoform	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Styrene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
o-Xylene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,2,2Tetrachloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Isopropylbenzene(Cumene)	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
n-Propylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Chlorotoluene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
4-Chlorotoluene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
tert-Butylbenzene	**04/06/04**	**04/06/04**	**11**	**2.0**	**ug/L**	**1:1**
1,2,4-Trimethylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
sec-Butylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
4-Isopropyltoluene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
n-Butylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210001	**Received**	04/05/04
Sample ID	MW-4	**Reported**	04/22/04
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2Dibromo3chloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Naphthalene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Hexachlorobutadiene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	48 ug/L	96 %	(65 - 135)
Toluene d8	48.2 ug/L	96 %	(65 - 118)
4-Bromofluorobenzene	47.2 ug/L	94 %	(65 - 121)

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210001	**Received**	04/05/04
Sample ID	MW-4	**Reported**	04/22/04
Matrix	Water		

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Arsenic	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Barium	**04/09/04**	**04/12/04**	**0.17**	**0.0010**	**mg/L**	**1:1**
Beryllium	04/09/04	04/12/04	ND	0.0010	mg/L	1:1
Cadmium	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Chromium	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Cobalt	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Copper	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Lead	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Molybdenum	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Nickel	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Selenium	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Silver	04/09/04	04/12/04	ND	0.0016	mg/L	1:1
Thallium	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Vanadium	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Zinc	**04/09/04**	**04/12/04**	**0.070**	**0.010**	**mg/L**	**1:1**

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210002	**Received**	04/05/04
Sample ID	MW-5	**Reported**	04/22/04
Matrix	Water		

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	04/09/04	04/12/04	ND	0.00020	mg/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210002	**Received**	04/05/04
Sample ID	MW-5	**Reported**	04/22/04
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Chloromethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Vinyl chloride	04/06/04	04/06/04	ND	20	ug/L	1:10
Bromomethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Chloroethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Trichlorofluoromethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Acrolein	04/06/04	04/06/04	ND	20	ug/L	1:10
1,1-Dichloroethene	04/06/04	04/06/04	ND	20	ug/L	1:10
Acetone	04/06/04	04/06/04	ND	20	ug/L	1:10
Methyl iodide	04/06/04	04/06/04	ND	20	ug/L	1:10
Carbon disulfide	04/06/04	04/06/04	ND	20	ug/L	1:10
Dichloromethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Acrylonitrile	04/06/04	04/06/04	ND	20	ug/L	1:10
trans-1,2-Dichloroethene	04/06/04	04/06/04	ND	20	ug/L	1:10
1,1-Dichloroethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Vinyl acetate	04/06/04	04/06/04	ND	20	ug/L	1:10
cis-1,2-Dichloroethene	04/06/04	04/06/04	ND	20	ug/L	1:10
2-Butanone (MEK)	04/06/04	04/06/04	ND	20	ug/L	1:10
Bromochloromethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Chloroform	04/06/04	04/06/04	ND	20	ug/L	1:10
2,2-dichloropropane	04/06/04	04/06/04	ND	20	ug/L	1:10
1,1,1-Trichloroethane	04/06/04	04/06/04	ND	20	ug/L	1:10
1,1-dichloropropane	04/06/04	04/06/04	ND	20	ug/L	1:10
Carbon tetrachloride	04/06/04	04/06/04	ND	20	ug/L	1:10
Benzene	**04/06/04**	**04/06/04**	**67**	**20**	**ug/L**	**1:10**
1,2-Dichloroethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Dibromomethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Bromodichloromethane	04/06/04	04/06/04	ND	20	ug/L	1:10
1,2-Dichloropropane	04/06/04	04/06/04	ND	20	ug/L	1:10
Trichloroethene	04/06/04	04/06/04	ND	20	ug/L	1:10
2-Chloroethylvinyl ether	04/06/04	04/06/04	ND	20	ug/L	1:10
cis-1,3-Dichloropropene	04/06/04	04/06/04	ND	20	ug/L	1:10

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210002	**Received**	04/05/04
Sample ID	MW-5	**Reported**	04/22/04
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	04/06/04	04/06/04	ND	20	ug/L	1:10
trans-1,3Dichloropropene	04/06/04	04/06/04	ND	20	ug/L	1:10
1,1,2-Trichloroethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Toluene	04/06/04	04/06/04	ND	20	ug/L	1:10
1,2-Dibromoethane (EDB)	04/06/04	04/06/04	ND	20	ug/L	1:10
1,3-Dichloropropane	04/06/04	04/06/04	ND	20	ug/L	1:10
2-Hexanone	04/06/04	04/06/04	ND	20	ug/L	1:10
Dibromochloromethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Tetrachloroethene	04/06/04	04/06/04	ND	20	ug/L	1:10
1,1,1,2Tetrachloroethane	04/06/04	04/06/04	ND	20	ug/L	1:10
Chlorobenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
Ethylbenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
M+P-Xylene	04/06/04	04/06/04	ND	20	ug/L	1:10
Bromoform	04/06/04	04/06/04	ND	20	ug/L	1:10
Styrene	04/06/04	04/06/04	ND	20	ug/L	1:10
o-Xylene	04/06/04	04/06/04	ND	20	ug/L	1:10
1,1,2,2Tetrachloroethane	04/06/04	04/06/04	ND	20	ug/L	1:10
1,2,3-Trichloropropane	04/06/04	04/06/04	ND	20	ug/L	1:10
Isopropylbenzene(Cumene)	04/06/04	04/06/04	ND	20	ug/L	1:10
Bromobenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
n-Propylbenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
2-Chlorotoluene	04/06/04	04/06/04	ND	20	ug/L	1:10
4-Chlorotoluene	04/06/04	04/06/04	ND	20	ug/L	1:10
1,3,5-Trimethylbenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
tert-Butylbenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
1,2,4-Trimethylbenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
sec-Butylbenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
1,3-Dichlorobenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
1,4-Dichlorobenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
4-Isopropyltoluene	04/06/04	04/06/04	ND	20	ug/L	1:10
1,2-Dichlorobenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
n-Butylbenzene	04/06/04	04/06/04	ND	20	ug/L	1:10

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210002	**Received**	04/05/04
Sample ID	MW-5	**Reported**	04/22/04
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2Dibromo3chloropropane	04/06/04	04/06/04	ND	20	ug/L	1:10
1,2,4-Trichlorobenzene	04/06/04	04/06/04	ND	20	ug/L	1:10
Naphthalene	04/06/04	04/06/04	ND	20	ug/L	1:10
Hexachlorobutadiene	04/06/04	04/06/04	ND	20	ug/L	1:10
1,2,3-Trichlorobenzene	04/06/04	04/06/04	ND	20	ug/L	1:10

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	48.8 ug/L	98 %	(65 - 135)
Toluene d8	48.8 ug/L	98 %	(65 - 118)
4-Bromofluorobenzene	47.8 ug/L	96 %	(65 - 121)

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210002	**Received**	04/05/04
Sample ID	MW-5	**Reported**	04/22/04
Matrix	Water		

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Arsenic	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Barium	**04/09/04**	**04/12/04**	**0.35**	**0.0010**	**mg/L**	**1:1**
Beryllium	04/09/04	04/12/04	ND	0.0010	mg/L	1:1
Cadmium	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Chromium	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Cobalt	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Copper	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Lead	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Molybdenum	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Nickel	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Selenium	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Silver	04/09/04	04/12/04	ND	0.0016	mg/L	1:1
Thallium	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Vanadium	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Zinc	**04/09/04**	**04/12/04**	**0.052**	**0.010**	**mg/L**	**1:1**

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210003	**Received**	04/05/04
Sample ID	MW-6	**Reported**	04/22/04
Matrix	Water		

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	04/09/04	04/12/04	ND	0.00020	mg/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210003	**Received**	04/05/04
Sample ID	MW-6	**Reported**	04/22/04
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Vinyl chloride	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromomethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Trichlorofluoromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acrolein	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-Dichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acetone	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Methyl iodide	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Carbon disulfide	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dichloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acrylonitrile	04/06/04	04/06/04	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-Dichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Vinyl acetate	04/06/04	04/06/04	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Butanone (MEK)	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromochloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloroform	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2,2-dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Carbon tetrachloride	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Benzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dibromomethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromodichloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Trichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	04/06/04	04/06/04	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	04/06/04	04/06/04	ND	2.0	ug/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210003	**Received**	04/05/04
Sample ID	MW-6	**Reported**	04/22/04
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	04/06/04	04/06/04	ND	2.0	ug/L	1:1
trans-1,3Dichloropropene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Toluene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dibromoethane (EDB)	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3-Dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Hexanone	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dibromochloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Tetrachloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,1,2Tetrachloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Ethylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
M+P-Xylene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromoform	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Styrene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
o-Xylene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,2,2Tetrachloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Isopropylbenzene(Cumene)	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
n-Propylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Chlorotoluene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
4-Chlorotoluene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
tert-Butylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,4-Trimethylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
sec-Butylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
4-Isopropyltoluene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
n-Butylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210003	**Received**	04/05/04
Sample ID	MW-6	**Reported**	04/22/04
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2Dibromo3chloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Naphthalene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Hexachlorobutadiene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	47.2 ug/L	94 %	(65 - 135)
Toluene d8	47.8 ug/L	96 %	(65 - 118)
4-Bromofluorobenzene	46.9 ug/L	94 %	(65 - 121)

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210003	**Received**	04/05/04
Sample ID	MW-6	**Reported**	04/22/04
Matrix	Water		

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Arsenic	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Barium	**04/09/04**	**04/12/04**	**0.13**	**0.0010**	**mg/L**	**1:1**
Beryllium	04/09/04	04/12/04	ND	0.0010	mg/L	1:1
Cadmium	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Chromium	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Cobalt	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Copper	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Lead	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Molybdenum	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Nickel	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Selenium	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Silver	04/09/04	04/12/04	ND	0.0016	mg/L	1:1
Thallium	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Vanadium	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Zinc	**04/09/04**	**04/12/04**	**0.046**	**0.010**	**mg/L**	**1:1**

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210004	**Received**	04/05/04
Sample ID	Trip Blank	**Reported**	04/22/04
Matrix	Water		

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Vinyl chloride	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromomethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Trichlorofluoromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acrolein	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-Dichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acetone	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Methyl iodide	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Carbon disulfide	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dichloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acrylonitrile	04/06/04	04/06/04	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-Dichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Vinyl acetate	04/06/04	04/06/04	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Butanone (MEK)	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromochloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloroform	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2,2-dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Carbon tetrachloride	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Benzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dibromomethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromodichloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Trichloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	04/06/04	04/06/04	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	04/06/04	04/06/04	ND	2.0	ug/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	*16210*	**Sampled**	04/05/04
Laboratory ID	16210004	**Received**	04/05/04
Sample ID	Trip Blank	**Reported**	04/22/04
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
4-Methyl-2-pentanone	04/06/04	04/06/04	ND	2.0	ug/L	1:1
trans-1,3Dichloropropene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Toluene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dibromoethane (EDB)	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3-Dichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Hexanone	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dibromochloromethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Tetrachloroethene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,1,2Tetrachloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Ethylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
M+P-Xylene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromoform	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Styrene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
o-Xylene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,2,2Tetrachloroethane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Isopropylbenzene(Cumene)	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
n-Propylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Chlorotoluene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
4-Chlorotoluene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
tert-Butylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,4-Trimethylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
sec-Butylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
4-Isopropyltoluene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
n-Butylbenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1

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Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	Caltrans, Former Thomas Short
Workorder #	16210	**Sampled**	04/05/04
Laboratory ID	16210004	**Received**	04/05/04
Sample ID	Trip Blank	**Reported**	04/22/04
Matrix	Water		

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

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
1,2Dibromo3chloropropane	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Naphthalene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Hexachlorobutadiene	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	04/06/04	04/06/04	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	46.5 ug/L	93 %	(65 - 135)
Toluene d8	47.5 ug/L	95 %	(65 - 118)
4-Bromofluorobenzene	45.5 ug/L	91 %	(65 - 121)

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Test Certificate of Analysis

Client ID Shaw Environmental & Infrastructure
Workorder # 16210 **Workorder ID** Caltrans, Former Thomas Short

Parameter TPHdiesel
Method 8015M DHS

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
16210001	MW-4	1400	50	ug/L	04/05/04	04/08/04	Water	1:1
16210002	MW-5	4000	50	ug/L	04/05/04	04/08/04	Water	1:1
16210003	MW-6	ND	50	ug/L	04/05/04	04/08/04	Water	1:1

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Test Certificate of Analysis

Client ID Shaw Environmental & Infrastructure
Workorder # 16210 **Workorder ID** Caltrans, Former Thomas Short

Parameter TPHgas
Method 8015M DHS

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
16210001	MW-4	2210	50	ug/L	04/05/04	04/12/04	Water	1:1
16210002	MW-5	3600	50	ug/L	04/05/04	04/12/04	Water	1:1
16210003	MW-6	190	50	ug/L	04/05/04	04/12/04	Water	1:1
16210004	Trip Blank	ND	50	ug/L	04/05/04	04/12/04	Water	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62800
Sample ID	MB for HBN 234253 [SGXV/2095]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	04/07/04	04/08/04	ND	50	ug/L	1:1

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62801
Sample ID	LCS for HBN 234253 [SGXV/2095]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	04/07/04	04/08/04	798	50	ug/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62802
Sample ID	LCSD for HBN 234253 [SGXV/2095
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	04/07/04	04/08/04	842	50	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62861
Sample ID	MB for HBN 234663 [DIGV/1493]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/09/04	04/12/04	ND	0.00020	mg/L	1:1

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62862
Sample ID	LCS for HBN 234663 [DIGV/1493]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/09/04	04/12/04	0.00110	0.00020	mg/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62863
Sample ID	LCSD for HBN 234663 [DIGV/1493
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/09/04	04/12/04	0.0011	0.00020	mg/L	1:1

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Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62864
Sample ID	DUP for HBN 234663 [DIGV/1493]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/09/04	04/12/04	ND	0.00020	mg/L	1:1

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Matrix Spike Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62865
Sample ID	MS for HBN 234663 [DIGV/1493]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/09/04	04/12/04	0.0014	0.00020	mg/L	1:1

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Matrix Spike Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62866
Sample ID	MSD for HBN 234663 [DIGV/1493]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/09/04	04/12/04	0.0014	0.00020	mg/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62890
Sample ID	MB for HBN 234756 [ICPV/4909]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Arsenic	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Barium	6010B	04/09/04	04/12/04	ND	0.0010	mg/L	1:1
Beryllium	6010B	04/09/04	04/12/04	ND	0.0010	mg/L	1:1
Cadmium	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Chromium	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Cobalt	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Copper	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Lead	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Molybdenum	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Nickel	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Selenium	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Silver	6010B	04/09/04	04/12/04	ND	0.0016	mg/L	1:1
Thallium	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:1
Vanadium	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:1
Zinc	6010B	04/09/04	04/12/04	ND	0.010	mg/L	1:1

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	*62891*
Sample ID	LCS for HBN 234756 [ICPV/4909]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/09/04	04/12/04	0.50	0.0050	mg/L	1:1
Arsenic	6010B	04/09/04	04/12/04	0.46	0.0050	mg/L	1:1
Barium	6010B	04/09/04	04/12/04	0.46	0.0010	mg/L	1:1
Beryllium	6010B	04/09/04	04/12/04	0.100	0.0010	mg/L	1:1
Cadmium	6010B	04/09/04	04/12/04	0.20	0.0030	mg/L	1:1
Chromium	6010B	04/09/04	04/12/04	0.42	0.0030	mg/L	1:1
Cobalt	6010B	04/09/04	04/12/04	0.18	0.0030	mg/L	1:1
Copper	6010B	04/09/04	04/12/04	0.45	0.0030	mg/L	1:1
Lead	6010B	04/09/04	04/12/04	0.50	0.0050	mg/L	1:1
Molybdenum	6010B	04/09/04	04/12/04	0.54	0.0050	mg/L	1:1
Nickel	6010B	04/09/04	04/12/04	0.93	0.0030	mg/L	1:1
Selenium	6010B	04/09/04	04/12/04	0.45	0.0050	mg/L	1:1
Silver	6010B	04/09/04	04/12/04	0.045	0.0016	mg/L	1:1
Thallium	6010B	04/09/04	04/12/04	0.45	0.0050	mg/L	1:1
Vanadium	6010B	04/09/04	04/12/04	0.17	0.0030	mg/L	1:1
Zinc	6010B	04/09/04	04/12/04	0.54	0.010	mg/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62892
Sample ID	LCSD for HBN 234756 [ICPV/4909
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/09/04	04/12/04	0.50	0.0050	mg/L	1:1
Arsenic	6010B	04/09/04	04/12/04	0.46	0.0050	mg/L	1:1
Barium	6010B	04/09/04	04/12/04	0.46	0.0010	mg/L	1:1
Beryllium	6010B	04/09/04	04/12/04	0.100	0.0010	mg/L	1:1
Cadmium	6010B	04/09/04	04/12/04	0.20	0.0030	mg/L	1:1
Chromium	6010B	04/09/04	04/12/04	0.42	0.0030	mg/L	1:1
Cobalt	6010B	04/09/04	04/12/04	0.18	0.0030	mg/L	1:1
Copper	6010B	04/09/04	04/12/04	0.44	0.0030	mg/L	1:1
Lead	6010B	04/09/04	04/12/04	0.50	0.0050	mg/L	1:1
Molybdenum	6010B	04/09/04	04/12/04	0.54	0.0050	mg/L	1:1
Nickel	6010B	04/09/04	04/12/04	0.92	0.0030	mg/L	1:1
Selenium	6010B	04/09/04	04/12/04	0.44	0.0050	mg/L	1:1
Silver	6010B	04/09/04	04/12/04	0.045	0.0016	mg/L	1:1
Thallium	6010B	04/09/04	04/12/04	0.45	0.0050	mg/L	1:1
Vanadium	6010B	04/09/04	04/12/04	0.16	0.0030	mg/L	1:1
Zinc	6010B	04/09/04	04/12/04	0.52	0.010	mg/L	1:1

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Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62893
Sample ID	DUP for HBN 234756 [ICPV/4909]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilutio
Antimony	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:
Arsenic	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:
Barium	6010B	04/09/04	04/12/04	0.17	0.0010	mg/L	1:
Beryllium	6010B	04/09/04	04/12/04	ND	0.0010	mg/L	1:
Cadmium	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:
Chromium	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:
Cobalt	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:
Copper	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:
Lead	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:
Molybdenum	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:
Nickel	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:
Selenium	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:
Silver	6010B	04/09/04	04/12/04	ND	0.0016	mg/L	1:
Thallium	6010B	04/09/04	04/12/04	ND	0.0050	mg/L	1:
Vanadium	6010B	04/09/04	04/12/04	ND	0.0030	mg/L	1:
Zinc	6010B	04/09/04	04/12/04	0.060	0.010	mg/L	1

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Matrix Spike Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62894
Sample ID	MS for HBN 234756 [ICPV/4909]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/09/04	04/12/04	0.46	0.0050	mg/L	1:1
Arsenic	6010B	04/09/04	04/12/04	0.46	0.0050	mg/L	1:1
Barium	6010B	04/09/04	04/12/04	0.60	0.0010	mg/L	1:1
Beryllium	6010B	04/09/04	04/12/04	0.093	0.0010	mg/L	1:1
Cadmium	6010B	04/09/04	04/12/04	0.18	0.0030	mg/L	1:1
Chromium	6010B	04/09/04	04/12/04	0.44	0.0030	mg/L	1:1
Cobalt	6010B	04/09/04	04/12/04	0.16	0.0030	mg/L	1:1
Copper	6010B	04/09/04	04/12/04	0.44	0.0030	mg/L	1:1
Lead	6010B	04/09/04	04/12/04	0.45	0.0050	mg/L	1:1
Molybdenum	6010B	04/09/04	04/12/04	0.50	0.0050	mg/L	1:1
Nickel	6010B	04/09/04	04/12/04	0.83	0.0030	mg/L	1:1
Selenium	6010B	04/09/04	04/12/04	0.43	0.0050	mg/L	1:1
Silver	6010B	04/09/04	04/12/04	0.042	0.0016	mg/L	1:1
Thallium	6010B	04/09/04	04/12/04	0.38	0.0050	mg/L	1:1
Vanadium	6010B	04/09/04	04/12/04	0.17	0.0030	mg/L	1:1
Zinc	6010B	04/09/04	04/12/04	0.50	0.010	mg/L	1:1

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Matrix Spike Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62895
Sample ID	MSD for HBN 234756 [ICPV/4909]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/09/04	04/12/04	0.47	0.0050	mg/L	1:1
Arsenic	6010B	04/09/04	04/12/04	0.46	0.0050	mg/L	1:1
Barium	6010B	04/09/04	04/12/04	0.60	0.0010	mg/L	1:1
Beryllium	6010B	04/09/04	04/12/04	0.090	0.0010	mg/L	1:1
Cadmium	6010B	04/09/04	04/12/04	0.18	0.0030	mg/L	1:1
Chromium	6010B	04/09/04	04/12/04	0.44	0.0030	mg/L	1:1
Cobalt	6010B	04/09/04	04/12/04	0.17	0.0030	mg/L	1:1
Copper	6010B	04/09/04	04/12/04	0.44	0.0030	mg/L	1:1
Lead	6010B	04/09/04	04/12/04	0.46	0.0050	mg/L	1:1
Molybdenum	6010B	04/09/04	04/12/04	0.48	0.0050	mg/L	1:1
Nickel	6010B	04/09/04	04/12/04	0.84	0.0030	mg/L	1:1
Selenium	6010B	04/09/04	04/12/04	0.43	0.0050	mg/L	1:1
Silver	6010B	04/09/04	04/12/04	0.042	0.0016	mg/L	1:1
Thallium	6010B	04/09/04	04/12/04	0.39	0.0050	mg/L	1:1
Vanadium	6010B	04/09/04	04/12/04	0.17	0.0030	mg/L	1:1
Zinc	6010B	04/09/04	04/12/04	0.49	0.010	mg/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62924
Sample ID	MB for HBN 234959 [VGXV/2611]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/12/04	04/12/04	ND	50	ug/L	1:1

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62925
Sample ID	LCS for HBN 234959 [VGXV/2611]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/12/04	04/12/04	1160	50	ug/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62926
Sample ID	LCSD for HBN 234959 [VGXV/2611
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/12/04	04/12/04	1220	50	ug/L	1:1

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Matrix Spike Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62927
Sample ID	MS for HBN 234959 [VGXV/2611]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/12/04	04/12/04	1040	50	ug/L	1:1

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Matrix Spike Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62928
Sample ID	MSD for HBN 234959 [VGXV/2611]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/12/04	04/12/04	1060	50	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62964
Sample ID	MB for HBN 235351 [VMXV/2412]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloromethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Vinyl chloride	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromomethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloroethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Trichlorofluoromethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acrolein	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-Dichloroethene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acetone	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Methyl iodide	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Carbon disulfide	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dichloromethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Acrylonitrile	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-Dichloroethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Vinyl acetate	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Butanone (MEK)	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromochloromethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chloroform	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2,2-dichloropropane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1-dichloropropane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Carbon tetrachloride	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Benzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dichloroethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dibromomethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromodichloromethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dichloropropane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Trichloroethene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
4-Methyl-2-pentanone	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62964
Sample ID	MB for HBN 235351 [VMXV/2412]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
(continued)							
trans-1,3Dichloropropene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Toluene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dibromoethane (EDB)	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3-Dichloropropane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Hexanone	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Dibromochloromethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Tetrachloroethene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,1,2Tetrachloroethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Chlorobenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Ethylbenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
M+P-Xylene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromoform	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Styrene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
o-Xylene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,1,2,2Tetrachloroethane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Isopropylbenzene(Cumene)	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Bromobenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
n-Propylbenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
2-Chlorotoluene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
4-Chlorotoluene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
tert-Butylbenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,4-Trimethylbenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
sec-Butylbenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
4-Isopropyltoluene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
n-Butylbenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1

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Method Blank Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62964
Sample ID	MB for HBN 235351 [VMXV/2412]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
(continued)							
1,2Dibromo3chloropropane	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Naphthalene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
Hexachlorobutadiene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	8260B	04/06/04	04/06/04	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	49 ug/L	98 %	(65 - 135)
Toluene d8	49 ug/L	98 %	(65 - 118)
4-Bromofluorobenzene	48.4 ug/L	97 %	(65 - 121)

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Lab Control Sample Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62965
Sample ID	LCS for HBN 235351 [VMXV/2412]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/06/04	04/06/04	49	2.0	ug/L	1:1
Benzene	8260B	04/06/04	04/06/04	46	2.0	ug/L	1:1
Trichloroethene	8260B	04/06/04	04/06/04	44	2.0	ug/L	1:1
Toluene	8260B	04/06/04	04/06/04	45	2.0	ug/L	1:1
Chlorobenzene	8260B	04/06/04	04/06/04	47	2.0	ug/L	1:1

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Lab Control Sample Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62966
Sample ID	LCSD for HBN 235351 [VMXV/2412
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/06/04	04/06/04	56	2.0	ug/L	1:1
Benzene	8260B	04/06/04	04/06/04	50	2.0	ug/L	1:1
Trichloroethene	8260B	04/06/04	04/06/04	51	2.0	ug/L	1:1
Toluene	8260B	04/06/04	04/06/04	50	2.0	ug/L	1:1
Chlorobenzene	8260B	04/06/04	04/06/04	54	2.0	ug/L	1:1

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Matrix Spike Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62967
Sample ID	MS for HBN 235351 [VMXV/2412]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/06/04	04/06/04	50	2.0	ug/L	1:1
Benzene	8260B	04/06/04	04/06/04	48	2.0	ug/L	1:1
Trichloroethene	8260B	04/06/04	04/06/04	51	2.0	ug/L	1:1
Toluene	8260B	04/06/04	04/06/04	47	2.0	ug/L	1:1
Chlorobenzene	8260B	04/06/04	04/06/04	49	2.0	ug/L	1:1

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Matrix Spike Duplicate Report

Client ID	Shaw Environmental & Infrastructure
Workorder ID	Caltrans, Former Thomas Short
Laboratory ID	62968
Sample ID	MSD for HBN 235351 [VMXV/2412]
Matrix	Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/06/04	04/06/04	52	2.0	ug/L	1:1
Benzene	8260B	04/06/04	04/06/04	49	2.0	ug/L	1:1
Trichloroethene	8260B	04/06/04	04/06/04	52	2.0	ug/L	1:1
Toluene	8260B	04/06/04	04/06/04	49	2.0	ug/L	1:1
Chlorobenzene	8260B	04/06/04	04/06/04	51	2.0	ug/L	1:1

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QC SUMMARY

Client ID	Shaw Environmental & Infrastructure		
Workorder ID	Caltrans, Former Thomas Short		
QC Batch	DIG 1499	**Original**	16210001
Matrix	Water	**Sample**	Duplicate [62864]

Parameter	RPD	RPD Limits
Mercury	0000	(35)

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QC SUMMARY

Client ID	Shaw Environmental & Infrastructure		
Workorder ID	Caltrans, Former Thomas Short		
QC Batch	ICPP 4935	**Original**	16210001
Matrix	Water	**Sample**	Duplicate [62893]

Parameter	RPD	RPD Limits
Antimony	00	(35)
Arsenic	00	(35)
Barium	0.60	(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	15	(35)

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QC SUMMARY

Client ID	Shaw Environmental & Infrastructure		
Workorder ID	Caltrans, Former Thomas Short		
QC Batch	DIG 1499	**Original**	16210001
Matrix	Water	**Samples**	Matrix Spike [62865]
			Matrix Spike Duplicate [62866]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Mercury	141	139	(75-125)	1.43	(35 MAX)

* High MS/MSD recoveries due to sample matrix effect.

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, Former Thomas Short
QC Batch ICPP 4935
Matrix Water

Original Samples 16210001
Matrix Spike [62894]
Matrix Spike Duplicate [62895]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Antimony	93	94	(25-125)	1.1	(35 MAX)
Arsenic	91	91	(75-125)	00	(35 MAX)
Barium	86	86	(75-125)	00	(35 MAX)
Beryllium	93	90	(75-125)	3.3	(35 MAX)
Cadmium	92	92	(75-125)	00	(35 MAX)
Chromium	87	88	(75-125)	1.1	(35 MAX)
Cobalt	82	84	(75-125)	2.4	(35 MAX)
Copper	88	89	(75-125)	1.1	(35 MAX)
Lead	89	92	(75-125)	3.3	(35 MAX)
Molybdenum	100	96	(75-125)	4.1	(35 MAX)
Nickel	83	84	(75-125)	1.2	(35 MAX)
Selenium	86	85	(75-125)	1.2	(35 MAX)
Silver	84	84	(25-125)	00	(35 MAX)
Thallium	77	78	(50-125)	1.3	(35 MAX)
Vanadium	85	86	(75-125)	1.2	(35 MAX)
Zinc	86	84	(75-125)	2.4	(35 MAX)

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Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
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QC SUMMARY

Client ID	Shaw Environmental & Infrastructure		
Workorder ID	Caltrans, Former Thomas Short		
QC Batch	VGX 2724	**Original**	16207001
Matrix	Water	**Samples**	Matrix Spike [62927]
			Matrix Spike Duplicate [62928]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	104	106	(65-135)	1.9	(20 MAX)

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QC SUMMARY

Client ID	Shaw Environmental & Infrastructure		
Workorder ID	Caltrans, Former Thomas Short		
QC Batch	VMX 2463	**Original**	16196001
Matrix	Water	**Samples**	Matrix Spike [62967]
			Matrix Spike Duplicate [62968]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
1,1-Dichloroethene	100	104	(61-145)	3.9	(20 MAX)
Benzene	96	98	(76-127)	2.1	(20 MAX)
Trichloroethene	95	97	(71-135)	2.1	(20 MAX)
Toluene	94	98	(76-130)	4.2	(20 MAX)
Chlorobenzene	98	102	(75-130)	4.0	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, Former Thomas Short
QC Batch SGX 2131
Matrix Water

Samples Lab Control Sample [62801]
Lab Control Sample Duplicate [62802]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHdiesel	80	84	(65-135)	4.9	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, Former Thomas Short
QC Batch DIG 1499
Matrix Water

Samples Lab Control Sample [62862]
Lab Control Sample Duplicate [62863]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Mercury	111	108	(80-120)	2.74	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, Former Thomas Short
QC Batch ICPP 4935
Matrix Water

Samples Lab Control Sample [62891]
Lab Control Sample Duplicate [62892]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Antimony	100	99	(70-120)	1.0	(20 MAX)
Arsenic	93	93	(80-120)	00	(20 MAX)
Barium	93	93	(80-120)	00	(20 MAX)
Beryllium	102	103	(80-120)	1.0	(20 MAX)
Cadmium	98	98	(80-120)	00	(20 MAX)
Chromium	85	84	(80-120)	1.2	(20 MAX)
Cobalt	92	92	(80-120)	00	(20 MAX)
Copper	90	89	(80-120)	1.1	(20 MAX)
Lead	100	99	(80-120)	1.0	(20 MAX)
Molybdenum	108	108	(80-120)	00	(20 MAX)
Nickel	93	92	(80-120)	1.1	(20 MAX)
Selenium	89	88	(80-120)	1.1	(20 MAX)
Silver	90	90	(60-120)	00	(20 MAX)
Thallium	91	90	(80-120)	1.1	(20 MAX)
Vanadium	83	82	(80-120)	1.2	(20 MAX)
Zinc	108	104	(80-120)	3.8	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, Former Thomas Short
QC Batch VGX 2724
Matrix Water

Samples Lab Control Sample [62925]
Lab Control Sample Duplicate [62926]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	116	122	(65-135)	5.0	(20 MAX)

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QC SUMMARY

Client ID Shaw Environmental & Infrastructure
Workorder ID Caltrans, Former Thomas Short
QC Batch VMX 2463
Matrix Water

Samples Lab Control Sample [62965]
Lab Control Sample Duplicate [62966]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
1,1-Dichloroethene	98	112	(65-145)	13	(20 MAX)
Benzene	92	100	(71-127)	8.3	(20 MAX)
Trichloroethene	88	102	(75-135)	15	(20 MAX)
Toluene	90	100	(76-135)	11	(20 MAX)
Chlorobenzene	94	108	(76-135)	14	(20 MAX)

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WORKORDER DATA SHEET
Apr 05, 2004 15:21

ID 16210 WO # 16210 Caltrans, Former Thomas Short STATUS WP
DESC A-5B/R3-3

CREATED	04/05/04 03:00	PO 830714/010100QA	TYPE CM ACODE REPORT_WO
CLIENT	Shaw Shaw Environmental & Infrastructure		
PROFILE	10213 CaltransStan Caltrans Standard		

WORKORDER SAMPLES

1 **16210001** 16210001 MW-4
WP TYPE SAMPLE MATRIX Water
COLLECTED 04/05/04 10:04 DUE 04/19/04 17:00

Analyses		Turndays
8260 WATR	8260B GCMS VOLATILES WATR	10
8015M_G W	TPH Gas WATR	10
8015M_D W	TPHdiesel Water	10
CAM16WATR	6010B ELEMENTS CAM16 WATER	10

2 **16210002** 16210002 MW-5
WP TYPE SAMPLE MATRIX Water
COLLECTED 04/05/04 09:52 DUE 04/19/04 17:00

Analyses		Turndays
8260 WATR	8260B GCMS VOLATILES WATR	10
8015M_G W	TPH Gas WATR	10
8015M_D W	TPHdiesel Water	10
CAM16WATR	6010B ELEMENTS CAM16 WATER	10

3 **16210003** 16210003 MW-6
WP TYPE SAMPLE MATRIX Water
COLLECTED 04/05/04 09:44 DUE 04/19/04 17:00

Analyses		Turndays
8260 WATR	8260B GCMS VOLATILES WATR	10
8015M_G W	TPH Gas WATR	10
8015M_D W	TPHdiesel Water	10
CAM16WATR	6010B ELEMENTS CAM16 WATER	10

4 **16210004** 16210004 Trip Blank
WP TYPE SAMPLE MATRIX Water
COLLECTED 04/05/04 00:00 DUE 04/19/04 17:00

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

[redacted] CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

A-5B R3-3

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

Purchase Order: **# 189348**

Lab: **Sparger Technology, Sacto**

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

Sampler's Signature: Paul Wernhardt

Sample I.D.	Date	Time	LAB I.D.	Sample Matrix	[redacted]	Number of Containers	VOCs by 8260B; TPH as gas by 8015M	TPH as Diesel by 8015M	CAM Metals by 6010/7470 LAB TO FILTER/PRES. Note Required Detection Limits ATTACHED.											REMARKS
						1	1	6	5											Container Types
						HCl	HCl	NP	NP											Preservations
1 MW-4	4/5	1004		Water	6	4	4	1	1											
2 MW-5	↓	952		Water	6	4	4	1	1											
3 MW-6		944		Water	6	4	4	1	1											
4 Trip Blank	↓	NR		Water	2	2	2													

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Paul Wernhardt	Signature: Jennifer Ritz	Signature	Signature
Printed Name: Paul Wernhardt	Printed Name: Sparger	Printed Name	Printed Name
Firm: SHAW E+I	Firm: 4/5/04 14:15	Firm	Firm
Date/Time: 4.5.04	Date/Time	Date/Time	Date/Time
RELINQUISHED BY	**RECEIVED BY**		
Signature	Signature		
Printed Name	Printed Name		
Firm	Firm		
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#)

Special Instructions/Comments:

CAM 17 Metals to be filtered / preserved in the lab.
Metals detection limits are attached. Please use these specific detection limits.

* FAX A COPY TO Sheryl PW

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

Detection Limits for Metals

Sample

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15822	**Sampled**	10/15/03
Laboratory ID	15822003	**Received**	10/15/03
Sample ID	MW-6	**Reported**	11/05/03
Matrix	Water		

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	10/21/03	10/27/03	ND	0.0050	mg/L	1:1
Arsenic	10/21/03	10/27/03	ND	0.0050	mg/L	1:1
Barium	**10/21/03**	**10/27/03**	**0.33**	**0.0010**	**mg/L**	**1:1**
Beryllium	10/21/03	10/27/03	ND	0.0010	mg/L	1:1
Cadmium	10/21/03	10/27/03	ND	0.0030	mg/L	1:1
Chromium	10/21/03	10/27/03	ND	0.0030	mg/L	1:1
Cobalt	10/21/03	10/27/03	ND	0.0030	mg/L	1:1
Copper	10/21/03	10/27/03	ND	0.0030	mg/L	1:1
Lead	10/21/03	10/27/03	ND	0.0050	mg/L	1:1
Molybdenum	10/21/03	10/27/03	ND	0.0050	mg/L	1:1
Nickel	10/21/03	10/27/03	ND	0.0030	mg/L	1:1
Selenium	10/21/03	10/27/03	ND	0.0050	mg/L	1:1
Silver	10/21/03	10/27/03	ND	0.0016	mg/L	1:1
Thallium	10/21/03	10/27/03	ND	0.0050	mg/L	1:1
Vanadium	10/21/03	10/27/03	ND	0.0030	mg/L	1:1
Zinc	10/21/03	10/27/03	ND	0.010	mg/L	1:1

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Test Certificate of Analysis

Client ID	Shaw Environmental & Infrastructure	**Workorder ID**	830714 Caltrans, Former Thomas
Workorder #	15822	**Sampled**	10/15/03
Laboratory ID	15822002	**Received**	10/15/03
Sample ID	MW-5	**Reported**	11/05/03
Matrix	Water		

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	10/22/03	10/27/03	0.0040	0.00020	mg/L	1:1

R0126

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 286-5647
FAX (510) 286-5642

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November 9, 2004

Alameda County
NOV 12 2004
Environmental Health

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

Dear Mr. Hwang:

Enclosed is the report for the first quarter 2004 groundwater sampling at the former Thomas A. Short Company site, 3430 Wood Street, Oakland, CA 94508. The groundwater sampling took place on April 5, 2004.

We apologize for the delay in providing this report, which was finalized in June of this year. My office has been distracted by funding problems for and the protracted development of a new contract for hazardous waste investigations. We are currently developing a task order under this new contract to continue the groundwater monitoring at the former Thomas A. Short Company site. The next monitoring report will be provided to you as soon as it is completed. If you have any questions, please call me at (510) 286-5647.

Sincerely,

Christopher Wilson

CHRISTOPHER R. WILSON
District Branch Chief
Office of Environmental Engineering