

**DEPARTMENT OF TRANSPORTATION**

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August 28, 2002

AUG 30 2002

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

Subject: Thomas A. Short Co., 3430 Wood Street, Oakland, CA 94508  
Alameda County Site #386

Dear Mr. Hwang:

Enclosed please find the most recent report for the subject former underground storage tank (UST) site. The report is authored by Caltrans' consultant for this site, IT Corporation, and discusses the results for the sampling event conducted on April 19, 2002.

The latest sampling event for the Thomas Short site was conducted on July 11, 2002. When the report for the July 2002 event is finished, it will be forwarded to your office. If you have any questions, please call me at (510) 286-5647.

Sincerely,

A handwritten signature in cursive script that reads "Christopher R. Wilson".

Christopher R. Wilson  
Senior Engineer  
Office of Environmental Engineering

R0126

AUG 30 2002



**IT CORPORATION**  
*A Member of The IT Group*

**SECOND QUARTER 2002 GROUNDWATER MONITORING REPORT  
FORMER THOMAS A. SHORT COMPANY PROPERTY  
OAKLAND, ALAMEDA COUNTY, CALIFORNIA**

August 14, 2002

Prepared for:

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

Prepared by:

IT Corporation  
1326 North Market Boulevard  
Sacramento, California 95834

**EA No.: 04-911052  
Task Order No.: 04-0911052-WB  
Contract No.: 43A0078**

**IT Project No.: 830714**

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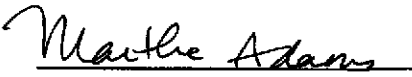
- Appendix A    Groundwater Monitoring Procedures
- Appendix B    Field Data Forms
- Appendix C    Laboratory Analytical Report and Chain-of-Custody Documentation

**SECOND QUARTER 2002 GROUNDWATER MONITORING REPORT  
FORMER THOMAS A. SHORT COMPANY PROPERTY  
OAKLAND, ALAMEDA COUNTY, CALIFORNIA**

IT Corporation (IT), is pleased to submit this report for second quarterly 2002 groundwater monitoring 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.

**IT Corporation**

  
Martha Adams, P.E.  
Project Manager

Distribution: Chris Wilson, Caltrans  
File 830714

## 1.0 Project History

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The Thomas Short property (Figure 1) was purchased by Caltrans in 1994. According to a previous report on this site (Geocon, 2001), one 4,000-gallon gasoline underground storage tank (UST) and one 1,000-gallon diesel UST were located at the site. The USTs were removed in January 1993. Groundwater samples collected from monitoring well W-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 five quarters of groundwater monitoring, groundwater has been encountered at depths ranging from approximately 2.45 to 5.03 meters (8.03 to 16.5 feet) from top of casing. Groundwater gradients have varied from southeast, southwest, and west. TPHg concentrations have ranged from below the detection limit to 11 mg/l and total petroleum hydrocarbons as diesel (TPHd) concentrations have ranged from below the detection limit to 1.17 mg/l. Benzene concentrations have ranged from below the detection limit to 191 µg/l. Toluene and ethyl benzene have been detected at levels that do not exceed their respective risk-based screening levels. Xylene concentrations have ranged from below the detection limit to 121 µg/l. Various other volatile organic compounds common to gasoline have been reported. Methyl tertiary butyl ether (MTBE) concentrations have ranged from below the detection limit to 7 µg/l, well below its risk-based screening level of 1,800 µg/l.

## 2.0 Groundwater Sampling Event

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### 2.1 Groundwater Sampling and Analytical Program

Groundwater sampling for the second quarter of 2002 was conducted on April 19, 2002, by personnel of IT. This monitoring event included the collection and analysis of groundwater samples from three on-site monitoring wells. Monitoring procedures are included in Appendix A. Groundwater sample field data sheets are included in Appendix B.

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

<b>Matrix</b>	<b>Analyses</b>
Water	Total Petroleum Hydrocarbons as Gasoline EPA Method 8015 modified
Water	Total Petroleum Hydrocarbons as Diesel EPA Method 8015 modified
Water	Total Petroleum Hydrocarbons EPA Method 1664
Water	Fuel Oxygenate Compounds EPA Method 8260B
Water	Volatile Organic Compounds EPA Method 8260B
Water	California Assessment Manual (CAM) 17 Metals EPA 6010/7470

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

### 2.2 Quality Assurance Program

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



The purpose of the travel blanks was to assess potential "cross contamination" of samples during storage and transport to the laboratory. During this program, one set of travel blanks was analyzed. TPHg, fuel oxygenate compounds, and VOCs were not reported present in the travel blank set at concentrations exceeding reporting limits of the analytical method 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

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The monitoring results from the groundwater samples collected during the second quarter 2002 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, and plotted on Figure 4. Historical analytical data are presented on Tables 6, 7, and 8.

#### 3.1 Summary

Site Location:	<u>Former Thomas A. Short Company</u> <u>3430 Wood Street, Oakland, California, Figure 1</u>
Current Phase of Project:	<u>Monitoring</u>
Frequency of Monitoring:	<u>Quarterly</u>
Separate-Phase Hydrocarbons Present:	<u>None present</u>
Water Purged from Wells This Quarter:	<u>7.5 gallons (from 3 monitoring wells)</u>
Range of Depth to Groundwater:	<u>10.42 to 14.13 (feet from top of casing), Table 1</u> <u>3.2 to 4.3 (meters from top of casing)</u>
Groundwater Elevation Change Since Last Quarter:	<u>Groundwater elevations decreased in all wells.</u> <u>Decreases ranged from -1.90 to -2.39 feet</u> <u>-0.58 to -0.73 meters</u>
Groundwater Gradient:	<u>0.007, Figure 3</u>
Groundwater Flow Direction:	<u>Southwest, Figure 3</u>

#### 3.2 Analytical Results

Total petroleum hydrocarbons were not reported in the groundwater samples analyzed at concentrations greater than the analytical method reporting limits (Table 3). TPHg was reported by the laboratory in groundwater samples from wells MW-4 and MW-5 at concentrations of 11 and 1.2 mg/l, respectively. TPHg was not reported in the groundwater sample from well MW-6 at concentrations above the laboratory analytical method reporting limit (Table 3).

Benzene, toluene, and ethylbenzene were reported in groundwater samples collected from wells MW-4 and MW-5. The reported concentrations ranged from 0.035 to 0.053 mg/l for benzene, 0.0025 to 0.013 mg/l for toluene, and 0.018 to 0.140 mg/l for ethylbenzene. Xylenes were only

reported in the groundwater samples collected from well MW-4 at a concentration of 0.023 mg/l. Xylenes were not reported in the groundwater samples collected from wells MW-5 and MW-6. Benzene, toluene, and ethylbenzene were not reported in the groundwater sample collected from well MW-6 (Table 3).

MTBE and other fuel oxygenate compounds were not reported by the laboratory in the groundwater samples collected (Tables 3 and 4).

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

Isopropylbenzene	0.016 to 0.190	n-propylbenzene	0.026 to 0.300
n-butylbenzene	0.0098 to 0.022	Tert-butylbenzene	0.016 to 0.025
Sec-butylbenzene	0.0042 to 0.013	1,3,5-trimethylbenzene	0.016 to 0.190

The groundwater samples were reported to contain barium and zinc (Table 5). Barium was reported in groundwater samples collected from wells MW-4, MW-5, and MW-6 at concentrations ranging from 0.12 to 0.32 mg/l. Zinc was reported in groundwater samples collected from wells MW-4, MW-5, and MW-6 at concentrations ranging from 0.015 to 0.16 mg/l. Chromium was also reported in the groundwater samples collected from well MW-5 at a concentration of 0.22 mg/l. Copper and nickel were also reported in the groundwater samples collected from well MW-6 at concentrations of 0.23 and 0.10 mg/l, respectively.

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

### **3.3 Discussion of Analytical Results**

Groundwater analytical results from the Second Quarter 2002 sampling event are generally consistent with historical data. However, TPHg results are somewhat inconsistent compared to January 2002 data with the TPHg concentration increasing by two orders of magnitude in well MW-4 and decreasing to none detected in well MW-6 (Table 6). TPHd concentrations increased in wells MW-4 and MW-5 since the last monitoring event. BTEX and MTBE results are generally consistent with historical results and trends (Table 6).

Remaining VOC results are generally comparable to historical compounds and concentrations reported for MW-6 (Table 7). For MW-4, the compounds bromodichloromethane, chloroform, 1,2-dichloroethane, 1,2-dichloropropane, 4-isopropyltoluene, naphthalene, 1,1,2-trichloroethane,

and trichloroethene decreased to below the method reporting limits. For MW-4, the compounds n-propylbenzene and 1,3,5-trimethylbenzene increased from below the method reporting limits to 300 and 190 µg/l, respectively. For MW-5, the compounds 1,2-dichloroethane and naphthalene decreased to below the method reporting limits. For MW-5, the compound 1,3,5-trimethylbenzene increased from below the method reporting limit to 16 µg/l.

Historically, groundwater samples from the site were reported to contain arsenic, barium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, silver, vanadium and zinc. Current results reported barium, chromium, copper, nickel, and zinc (Table 8). The barium results are generally comparable to historical concentrations. Chromium and zinc increased in MW-5 to 0.22 and 0.16 mg/l, respectively. Copper and nickel increased in MW-6 to 0.23 and 0.10 mg/l, respectively. The reason for the difference between current results and historical results is not known.

### 3.4 Comparison to Risk-Based Screening Levels

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

<u>Constituent</u>	<u>RBSL (mg/l)</u>	<u>Wells with Groundwater Results Exceeding RBSL</u>
TPHg	0.500	MW-4, MW-5
TPHd	0.64	MW-4, MW-5
Benzene	0.046	MW-5
Xylenes	0.013	MW-4
Barium	0.0039	MW-4, MW-5, MW-6
Chromium	0.180	MW-5
Copper	0.0031	MW-6
Nickel	0.0082	MW-6
Zinc	0.023	MW-5

## 4.0 Recommendations

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IT recommends continued groundwater monitoring to evaluate temporal changes in groundwater quality.

## 5.0 References

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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**  
**Second Quarter 2002 Groundwater Elevations**  
 Former Thomas Short Company  
 Oakland, California

Well Number	Well TOC Elevation (feet-MSL)	Screened Interval (feet bgs)	Date Measured	Depth to Groundwater (feet bTOC)	Free Product Thickness (feet)	Groundwater Elevation (feet-MSL)
MW-4	8.33	5 to 15	04/19/02	10.42	0	-2.09
MW-5	12.33	5 to 15	04/19/02	14.13	0	-1.80
MW-6	11.49	5 to 15	04/19/02	13.48	0	-1.99

*Notes:*

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

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

Well Number	Well TOC Elevation (feet-MSL)	Screened Interval (feet bgs)	Date Measured	Depth to Groundwater (feet bTOC)	Free Product Thickness (feet)	Groundwater Elevation (feet-MSL)
MW-4	8.33	5 to 15	06/19/00	12.71	0	-4.38
			11/27/00	11.51	0	-3.18
			03/29/01	9.58	0	-1.25
			01/15/02	8.03	0	0.30
			04/19/02	10.42	0	-2.09
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
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

*Notes:*

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



**Table 3**  
**Second Quarter 2002 Groundwater Analytical Results**  
**Petroleum Hydrocarbons**  
**Former Thomas Short Company**  
**Oakland, California**

Sample Designation Sampling Date	MW-4 04/19/02	MW-5 04/19/02	MW-6 04/19/02	Trip Blank 04/19/02
Total Petroleum Hydrocarbons	<5	<5	<5	
TPH as Gasoline (mg/l)	11	1.2	<0.050	<0.050
TPH as Diesel, (mg/l)	1.17	0.942	<0.050	
Benzene, (ug/l)	35	53	<2.0	<2.0
Toulene, (ug/l)	13	2.5	<2.0	<2.0
Ethylbenzene, (ug/l)	140	18	<2.0	<2.0
Total Xylenes, (ug/l)	23	<2.0	<2.0	<2.0
MTBE, (ug/l)	<2.0	<2.0	<2.0	<2.0
Total Dissolved Solids, (mg/l)	2240	1410	2820	

*Notes:*

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

**Table 4**  
**Second Quarter 2002 Groundwater Analytical Results**  
**Volatile Organic Compounds**  
**Former Thomas Short Company**  
**Oakland, California**

Sample Designation Sampling Date	MW-4 04/19/02	MW-5 04/19/02	MW-6 04/19/02	Trip Blank 04/19/02
1,1,2-trichloroethane, (ug/l)	<2.0	<2.0	<2.0	<2.0
1,2,4-trimethylbenzene, (ug/l)	<2.0	<2.0	<2.0	<2.0
1,2-dichloroethane, (ug/l)	<2.0	<2.0	<2.0	<2.0
1,2-dichloropropane, (ug/l)	<2.0	<2.0	<2.0	<2.0
1,3,5-trimethylbenzene, (ug/l)	190	16	<2.0	<2.0
4-chlorotoluene, (ug/l)	<2.0	<2.0	<2.0	<2.0
4-isopropyltoluene, (ug/l)	<2.0	<2.0	<2.0	<2.0
bromodichloromethane, (ug/l)	<2.0	<2.0	<2.0	<2.0
chloroform, (ug/l)	<2.0	<2.0	<2.0	<2.0
isopropylbenzene (Cumene), (ug/l)	190	16	<2.0	<2.0
napthalene, (ug/l)	<2.0	<2.0	<2.0	<2.0
n-butylbenzene, (ug/l)	22	9.8	<2.0	<2.0
n-propylbenzene, (ug/l)	300	26	<2.0	<2.0
sec-butylbenzene, (ug/l)	13	4.2	<2.0	<2.0
tert-butylbenzene, (ug/l)	25	16	<2.0	<2.0
trichloroethene, (ug/l)	<2.0	<2.0	<2.0	<2.0

**Notes:**

1. ug/l = micrograms per liter
2. "<" = not detected at concentrations above the indicated amount.

**Table 5**  
**Second Quarter 2002 Groundwater Analytical Results**  
**Heavy Metals**  
Former Thomas Short Company  
Oakland, California

Sample Designation	MW-4	MW-5	MW-6
Sampling Date	04/19/02	04/19/02	04/19/02
Antimony	<0.060	<0.060	<0.060
Arsenic	<0.080	<0.080	<0.080
Barium	0.30	0.32	0.12
Beryllium	<0.0030	<0.0030	<0.0030
Cadmium	<0.0050	<0.0050	<0.0050
Chromium	<0.010	0.22	<0.010
Cobalt	<0.050	<0.050	<0.050
Copper	<0.020	<0.020	0.23
Lead	<0.010	<0.010	<0.010
Mercury	<0.00020	<0.00020	<0.00020
Molybdenum	<0.050	<0.050	<0.050
Nickel	<0.040	<0.040	0.10
Selenium	<0.10	<0.10	<0.10
Silver	<0.010	<0.010	<0.010
Thallium	<0.10	<0.10	<0.10
Vanadium	<0.050	<0.050	<0.050
Zinc	0.015	0.16	0.02

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.

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

Sample Designation Sampling Date	MW-4	MW-4	MW-4	MW-4	MW-4	MW-5	MW-5	MW-5	MW-5	MW-5	MW-6	MW-6	MW-6	MW-6	MW-6	Risk-Based Screening Levels
	05/26/00	11/27/00	03/29/01	01/15/02	04/19/02	05/26/00	11/27/00	03/29/01	01/15/02	04/19/02	05/26/00	11/27/00	03/29/01	01/15/02	04/19/02	
Total Petroleum Hydrocarbons				<5	<5				<5	<5				<5	<5	
TPH as Gasoline, (mg/l)	4.8	4.2	8.1	<0.050	<b>11</b>	4.6	1.7	2.7	7.8	1.2	4.4	0.32	0.26	3.5	<0.050	0.500
TPH as Diesel, (mg/l)	0.5	0.47	0.61	<0.050	1.17	0.6	0.45	0.96	<0.050	<b>0.942</b>	0.4	0.18	0.42	<0.050	<0.050	0.640
Benzene, (ug/l)	122	55	51	47	35	98	39	35	63	53	191	16	52	<2.0	<2.0	46
Toluene, (ug/l)	39	18	23	18	13	7	2	1.1	3.1	2.5	14	0.51	0.62	<2.0	<2.0	130
Ethylbenzene, (ug/l)	126	65	160	130	140	35	3.8	3.5	18	18	110	1.1	1.1	<2.0	<2.0	290
Total Xylenes, (ug/l)	24.7	26.3	44.5	32.5	23	44	6.1	3.2	<2.0	<2.0	121	0.88	<0.50	<2.0	<2.0	13
MTBE, (ug/l)	<0.5	1.2	<5.0	<2.0	<2.0	7	1.5	<5.0	<2.0	<2.0	7	1.8	<5.0	<2.0	<2.0	1800
Total Dissolved Solids, (mg/l)					2240					1410						2820

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 Short Company**  
**Oakland, California**

Well Number Date Sampled	MW-4 05/26/00	MW-4 11/27/00	MW-4 03/29/01	MW-4 01/15/02	MW-4 04/19/02	MW-5 05/26/00	MW-5 11/27/00	MW-5 03/29/01	MW-5 01/15/02	MW-5 04/19/02	MW-6 05/26/00	MW-6 11/27/00	MW-6 03/29/01	MW-6 01/15/02	MW-6 04/19/02	Risk-Based Screening Levels
1,1,2-trichloroethane, (ug/l)	<5.0	<5.0	<5.0	3.6	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	930
1,2,4-trimethylbenzene, (ug/l)	<5.0	<5.0	<5.0	<2.0	<2.0	96	<5.0	<5.0	<2.0	<2.0	149	<5.0	<5.0	<2.0	<2.0	
1,2-dichloroethane, (ug/l)	<5.0	<5.0	<5.0	3.9	<2.0	<5.0	<5.0	<5.0	3.9	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	500
1,2-dichloropropane, (ug/l)	<5.0	<5.0	<5.0	4.1	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	100
1,3,5-trimethylbenzene, (ug/l)	12	<5.0	8	<2.0	190	51	<5.0	<5.0	<2.0	16	<5.0	<5.0	<5.0	<2.0	<2.0	
4-chlorotoluene, (ug/l)	<5.0	<5.0	<5.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	7.4	<5.0	<5.0	<2.0	<2.0	
4-isopropyltoluene, (ug/l)	5	<5.0	8	3.6	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	6.6	<5.0	<5.0	<2.0	<2.0	
bromodichloromethane, (ug/l)	<5.0	<5.0	<5.0	6.8	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	420
chloroform, (ug/l)	<5.0	<5.0	<5.0	23	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	28
isopropylbenzene (Cumene), (ug/l)	141	70	180	180	190	29	<5.0	7.1	25	16	25	<5.0	<5.0	<2.0	<2.0	
naphthalene, (ug/l)	101	<5.0	45	12	<2.0	14	<5.0	15	38	<2.0	44	<5.0	<5.0	<2.0	<2.0	24
n-butylbenzene, (ug/l)	18	7.3	26	17	22	21	<5.0	<5.0	21	9.8	17	<5.0	<5.0	<2.0	<2.0	
n-propylbenzene, (ug/l)	170	63	280	<2.0	300	31	<5.0	11	45	26	36	<5.0	<5.0	<2.0	<2.0	
sec-butylbenzene, (ug/l)	0.6	<5.0	12	11	13	8.2	<5.0	<5.0	5.1	4.2	<5.0	<5.0	<5.0	<2.0	<2.0	
tert-butylbenzene, (ug/l)	14	9.9	21	20	25	11	<5.0	14	16	16	5.4	<5.0	<5.0	<2.0	<2.0	
trichloroethane, (ug/l)	<5.0	<5.0	<5.0	6.7	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	<5.0	<5.0	<5.0	<2.0	<2.0	360

Notes:

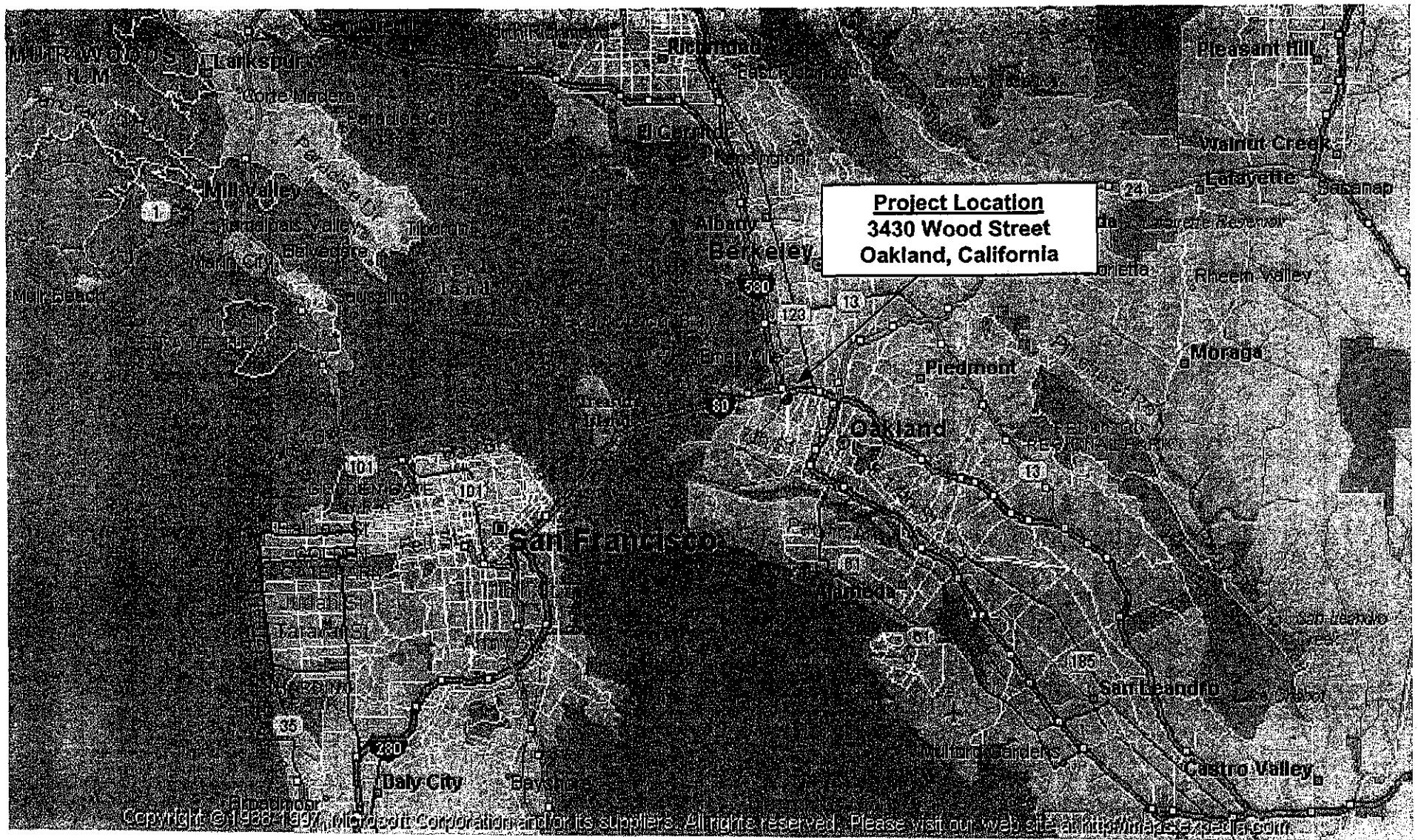
1. TPH = Total Petroleum Hydrocarbons
2. mg/l = milligrams per liter
3. ug/l = micrograms per liter
4. "<" = not detected at concentrations above the indicated amount
5. Risk-based screening levels (RBSLs) for groundwater that is not a current or potential drinking water source.
6. Bold results exceed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

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

Sample Designation Sampling Date	MW-4 05/26/00	MW-4 11/27/00	MW-4 03/29/01	MW-4 01/15/02	MW-4 04/19/02	MW-5 05/26/00	MW-5 11/27/00	MW-5 03/29/01	MW-5 01/15/02	MW-5 04/19/02	MW-6 05/26/00	MW-6 11/27/00	MW-6 03/29/01	MW-6 01/15/02	MW-6 04/19/02	Risk-Based Screening Levels
Antimony	--	<0.0050	<0.0050	<0.060	<0.060	--	<0.0050	<0.0050	<0.060	<0.060	--	<0.0050	<0.0050	<0.060	<0.060	0.030
Arsenic	--	0.01	0.009	<0.080	<0.080	--	0.030	0.010	<0.080	<0.080	--	0.0091	0.0091	<0.080	<0.080	0.036
Barium	--	<b>0.47</b>	<b>0.33</b>	<b>0.34</b>	<b>0.30</b>	--	<b>1.2</b>	<b>0.20</b>	<b>0.19</b>	<b>0.32</b>	--	<b>0.20</b>	<b>0.11</b>	<b>0.092</b>	<b>0.12</b>	0.0039
Beryllium	--	<0.0010	<0.0010	<0.0030	<0.0030	--	<0.0010	<0.0010	<0.0030	<0.0030	--	<0.0010	<0.0010	<0.0030	<0.0030	0.0051
Cadmium	--	<0.0030	<0.0030	<0.0050	<0.0050	--	<0.0030	<0.0030	<0.0050	<0.0050	--	<0.0030	<0.0030	<0.0050	<0.0050	0.0011
Chromium	--	0.0032	<0.003	<0.010	<0.010	--	0.05	<0.003	<0.010	<b>0.22</b>	--	<0.003	<0.003	<0.010	<0.010	0.180
Cobalt	--	<0.003	<0.003	<0.050	<0.050	--	0.01	<0.003	<0.050	<0.050	--	<b>0.0049</b>	<b>0.0040</b>	<0.050	<0.050	0.0030
Copper	--	<b>0.01</b>	<b>0.010</b>	<0.020	<0.020	--	<b>0.05</b>	<b>0.010</b>	<0.020	<0.020	--	<b>0.010</b>	<b>0.020</b>	<0.020	<b>0.23</b>	0.0031
Lead	<b>0.20</b>	<b>0.0077</b>	<0.0050	<0.010	<0.010	<b>0.33</b>	<b>0.020</b>	<0.0050	<0.010	<0.010	<b>0.40</b>	<0.0050	<0.0050	<0.010	<0.010	0.0032
Mercury	--	<0.004	<0.004	<0.00020	<0.00020	--	<0.004	<0.004	<0.00020	<0.00020	--	<0.004	<0.004	<0.00020	<0.00020	0.000012
Molybdenum	--	0.0064	0.0060	<0.050	<0.050	--	0.010	<0.005	<0.050	<0.050	--	0.010	0.0054	<0.050	<0.050	0.240
Nickel	--	<b>0.030</b>	0.0056	<0.040	<0.040	--	<b>0.010</b>	0.0062	<0.040	<0.040	--	<b>0.040</b>	<b>0.010</b>	<0.040	<b>0.10</b>	0.0082
Selenium	--	<0.0050	<b>0.0058</b>	<0.10	<0.10	--	<0.0050	<0.0050	<0.10	<0.10	--	<0.0050	<0.0050	<0.10	<0.10	0.0050
Silver	--	<b>0.020</b>	<b>0.010</b>	<0.010	<0.010	--	<b>0.010</b>	<b>0.0013</b>	<0.010	<0.010	--	<b>0.010</b>	<b>0.001</b>	<0.010	<0.010	0.00012
Thallium	--	<0.0050	<0.0050	<0.10	<0.10	--	<0.0050	<0.0050	<0.10	<0.10	--	<0.0050	<0.0050	<0.10	<0.10	0.040
Vanadium	--	0.0034	0.003	<0.050	<0.050	--	<b>0.050</b>	<0.003	<0.050	<0.050	--	<b>0.0036</b>	<b>0.003</b>	<0.050	<0.050	0.019
Zinc	--	<b>0.070</b>	0.020	<0.015	0.015	--	0.010	<b>0.030</b>	0.020	<b>0.16</b>	--	<b>0.050</b>	<b>0.37</b>	<b>0.031</b>	<b>0.02</b>	0.023

Notes:

1. Metals analyses conducted in general accordance with U.S. Environmental Protection Agency (EPA) Methods 8010 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.



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Reference:  
Microsoft Expedia, Streets 98

Scale



Figure 1

SITE LOCATION MAP



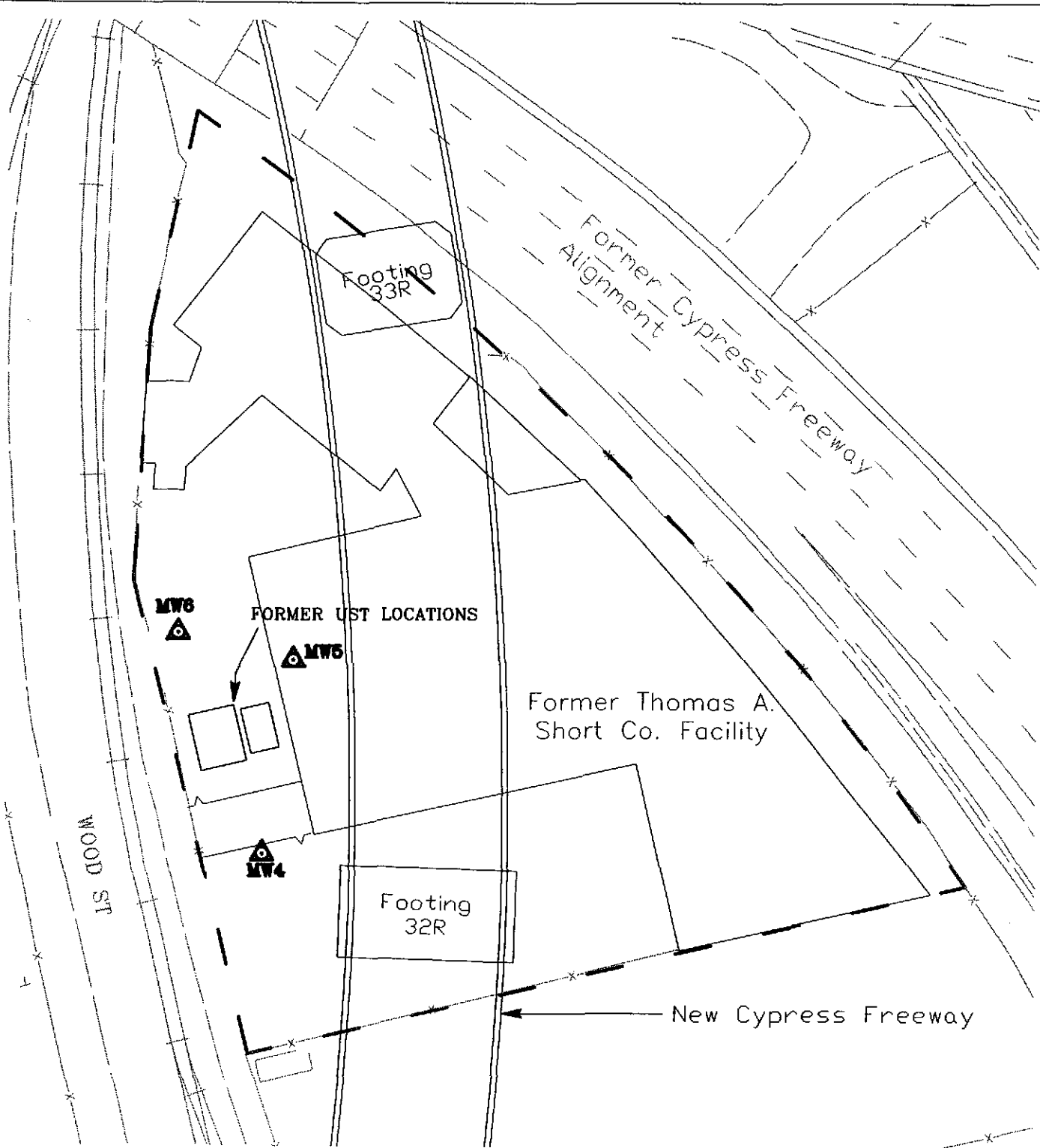
Caltrans-Cypress GW (Thomas Short Co.)  
Quarterly GW Monitoring  
Task Order No.04-911052-WB

PROJECT NUMBER  
830714

CHECKED BY  
APPROVED BY

DPB  
3/26/02

DRAWN BY



**LEGEND**



WELL LOCATION AND DESIGNATION

**Notes:**

- 1. Base map compiled from maps provided by Caltrans.
- 2. All locations and dimensions are approximate.

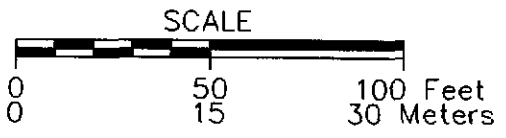


FIGURE 2

**MONITORING WELL LOCATIONS**

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



**IT CORPORATION**  
A Member of  
The IT Group



PROJECT NUMBER 830714

CHECKED BY

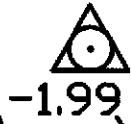
APPROVED BY

CBD 7/29/02

DRAWN BY

WOOD ST

MW6



-1.99

FORMER UST LOCATIONS

MW5



-1.80

MW4

-2.09



0.007

LEGEND



WELL LOCATION, DESIGNATION, AND GROUNDWATER ELEVATION IN FEET

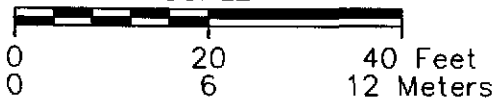


APPROXIMATE DIRECTION OF GROUNDWATER FLOW AND GRADIENT

Notes:

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

SCALE



Footing 32R

FIGURE 3

PIEZOMETRIC ELEVATION CONTOUR MAP

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



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830714

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APPROVED BY

DPB  
3/26/02

DRAWN BY

WOOD ST

TPH - <5  
TPHg - <0.050  
TPHd - <0.050  
benzene - <0.0020  
toluene - <0.0020  
ethylbenzene - <0.0020  
xylenes - <0.0020  
MTBE - <0.0020

MW6



FORMER UST LOCATIONS

MW5

TPH - <5  
TPHg - 1.2  
TPHd - 0.942  
benzene - 0.053  
toluene - 0.0025  
ethylbenzene - 0.018  
xylenes - <0.0020  
MTBE - <0.0020

MW4

TPH - <5  
TPHg - 11  
TPHd - 1.17  
benzene - 0.035  
toluene - 0.013  
ethylbenzene - 0.14  
xylenes - 0.023  
MTBE - <0.0020

Footing  
32R

LEGEND



WELL LOCATION AND DESIGNATION

Notes:

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

SCALE

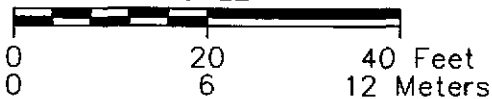


FIGURE 4

PETROLEUM HYDROCARBON CONCENTRATIONS

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



IT CORPORATION  
A Member of  
The IT Group

**APPENDIX A**  
**GROUNDWATER MONITORING PROCEDURES**

## **Appendix A**

### **Groundwater Monitoring Procedures**

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

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

#### **Groundwater Sampling Procedures**

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

- Groundwater was discharged from the bailer via a bottom-emptying device. Discharge to the containers was conducted in a manner to minimize bubbling and agitation of the liquid. The volatile organic analysis vials were filled to the top forming a meniscus to minimize the headspace.
- Groundwater samples were collected in the following order for the indicated analyses: volatile organic compounds and fuel oxygenate compounds, total petroleum hydrocarbons as gasoline, total petroleum hydrocarbons as diesel, total recoverable petroleum hydrocarbons, and heavy metals. Groundwater grab samples collected for heavy metals analyses were not filtered in the field, but were filtered at the laboratory prior to analysis.

### ***Sample Retention and Analysis Procedures***

- Chain of custody procedures, including the use of chain of custody forms, were used to document sample handling and transport from collection to delivery to the laboratory for analysis.
- The samples were placed on ice in an insulated chest overnight in the custody of an IT Corporation (IT) employee. The samples were picked up within approximately 24 hours of collection of the last sample by a courier supplied by the laboratory, or were delivered to the laboratory by IT personnel within approximately 24 hours of collection of the last sample. The samples were transported to the laboratory in a motor vehicle.
- Groundwater samples were labeled with the well number followed by the date.
- Laboratory quality assurance/quality control procedures are summarized below:
  - Method Blank Frequency = one per 20 samples
  - Matrix Spike/Matrix Spike Duplicate = one per 20 samples
  - Laboratory Control Sample/Laboratory Control Sample Duplicate = one per 20 samples

**APPENDIX B  
FIELD DATA FORMS**

**FIELD REPORT  
WATER LEVEL / FLOATING PRODUCT  
SURVEY**

**IT CORPORATION**  
1326 North Market Boulevard  
Sacramento, California 95834  
(916) 928-3300

PROJECT NO : 830714 / 01010000

LOCATION : 3430 Wood Street, Oakland

DATE: 4-19-02

CLIENT : Caltrans  
Former Thomas Short Co. Property

SAMPLER : Paul Weinhardt

DAY OF WEEK: **FRIDAY**

WELL ID	TIME	TOTAL DEPTH (Feet)	DEPTH TO WATER (Feet)	DEPTH TO FLOATING PRODUCT (Feet)	FLOATING PRODUCT THICKNESS (Feet)	COMMENTS
MW-4	758	15.00	10.42	—	—	
MW-5	801	19.20	14.13	—	—	
MW-6	804	18.70	13.48	—	—	

Comments :

*Paul Weinhardt*  
\_\_\_\_\_  
Signature



# WATER SAMPLE FIELD DATA SHEET

PROJECT NO : 830714 / 01010000  
 PURGED BY : Paul Weinhardt  
 SAMPLED BY : Paul Weinhardt

SAMPLE ID : MW4  
 CLIENT NAME : Caltrans - Former Thomas Short Co.  
 LOCATION : 3430 Wood Street, Oakland, CA

TYPE: Groundwater  Surface Water \_\_\_\_\_ Leachate \_\_\_\_\_ Other \_\_\_\_\_  
 CASING DIAMETER (inches): 2  3 \_\_\_\_\_ 4 \_\_\_\_\_ 4.5 \_\_\_\_\_ 6 \_\_\_\_\_ Other \_\_\_\_\_  
 (.163) (.367) (.652) (.826) (1.47) (1"- .041 / 8"-2.61)

CASING ELEVATION (feet/MSL) : \_\_\_\_\_ VOLUME IN CASING (gal.) : 1.45  
 DEPTH OF WELL (feet) : 15.0 CALCULATED PURGE (gal.) : 1.37  
 DEPTH TO WATER (feet) : 10.42 ACTUAL PURGE VOL. (gal.) : 1.50

DATE PURGED : 4.19.02 END PURGE : 820  
 DATE SAMPLED : 4.19.02 SAMPLING TIME : 826  
 DTW AT SAMPLE TIME: 10.81

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°C)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
<u>814</u>	<u>1.50</u>	<u>7.56</u>	<u>1.610</u>	<u>17.3°</u>	<u>BLACK</u>	<u>#04</u>
<u>817</u>	<u>1.00</u>	<u>7.53</u>	<u>1.740</u>	<u>17.6°</u>	<u>BLACK</u>	<u>#04</u>
<u>820</u>	<u>1.50</u>	<u>7.51</u>	<u>1.810</u>	<u>17.5°</u>	<u>BLACK</u>	<u>#04</u>

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)  
 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: Good LOCK: Dolphin

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

pH, E.C., Temp. Meter Calibration: Date: \_\_\_\_\_ Time: \_\_\_\_\_ Meter Serial No.: \_\_\_\_\_  
 E.C. 1000 / \_\_\_\_\_ pH 7 / \_\_\_\_\_ pH 10 / \_\_\_\_\_ pH 4 / \_\_\_\_\_  
 Temperature °C \_\_\_\_\_

SIGNATURE: Paul Weinhardt REVIEWED BY: [Signature] PAGE 1 OF 3





# WATER SAMPLE FIELD DATA SHEET

PROJECT NO : 830714 / 01010000  
 PURGED BY : Paul Weinhardt  
 SAMPLED BY : Paul Weinhardt

SAMPLE ID : MWS  
 CLIENT NAME : Caltrans - Former Thomas Short Co.  
 LOCATION : 3430 Wood Street, Oakland, CA

TYPE: Groundwater  Surface Water \_\_\_\_\_ Leachate \_\_\_\_\_ Other \_\_\_\_\_  
 CASING DIAMETER (inches): 2  3 \_\_\_\_\_ 4 \_\_\_\_\_ 4.5 \_\_\_\_\_ 6 \_\_\_\_\_ Other \_\_\_\_\_  
 (.163) (.367) (.652) (.826) (1.47) (1"- .041 / 8"-2.61)

CASING ELEVATION (feet/MSL) : \_\_\_\_\_ VOLUME IN CASING (gal.) : .86  
 DEPTH OF WELL (feet) : 19.20 CALCULATED PURGE (gal.) : 2.58  
 DEPTH TO WATER (feet) : 14.13 ACTUAL PURGE VOL. (gal.) : 3.0

DATE PURGED : 4/19/02 END PURGE : 858  
 DATE SAMPLED : 4/19/02 SAMPLING TIME : 9:17  
 DTW AT SAMPLE TIME: 14.60

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°C)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
<u>852</u>	<u>1.0</u>	<u>7.53</u>	<u>1.480</u>	<u>17.10</u>	<u>BLACK</u>	<u>hvy</u>
<u>855</u>	<u>2.0</u>	<u>7.63</u>	<u>1.460</u>	<u>16.90</u>	<u>BLACK</u>	<u>hvy</u>
<u>858</u>	<u>3.0</u>	<u>7.59</u>	<u>1.440</u>	<u>17.00</u>	<u>BLACK</u>	<u>hvy</u>

OTHER: \_\_\_\_\_ ODOR: \_\_\_\_\_  
 (COBALT 0-100) (NTU 0-200)

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

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> 2" Bladder Pump	<input type="checkbox"/> Bailer (Teflon)	<input type="checkbox"/> 2" Bladder Pump	<input type="checkbox"/> Bailer (Teflon)
<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> Bomb Sampler	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input type="checkbox"/> Dipper	<input type="checkbox"/> Submersible Pump
<input checked="" type="checkbox"/> Dispo Bailer	<input type="checkbox"/> Dedicated	<input checked="" type="checkbox"/> Dispo Bailer	<input type="checkbox"/> Dedicated
Other: _____		Other: _____	

WELL INTEGRITY: Good LOCK: Dolphin

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

pH, E.C., Temp. Meter Calibration: Date: \_\_\_\_\_ Time: \_\_\_\_\_ Meter Serial No.: \_\_\_\_\_  
 E.C. 1000 / \_\_\_\_\_ pH 7 / \_\_\_\_\_ pH 10 / \_\_\_\_\_ pH 4 / \_\_\_\_\_

Temperature °C \_\_\_\_\_  
 SIGNATURE: Paul Weinhardt REVIEWED BY: [Signature] PAGE 2 OF 3



# WATER SAMPLE FIELD DATA SHEET

PROJECT NO : 830714 / 01010000  
 PURGED BY : Paul Weinhardt  
 SAMPLED BY : Paul Weinhardt

SAMPLE ID : Mw6  
 CLIENT NAME : Caltrans - Former Thomas Short Co.  
 LOCATION : 3430 Wood Street, Oakland, CA

TYPE: Groundwater  Surface Water \_\_\_\_\_ Leachate \_\_\_\_\_ Other \_\_\_\_\_  
 CASING DIAMETER (inches): 2  3 \_\_\_\_\_ 4 \_\_\_\_\_ 4.5 \_\_\_\_\_ 6 \_\_\_\_\_ Other \_\_\_\_\_  
 (.163) (.367) (.652) (.826) (1.47) (1"-0.041 / 8"-2.61)

CASING ELEVATION (feet/MSL) : \_\_\_\_\_ VOLUME IN CASING (gal.) : 188  
 DEPTH OF WELL (feet) : 18.70 CALCULATED PURGE (gal.) : 2.66  
 DEPTH TO WATER (feet) : 13.48 ACTUAL PURGE VOL. (gal.) : 3.0

DATE PURGED : 4.19.02 END PURGE : 843  
 DATE SAMPLED : 4.19.02 SAMPLING TIME : 910  
 DTW AT SAMPLE TIME : 13.90

TIME (2400 HR)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm@25°C)	TEMPERATURE (°C)	COLOR (visual)	TURBIDITY (visual)
<u>836</u>	<u>1.0</u>	<u>7.50</u>	<u>1.600</u>	<u>22.90</u>	<u>cloudy</u>	<u>MOD</u>
<u>840</u>	<u>2.0</u>	<u>7.61</u>	<u>1.810</u>	<u>22.80</u>	<u>cloudy</u>	<u>MOD</u>
<u>843</u>	<u>3.0</u>	<u>7.47</u>	<u>1.960</u>	<u>22.7</u>	<u>cloudy</u>	<u>MOD</u>

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)  
 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: Good LOCK: Dolphin

REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

pH, E.C., Temp. Meter Calibration: Date: \_\_\_\_\_ Time: \_\_\_\_\_ Meter Serial No.: \_\_\_\_\_  
 E.C. 1000 \_\_\_\_\_ / \_\_\_\_\_ pH 7 \_\_\_\_\_ / \_\_\_\_\_ pH 10 \_\_\_\_\_ / \_\_\_\_\_ pH 4 \_\_\_\_\_ / \_\_\_\_\_

Temperature °C \_\_\_\_\_  
 SIGNATURE: Paul Weinhardt REVIEWED BY: DR PAGE 3 OF 3

**IT CORPORATION - Drum Inventory Record**

830714 / 01010000

**Project No**

Former Thomas Short Co. Property

3430 Wood Street, Oakland

**Location**

4-19-02

**Date**

Caltrans

**Client**

Paul Weinhardt

**Sampler**

Fri

**Day of Week**

DRUM NUMBER OR ID	WELL OR SOURCE ID(s)	TYPE OF MATERIAL	AMOUNT OF MATERIAL IN DRUM	DATE ACCUMULATED OR GENERATED

*Approx 309AL  
TOTAL ~~111 DRUM~~*

Sketch locations of drums, include drum ID's

COMMENTS:

Number of Drums From This Event

0

Total Number of Drums At Site

1

# CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

IT CORPORATION - 1326 North Market Boulevard, Sacramento, CA 95834

Purchase Order: # 189348 for 2nd Qtr. 200

(916) 928-3300 FAX (916) 565-4356

Lab: Sparger Technology, Sacto

Project Name: Caltrans, Former Thomas Short Property  
 Project Number: 830714 / 01010000  
 Project Manager: Don Bransford  
 Company: IT CORPORATION  
 Address: 1326 North Market Boulevard  
 Sacramento, CA 95834  
 Dir. Ph: (916) 565-4186 FAX: (916) 565-4356  
 Sampler's Signature: Paul Weinhart

					Analysis Requested											REMARKS								
					Number of Containers	Fuel Oxygenates by 8260B; VOCs by 8260B; TPH as gas by 8015M	TPH as Diesel by 8015M	TRPH by 1664	CAM Metals by 6010/7470 NOT field filtered.	TDS														
Sample I.D.	Date	Time	LAB I.D.	Sample Matrix		1	6	6	3	3												Container Types	Preservations	
MW-4	4.9	8:26		Water	8	4	1	1	1	1														
MW-5	↓	9:17		Water	8	4	1	1	1	1														
MW-6	↓	9:10		Water	8	4	1	1	1	1														
Trip Blank	↓	~11		Water	2	2																		

RELINQUISHED BY	RECEIVED BY
Signature: <u>Paul Weinhart</u>	Signature: <u>Sparger</u>
Printed Name: <u>Paul Weinhart</u>	Printed Name: <u>Sparger</u>
Firm: <u>IT Corp</u>	Firm: <u>Sparger</u>
Date/Time: <u>4/18/02 14:20</u>	Date/Time: <u>4/19/02 14:20</u>

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

**TURNAROUND REQUIREMENTS**

24 hr \_\_\_\_\_ 48 hr \_\_\_\_\_ 5 day \_\_\_\_\_

Standard (~10-15 working days)

Provide Verbal Preliminary Results \_\_\_\_\_

Provide FAX Preliminary Results \_\_\_\_\_

Requested Report Date: \_\_\_\_\_

**REPORT REQUIREMENTS**

I. Routine Report

II. Report (includes DUP, MS MSD, as required, may be charged as samples)

III. Data Validation Report (includes All Raw Data)

RWQCB (MDLs/PQLs/TRACE#)

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

Special Instructions/Comments:

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

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

**Container Types Key:**

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

**APPENDIX C**  
**LABORATORY ANALYTICAL REPORT**  
**AND CHAIN-OF-CUSTODY DOCUMENTATION**

Don Bransford  
IT Corporation  
1326 N. Market Blvd.  
Sacramento, CA 95834

---

Client	IT Corporation
Workorder	14655 830714 Former Thomas Short
Received	04/22/02

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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

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655001  
 Sample ID MW-4  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Mercury	04/23/02	05/01/02	ND	0.00020 mg/L	1:1

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655001  
 Sample ID MW-4  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

8260B Oxygenates - 8260B

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Tertiary butanol	04/22/02	04/22/02	ND	10 ug/L	1:1
Methyl-tert-butyl-ether	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Di-isopropyl ether	04/22/02	04/22/02	ND	5.0 ug/L	1:1
Ethyl tert-butyl ether	04/22/02	04/22/02	ND	5.0 ug/L	1:1
Tertiaryamyl methylether	04/22/02	04/22/02	ND	5.0 ug/L	1:1

Surrogates	Result	Recovery	Limits
Dibromodifluoromethane	42 ug/L	84 %	(76 - 135)



Test Certificate of Analysis

Client ID IT Corporation  
Workorder # 14655  
Laboratory ID 14655001  
Sample ID MW-4  
Matrix Water

Workorder ID 830714 Former Thomas Short  
Sampled 04/19/02  
Received 04/19/02  
Reported 05/03/02

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	04/23/02	04/23/02	ND	10	ug/L	1:5
Chloromethane	04/23/02	04/23/02	ND	10	ug/L	1:5
Vinyl chloride	04/23/02	04/23/02	ND	10	ug/L	1:5
Bromomethane	04/23/02	04/23/02	ND	10	ug/L	1:5
Chloroethane	04/23/02	04/23/02	ND	10	ug/L	1:5
Trichlorofluoromethane	04/23/02	04/23/02	ND	10	ug/L	1:5
Acrolein	04/23/02	04/23/02	ND	10	ug/L	1:5
1,1-Dichloroethene	04/23/02	04/23/02	ND	10	ug/L	1:5
Acetone	04/23/02	04/23/02	ND	10	ug/L	1:5
Methyl iodide	04/23/02	04/23/02	ND	10	ug/L	1:5
Carbon disulfide	04/23/02	04/23/02	ND	10	ug/L	1:5
Dichloromethane	04/23/02	04/23/02	ND	10	ug/L	1:5
Acrylonitrile	04/23/02	04/23/02	ND	10	ug/L	1:5
trans-1,2-Dichloroethene	04/23/02	04/23/02	ND	10	ug/L	1:5
1,1-Dichloroethane	04/23/02	04/23/02	ND	10	ug/L	1:5
Vinyl acetate	04/23/02	04/23/02	ND	10	ug/L	1:5
cis-1,2-Dichloroethene	04/23/02	04/23/02	ND	10	ug/L	1:5
2-Butanone (MEK)	04/23/02	04/23/02	ND	10	ug/L	1:5
Bromochloromethane	04/23/02	04/23/02	ND	10	ug/L	1:5
Chloroform	04/23/02	04/23/02	ND	10	ug/L	1:5
2,2-dichloropropane	04/23/02	04/23/02	ND	10	ug/L	1:5
1,1,1-Trichloroethane	04/23/02	04/23/02	ND	10	ug/L	1:5
1,1-dichloropropane	04/23/02	04/23/02	ND	10	ug/L	1:5
Carbon tetrachloride	04/23/02	04/23/02	ND	10	ug/L	1:5
<b>Benzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>35</b>	<b>10</b>	<b>ug/L</b>	<b>1:5</b>
1,2-Dichloroethane	04/23/02	04/23/02	ND	10	ug/L	1:5
Dibromomethane	04/23/02	04/23/02	ND	10	ug/L	1:5
Bromodichloromethane	04/23/02	04/23/02	ND	10	ug/L	1:5
1,2-Dichloropropane	04/23/02	04/23/02	ND	10	ug/L	1:5
Trichloroethene	04/23/02	04/23/02	ND	10	ug/L	1:5
2-Chloroethylvinyl ether	04/23/02	04/23/02	ND	10	ug/L	1:5
cis-1,3-Dichloropropene	04/23/02	04/23/02	ND	10	ug/L	1:5

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655001  
 Sample ID MW-4  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

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

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
4-Methyl-2-pentanone	04/23/02	04/23/02	ND	10 ug/L	1:5
trans-1,3-Dichloropropene	04/23/02	04/23/02	ND	10 ug/L	1:5
1,1,2-Trichloroethane	04/23/02	04/23/02	ND	10 ug/L	1:5
<b>Toluene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>13</b>	<b>10 ug/L</b>	<b>1:5</b>
1,2-Dibromoethane (EDB)	04/23/02	04/23/02	ND	10 ug/L	1:5
1,3-Dichloropropane	04/23/02	04/23/02	ND	10 ug/L	1:5
2-Hexanone	04/23/02	04/23/02	ND	10 ug/L	1:5
Dibromochloromethane	04/23/02	04/23/02	ND	10 ug/L	1:5
Tetrachloroethene	04/23/02	04/23/02	ND	10 ug/L	1:5
1,1,1,2-Tetrachloroethane	04/23/02	04/23/02	ND	10 ug/L	1:5
Chlorobenzene	04/23/02	04/23/02	ND	10 ug/L	1:5
<b>Ethylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>140</b>	<b>10 ug/L</b>	<b>1:5</b>
<b>M+P-Xylene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>23</b>	<b>10 ug/L</b>	<b>1:5</b>
Bromoform	04/23/02	04/23/02	ND	10 ug/L	1:5
Styrene	04/23/02	04/23/02	ND	10 ug/L	1:5
o-Xylene	04/23/02	04/23/02	ND	10 ug/L	1:5
1,1,2,2-Tetrachloroethane	04/23/02	04/23/02	ND	10 ug/L	1:5
1,2,3-Trichloropropane	04/23/02	04/23/02	ND	10 ug/L	1:5
<b>Isopropylbenzene (Cumene)</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>190</b>	<b>10 ug/L</b>	<b>1:5</b>
Bromobenzene	04/23/02	04/23/02	ND	10 ug/L	1:5
<b>n-Propylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>300</b>	<b>10 ug/L</b>	<b>1:5</b>
2-Chlorotoluene	04/23/02	04/23/02	ND	10 ug/L	1:5
4-Chlorotoluene	04/23/02	04/23/02	ND	10 ug/L	1:5
<b>1,3,5-Trimethylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>190</b>	<b>10 ug/L</b>	<b>1:5</b>
<b>tert-Butylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>25</b>	<b>10 ug/L</b>	<b>1:5</b>
1,2,4-Trimethylbenzene	04/23/02	04/23/02	ND	10 ug/L	1:5
<b>sec-Butylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>13</b>	<b>10 ug/L</b>	<b>1:5</b>
1,3-Dichlorobenzene	04/23/02	04/23/02	ND	10 ug/L	1:5
1,4-Dichlorobenzene	04/23/02	04/23/02	ND	10 ug/L	1:5
4-Isopropyltoluene	04/23/02	04/23/02	ND	10 ug/L	1:5
1,2-Dichlorobenzene	04/23/02	04/23/02	ND	10 ug/L	1:5
<b>n-Butylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>22</b>	<b>10 ug/L</b>	<b>1:5</b>

**Test Certificate of Analysis**

**Client ID** IT Corporation  
**Workorder #** 14655  
**Laboratory ID** 14655001  
**Sample ID** MW-4  
**Matrix** Water

**Workorder ID** 830714 Former Thomas Short  
**Sampled** 04/19/02  
**Received** 04/19/02  
**Reported** 05/03/02

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

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
1,2-Dibromo-3-chloropropane	04/23/02	04/23/02	ND	10 ug/L	1:5
1,2,4-Trichlorobenzene	04/23/02	04/23/02	ND	10 ug/L	1:5
Naphthalene	04/23/02	04/23/02	ND	10 ug/L	1:5
Hexachlorobutadiene	04/23/02	04/23/02	ND	10 ug/L	1:5
1,2,3-Trichlorobenzene	04/23/02	04/23/02	ND	10 ug/L	1:5

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	52.5 ug/L	105 %	(76 - 135)
Toluene d8	45.5 ug/L	91 %	(88 - 118)
4-Bromofluorobenzene	46.3 ug/L	93 %	(86 - 121)

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655001  
 Sample ID MW-4  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Antimony	04/23/02	05/01/02	ND	0.060 mg/L	1:1
Arsenic	04/23/02	05/01/02	ND	0.080 mg/L	1:1
<b>Barium</b>	<b>04/23/02</b>	<b>05/01/02</b>	<b>0.30</b>	<b>0.020 mg/L</b>	<b>1:1</b>
Beryllium	04/23/02	05/01/02	ND	0.0030 mg/L	1:1
Cadmium	04/23/02	05/01/02	ND	0.0050 mg/L	1:1
Chromium	04/23/02	05/01/02	ND	0.010 mg/L	1:1
Cobalt	04/23/02	05/01/02	ND	0.050 mg/L	1:1
Copper	04/23/02	05/01/02	ND	0.020 mg/L	1:1
Lead	04/23/02	05/01/02	ND	0.010 mg/L	1:1
Molybdenum	04/23/02	05/01/02	ND	0.050 mg/L	1:1
Nickel	04/23/02	05/01/02	ND	0.040 mg/L	1:1
Selenium	04/23/02	05/01/02	ND	0.10 mg/L	1:1
Silver	04/23/02	05/01/02	ND	0.010 mg/L	1:1
Thallium	04/23/02	05/01/02	ND	0.10 mg/L	1:1
Vanadium	04/23/02	05/01/02	ND	0.050 mg/L	1:1
<b>Zinc</b>	<b>04/23/02</b>	<b>05/01/02</b>	<b>0.015</b>	<b>0.015 mg/L</b>	<b>1:1</b>



Analytical Laboratory Division  
Mobile Laboratory Division  
Scientific Division

Test Certificate of Analysis

**Client ID** IT Corporation  
**Workorder #** 14655  
**Laboratory ID** 14655002  
**Sample ID** MW-5  
**Matrix** Water

**Workorder ID** 830714 Former Thomas Short  
**Sampled** 04/19/02  
**Received** 04/19/02  
**Reported** 05/03/02

EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Mercury	04/23/02	05/01/02	ND	0.00020 mg/L	1:1

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655002  
 Sample ID MW-5  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

8260B Oxygenates - 8260B

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Tertiary butanol	04/22/02	04/22/02	ND	10 ug/L	1:1
Methyl-tert-butyl-ether	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Di-isopropyl ether	04/22/02	04/22/02	ND	5.0 ug/L	1:1
Ethyl tert-butyl ether	04/22/02	04/22/02	ND	5.0 ug/L	1:1
Tertiaryamyl methylether	04/22/02	04/22/02	ND	5.0 ug/L	1:1

Surrogates	Result	Recovery	Limits
Dibromodifluoromethane	40 ug/L	80 %	(76 - 135)

Test Certificate of Analysis

Client ID IT Corporation  
Workorder # 14655  
Laboratory ID 14655002  
Sample ID MW-5  
Matrix Water

Workorder ID 830714 Former Thomas Short  
Sampled 04/19/02  
Received 04/19/02  
Reported 05/03/02

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Dichlorodifluoromethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Chloromethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Vinyl chloride	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Bromomethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Chloroethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Trichlorofluoromethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Acrolein	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,1-Dichloroethene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Acetone	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Methyl iodide	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Carbon disulfide	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Dichloromethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Acrylonitrile	04/23/02	04/23/02	ND	2.0 ug/L	1:1
trans-1,2-Dichloroethene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,1-Dichloroethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Vinyl acetate	04/23/02	04/23/02	ND	2.0 ug/L	1:1
cis-1,2-Dichloroethene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
2-Butanone (MEK)	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Bromochloromethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Chloroform	04/23/02	04/23/02	ND	2.0 ug/L	1:1
2,2-dichloropropane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,1,1-Trichloroethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,1-dichloropropane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Carbon tetrachloride	04/23/02	04/23/02	ND	2.0 ug/L	1:1
<b>Benzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>53</b>	<b>2.0 ug/L</b>	<b>1:1</b>
1,2-Dichloroethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Dibromomethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Bromodichloromethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,2-Dichloropropane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Trichloroethene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
2-Chloroethylvinyl ether	04/23/02	04/23/02	ND	2.0 ug/L	1:1
cis-1,3-Dichloropropene	04/23/02	04/23/02	ND	2.0 ug/L	1:1

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655002  
 Sample ID MW-5  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

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

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
4-Methyl-2-pentanone	04/23/02	04/23/02	ND	2.0 ug/L	1:1
trans-1,3-Dichloropropene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,1,2-Trichloroethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
<b>Toluene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>2.5</b>	<b>2.0 ug/L</b>	<b>1:1</b>
1,2-Dibromoethane (EDB)	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,3-Dichloropropane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
2-Hexanone	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Dibromochloromethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Tetrachloroethene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,1,1,2-Tetrachloroethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Chlorobenzene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
<b>Ethylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>18</b>	<b>2.0 ug/L</b>	<b>1:1</b>
m+p-Xylene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Bromoform	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Styrene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
o-Xylene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,1,2,2-Tetrachloroethane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,2,3-Trichloropropane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
<b>Isopropylbenzene (Cumene)</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>16</b>	<b>2.0 ug/L</b>	<b>1:1</b>
Bromobenzene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
<b>n-Propylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>26</b>	<b>2.0 ug/L</b>	<b>1:1</b>
2-Chlorotoluene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
4-Chlorotoluene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
<b>1,3,5-Trimethylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>16</b>	<b>2.0 ug/L</b>	<b>1:1</b>
<b>tert-Butylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>16</b>	<b>2.0 ug/L</b>	<b>1:1</b>
1,2,4-Trimethylbenzene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
<b>sec-Butylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>4.2</b>	<b>2.0 ug/L</b>	<b>1:1</b>
1,3-Dichlorobenzene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,4-Dichlorobenzene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
4-Isopropyltoluene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,2-Dichlorobenzene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
<b>n-Butylbenzene</b>	<b>04/23/02</b>	<b>04/23/02</b>	<b>9.8</b>	<b>2.0 ug/L</b>	<b>1:1</b>



**Test Certificate of Analysis**

**Client ID** IT Corporation  
**Workorder #** 14655  
**Laboratory ID** 14655002  
**Sample ID** MW-5  
**Matrix** Water

**Workorder ID** 830714 Former Thomas Short  
**Sampled** 04/19/02  
**Received** 04/19/02  
**Reported** 05/03/02

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

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
1,2-Dibromo-3-chloropropane	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,2,4-Trichlorobenzene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Naphthalene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
Hexachlorobutadiene	04/23/02	04/23/02	ND	2.0 ug/L	1:1
1,2,3-Trichlorobenzene	04/23/02	04/23/02	ND	2.0 ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	60 ug/L	120 %	(76 - 135)
Toluene d8	52.2 ug/L	104 %	(88 - 118)
4-Bromofluorobenzene	57.5 ug/L	115 %	(86 - 121)

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655002  
 Sample ID MW-5  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Antimony	04/23/02	05/01/02	ND	0.060 mg/L	1:1
Arsenic	04/23/02	05/01/02	ND	0.080 mg/L	1:1
<b>Barium</b>	<b>04/23/02</b>	<b>05/01/02</b>	<b>0.32</b>	<b>0.020 mg/L</b>	<b>1:1</b>
Beryllium	04/23/02	05/01/02	ND	0.0030 mg/L	1:1
Cadmium	04/23/02	05/01/02	ND	0.0050 mg/L	1:1
<b>Chromium</b>	<b>04/23/02</b>	<b>05/01/02</b>	<b>0.022</b>	<b>0.010 mg/L</b>	<b>1:1</b>
Cobalt	04/23/02	05/01/02	ND	0.050 mg/L	1:1
Copper	04/23/02	05/01/02	ND	0.020 mg/L	1:1
Lead	04/23/02	05/01/02	ND	0.010 mg/L	1:1
Molybdenum	04/23/02	05/01/02	ND	0.050 mg/L	1:1
Nickel	04/23/02	05/01/02	ND	0.040 mg/L	1:1
Selenium	04/23/02	05/01/02	ND	0.10 mg/L	1:1
Silver	04/23/02	05/01/02	ND	0.010 mg/L	1:1
Thallium	04/23/02	05/01/02	ND	0.10 mg/L	1:1
Vanadium	04/23/02	05/01/02	ND	0.050 mg/L	1:1
<b>Zinc</b>	<b>04/23/02</b>	<b>05/01/02</b>	<b>0.16</b>	<b>0.015 mg/L</b>	<b>1:1</b>

### Test Certificate of Analysis

**Client ID** IT Corporation  
**Workorder #** 14655  
**Laboratory ID** 14655003  
**Sample ID** MW-6  
**Matrix** Water

**Workorder ID** 830714 Former Thomas Short  
**Sampled** 04/19/02  
**Received** 04/19/02  
**Reported** 05/03/02

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### EPA Method 7470A Mercury - EPA 7470A

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Mercury	04/23/02	05/01/02	ND	0.00020 mg/L	1:1

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655003  
 Sample ID MW-6  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

8260B Oxygenates - 8260B

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Tertiary butanol	04/22/02	04/22/02	ND	10 ug/L	1:1
Methyl-tert-butyl-ether	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Di-isopropyl ether	04/22/02	04/22/02	ND	5.0 ug/L	1:1
Ethyl tert-butyl ether	04/22/02	04/22/02	ND	5.0 ug/L	1:1
Tertiaryamyl methylether	04/22/02	04/22/02	ND	5.0 ug/L	1:1

Surrogates	Result	Recovery	Limits
Dibromodifluoromethane	38.1 ug/L	76 %	(76 - 135)

Test Certificate of Analysis

Client ID IT Corporation  
Workorder # 14655  
Laboratory ID 14655003  
Sample ID MW-6  
Matrix Water

Workorder ID 830714 Former Thomas Short  
Sampled 04/19/02  
Received 04/19/02  
Reported 05/03/02

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Dichlorodifluoromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Chloromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Vinyl chloride	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Bromomethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Chloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Trichlorofluoromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Acrolein	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1-Dichloroethene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Acetone	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Methyl iodide	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Carbon disulfide	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Dichloromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Acrylonitrile	04/22/02	04/22/02	ND	2.0 ug/L	1:1
trans-1,2-Dichloroethene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1-Dichloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Vinyl acetate	04/22/02	04/22/02	ND	2.0 ug/L	1:1
cis-1,2-Dichloroethene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
2-Butanone (MEK)	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Bromochloromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Chloroform	04/22/02	04/22/02	ND	2.0 ug/L	1:1
2,2-dichloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1,1-Trichloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1-dichloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Carbon tetrachloride	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Benzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2-Dichloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Dibromomethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Bromodichloromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2-Dichloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Trichloroethene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
2-Chloroethylvinyl ether	04/22/02	04/22/02	ND	2.0 ug/L	1:1
cis-1,3-Dichloropropene	04/22/02	04/22/02	ND	2.0 ug/L	1:1

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655003  
 Sample ID MW-6  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

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

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
4-Methyl-2-pentanone	04/22/02	04/22/02	ND	2.0 ug/L	1:1
trans-1,3-Dichloropropene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1,2-Trichloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Toluene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2-Dibromoethane (EDB)	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,3-Dichloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
2-Hexanone	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Dibromochloromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Tetrachloroethene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1,1,2-Tetrachloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Chlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Ethylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
m+p-Xylene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Bromoform	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Styrene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
o-Xylene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1,2,2-Tetrachloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2,3-Trichloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Isopropylbenzene (Cumene)	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Bromobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
n-Propylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
2-Chlorotoluene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
4-Chlorotoluene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,3,5-Trimethylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
tert-Butylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2,4-Trimethylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
sec-Butylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,3-Dichlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,4-Dichlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
4-Isopropyltoluene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2-Dichlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
n-Butylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1

Test Certificate of Analysis

**Client ID** IT Corporation  
**Workorder #** 14655  
**Laboratory ID** 14655003  
**Sample ID** MW-6  
**Matrix** Water

**Workorder ID** 830714 Former Thomas Short  
**Sampled** 04/19/02  
**Received** 04/19/02  
**Reported** 05/03/02

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

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
1,2-Dibromo-3-chloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2,4-Trichlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Naphthalene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Hexachlorobutadiene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2,3-Trichlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	48.5 ug/L	97 %	(76 - 135)
Toluene d8	46 ug/L	92 %	(88 - 118)
4-Bromofluorobenzene	49.9 ug/L	100 %	(86 - 121)

Test Certificate of Analysis

Client ID IT Corporation  
Workorder # 14655  
Laboratory ID 14655003  
Sample ID MW-6  
Matrix Water

Workorder ID 830714 Former Thomas Short  
Sampled 04/19/02  
Received 04/19/02  
Reported 05/03/02

Metals, CAM16 - 6010B

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Antimony	04/23/02	05/01/02	ND	0.060 mg/L	1:1
Arsenic	04/23/02	05/01/02	ND	0.080 mg/L	1:1
<b>Barium</b>	<b>04/23/02</b>	<b>05/01/02</b>	<b>0.12</b>	<b>0.020 mg/L</b>	<b>1:1</b>
Beryllium	04/23/02	05/01/02	ND	0.0030 mg/L	1:1
Cadmium	04/23/02	05/01/02	ND	0.0050 mg/L	1:1
Chromium	04/23/02	05/01/02	ND	0.010 mg/L	1:1
Cobalt	04/23/02	05/01/02	ND	0.050 mg/L	1:1
<b>Copper</b>	<b>04/23/02</b>	<b>05/01/02</b>	<b>0.023</b>	<b>0.020 mg/L</b>	<b>1:1</b>
Lead	04/23/02	05/01/02	ND	0.010 mg/L	1:1
Molybdenum	04/23/02	05/01/02	ND	0.050 mg/L	1:1
<b>Nickel</b>	<b>04/23/02</b>	<b>05/01/02</b>	<b>0.10</b>	<b>0.040 mg/L</b>	<b>1:1</b>
Selenium	04/23/02	05/01/02	ND	0.10 mg/L	1:1
Silver	04/23/02	05/01/02	ND	0.010 mg/L	1:1
Thallium	04/23/02	05/01/02	ND	0.10 mg/L	1:1
Vanadium	04/23/02	05/01/02	ND	0.050 mg/L	1:1
<b>Zinc</b>	<b>04/23/02</b>	<b>05/01/02</b>	<b>0.020</b>	<b>0.015 mg/L</b>	<b>1:1</b>



**Test Certificate of Analysis**

**Client ID** IT Corporation  
**Workorder #** 14655  
**Laboratory ID** 14655004  
**Sample ID** Trip Blank  
**Matrix** Water

**Workorder ID** 830714 Former Thomas Short  
**Sampled** 04/19/02  
**Received** 04/19/02  
**Reported** 05/03/02

**8260B Oxygenates - 8260B**

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Tertiary butanol	04/22/02	04/22/02	ND	10 ug/L	1:1
Methyl-tert-butyl-ether	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Di-isopropyl ether	04/22/02	04/22/02	ND	5.0 ug/L	1:1
Ethyl tert-butyl ether	04/22/02	04/22/02	ND	5.0 ug/L	1:1
Tertiaryamyl methylether	04/22/02	04/22/02	ND	5.0 ug/L	1:1

Surrogates	Result	Recovery	Limits
Dibromodifluoromethane	44.5 ug/L	89 %	(76 - 135)

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655004  
 Sample ID Trip Blank  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

8260B GC/MS Volatiles - 8260B

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
Dichlorodifluoromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Chloromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Vinyl chloride	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Bromomethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Chloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Trichlorofluoromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Acrolein	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1-Dichloroethene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Acetone	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Methyl iodide	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Carbon disulfide	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Dichloromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Acrylonitrile	04/22/02	04/22/02	ND	2.0 ug/L	1:1
trans-1,2-Dichloroethene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1-Dichloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Vinyl acetate	04/22/02	04/22/02	ND	2.0 ug/L	1:1
cis-1,2-Dichloroethene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
2-Butanone (MEK)	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Bromochloromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Chloroform	04/22/02	04/22/02	ND	2.0 ug/L	1:1
2,2-dichloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1,1-Trichloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1-dichloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Carbon tetrachloride	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Benzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2-Dichloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Dibromomethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Bromodichloromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2-Dichloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Trichloroethene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
2-Chloroethylvinyl ether	04/22/02	04/22/02	ND	2.0 ug/L	1:1
cis-1,3-Dichloropropene	04/22/02	04/22/02	ND	2.0 ug/L	1:1

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655004  
 Sample ID Trip Blank  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

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

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
4-Methyl-2-pentanone	04/22/02	04/22/02	ND	2.0 ug/L	1:1
trans-1,3-Dichloropropene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1,2-Trichloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Toluene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2-Dibromoethane (EDB)	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,3-Dichloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
2-Hexanone	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Dibromochloromethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Tetrachloroethene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1,1,2-Tetrachloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Chlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Ethylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
M+P-Xylene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Bromoform	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Styrene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
o-Xylene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,1,2,2-Tetrachloroethane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2,3-Trichloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Isopropylbenzene (Cumene)	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Bromobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
n-Propylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
2-Chlorotoluene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
4-Chlorotoluene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,3,5-Trimethylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
tert-Butylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2,4-Trimethylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
sec-Butylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,3-Dichlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,4-Dichlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
4-Isopropyltoluene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2-Dichlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
n-Butylbenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655  
 Laboratory ID 14655004  
 Sample ID Trip Blank  
 Matrix Water

Workorder ID 830714 Former Thomas Short  
 Sampled 04/19/02  
 Received 04/19/02  
 Reported 05/03/02

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

Parameter	Prep Date	Analyzed	Result	RL Units	Dilution
1,2-Dibromo-3-chloropropane	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2,4-Trichlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Naphthalene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Hexachlorobutadiene	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2,3-Trichlorobenzene	04/22/02	04/22/02	ND	2.0 ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	50 ug/L	100 %	(76 - 135)
Toluene d8	50.5 ug/L	101 %	(88 - 118)
4-Bromofluorobenzene	51.7 ug/L	103 %	(86 - 121)

### Test Certificate of Analysis

**Client ID** IT Corporation  
**Workorder #** 14655

**Workorder ID** 830714 Former Thomas Short

**Parameter Method** TPHdiesel  
8015M DHS

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
14655001	MW-4	1170	50	ug/L	04/19/02	04/22/02	Water	1:1
14655002	MW-5	942	50	ug/L	04/19/02	04/22/02	Water	1:1
14655003	MW-6	ND	50	ug/L	04/19/02	04/22/02	Water	1:1

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655

Workorder ID 830714 Former Thomas Short

Parameter TPHgas  
 Method 8015M DHS

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
14655001	MW-4	11000	250	ug/L	04/19/02	04/22/02	Water	1:5
14655002	MW-5	1200	50	ug/L	04/19/02	04/22/02	Water	1:1
14655003	MW-6	ND	50	ug/L	04/19/02	04/22/02	Water	1:1
14655004	Trip Blank	ND	50	ug/L	04/19/02	04/22/02	Water	1:1



Environmental Laboratories

Analytical Laboratory Division  
Mobile Laboratory Division  
Scientific Division

Test Certificate of Analysis

Client ID IT Corporation  
Workorder # 14655

Workorder ID 830714 Former Thomas Short

Parameter Total Dissolved Solids  
Method EPA 160.1

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
14655001	MW-4	2240	10	mg/L	04/19/02	04/23/02	Water	1:1
14655002	MW-5	1410	10	mg/L	04/19/02	04/23/02	Water	1:1
14655003	MW-6	2820	10	mg/L	04/19/02	04/23/02	Water	1:1

Test Certificate of Analysis

Client ID IT Corporation  
 Workorder # 14655

Workorder ID 830714 Former Thomas Short

Parameter Method Total Pet. Hydrocarbons  
 EPA 1664

Lab ID	Sample ID	Result	RL	Units	Collected	Analyzed	Matrix	Dilution
14655001	MW-4	ND	5000	ug/L	04/19/02	04/23/02	Water	1:1
14655002	MW-5	ND	5000	ug/L	04/19/02	04/23/02	Water	1:1
14655003	MW-6	ND	5000	ug/L	04/19/02	04/23/02	Water	1:1



**Method Blank Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 41913  
**Sample ID** MB for HBN 136968 [SGXV/1670]  
**Matrix** Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	04/22/02	04/22/02	ND	50	ug/L	1:1

**Lab Control Sample Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 41914  
**Sample ID** LCS for HBN 136968 [SGXV/1670]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	04/22/02	04/22/02	500	50	ug/L	1:1

**Lab Control Sample Duplicate Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 41915  
**Sample ID** LCSD for HBN 136968 [SGXV/1670]  
**Matrix** Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHdiesel	8015M DHS	04/22/02	04/22/02	485	50	ug/L	1:1

Method Blank Report

Client ID IT Corporation  
Workorder ID 830714 Former Thomas Short  
Laboratory ID 41966  
Sample ID MB for HBN 137260 [VGXV/2154]  
Matrix Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/22/02	04/22/02	ND	50	ug/L	1:1

Lab Control Sample Report

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 41967  
**Sample ID** LCS for HBN 137260 [VGXV/2154]  
**Matrix** Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/22/02	04/22/02	1040	50	ug/L	1:1

**Lab Control Sample Duplicate Report**

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 Laboratory ID 41968  
 Sample ID LCSD for HBN 137260 [VGXV/2154  
 Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/22/02	04/22/02	1020	50	ug/L	1:1

**Matrix Spike Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 41969  
**Sample ID** MS for HBN 137260 [VGXV/2154]  
**Matrix** Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/22/02	04/22/02	1090	50	ug/L	1:1

**Matrix Spike Duplicate Report**

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 Laboratory ID 41970  
 Sample ID MSD for HBN 137260 [VGXV/2154]  
 Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
TPHgas	8015M DHS	04/22/02	04/22/02	1050	50	ug/L	1:1



## Method Blank Report

Client ID IT Corporation  
Workorder ID 830714 Former Thomas Short  
Laboratory ID 42089  
Sample ID MB for HBN 137748 [VMXV/1895]  
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Chloromethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Vinyl chloride	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Bromomethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Chloroethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Trichlorofluoromethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Acrolein	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,1-Dichloroethene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Acetone	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Methyl iodide	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Carbon disulfide	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Dichloromethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Acrylonitrile	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,1-Dichloroethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Vinyl acetate	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
2-Butanone (MEK)	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Bromochloromethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Chloroform	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
2,2-dichloropropane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,1-dichloropropane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Carbon tetrachloride	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Benzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,2-Dichloroethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Dibromomethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Bromodichloromethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,2-Dichloropropane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Trichloroethene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
4-Methyl-2-pentanone	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1

Method Blank Report

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 Laboratory ID 42089  
 Sample ID MB for HBN 137748 [VMXV/1895]  
 Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
(continued)							
trans-1,3-Dichloropropene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Toluene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,2-Dibromoethane (EDB)	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,3-Dichloropropane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
2-Hexanone	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Dibromochloromethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Tetrachloroethene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,1,1,2-Tetrachloroethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Chlorobenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Ethylbenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
m-P-Xylene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Bromoform	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Styrene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
o-Xylene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,1,2,2-Tetrachloroethane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Isopropylbenzene (Cumene)	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Bromobenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
n-Propylbenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
2-Chlorotoluene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
4-Chlorotoluene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
tert-Butylbenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,2,4-Trimethylbenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
sec-Butylbenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
4-Isopropyltoluene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
n-Butylbenzene	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1

Method Blank Report

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42089  
**Sample ID** MB for HBN 137748 [VMXV/1895]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL Units	Dilution
(continued)						
1,2-Dibromo-3-chloropropane	8260B	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2,4-Trichlorobenzene	8260B	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Naphthalene	8260B	04/22/02	04/22/02	ND	2.0 ug/L	1:1
Hexachlorobutadiene	8260B	04/22/02	04/22/02	ND	2.0 ug/L	1:1
1,2,3-Trichlorobenzene	8260B	04/22/02	04/22/02	ND	2.0 ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	47.5 ug/L	95 %	(76 - 135)
Toluene d8	50.1 ug/L	100 %	(88 - 118)
4-Bromofluorobenzene	50.3 ug/L	101 %	(86 - 121)

**Lab Control Sample Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42090  
**Sample ID** LCS for HBN 137748 [VMXV/1895]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/22/02	04/22/02	47	2.0	ug/L	1:1
Benzene	8260B	04/22/02	04/22/02	53	2.0	ug/L	1:1
Trichloroethene	8260B	04/22/02	04/22/02	51	2.0	ug/L	1:1
Toluene	8260B	04/22/02	04/22/02	54	2.0	ug/L	1:1
Chlorobenzene	8260B	04/22/02	04/22/02	56	2.0	ug/L	1:1

Lab Control Sample Duplicate Report

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42091  
**Sample ID** LCSD for HBN 137748 [VMXV/1895]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/22/02	04/22/02	45	2.0	ug/L	1:1
Benzene	8260B	04/22/02	04/22/02	53	2.0	ug/L	1:1
Trichloroethene	8260B	04/22/02	04/22/02	51	2.0	ug/L	1:1
Toluene	8260B	04/22/02	04/22/02	55	2.0	ug/L	1:1
Chlorobenzene	8260B	04/22/02	04/22/02	56	2.0	ug/L	1:1

**Matrix Spike Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42092  
**Sample ID** MS for HBN 137748 [VMXV/1895]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/22/02	04/22/02	40	2.0	ug/L	1:1
Benzene	8260B	04/22/02	04/22/02	53	2.0	ug/L	1:1
Trichloroethene	8260B	04/22/02	04/22/02	50	2.0	ug/L	1:1
Toluene	8260B	04/22/02	04/22/02	55	2.0	ug/L	1:1
Chlorobenzene	8260B	04/22/02	04/22/02	55	2.0	ug/L	1:1

**Matrix Spike Duplicate Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42093  
**Sample ID** MSD for HBN 137748 [VMXV/1895]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/22/02	04/22/02	40	2.0	ug/L	1:1
Benzene	8260B	04/22/02	04/22/02	52	2.0	ug/L	1:1
Trichloroethene	8260B	04/22/02	04/22/02	49	2.0	ug/L	1:1
Toluene	8260B	04/22/02	04/22/02	54	2.0	ug/L	1:1
Chlorobenzene	8260B	04/22/02	04/22/02	55	2.0	ug/L	1:1

Method Blank Report

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 Laboratory ID 42094  
 Sample ID MB for HBN 137751 [VMXV/1896]  
 Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	8260B	04/22/02	04/22/02	ND	10	ug/L	1:1
Methyl-tert-butyl-ether	8260B	04/22/02	04/22/02	ND	2.0	ug/L	1:1
Di-isopropyl ether	8260B	04/22/02	04/22/02	ND	5.0	ug/L	1:1
Ethyl tert-butyl ether	8260B	04/22/02	04/22/02	ND	5.0	ug/L	1:1
Tertiaryamyl methylether	8260B	04/22/02	04/22/02	ND	5.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
Dibromodifluoromethane	55.6 ug/L	111 %	(76 - 135)



**Lab Control Sample Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42095  
**Sample ID** LCS for HBN 137751 [VMXV/1896]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	8260B	04/22/02	04/22/02	50	10	ug/L	1:1
Methyl-tert-butyl-ether	8260B	04/22/02	04/22/02	51	2.0	ug/L	1:1
Di-isopropyl ether	8260B	04/22/02	04/22/02	51	5.0	ug/L	1:1
Ethyl tert-butyl ether	8260B	04/22/02	04/22/02	51	5.0	ug/L	1:1
Tertiaryamyl methylether	8260B	04/22/02	04/22/02	51	5.0	ug/L	1:1

**Lab Control Sample Duplicate Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42096  
**Sample ID** LCSD for HBN 137751 [VMXV/1896]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	8260B	04/22/02	04/22/02	52	10	ug/L	1:1
Methyl-tert-butyl-ether	8260B	04/22/02	04/22/02	50	2.0	ug/L	1:1
Di-isopropyl ether	8260B	04/22/02	04/22/02	50	5.0	ug/L	1:1
Ethyl tert-butyl ether	8260B	04/22/02	04/22/02	50	5.0	ug/L	1:1
Tertiaryamyl methylether	8260B	04/22/02	04/22/02	51	5.0	ug/L	1:1

**Matrix Spike Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42097  
**Sample ID** MS for HBN 137751 [VMXV/1896]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	8260B	04/22/02	04/22/02	48	10	ug/L	1:1
Methyl-tert-butyl-ether	8260B	04/22/02	04/22/02	49	2.0	ug/L	1:1
Di-isopropyl ether	8260B	04/22/02	04/22/02	49	5.0	ug/L	1:1
Ethyl tert-butyl ether	8260B	04/22/02	04/22/02	49	5.0	ug/L	1:1
Tertiaryamyl methylether	8260B	04/22/02	04/22/02	49	5.0	ug/L	1:1

**Matrix Spike Duplicate Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42098  
**Sample ID** MSD for HBN 137751 [VMXV/1896]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Tertiary butanol	8260B	04/22/02	04/22/02	50	10	ug/L	1:1
Methyl-tert-butyl-ether	8260B	04/22/02	04/22/02	49	2.0	ug/L	1:1
Di-isopropyl ether	8260B	04/22/02	04/22/02	48	5.0	ug/L	1:1
Ethyl tert-butyl ether	8260B	04/22/02	04/22/02	49	5.0	ug/L	1:1
Tertiaryamyl methylether	8260B	04/22/02	04/22/02	49	5.0	ug/L	1:1

Method Blank Report

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 Laboratory ID 42105  
 Sample ID MB for HBN 137757 [VMXV/1897]  
 Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Dichlorodifluoromethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Chloromethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Vinyl chloride	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Bromomethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Chloroethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Trichlorofluoromethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Acrolein	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,1-Dichloroethene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Acetone	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Methyl iodide	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Carbon disulfide	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Dichloromethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Acrylonitrile	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
trans-1,2-Dichloroethene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,1-Dichloroethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Vinyl acetate	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
cis-1,2-Dichloroethene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
2-Butanone (MEK)	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Bromochloromethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Chloroform	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
2,2-dichloropropane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,1,1-Trichloroethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,1-dichloropropane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Carbon tetrachloride	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Benzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,2-Dichloroethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Dibromomethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Bromodichloromethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,2-Dichloropropane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Trichloroethene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
2-Chloroethylvinyl ether	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
cis-1,3-Dichloropropene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
4-Methyl-2-pentanone	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1

**Method Blank Report**

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 Laboratory ID 42105  
 Sample ID MB for HBN 137757 [VMXV/1897]  
 Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
(continued)							
trans-1,3-Dichloropropene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,1,2-Trichloroethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Toluene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,2-Dibromoethane (EDB)	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,3-Dichloropropane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
2-Hexanone	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Dibromochloromethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Tetrachloroethene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,1,1,2-Tetrachloroethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Chlorobenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Ethylbenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
m+p-Xylene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Bromoform	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Styrene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
o-Xylene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,1,2,2-Tetrachloroethane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,2,3-Trichloropropane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Isopropylbenzene (Cumene)	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Bromobenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
n-Propylbenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
2-Chlorotoluene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
4-Chlorotoluene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,3,5-Trimethylbenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
tert-Butylbenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,2,4-Trimethylbenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
sec-Butylbenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,3-Dichlorobenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,4-Dichlorobenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
4-Isopropyltoluene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,2-Dichlorobenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
n-Butylbenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1

Method Blank Report

Client ID IT Corporation  
Workorder ID 830714 Former Thomas Short  
Laboratory ID 42105  
Sample ID MB for HBN 137757 [VMXV/1897]  
Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
(continued)							
1,2-Dibromo-3-chloropropane	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,2,4-Trichlorobenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Naphthalene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
Hexachlorobutadiene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1
1,2,3-Trichlorobenzene	8260B	04/23/02	04/23/02	ND	2.0	ug/L	1:1

Surrogates	Result	Recovery	Limits
1,2-Dichloroethane-d4	59.2 ug/L	118 %	(76 - 135)
Toluene d8	50.5 ug/L	101 %	(88 - 118)
4-Bromofluorobenzene	54.6 ug/L	109 %	(86 - 121)

**Lab Control Sample Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42106  
**Sample ID** LCS for HBN 137757 [VMXV/1897]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/23/02	04/23/02	45	2.0	ug/L	1:1
Benzene	8260B	04/23/02	04/23/02	49	2.0	ug/L	1:1
Trichloroethene	8260B	04/23/02	04/23/02	44	2.0	ug/L	1:1
Toluene	8260B	04/23/02	04/23/02	43	2.0	ug/L	1:1
Chlorobenzene	8260B	04/23/02	04/23/02	51	2.0	ug/L	1:1



**Lab Control Sample Duplicate Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42107  
**Sample ID** LCSD for HBN 137757 [VMXV/1897]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/23/02	04/23/02	44	2.0	ug/L	1:1
Benzene	8260B	04/23/02	04/23/02	50	2.0	ug/L	1:1
Trichloroethene	8260B	04/23/02	04/23/02	46	2.0	ug/L	1:1
Toluene	8260B	04/23/02	04/23/02	45	2.0	ug/L	1:1
Chlorobenzene	8260B	04/23/02	04/23/02	52	2.0	ug/L	1:1

**Matrix Spike Report**

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 Laboratory ID 42108  
 Sample ID MS for HBN 137757 [VMXV/1897]  
 Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/23/02	04/23/02	46	2.0	ug/L	1:1
Benzene	8260B	04/23/02	04/23/02	99	2.0	ug/L	1:1
Trichloroethene	8260B	04/23/02	04/23/02	44	2.0	ug/L	1:1
Toluene	8260B	04/23/02	04/23/02	47	2.0	ug/L	1:1
Chlorobenzene	8260B	04/23/02	04/23/02	49	2.0	ug/L	1:1

**Matrix Spike Duplicate Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42109  
**Sample ID** MSD for HBN 137757 [VMXV/1897]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
1,1-Dichloroethene	8260B	04/23/02	04/23/02	49	2.0	ug/L	1:1
Benzene	8260B	04/23/02	04/23/02	102	2.0	ug/L	1:1
Trichloroethene	8260B	04/23/02	04/23/02	45	2.0	ug/L	1:1
Toluene	8260B	04/23/02	04/23/02	49	2.0	ug/L	1:1
Chlorobenzene	8260B	04/23/02	04/23/02	51	2.0	ug/L	1:1

**Method Blank Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42241  
**Sample ID** MB for HBN 138045 [TDSV/1097]  
**Matrix** Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Total Dissolved Solids	EPA 160.1	04/23/02	04/23/02	ND	10	mg/L	1:1

Lab Control Sample Report

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42242  
**Sample ID** LCS for HBN 138045 [TDSV/1097]  
**Matrix** Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Total Dissolved Solids	EPA 160.1	04/23/02	04/23/02	500	10	mg/L	1:1

**Lab Control Sample Duplicate Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42243  
**Sample ID** LCSD for HBN 138045 [TDSV/1097]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Total Dissolved Solids	EPA 160.1	04/23/02	04/23/02	484	10	mg/L	1:1

**Duplicate Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42244  
**Sample ID** DUP for HBN 138045 [TDSV/1097]  
**Matrix** Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Total Dissolved Solids	EPA 160.1	04/23/02	04/23/02	2320	10	mg/L	1:1

**Matrix Spike Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42245  
**Sample ID** MS for HBN 138045 [TDSV/1097]  
**Matrix** Water

---

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Total Dissolved Solids	EPA 160.1	04/23/02	04/23/02	2810	10	mg/L	1:1



**Matrix Spike Duplicate Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42246  
**Sample ID** MSD for HBN 138045 [TDSV/1097]  
**Matrix** Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Total Dissolved Solids	EPA 160.1	04/23/02	04/23/02	2830	10	mg/L	1:1

Method Blank Report

Client ID IT Corporation  
Workorder ID 830714 Former Thomas Short  
Laboratory ID 42316  
Sample ID MB for HBN 138252 [DIGV/1336]  
Matrix Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/23/02	05/01/02	ND0.00020		mg/L	1:1

**Lab Control Sample Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42317  
**Sample ID** LCS for HBN 138252 [DIGV/1336]  
**Matrix** Water

---

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/23/02	05/01/02	0.001070.00020		mg/L	1:1

Lab Control Sample Duplicate Report

Client ID IT Corporation  
Workorder ID 830714 Former Thomas Short  
Laboratory ID 42318  
Sample ID LCSD for HBN 138252 [DIGV/1336  
Matrix Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/23/02	05/01/02	0.001070.00020		mg/L	1:1

Duplicate Report

Client ID IT Corporation  
Workorder ID 830714 Former Thomas Short  
Laboratory ID 42319  
Sample ID DUP for HBN 138252 [DIGV/1336]  
Matrix Water

---

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/23/02	05/01/02	ND0.00020		mg/L	1:1

**Matrix Spike Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42320  
**Sample ID** MS for HBN 138252 [DIGV/1336]  
**Matrix** Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/23/02	05/01/02	0.001100	0.00020	mg/L	1:1

**Matrix Spike Duplicate Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42321  
**Sample ID** MSD for HBN 138252 [DIGV/1336]  
**Matrix** Water

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Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Mercury	EPA 7470A	04/23/02	05/01/02	0.001050	0.00020	mg/L	1:1

Method Blank Report

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 Laboratory ID 42334  
 Sample ID MB for HBN 138262 [ICPV/3516]  
 Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/23/02	05/01/02	ND	0.060	mg/L	1:1
Arsenic	6010B	04/23/02	05/01/02	ND	0.080	mg/L	1:1
Barium	6010B	04/23/02	05/01/02	ND	0.020	mg/L	1:1
Beryllium	6010B	04/23/02	05/01/02	ND	0.0030	mg/L	1:1
Cadmium	6010B	04/23/02	05/01/02	ND	0.0050	mg/L	1:1
Chromium	6010B	04/23/02	05/01/02	ND	0.010	mg/L	1:1
Cobalt	6010B	04/23/02	05/01/02	ND	0.050	mg/L	1:1
Copper	6010B	04/23/02	05/01/02	ND	0.020	mg/L	1:1
Lead	6010B	04/23/02	05/01/02	ND	0.010	mg/L	1:1
Molybdenum	6010B	04/23/02	05/01/02	ND	0.050	mg/L	1:1
Nickel	6010B	04/23/02	05/01/02	ND	0.040	mg/L	1:1
Selenium	6010B	04/23/02	05/01/02	ND	0.10	mg/L	1:1
Silver	6010B	04/23/02	05/01/02	ND	0.010	mg/L	1:1
Thallium	6010B	04/23/02	05/01/02	ND	0.10	mg/L	1:1
Vanadium	6010B	04/23/02	05/01/02	ND	0.050	mg/L	1:1
Zinc	6010B	04/23/02	05/01/02	ND	0.015	mg/L	1:1



**Lab Control Sample Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42335  
**Sample ID** LCS for HBN 138262 [ICPV/3516]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/23/02	05/01/02	0.64	0.060	mg/L	1:1
Arsenic	6010B	04/23/02	05/01/02	0.51	0.080	mg/L	1:1
Barium	6010B	04/23/02	05/01/02	0.52	0.020	mg/L	1:1
Beryllium	6010B	04/23/02	05/01/02	0.10	0.0030	mg/L	1:1
Cadmium	6010B	04/23/02	05/01/02	0.19	0.0050	mg/L	1:1
Chromium	6010B	04/23/02	05/01/02	0.51	0.010	mg/L	1:1
Cobalt	6010B	04/23/02	05/01/02	0.19	0.050	mg/L	1:1
Copper	6010B	04/23/02	05/01/02	0.52	0.020	mg/L	1:1
Lead	6010B	04/23/02	05/01/02	0.50	0.010	mg/L	1:1
Molybdenum	6010B	04/23/02	05/01/02	0.50	0.050	mg/L	1:1
Nickel	6010B	04/23/02	05/01/02	1.1	0.040	mg/L	1:1
Selenium	6010B	04/23/02	05/01/02	0.52	0.10	mg/L	1:1
Silver	6010B	04/23/02	05/01/02	0.044	0.010	mg/L	1:1
Thallium	6010B	04/23/02	05/01/02	0.46	0.10	mg/L	1:1
Vanadium	6010B	04/23/02	05/01/02	0.20	0.050	mg/L	1:1
Zinc	6010B	04/23/02	05/01/02	0.50	0.015	mg/L	1:1

Lab Control Sample Duplicate Report

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 Laboratory ID 42336  
 Sample ID LCSD for HBN 138262 [ICPV/3516  
 Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/23/02	05/01/02	0.63	0.060	mg/L	1:1
Arsenic	6010B	04/23/02	05/01/02	0.52	0.080	mg/L	1:1
Barium	6010B	04/23/02	05/01/02	0.54	0.020	mg/L	1:1
Beryllium	6010B	04/23/02	05/01/02	0.10	0.0030	mg/L	1:1
Cadmium	6010B	04/23/02	05/01/02	0.20	0.0050	mg/L	1:1
Chromium	6010B	04/23/02	05/01/02	0.51	0.010	mg/L	1:1
Cobalt	6010B	04/23/02	05/01/02	0.19	0.050	mg/L	1:1
Copper	6010B	04/23/02	05/01/02	0.51	0.020	mg/L	1:1
Lead	6010B	04/23/02	05/01/02	0.50	0.010	mg/L	1:1
Molybdenum	6010B	04/23/02	05/01/02	0.50	0.050	mg/L	1:1
Nickel	6010B	04/23/02	05/01/02	1.1	0.040	mg/L	1:1
Selenium	6010B	04/23/02	05/01/02	0.50	0.10	mg/L	1:1
Silver	6010B	04/23/02	05/01/02	0.040	0.010	mg/L	1:1
Thallium	6010B	04/23/02	05/01/02	0.50	0.10	mg/L	1:1
Vanadium	6010B	04/23/02	05/01/02	0.21	0.050	mg/L	1:1
Zinc	6010B	04/23/02	05/01/02	0.49	0.015	mg/L	1:1

Duplicate Report

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 Laboratory ID 42337  
 Sample ID DUP for HBN 138262 [ICPV/3516]  
 Matrix Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/23/02	05/01/02	ND	0.060	mg/L	1:1
Arsenic	6010B	04/23/02	05/01/02	ND	0.080	mg/L	1:1
Barium	6010B	04/23/02	05/01/02	0.038	0.020	mg/L	1:1
Beryllium	6010B	04/23/02	05/01/02	ND	0.0030	mg/L	1:1
Cadmium	6010B	04/23/02	05/01/02	ND	0.0050	mg/L	1:1
Chromium	6010B	04/23/02	05/01/02	ND	0.010	mg/L	1:1
Cobalt	6010B	04/23/02	05/01/02	ND	0.050	mg/L	1:1
Copper	6010B	04/23/02	05/01/02	ND	0.020	mg/L	1:1
Lead	6010B	04/23/02	05/01/02	ND	0.010	mg/L	1:1
Molybdenum	6010B	04/23/02	05/01/02	ND	0.050	mg/L	1:1
Nickel	6010B	04/23/02	05/01/02	ND	0.040	mg/L	1:1
Selenium	6010B	04/23/02	05/01/02	ND	0.10	mg/L	1:1
Silver	6010B	04/23/02	05/01/02	ND	0.010	mg/L	1:1
Thallium	6010B	04/23/02	05/01/02	ND	0.10	mg/L	1:1
Vanadium	6010B	04/23/02	05/01/02	ND	0.050	mg/L	1:1
Zinc	6010B	04/23/02	05/01/02	0.029	0.015	mg/L	1:1

**Matrix Spike Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42338  
**Sample ID** MS for HBN 138262 [ICPV/3516]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/23/02	05/01/02	0.78	0.060	mg/L	1:1
Arsenic	6010B	04/23/02	05/01/02	0.53	0.080	mg/L	1:1
Barium	6010B	04/23/02	05/01/02	0.59	0.020	mg/L	1:1
Beryllium	6010B	04/23/02	05/01/02	0.11	0.0030	mg/L	1:1
Cadmium	6010B	04/23/02	05/01/02	0.20	0.0050	mg/L	1:1
Chromium	6010B	04/23/02	05/01/02	0.52	0.010	mg/L	1:1
Cobalt	6010B	04/23/02	05/01/02	0.19	0.050	mg/L	1:1
Copper	6010B	04/23/02	05/01/02	0.51	0.020	mg/L	1:1
Lead	6010B	04/23/02	05/01/02	0.50	0.010	mg/L	1:1
Molybdenum	6010B	04/23/02	05/01/02	0.51	0.050	mg/L	1:1
Nickel	6010B	04/23/02	05/01/02	1.1	0.040	mg/L	1:1
Selenium	6010B	04/23/02	05/01/02	0.53	0.10	mg/L	1:1
Silver	6010B	04/23/02	05/01/02	0.049	0.010	mg/L	1:1
Thallium	6010B	04/23/02	05/01/02	0.50	0.10	mg/L	1:1
Vanadium	6010B	04/23/02	05/01/02	0.18	0.050	mg/L	1:1
Zinc	6010B	04/23/02	05/01/02	0.53	0.015	mg/L	1:1

**Matrix Spike Duplicate Report**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**Laboratory ID** 42339  
**Sample ID** MSD for HBN 138262 [ICPV/3516]  
**Matrix** Water

Parameter	Method	Prep Date	Analyzed	Result	RL	Units	Dilution
Antimony	6010B	04/23/02	05/01/02	0.80	0.060	mg/L	1:1
Arsenic	6010B	04/23/02	05/01/02	0.53	0.080	mg/L	1:1
Barium	6010B	04/23/02	05/01/02	0.55	0.020	mg/L	1:1
Beryllium	6010B	04/23/02	05/01/02	0.10	0.0030	mg/L	1:1
Cadmium	6010B	04/23/02	05/01/02	0.20	0.0050	mg/L	1:1
Chromium	6010B	04/23/02	05/01/02	0.54	0.010	mg/L	1:1
Cobalt	6010B	04/23/02	05/01/02	0.19	0.050	mg/L	1:1
Copper	6010B	04/23/02	05/01/02	0.49	0.020	mg/L	1:1
Lead	6010B	04/23/02	05/01/02	0.51	0.010	mg/L	1:1
Molybdenum	6010B	04/23/02	05/01/02	0.53	0.050	mg/L	1:1
Nickel	6010B	04/23/02	05/01/02	1.0	0.040	mg/L	1:1
Selenium	6010B	04/23/02	05/01/02	0.55	0.10	mg/L	1:1
Silver	6010B	04/23/02	05/01/02	0.042	0.010	mg/L	1:1
Thallium	6010B	04/23/02	05/01/02	0.51	0.10	mg/L	1:1
Vanadium	6010B	04/23/02	05/01/02	0.21	0.050	mg/L	1:1
Zinc	6010B	04/23/02	05/01/02	0.50	0.015	mg/L	1:1

**QC SUMMARY**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** TDSX 1103  
**Matrix** Water

**Original Sample** 14655001  
 Duplicate [42244]

---

Parameter	RPD	RPD Limits
Total Dissolved Solids	3.3	(30)

QC SUMMARY

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** DIG 1342  
**Matrix** Water

**Original** 14654001  
**Sample** Duplicate [42319]

---

<b>Parameter</b>	<b>RPD</b>	<b>RPD Limits</b>
Mercury	0000	(35)

QC SUMMARY

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 QC Batch ICPP 3555  
 Matrix Water

Original 14654001  
 Sample Duplicate [42337]

Parameter	RPD	RPD Limits
Antimony	00	(35)
Arsenic	00	(35)
Barium	13	(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	12	(35)



QC SUMMARY

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** VGX 2262  
**Matrix** Water

**Original** 14654006  
**Samples** Matrix Spike [41969]  
 Matrix Spike Duplicate [41970]

---

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	109	105	(65-135)	3.7	(20 MAX)

**QC SUMMARY**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** VMX 1939  
**Matrix** Water

**Original Samples** 14654006  
 Matrix Spike [42092]  
 Matrix Spike Duplicate [42093]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
1,1-Dichloroethene	80	80	(61-145)	00	(20 MAX)
Benzene	106	104	(76-127)	1.9	(20 MAX)
Trichloroethene	100	98	(71-135)	2.0	(20 MAX)
Toluene	110	108	(76-130)	1.8	(20 MAX)
Chlorobenzene	110	110	(75-130)	00	(20 MAX)

QC SUMMARY

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 QC Batch VMX 1940  
 Matrix Water

Original 14654006  
 Samples Matrix Spike [42097]  
 Matrix Spike Duplicate [42098]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Tertiary butanol	96	100	(76-135)	4.1	(20 MAX)
Methyl-tert-butyl-ether	98	98	(76-135)	00	(20 MAX)
Di-isopropyl ether	98	96	(76-135)	2.1	(20 MAX)
Ethyl tert-butyl ether	98	98	(76-135)	00	(20 MAX)
Tertiaryamyl methylether	98	98	(76-135)	00	(20 MAX)

**QC SUMMARY**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** VMX 1941  
**Matrix** Water

**Original** 14655002  
**Samples** Matrix Spike [42108]  
 Matrix Spike Duplicate [42109]

Parameter	Spike % Recovery	Spike Dup % Recovery	Recovery Limits	RPD	RPD Limits
1,1-Dichloroethene	92	98	(61-145)	6.3	(20 MAX)
Benzene	92	98	(76-127)	6.3	(20 MAX)
Trichloroethene	88	90	(71-135)	2.2	(20 MAX)
Toluene	89	93	(76-130)	4.4	(20 MAX)
Chlorobenzene	98	102	(75-130)	4.0	(20 MAX)

QC SUMMARY

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** TDSX 1103  
**Matrix** Water

**Original Samples** 14655001  
 Matrix Spike [42245]  
 Matrix Spike Duplicate [42246]

---

Parameter	Spike % Recovery	Spike Dup % Recovery	Recovery Limits	RPD	RPD Limits
Total Dissolved Solids	115	118	(75-125)	2.6	(30 MAX)

**QC SUMMARY**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** DIG 1342  
**Matrix** Water

**Original Samples** 14654001  
 Matrix Spike [42320]  
 Matrix Spike Duplicate [42321]

---

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Mercury	110	105	(75-125)	4.65	(35 MAX)

QC SUMMARY

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 QC Batch ICPP 3555  
 Matrix Water

Original Samples 14654001  
 Matrix Spike [42338]  
 Matrix Spike Duplicate [42339]

Parameter	Spike %Recovery	Spike Dup %Recovery	Recovery Limits	RPD	RPD Limits
Antimony	157	160	(25-125)	1.9	(35 MAX)
Arsenic	107	106	(75-125)	0.90	(35 MAX)
Barium	112	104	(75-125)	7.4	(35 MAX)
Beryllium	107	101	(75-125)	5.8	(35 MAX)
Cadmium	101	102	(75-125)	1.0	(35 MAX)
Chromium	105	108	(75-125)	2.8	(35 MAX)
Cobalt	95	97	(75-125)	2.1	(35 MAX)
Copper	102	99	(75-125)	3.0	(35 MAX)
Lead	99	102	(75-125)	3.0	(35 MAX)
Molybdenum	103	106	(75-125)	2.9	(35 MAX)
Nickel	106	103	(75-125)	2.9	(35 MAX)
Selenium	107	110	(75-125)	2.8	(35 MAX)
Silver	98	84	(25-125)	15	(35 MAX)
Thallium	101	101	(50-125)	00	(35 MAX)
Vanadium	92	105	(75-125)	13	(35 MAX)
Zinc	101	96	(75-125)	5.1	(35 MAX)

QC SUMMARY

Client ID IT Corporation  
 Workorder ID 830714 Former Thomas Short  
 QC Batch SGX 1711  
 Matrix Water

Samples Lab Control Sample [41914]  
 Lab Control Sample Duplicate [41915]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHDiesel	100	97	(65-135)	3.0	(20 MAX)



QC SUMMARY

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** VGX 2262  
**Matrix** Water

**Samples** Lab Control Sample [41967]  
 Lab Control Sample Duplicate [41968]

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Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
TPHgas	104	102	(65-135)	1.9	(20 MAX)

**QC SUMMARY**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** VMX 1939  
**Matrix** Water

**Samples** Lab Control Sample [42090]  
 Lab Control Sample Duplicate [42091]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
1,1-Dichloroethene	94	90	(65-145)	4.3	(20 MAX)
Benzene	106	106	(71-127)	00	(20 MAX)
Trichloroethene	102	102	(75-135)	00	(20 MAX)
Toluene	108	110	(76-135)	1.8	(20 MAX)
Chlorobenzene	112	112	(76-135)	00	(20 MAX)

**QC SUMMARY**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** VMX 1940  
**Matrix** Water

**Samples** Lab Control Sample [42095]  
 Lab Control Sample Duplicate [42096]

Parameter	Check % Recovery	Check Dup % Recovery	Recovery Limits	RPD	RPD Limits
Tertiary butanol	100	104	(76-135)	3.9	(20 MAX)
Methyl-tert-butyl-ether	102	100	(76-135)	2.0	(20 MAX)
Di-isopropyl ether	102	100	(76-135)	2.0	(20 MAX)
Ethyl tert-butyl ether	102	100	(76-135)	2.0	(20 MAX)
Tertiaryamyl methylether	102	102	(76-135)	00	(20 MAX)

**QC SUMMARY**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** VMX 1941  
**Matrix** Water

**Samples** Lab Control Sample [42106]  
 Lab Control Sample Duplicate [42107]

Parameter	Check % Recovery	Check Dup % Recovery	Recovery Limits	RPD	RPD Limits
1,1-Dichloroethene	90	88	(65-145)	2.2	(20 MAX)
Benzene	98	100	(71-127)	2.0	(20 MAX)
Trichloroethene	88	92	(75-135)	4.4	(20 MAX)
Toluene	86	90	(76-135)	4.5	(20 MAX)
Chlorobenzene	102	104	(76-135)	1.9	(20 MAX)

**QC SUMMARY**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** TDSX 1103  
**Matrix** Water

**Samples** Lab Control Sample [42242]  
 Lab Control Sample Duplicate [42243]

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Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Total Dissolved Solids	100	97	(80-120)	3.0	(20 MAX)

**QC SUMMARY**

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** DIG 1342  
**Matrix** Water

**Samples** Lab Control Sample [42317]  
 Lab Control Sample Duplicate [42318]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Mercury	107	107	(80-120)	0000	(20 MAX)

## QC SUMMARY

**Client ID** IT Corporation  
**Workorder ID** 830714 Former Thomas Short  
**QC Batch** ICPP 3555  
**Matrix** Water

**Samples** Lab Control Sample [42335]  
Lab Control Sample Duplicate [42336]

Parameter	Check %Recovery	Check Dup %Recovery	Recovery Limits	RPD	RPD Limits
Antimony	128	126	(70-120)	1.6	(20 MAX)
Arsenic	102	104	(80-120)	1.9	(20 MAX)
Barium	104	108	(80-120)	3.8	(20 MAX)
Beryllium	103	102	(80-120)	1.0	(20 MAX)
Cadmium	96	98	(80-120)	2.1	(20 MAX)
Chromium	101	103	(80-120)	2.0	(20 MAX)
Cobalt	94	96	(80-120)	2.1	(20 MAX)
Copper	104	102	(80-120)	1.9	(20 MAX)
Lead	100	99	(80-120)	1.0	(20 MAX)
Molybdenum	100	101	(80-120)	1.0	(20 MAX)
Nickel	107	106	(80-120)	0.90	(20 MAX)
Selenium	104	101	(80-120)	2.9	(20 MAX)
Silver	87	80	(60-120)	8.4	(20 MAX)
Thallium	93	101	(80-120)	8.2	(20 MAX)
Vanadium	102	103	(80-120)	1.0	(20 MAX)
Zinc	99	99	(80-120)	00	(20 MAX)

WORKORDER DATA SHEET

Apr 22, 2002 10:33

ID 14655 WO #14655 830714 Former Thomas Short STATUS WP  
DESC JR

CREATED 04/22/02 10:28 PO QA TYPE CM ACODE REPORT\_WO  
CLIENT IT Corp. IT Corporation  
PROFILE 110 Standard Standard w/o Discount

WORKORDER SAMPLES

1 14655001 14655001 MW-4  
WP TYPE SAMPLE MATRIX Water  
COLLECTED 04/19/02 00:00 DUE 05/03/02 17:00

<u>Analyses</u>	<u>Turndays</u>
OXG/60W 8260B OXYGENATES WATR	10
8260 WATR 8260B GCMS VOLATILES WATR	10
8015M_G W TPH Gas WATR	10
8015M_D W TPHdiesel Water	10
1664TRPHW TRPH 1664, Water	10
CAM16WATR 6010B ELEMENTS CAM16 WATER	10

2 14655002 14655002 MW-5  
WP TYPE SAMPLE MATRIX Water  
COLLECTED 04/19/02 00:00 DUE 05/03/02 17:00

<u>Analyses</u>	<u>Turndays</u>
OXG/60W 8260B OXYGENATES WATR	10
8260 WATR 8260B GCMS VOLATILES WATR	10
8015M_G W TPH Gas WATR	10
8015M_D W TPHdiesel Water	10
1664TRPHW TRPH 1664, Water	10
CAM16WATR 6010B ELEMENTS CAM16 WATER	10

3 14655003 14655003 MW-6  
WP TYPE SAMPLE MATRIX Water  
COLLECTED 04/19/02 00:00 DUE 05/03/02 17:00

<u>Analyses</u>	<u>Turndays</u>
OXG/60W 8260B OXYGENATES WATR	10
8260 WATR 8260B GCMS VOLATILES WATR	10
8015M_G W TPH Gas WATR	10
8015M_D W TPHdiesel Water	10
1664TRPHW TRPH 1664, Water	10
CAM16WATR 6010B ELEMENTS CAM16 WATER	10



**WORKORDER DATA SHEET**

Apr 22, 2002 10:33

4 14655004 14655004 Trip Blank  
WP TYPE SAMPLE MATRIX Water  
COLLECTED 04/19/02 00:00 DUE 05/03/02 17:00

<u>Analyses</u>		<u>Turndays</u>
OXG/60W	8260B OXYGENATES WATR	10
8260 WATR	8260B GCMS VOLATILES WATR	10
8015M_G W	TPH Gas WATR	10

**CLEAN UP CUSTODY / LABORATORY ANALYSIS REQUEST FORM**

IT CORPORATION - 1326 North Market Boulevard, Sacramento, CA 95834

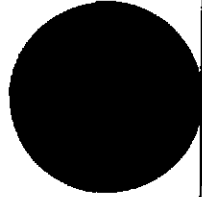
(916) 928-3300 FAX (916) 565-4356

Purchase Order: # 189348 for 2nd Qtr. 200

Lab: Sparger Technology, Sacto

Project Name: Caltrans, Former Thomas Short Property  
 Project Number: 830714 / 01010000  
 Project Manager: Don Bransford  
 Company: IT CORPORATION  
 Address: 1326 North Market Boulevard  
 Sacramento, CA 95834  
 Dir. Ph: (916) 565-4186 FAX: (916) 565-4356  
 Sampler's Signature: *Paul Weinhart*

					Analysis Requested										REMARKS					
Sample I.D.	Date	Time	LAB I.D.	Sample Matrix	Number of Containers	Fuel Oxygenates by 8260B; VOCs by 8260B; TPH as gas by 8015M	TPH as Diesel by 8015M	TRPH by 1664	CAM Metals by 6010/7470 NOT field filtered.	TDS										
						1	6	6	3	3										Container Types
						HCl	NP	HCl	NP	NP										Preservations
MW-4	4.9	8:26		Water	8	4	1	1	1	1										
MW-5	↓	9:17		Water	8	4	1	1	1	1										
MW-6	↓	9:10		Water	8	4	1	1	1	1										
Trip Blank	↓	~11		Water	2	2														



RELINQUISHED BY	RECEIVED BY
Signature: <i>Paul Weinhart</i>	Signature: <i>Samuel Rivera</i>
Printed Name: <i>Paul Weinhart</i>	Printed Name: <i>Samuel Rivera</i>
Firm: <i>IT Corp</i>	Firm: <i>Sparger</i>
Date/Time: <i>4-19-02 14:20</i>	Date/Time: <i>4/19/02 14:20</i>

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

**TURNAROUND REQUIREMENTS**

24 hr \_\_\_\_\_ 48 hr \_\_\_\_\_ 5 day \_\_\_\_\_

Standard (~10-15 working days)

Provide Verbal Preliminary Results \_\_\_\_\_

Provide FAX Preliminary Results \_\_\_\_\_

Requested Report Date: \_\_\_\_\_

**REPORT REQUIREMENTS**

I. Routine Report

II. Report (includes DUP, MS MSD, as required, may be charged as samples)

III. Data Validation Report (includes All Raw Data)

**RWQCB**  
(MDLs/PQLs/TRACE#)

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

**Special Instructions/Comments:**

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

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

**Container Types Key:**

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