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MAY 24 2002

May 21, 2002

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

Dear Mr. Hwang:

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

In continuation of the groundwater monitoring at the former Thomas Short Company site (3430 Wood Street, Alameda County Site #386), enclosed you will find the 2002 first quarterly report, dated May 14, 2002, prepared by the IT Corporation. This sampling session occurred on January 15, 2002.

This is the 6th and the most current quarterly report. I will continue to keep you updated with the latest as information becomes available.

If you have any questions or comments, I can be reached at (510) 286-5647.

Sincerely,

Christopher R. Wilson

CHRISTOPHER R. WILSON, P.E.
District Branch Chief
Office of Environmental Engineering

R0126

IT CORPORATION
*A Member of The IT Group*

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

May 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

MAY 24 2002

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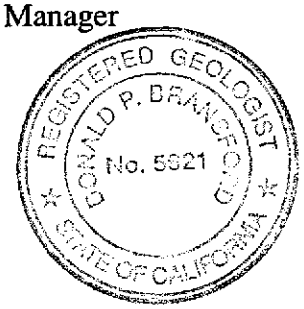
# FIRST QUARTER 2002 GROUNDWATER MONITORING REPORT
## FORMER THOMAS A. SHORT COMPANY PROPERTY
## OAKLAND, ALAMEDA COUNTY, CALIFORNIA

IT Corporation (IT), is pleased to submit this report for first 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**

Donald P. Bransford, R.G.
Project Manager




Distribution: Chris Wilson, Caltrans
File 830714

# 1.0 Project History

The Thomas Short property (Figure 1) was purchased by Caltrans in 1994. According to a previous report on this site (Geocon, 2001), one 4,000-gallon gasoline underground storage tank (UST) and one 1,000-gallon diesel UST were located at the site. The USTs were removed in January 1993. Groundwater samples collected from monitoring well 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. Groundwater was encountered at depths of approximately 3.1 to 4.7 meters (10 to 15.5 feet) BGS. The wells were sampled over three quarters. Groundwater gradients varied from southeast, southwest, and west-southwest. The most recent monitoring results from March 2001 reported TPHg at concentrations that ranged from 0.26 to 8.1 mg/l and total petroleum hydrocarbons as diesel (TPHd) at concentrations that ranged from 0.42 to 0.96 mg/l. Benzene, toluene, and ethyl benzene were detected in each of the groundwater samples collected from the three wells; xylenes were detected in one of the groundwater samples. Benzene concentrations ranged from 0.035 to 0.052 mg/l. The groundwater samples were reported to contain various other volatile organic compounds common to gasoline. Methyl tertiary butyl ether (MTBE) was not reported in the groundwater samples collected during the last monitoring event, although it was reported in previous groundwater sampling events at concentrations up to 0.007 mg/l (Geocon, 2001).

# 2.0 Groundwater Sampling Event

## 2.1 Groundwater Sampling and Analytical Program

Groundwater sampling for the first quarter of 2002 was conducted on January 15, 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.

| Matrix | Analyses |
|---|---|
| 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

The monitoring results from the groundwater samples collected during the first 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: | Former Thomas A. Short Company<br>3430 Wood Street, Oakland, California, Figure 1 |
| Current Phase of Project: | Monitoring |
| Frequency of Monitoring: | Quarterly |
| Separate-Phase Hydrocarbons Present: | None present |
| Water Purged from Wells This Quarter: | 11.25 gallons (from 3 monitoring wells) |
| Range of Depth to Groundwater: | 8.03 to 11.92 (feet from top of casing), Table 1<br>2.4 to 3.6 (meters from top of casing) |
| Groundwater Elevation Change Since Last Quarter: | Groundwater elevations increased in all wells.<br>Increases ranged from 1.13 to 1.55 feet<br>0.3 to 0.5 meters |
| Groundwater Gradient: | 0.011, Figure 3 |
| Groundwater Flow Direction: | West, Figure 3 |

## 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-5 and MW-6 at concentrations ranging from 3.5 to 7.8 mg/l. TPHg was not reported in the groundwater sample from well MW-4 at concentrations above 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 0.047 to 0.063 mg/l for benzene, 0.0031 to 0.018 mg/l for toluene, and 0.018 to 0.130 mg/l for ethylbenzene. Xylenes were

reported in the groundwater samples collected from well MW-4 at a concentration of 0.0325 mg/l. Xylenes were not reported in the groundwater sample 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).

| | | | |
|---|---|---|---|
| 1,1,2-trichloroethane | 0.0036 | 1,2-dichloroethane | 0.0039 |
| 1,2-dichloropropane | 0.0041 | 4-isopropyltoluene | 0.0036 |
| bromodichloromethane | 0.0068 | chloroform | 0.023 |
| isopropylbenzene | 0.025 to 0.180 | naphthalene | 0.012 to 0.038 |
| n-butylbenzene | 0.017 to 0.021 | n-propylbenzene | 0.045 |
| sec-butylbenzene | 0.0051 to 0.011 | tert-butylbenzene | 0.016 to 0.020 |
| trichloroethene | 0.0067 | | |

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 0.092 to 0.34 mg/l. Zinc was reported in groundwater samples collected from wells MW-5 and MW-6 at concentrations of 0.020 and 0.031 mg/l.

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

## 3.3 Discussion of Analytical Results

Groundwater analytical results from the First Quarter 2002 sampling event are generally consistent with historical data. However, TPHg results are somewhat inconsistent compared to March 2001 data with the TPHg concentration increasing by an order of magnitude in well MW-6 and decreasing to none detected in well MW-4 (Table 6). TPHd concentrations decreased to none detected in all wells since the last monitoring event. BTEX and MTBE results are generally consistent with historical results and trends (Table 6).

VOC results are generally comparable to historical compounds and concentrations reported (Table 7). New compounds reported as a result of the January 2002 monitoring event include bromodichloromethane, chloroform, 1,2-dichloroethane, 1,2-dichloropropane, 1,1,2-trichloroethane, and trichloroethene. The analytical method reporting limits for these VOCs are lower for the current monitoring event than historical limits. The reported concentrations for

these new compounds are generally below or very close to the historical reporting limits, suggesting their detection this quarter may be a result of lower method detection limits.

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 only barium and zinc. Historical results for arsenic, chromium, molybdenum, nickel, selenium, silver, and vanadium are below the current method reporting limits. The reason for the difference between current results and historical results for the remaining metals is not known. Barium and zinc results are generally comparable to historical concentrations (Table 8).

## 3.4 Comparison to Risk-Based Screening Levels

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

| Constituent | RBSL (mg/l) | Wells with Groundwater Results Exceeding RBSL |
|---|---|---|
| TPHg | 0.500 | MW-5, MW-6 |
| benzene | 0.046 | MW-4, MW-5 |
| xylenes | 0.013 | MW-4 |
| naphthalene | 0.024 | MW-5 |
| barium | 0.0039 | MW-4, MW-5, MW-6 |
| zinc | 0.023 | MW-6 |

## 4.0 Recommendations

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

## 5.0 References


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

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

_____, 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.

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

**Table 1**
**First Quarter 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 | 01/15/02 | 8.03 | 0 | 0.30 |
| MW-5 | 12.33 | 5 to 15 | 01/15/02 | 11.92 | 0 | 0.41 |
| MW-6 | 11.49 | 5 to 15 | 01/15/02 | 11.58 | 0 | -0.09 |

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 |
| 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 |
| 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 |

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

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

| Well Number | Date Sampled | Total Petroleum Hydrocarbons | TPH as Gasoline (mg/l) | TPH as Diesel (mg/l) | Benzene (ug/l) | Toulene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | MTBE (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 01/15/02 | <5 | <0.050 | <0.050 | 47 | 18 | 130 | 32.5 | <2.0 |
| MW-5 | 01/15/02 | <5 | 7.8 | <0.050 | 63 | 3.1 | 18 | <2.0 | <2.0 |
| MW-6 | 01/15/02 | <5 | 3.5 | <0.050 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| Trip Blank | 01/15/02 | | <0.050 | | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |

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

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

| Well Number | Date Sampled | bromodichloromethane (ug/l) | n-butylbenzene (ug/l) | sec-butylbenzene (ug/l) | tert-butylbenzene (ug/l) | chloroform (ug/l) | 4-chlorotoluene (ug/l) | 1,2-dichloroethane (ug/l) | 1,2-dichloropropane (ug/l) | isopropylbenzene (Cumene) (ug/l) | 4-isopropyltoluene (ug/l) | napthanlene (ug/l) | n-propylbenzene (ug/l) | 1,1,2-trichloroethane (ug/l) | trichloroethene (ug/l) | 1,2,4-trimethylbenzene (ug/l) | 1,3,5-trimethylbenzene (ug/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 01/15/02 | 6.8 | 17 | 11 | 20 | 23 | <2.0 | 3.9 | 4.1 | 180 | 3.6 | 12 | <2.0 | 3.6 | 6.7 | <2.0 | <2.0 |
| MW-5 | 01/15/02 | <2.0 | 21 | 5.1 | 16 | <2.0 | <2.0 | 3.9 | <2.0 | 25 | <2.0 | 38 | 45 | <2.0 | <2.0 | <2.0 | <2.0 |
| MW-6 | 01/15/02 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| Trip Blank | 01/15/02 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 | <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**
**First Quarter 2002 Groundwater Analytical Results**
**Heavy Metals**
Former Thomas Short Company
Oakland, California

| Boring Number | Date | Antimony | Arsenic | Barium | Beryllium | Cadmium | Chromium | Cobalt | Copper | Lead | Mercury | Molybdenum | Nickel | Selenium | Silver | Thallium | Vanadium | Zinc |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 01/15/02 | <0.060 | <0.080 | 0.34 | <0.0030 | <0.0050 | <0.010 | <0.050 | <0.020 | <0.010 | <0.00020 | <0.050 | <0.040 | <0.10 | <0.010 | <0.10 | <0.050 | <0.015 |
| MW-5 | 01/15/02 | <0.060 | <0.080 | 0.19 | <0.0030 | <0.0050 | <0.010 | <0.050 | <0.020 | <0.010 | <0.00020 | <0.050 | <0.040 | <0.10 | <0.010 | <0.10 | <0.050 | 0.020 |
| MW-6 | 01/15/02 | <0.060 | <0.080 | 0.092 | <0.0030 | <0.0050 | <0.010 | <0.050 | <0.020 | <0.010 | <0.00020 | <0.050 | <0.040 | <0.10 | <0.010 | <0.10 | <0.050 | 0.031 |
| Reporting Limits | | 0.060 | 0.080 | 0.020 | 0.0030 | 0.0050 | 0.010 | 0.050 | 0.020 | 0.010 | 0.00020 | 0.050 | 0.040 | 0.10 | 0.010 | 0.10 | 0.050 | 0.015 |

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

| Well Number | Date Sampled | Total Petroleum Hydrocarbons | TPH as Gasoline (mg/l) | TPH as Diesel (mg/l) | Benzene (ug/l) | Toulene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | MTBE (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 05/26/00 | | **4.8** | 0.5 | **122** | 39 | 126 | **24.7** | <0.5 |
| | 11/27/00 | | **4.2** | 0.47 | **55** | 18 | 65 | **26.3** | 1.2 |
| | 03/29/01 | | **8.1** | 0.61 | **51** | 23 | 160 | **44.5** | <5.0 |
| | 01/15/02 | <5 | <0.050 | <0.050 | **47** | 18 | 130 | **32.5** | <2.0 |
| MW-5 | 05/26/00 | | **4.6** | 0.6 | **98** | 7 | 35 | **44** | 7 |
| | 11/27/00 | | **1.7** | 0.45 | 39 | 2.0 | 3.8 | 6.1 | 1.5 |
| | 03/29/01 | | **2.7** | **0.96** | 35 | 1.1 | 3.5 | 3.2 | <5.0 |
| | 01/15/02 | <5 | **7.8** | <0.050 | **63** | 3.1 | 18 | <2.0 | <2.0 |
| MW-6 | 05/26/00 | | **4.4** | 0.4 | **191** | 14 | 110 | **121** | 7 |
| | 11/27/00 | | 0.32 | 0.18 | 16 | 0.51 | 1.1 | 0.88 | 1.8 |
| | 03/29/01 | | 0.26 | 0.42 | **52** | 0.62 | 1.1 | <0.50 | <5.0 |
| | 01/15/02 | <5 | **3.5** | <0.050 | <2.0 | <2.0 | <2.0 | <2.0 | <2.0 |
| Risk-Based Screening Levels | | | 0.500 | 0.640 | 46 | 130 | 290 | 13 | 1,800 |

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

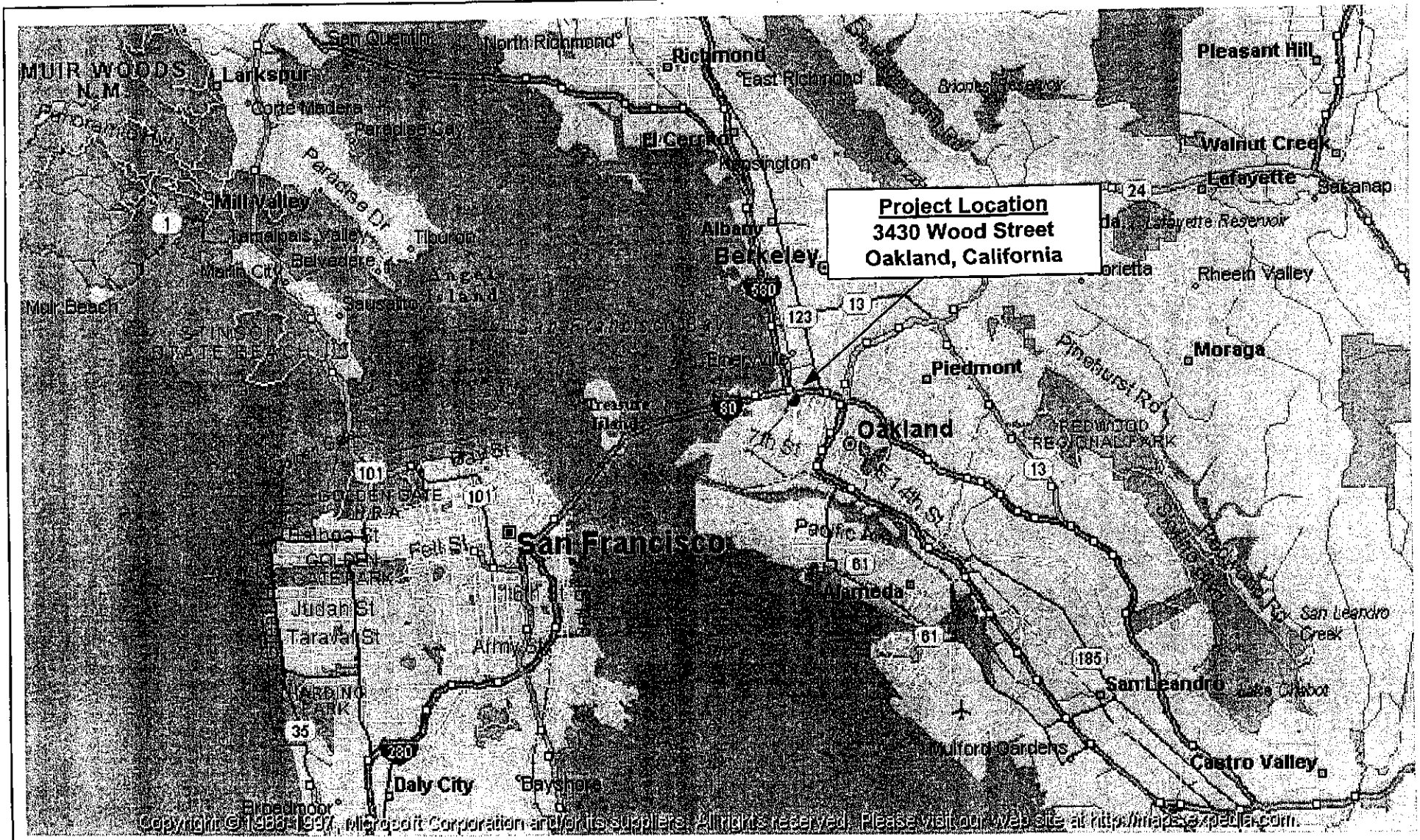
| Well Number | Date Sampled | bromodichloromethane (ug/l) | n-butylbenzene (ug/l) | sec-butylbenzene (ug/l) | tert-butylbenzene (ug/l) | chloroform (ug/l) | 4-chlorotoluene (ug/l) | 1,2-dichloroethane (ug/l) | 1,2-dichloropropane (ug/l) | isopropylbenzene (Cumene) (ug/l) | 4-Isopropyltoluene (ug/l)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

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

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




Reference:
Microsoft Expedia, Streets 98

**Scale**

0 5km 10km

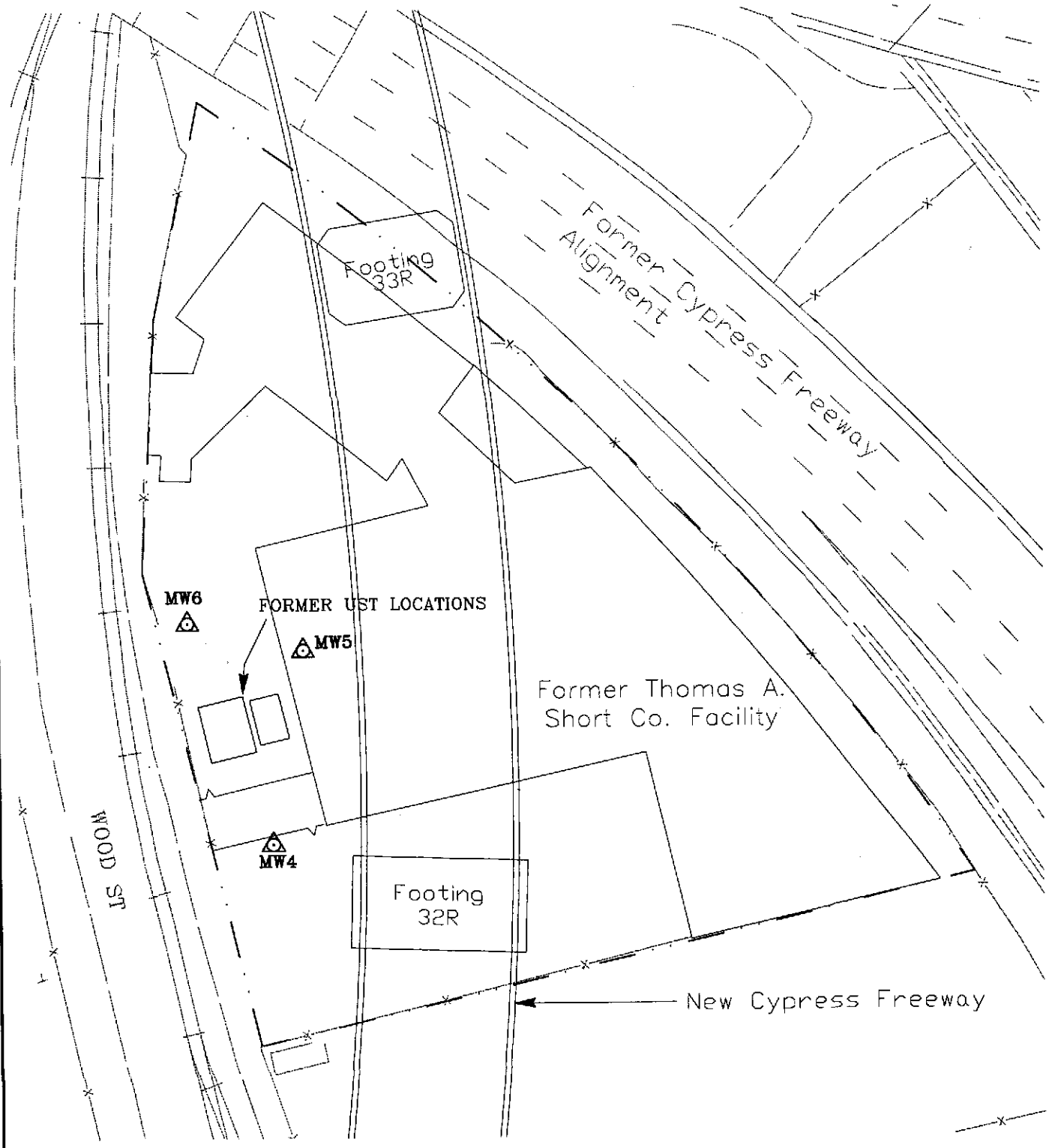
**Figure 1**

SITE LOCATION MAP

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

the group

| PROJECT NUMBER | 823340 |
|---|---|
| CHECKED BY | |
| APPROVED BY | |
| DRAWN BY | DPB |
| | 3/26/02 |




LEGEND

MW4 WELL LOCATION AND DESIGNATION

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

SCALE

0 50 100 Feet
0 15 30 Meters

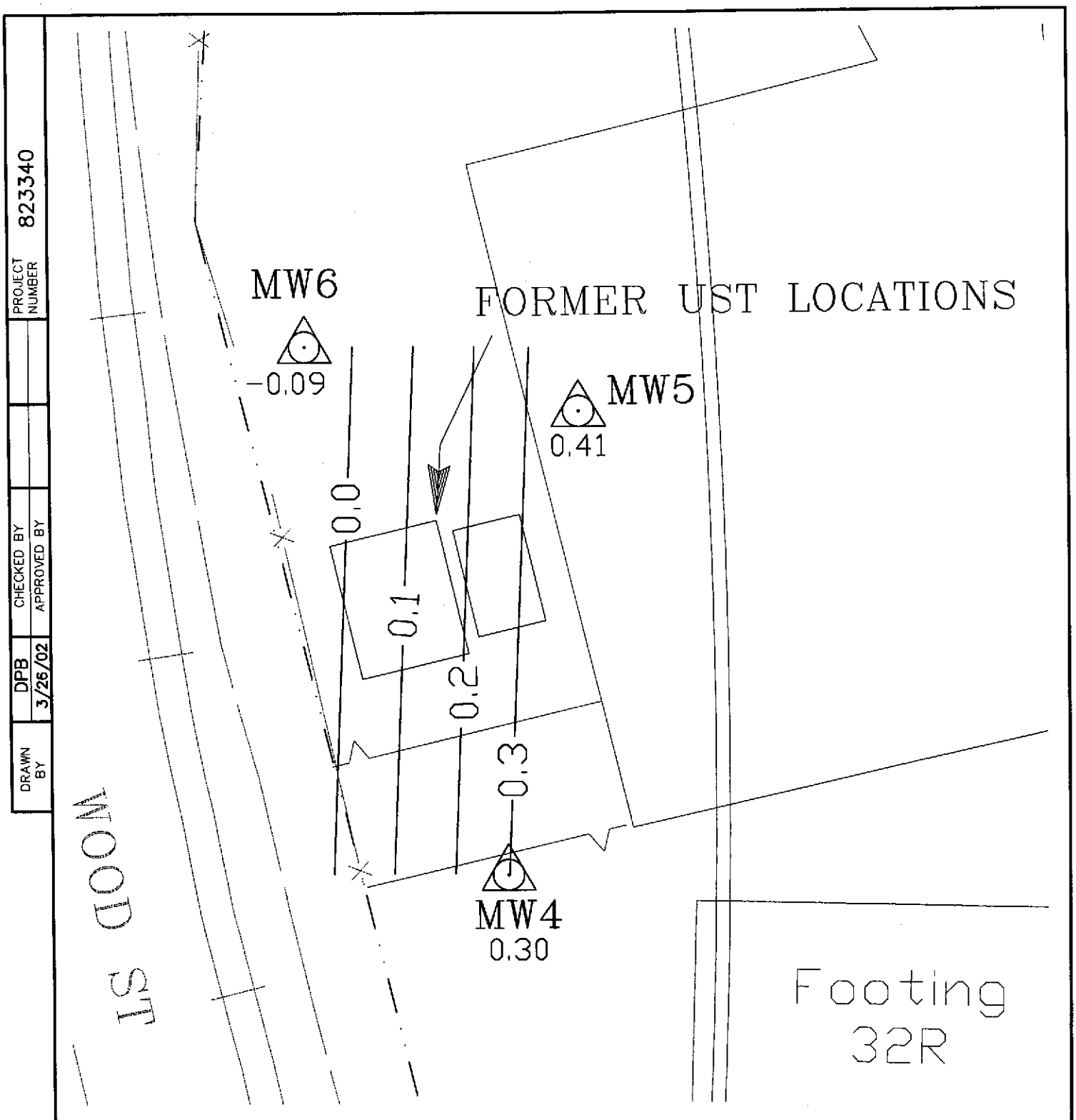
N

FIGURE 2

MONITORING WELL LOCATIONS

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

IT CORPORATION
A Member of The IT Group




| PROJECT NUMBER | 823340 |
|---|---|
| | |
| | |
| CHECKED BY | |
| APPROVED BY | |
| DRAWN BY | DPB |
| | 3/26/02 |

LEGEND

MW4
0.41
WELL LOCATION, DESIGNATION, AND GROUNDWATER ELEVATION IN FEET

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

SCALE
0 20 40 Feet
0 6 12 Meters

FIGURE 3

PIEZOMETRIC ELEVATION CONTOUR MAP

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

IT CORPORATION
A Member of The IT Group

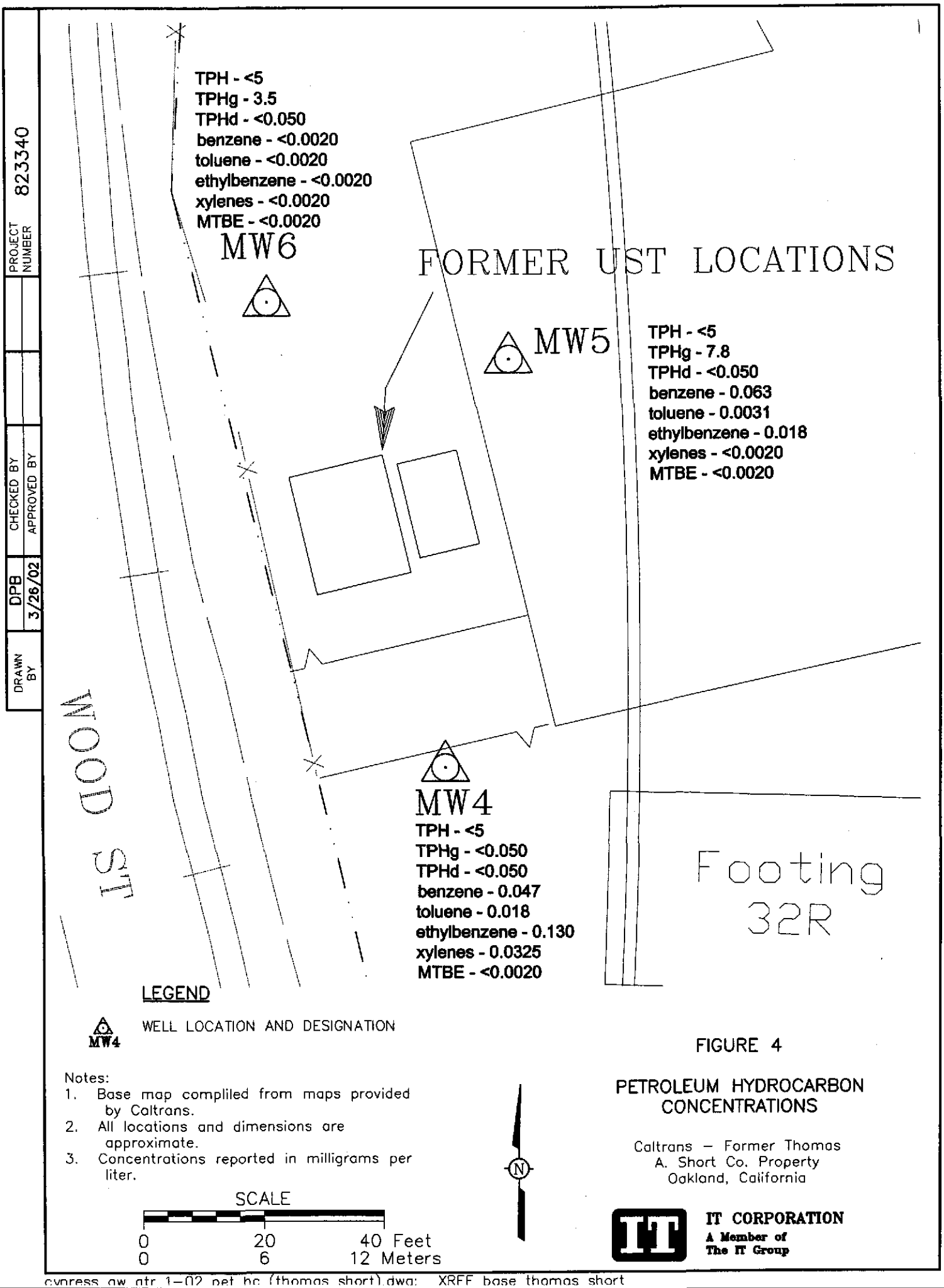



FIGURE 4

PETROLEUM HYDROCARBON CONCENTRATIONS

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

IT CORPORATION
A Member of The IT Group

cypress_gw_qtr_1-02_pet_hc_(thomas_short).dwg; XREF base_thomas_short

# 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 chests overnight in the custody of an IT Corporation (IT) employee. The samples were picked up within approximately 24 hours of collection of the last sample by a courier supplied by the laboratory, or were delivered to the laboratory by IT personnel within approximately 24 hours of collection of the last sample. The samples were transported to the laboratory in a motor vehicle.
- Groundwater samples were labeled with the well number followed by the date.
- Laboratory quality assurance/quality control procedures are summarized below:
  - Method Blank Frequency = one per 20 samples
  - Matrix Spike/Matrix Spike Duplicate = one per 20 samples
  - Laboratory Control Sample/Laboratory Control Sample Duplicate = one per 20 samples

# 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:** 1/15/02

**CLIENT : Caltrans** **SAMPLER :** Paul Weinhardt **DAY OF WEEK:** Tues.
**Former Thomas Short Co. Property**

| WELL ID | TIME | TOTAL DEPTH (Feet) | DEPTH TO WATER (Feet) | DEPTH TO FLOATING PRODUCT (Feet) | FLOATING PRODUCT THICKNESS (Feet) | COMMENTS |
|---|---|---|---|---|---|---|
| MW-4 | 818 | 15.00 | 8.03 | — | — | |
| MW-5 | 824 | 19.20 | 11.92 | — | — | |
| MW-6 | 830 | 18.70 | 11.58 | — | — | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
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| | | | | | | |
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| | | | | | | |

Comments :

Signature

Rev. 1/97

# WATER SAMPLE FIELD DATA SHEET

PROJECT NO : 830714 / 01010000 SAMPLE ID : MW-4

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

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

TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____

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

CASING ELEVATION (feet/MSL) : ____ VOLUME IN CASING (gal.) : 1.18

DEPTH OF WELL (feet) : 15.00 CALCULATED PURGE (gal.) : 3.55

DEPTH TO WATER (feet) : 8.03 ACTUAL PURGE VOL. (gal.) : 3.25

DATE PURGED : 1.15.02 END PURGE : 851

DATE SAMPLED : 1.15.02 SAMPLING TIME : 935

| TIME (2400 HR) | VOLUME (gal.) | pH (units) | E.C. (µmhos/cm@25°c) | TEMPERATURE ~~(°F)~~ | COLOR (visual) | TURBIDITY (visual) |
|---|---|---|---|---|---|---|
| 845 | 1.25 | 6.83 | 2.950 | 15.3°C | BLACK | HVY |
| 848 | 2.50 | 6.82 | 3.340 | 16.0°C | Black | Hvy |
| 851 | 3.25 | 6.83 | 3.350 | 15.4°C | BLACK | Hvy |
| | | | | | | |
| | | | | | | |

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

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

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

WELL INTEGRITY: ____ LOCK: OK

REMARKS: * WELL DID NOT GO DRY *

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

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

Temperature °F ____

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

Rev. 1/97

# WATER SAMPLE FIELD DATA SHEET

PROJECT NO : 830714 / 01010000 SAMPLE ID : MW-5

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

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

TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____

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

CASING ELEVATION (feet/MSL) : ____ VOLUME IN CASING (gal.) : 1.23

DEPTH OF WELL (feet) : 19.20 CALCULATED PURGE (gal.) : 3.69

DEPTH TO WATER (feet) : 11.92 ACTUAL PURGE VOL. (gal.) : 3.75

DATE PURGED : 1.15.02 END PURGE : 909

DATE SAMPLED : 1.15.02 SAMPLING TIME : 944

| TIME (2400 HR) | VOLUME (gal.) | pH (units) | E.C. (µmhos/cm@25°c) | TEMPERATURE ~~(°F)~~ | COLOR (visual) | TURBIDITY (visual) |
|---|---|---|---|---|---|---|
| 903 | 1.25 | 6.82 | 2.270 | 16.5 °C | cloudy | MOD |
| 906 | 2.50 | 6.84 | 2.330 | 16.6 °C | cloudy | MOD |
| 909 | 3.75 | 6.87 | 1.240 | 16.5 °C | cloudy | MOD |
| | | | | | | |
| | | | | | | |

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

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

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

WELL INTEGRITY: Good LOCK: Depth

REMARKS: * Well did not dry *

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

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

Temperature °F ____

SIGNATURE: Paul Weinhardt REVIEWED BY: [illegible] PAGE 2 OF 3

Rev. 1/97

# WATER SAMPLE FIELD DATA SHEET

PROJECT NO : 830714 / 01010000 SAMPLE ID : MW-6

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

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

TYPE: Groundwater X Surface Water ____ Leachate ____ Other ____

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

CASING ELEVATION (feet/MSL) : ____ VOLUME IN CASING (gal.) : 1.21

DEPTH OF WELL (feet) : 18.70 CALCULATED PURGE (gal.) : 3.63

DEPTH TO WATER (feet) : 11.58 ACTUAL PURGE VOL. (gal.) : 3.75

DATE PURGED : 1.15.02 END PURGE : 923

DATE SAMPLED : 1.15.02 SAMPLING TIME : 955

| TIME (2400 HR) | VOLUME (gal.) | pH (units) | E.C. (µmhos/cm@25°c) | TEMPERATURE (F) | COLOR (visual) | TURBIDITY (visual) |
|---|---|---|---|---|---|---|
| 917 | 1.25 | 6.94 | 1,920 | 16.6°C | cloudy | MOD |
| 920 | 2.5 | 6.94 | 2,150 | 16.9 | cloudy | MOD |
| 923 | 3.75 | 6.95 | 2,220 | 17.8 | cloudy | MOD |
| | | | | | | |
| | | | | | | |

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

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

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

WELL INTEGRITY: Good LOCK: Dolphin

REMARKS: ____

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

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

Temperature °F ____

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

## IT CORPORATION - Drum Inventory Record

| | | |
|---|---|---|
| 830714 / 01010000<br>**Project No** | Former Thomas Short Co. Property<br>3430 Wood Street, Oakland<br>**Location** | 1.15.02<br>**Date** |
| Caltrans<br>**Client** | Paul Weinhardt<br>**Sampler** | Tues<br>**Day of Week** |

| DRUM NUMBER OR ID | WELL OR SOURCE ID(s) | TYPE OF MATERIAL | AMOUNT OF MATERIAL IN DRUM | DATE ACCUMULATED OR GENERATED |
|---|---|---|---|---|
| #1 | MW4 - MW6 | WATER | 7gal | 1.15.02 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**Sketch locations of drums, include drum ID's**

SEE SITE MAP FOR DRUM LOCATION

**COMMENTS:**

**Number of Drums From This Event** 1

**Total Number of Drums At Site** 1

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

Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

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

| | |
|---|---|
| Client | IT Corporation |
| Workorder | 14394 83074 Caltrans, Former Thomas |
| Received | |

Service Date: 01/20/02

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

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

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

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

Ray James
Laboratory Director



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

Sparger Technology, Inc.
Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

**Test Certificate of Analysis**

| | | | |
|---|---|---|---|
| **Client ID** | IT Corporation | **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394001 | **Received** | 01/15/02 |
| **Sample ID** | MW-4 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## EPA Method 7470A Mercury - EPA 7470A

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Mercury | 01/17/02 | 01/18/02 | ND | 0.00020 | mg/L | 1:1 |



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Sparger Technology, Inc.
Environmental Laboratories



**Test Certificate of Analysis**

| | | | |
|---|---|---|---|
| **Client ID** | IT Corporation | **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394001 | **Received** | 01/15/02 |
| **Sample ID** | MW-4 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## 8260B Oxygenates - 8260B

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Tertiary butanol | 01/28/02 | 01/28/02 | ND | 10 | ug/L | 1:1 |
| Methyl-tert-butyl-ether | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Di-isopropyl ether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |
| Ethyl tert-butyl ether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |
| Tertiaryamyl methylether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Dibromodifluoromethane | 35.9 ug/L | 72 % | (76 - 135) |



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Sparger Technology, Inc.
Environmental Laboratories



**Test Certificate of Analysis**

| | | | |
|---|---|---|---|
| **Client ID** | IT Corporation | **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394001 | **Received** | 01/15/02 |
| **Sample ID** | MW-4 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## 8260B GC/MS Volatiles - 8260B

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Vinyl chloride | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromomethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Trichlorofluoromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acrolein | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acetone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Methyl iodide | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Carbon disulfide | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dichloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acrylonitrile | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| trans-1,2-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-Dichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Vinyl acetate | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| cis-1,2-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Butanone (MEK) | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromochloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **Chloroform** | **01/28/02** | **01/28/02** | **23** | **2.0** | **ug/L** | **1:1** |
| 2,2-dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,1-Trichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Carbon tetrachloride | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **Benzene** | **01/28/02** | **01/28/02** | **47** | **2.0** | **ug/L** | **1:1** |
| **1,2-Dichloroethane** | **01/28/02** | **01/28/02** | **3.9** | **2.0** | **ug/L** | **1:1** |
| Dibromomethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **Bromodichloromethane** | **01/28/02** | **01/28/02** | **6.8** | **2.0** | **ug/L** | **1:1** |
| **1,2-Dichloropropane** | **01/28/02** | **01/28/02** | **4.1** | **2.0** | **ug/L** | **1:1** |
| **Trichloroethene** | **01/28/02** | **01/28/02** | **6.7** | **2.0** | **ug/L** | **1:1** |
| 2-Chloroethylvinyl ether | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| cis-1,3-Dichloropropene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |



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| **Client ID** | IT Corporation | **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394001 | **Received** | 01/15/02 |
| **Sample ID** | MW-4 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

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

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| trans-1,3-Dichloropropene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **1,1,2-Trichloroethane** | **01/28/02** | **01/28/02** | **3.6** | **2.0** | **ug/L** | **1:1** |
| **Toluene** | **01/28/02** | **01/28/02** | **18** | **2.0** | **ug/L** | **1:1** |
| 1,2-Dibromoethane (EDB) | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3-Dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Hexanone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dibromochloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Tetrachloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,1,2-Tetrachloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **Ethylbenzene** | **01/28/02** | **01/28/02** | **130** | **2.0** | **ug/L** | **1:1** |
| **M+P-Xylene** | **01/28/02** | **01/28/02** | **30** | **2.0** | **ug/L** | **1:1** |
| Bromoform | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Styrene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **o-Xylene** | **01/28/02** | **01/28/02** | **2.5** | **2.0** | **ug/L** | **1:1** |
| 1,1,2,2-Tetrachloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,3-Trichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **Isopropylbenzene (Cumene)** | **01/28/02** | **01/28/02** | **180** | **2.0** | **ug/L** | **1:1** |
| Bromobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| n-Propylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Chlorotoluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 4-Chlorotoluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3,5-Trimethylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **tert-Butylbenzene** | **01/28/02** | **01/28/02** | **20** | **2.0** | **ug/L** | **1:1** |
| 1,2,4-Trimethylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **sec-Butylbenzene** | **01/28/02** | **01/28/02** | **11** | **2.0** | **ug/L** | **1:1** |
| 1,3-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,4-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **4-Isopropyltoluene** | **01/28/02** | **01/28/02** | **3.6** | **2.0** | **ug/L** | **1:1** |
| 1,2-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **n-Butylbenzene** | **01/28/02** | **01/28/02** | **17** | **2.0** | **ug/L** | **1:1** |



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| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394001 | **Received** | 01/15/02 |
| **Sample ID** | MW-4 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

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

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,4-Trichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **Naphthalene** | **01/28/02** | **01/28/02** | **12** | **2.0** | **ug/L** | **1:1** |
| Hexachlorobutadiene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,3-Trichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 39 ug/L | 78 % | (76 - 135) |
| Toluene d8 | 58.9 ug/L | 118 % | (88 - 118) |
| 4-Bromofluorobenzene | 60.7 ug/L | 121 % | (86 - 121) |



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| **Client ID** | IT Corporation | **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394001 | **Received** | 01/15/02 |
| **Sample ID** | MW-4 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## Metals, CAM16 - 6010B

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Antimony | 01/16/02 | 01/17/02 | ND | 0.060 | mg/L | 1:1 |
| Arsenic | 01/16/02 | 01/17/02 | ND | 0.080 | mg/L | 1:1 |
| **Barium** | **01/16/02** | **01/17/02** | **0.34** | **0.020** | **mg/L** | **1:1** |
| Beryllium | 01/16/02 | 01/17/02 | ND | 0.0030 | mg/L | 1:1 |
| Cadmium | 01/16/02 | 01/17/02 | ND | 0.0050 | mg/L | 1:1 |
| Chromium | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Cobalt | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Copper | 01/16/02 | 01/17/02 | ND | 0.020 | mg/L | 1:1 |
| Lead | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Molybdenum | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Nickel | 01/16/02 | 01/17/02 | ND | 0.040 | mg/L | 1:1 |
| Selenium | 01/16/02 | 01/17/02 | ND | 0.10 | mg/L | 1:1 |
| Silver | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Thallium | 01/16/02 | 01/17/02 | ND | 0.10 | mg/L | 1:1 |
| Vanadium | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Zinc | 01/16/02 | 01/17/02 | ND | 0.015 | mg/L | 1:1 |



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| **Client ID** | IT Corporation | **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394002 | **Received** | 01/15/02 |
| **Sample ID** | MW-5 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## EPA Method 7470A Mercury - EPA 7470A

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Mercury | 01/17/02 | 01/18/02 | ND | 0.00020 | mg/L | 1:1 |



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| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394002 | **Received** | 01/15/02 |
| **Sample ID** | MW-5 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## 8260B Oxygenates - 8260B

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Tertiary butanol | 01/28/02 | 01/28/02 | ND | 10 | ug/L | 1:1 |
| Methyl-tert-butyl-ether | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Di-isopropyl ether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |
| Ethyl tert-butyl ether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |
| Tertiaryamyl methylether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Dibromodifluoromethane | 43.6 ug/L | 87 % | (76 - 135) |



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| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394002 | **Received** | 01/15/02 |
| **Sample ID** | MW-5 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## 8260B GC/MS Volatiles - 8260B

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Vinyl chloride | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromomethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Trichlorofluoromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acrolein | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acetone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Methyl iodide | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Carbon disulfide | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dichloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acrylonitrile | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| trans-1,2-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-Dichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Vinyl acetate | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| cis-1,2-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Butanone (MEK) | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromochloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloroform | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2,2-dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,1-Trichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Carbon tetrachloride | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **Benzene** | **01/28/02** | **01/28/02** | **63** | **2.0** | **ug/L** | **1:1** |
| **1,2-Dichloroethane** | **01/28/02** | **01/28/02** | **3.9** | **2.0** | **ug/L** | **1:1** |
| Dibromomethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromodichloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Trichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Chloroethylvinyl ether | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| cis-1,3-Dichloropropene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |



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| **Laboratory ID** | 14394002 | **Received** | 01/15/02 |
| **Sample ID** | MW-5 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

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

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| trans-1,3-Dichloropropene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,2-Trichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **Toluene** | **01/28/02** | **01/28/02** | **3.1** | **2.0** | **ug/L** | **1:1** |
| 1,2-Dibromoethane (EDB) | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3-Dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Hexanone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dibromochloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Tetrachloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,1,2-Tetrachloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **Ethylbenzene** | **01/28/02** | **01/28/02** | **18** | **2.0** | **ug/L** | **1:1** |
| M+P-Xylene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromoform | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Styrene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| o-Xylene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,2,2-Tetrachloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,3-Trichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **Isopropylbenzene (Cumene)** | **01/28/02** | **01/28/02** | **25** | **2.0** | **ug/L** | **1:1** |
| Bromobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **n-Propylbenzene** | **01/28/02** | **01/28/02** | **45** | **2.0** | **ug/L** | **1:1** |
| 2-Chlorotoluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 4-Chlorotoluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3,5-Trimethylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **tert-Butylbenzene** | **01/28/02** | **01/28/02** | **16** | **2.0** | **ug/L** | **1:1** |
| 1,2,4-Trimethylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **sec-Butylbenzene** | **01/28/02** | **01/28/02** | **5.1** | **2.0** | **ug/L** | **1:1** |
| 1,3-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,4-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 4-Isopropyltoluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **n-Butylbenzene** | **01/28/02** | **01/28/02** | **21** | **2.0** | **ug/L** | **1:1** |



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| **Laboratory ID** | 14394002 | **Received** | 01/15/02 |
| **Sample ID** | MW-5 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

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

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,4-Trichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| **Naphthalene** | **01/28/02** | **01/28/02** | **38** | **2.0** | **ug/L** | **1:1** |
| Hexachlorobutadiene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,3-Trichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 47 ug/L | 94 % | (76 - 135) |
| Toluene d8 | 56.9 ug/L | 114 % | (88 - 118) |
| 4-Bromofluorobenzene | 64.6 ug/L | 129 % | (86 - 121) |



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| **Client ID** | IT Corporation | **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394002 | **Received** | 01/15/02 |
| **Sample ID** | MW-5 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## Metals, CAM16 - 6010B

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Antimony | 01/16/02 | 01/17/02 | ND | 0.060 | mg/L | 1:1 |
| Arsenic | 01/16/02 | 01/17/02 | ND | 0.080 | mg/L | 1:1 |
| **Barium** | **01/16/02** | **01/17/02** | **0.19** | **0.020** | **mg/L** | **1:1** |
| Beryllium | 01/16/02 | 01/17/02 | ND | 0.0030 | mg/L | 1:1 |
| Cadmium | 01/16/02 | 01/17/02 | ND | 0.0050 | mg/L | 1:1 |
| Chromium | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Cobalt | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Copper | 01/16/02 | 01/17/02 | ND | 0.020 | mg/L | 1:1 |
| Lead | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Molybdenum | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Nickel | 01/16/02 | 01/17/02 | ND | 0.040 | mg/L | 1:1 |
| Selenium | 01/16/02 | 01/17/02 | ND | 0.10 | mg/L | 1:1 |
| Silver | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Thallium | 01/16/02 | 01/17/02 | ND | 0.10 | mg/L | 1:1 |
| Vanadium | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| **Zinc** | **01/16/02** | **01/17/02** | **0.020** | **0.015** | **mg/L** | **1:1** |



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| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394003 | **Received** | 01/15/02 |
| **Sample ID** | MW-6 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## EPA Method 7470A Mercury - EPA 7470A

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Mercury | 01/17/02 | 01/18/02 | ND | 0.00020 | mg/L | 1:1 |



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| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394003 | **Received** | 01/15/02 |
| **Sample ID** | MW-6 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## 8260B Oxygenates - 8260B

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Tertiary butanol | 01/28/02 | 01/28/02 | ND | 10 | ug/L | 1:1 |
| Methyl-tert-butyl-ether | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Di-isopropyl ether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |
| Ethyl tert-butyl ether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |
| Tertiaryamyl methylether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Dibromodifluoromethane | 46 ug/L | 92 % | (76 - 135) |



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| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394003 | **Received** | 01/15/02 |
| **Sample ID** | MW-6 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## 8260B GC/MS Volatiles - 8260B

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Vinyl chloride | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromomethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Trichlorofluoromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acrolein | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acetone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Methyl iodide | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Carbon disulfide | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dichloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acrylonitrile | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| trans-1,2-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-Dichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Vinyl acetate | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| cis-1,2-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Butanone (MEK) | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromochloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloroform | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2,2-dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,1-Trichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Carbon tetrachloride | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Benzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dibromomethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromodichloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Trichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Chloroethylvinyl ether | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| cis-1,3-Dichloropropene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |



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| **Laboratory ID** | 14394003 | **Received** | 01/15/02 |
| **Sample ID** | MW-6 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

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

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| trans-1,3-Dichloropropene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,2-Trichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Toluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dibromoethane (EDB) | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3-Dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Hexanone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dibromochloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Tetrachloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,1,2-Tetrachloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Ethylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| M+P-Xylene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromoform | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Styrene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| o-Xylene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,2,2-Tetrachloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,3-Trichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Isopropylbenzene (Cumene) | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| n-Propylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Chlorotoluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 4-Chlorotoluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3,5-Trimethylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| tert-Butylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,4-Trimethylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| sec-Butylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,4-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 4-Isopropyltoluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| n-Butylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |



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| **Laboratory ID** | 14394003 | **Received** | 01/15/02 |
| **Sample ID** | MW-6 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

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

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,4-Trichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Naphthalene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Hexachlorobutadiene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,3-Trichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 55.1 ug/L | 110 % | (76 - 135) |
| Toluene d8 | 51.4 ug/L | 103 % | (88 - 118) |
| 4-Bromofluorobenzene | 55.7 ug/L | 111 % | (86 - 121) |



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| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394003 | **Received** | 01/15/02 |
| **Sample ID** | MW-6 | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## Metals, CAM16 - 6010B

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Antimony | 01/16/02 | 01/17/02 | ND | 0.060 | mg/L | 1:1 |
| Arsenic | 01/16/02 | 01/17/02 | ND | 0.080 | mg/L | 1:1 |
| **Barium** | **01/16/02** | **01/17/02** | **0.092** | **0.020** | **mg/L** | **1:1** |
| Beryllium | 01/16/02 | 01/17/02 | ND | 0.0030 | mg/L | 1:1 |
| Cadmium | 01/16/02 | 01/17/02 | ND | 0.0050 | mg/L | 1:1 |
| Chromium | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Cobalt | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Copper | 01/16/02 | 01/17/02 | ND | 0.020 | mg/L | 1:1 |
| Lead | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Molybdenum | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Nickel | 01/16/02 | 01/17/02 | ND | 0.040 | mg/L | 1:1 |
| Selenium | 01/16/02 | 01/17/02 | ND | 0.10 | mg/L | 1:1 |
| Silver | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Thallium | 01/16/02 | 01/17/02 | ND | 0.10 | mg/L | 1:1 |
| Vanadium | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| **Zinc** | **01/16/02** | **01/17/02** | **0.031** | **0.015** | **mg/L** | **1:1** |



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| **Laboratory ID** | 14394004 | **Received** | 01/15/02 |
| **Sample ID** | TRIP BLANK | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## 8260B Oxygenates - 8260B

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Tertiary butanol | 01/28/02 | 01/28/02 | ND | 10 | ug/L | 1:1 |
| Methyl-tert-butyl-ether | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Di-isopropyl ether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |
| Ethyl tert-butyl ether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |
| Tertiaryamyl methylether | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Dibromodifluoromethane | 43.5 ug/L | 87 % | (76 - 135) |



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| **Laboratory ID** | 14394004 | **Received** | 01/15/02 |
| **Sample ID** | TRIP BLANK | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

## 8260B GC/MS Volatiles - 8260B

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Vinyl chloride | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromomethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Trichlorofluoromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acrolein | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acetone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Methyl iodide | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Carbon disulfide | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dichloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acrylonitrile | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| trans-1,2-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-Dichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Vinyl acetate | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| cis-1,2-Dichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Butanone (MEK) | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromochloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloroform | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2,2-dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,1-Trichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Carbon tetrachloride | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Benzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dibromomethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromodichloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Trichloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Chloroethylvinyl ether | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| cis-1,3-Dichloropropene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |



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| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394004 | **Received** | 01/15/02 |
| **Sample ID** | TRIP BLANK | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

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

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| 4-Methyl-2-pentanone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| trans-1,3-Dichloropropene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,2-Trichloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Toluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dibromoethane (EDB) | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3-Dichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Hexanone | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dibromochloromethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Tetrachloroethene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,1,2-Tetrachloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Ethylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| M+P-Xylene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromoform | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Styrene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| o-Xylene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,2,2-Tetrachloroethane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,3-Trichloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Isopropylbenzene (Cumene) | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| n-Propylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Chlorotoluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 4-Chlorotoluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3,5-Trimethylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| tert-Butylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,4-Trimethylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| sec-Butylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,4-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 4-Isopropyltoluene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| n-Butylbenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |



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**Test Certificate of Analysis**

| | | | |
|---|---|---|---|
| **Client ID** | IT Corporation | **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Workorder #** | 14394 | **Sampled** | 01/15/02 |
| **Laboratory ID** | 14394004 | **Received** | 01/15/02 |
| **Sample ID** | TRIP BLANK | **Reported** | 01/29/02 |
| **Matrix** | Water | | |

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

| Parameter | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,4-Trichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Naphthalene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Hexachlorobutadiene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,3-Trichlorobenzene | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 46.8 ug/L | 94 % | (76 - 135) |
| Toluene d8 | 55.8 ug/L | 112 % | (88 - 118) |
| 4-Bromofluorobenzene | 60 ug/L | 120 % | (86 - 121) |


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**Test Certificate of Analysis**

**Client ID** IT Corporation
**Workorder #** 14394 **Workorder ID** 83074 Caltrans, Former Thomas

**Parameter** TPHdiesel
**Method** 8015M DHS

| Lab ID | Sample ID | Result | RL | Units | Collected | Analyzed | Matrix | Dilution |
|---|---|---|---|---|---|---|---|---|
| 14394001 | MW-4 | ND | 50 | ug/L | 01/15/02 | 01/23/02 | Water | 1:1 |
| 14394002 | MW-5 | ND | 50 | ug/L | 01/15/02 | 01/23/02 | Water | 1:1 |
| 14394003 | MW-6 | ND | 50 | ug/L | 01/15/02 | 01/23/02 | Water | 1:1 |



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**Test Certificate of Analysis**

**Client ID** IT Corporation
**Workorder #** 14394 **Workorder ID** 83074 Caltrans, Former Thomas

**Parameter** TPHgas
**Method** 8015M DHS

| Lab ID | Sample ID | Result | RL | Units | Collected | Analyzed | Matrix | Dilution |
|---|---|---|---|---|---|---|---|---|
| 14394001 | MW-4 | ND | 50 | ug/L | 01/15/02 | 01/16/02 | Water | 1:1 |
| 14394002 | MW-5 | 7800 | 50 | ug/L | 01/15/02 | 01/16/02 | Water | 1:1 |
| 14394003 | MW-6 | 3500 | 50 | ug/L | 01/15/02 | 01/16/02 | Water | 1:1 |
| 14394004 | TRIP BLANK | ND | 50 | ug/L | 01/15/02 | 01/16/02 | Water | 1:1 |


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**Test Certificate of Analysis**

**Client ID** IT Corporation
**Workorder #** 14394

**Workorder ID** 83074 Caltrans, Former Thomas

**Parameter** Total Pet. Hydrocarbons
**Method** EPA 1664

| Lab ID | Sample ID | Result | RL | Units | Collected | Analyzed | Matrix | Dilution |
|---|---|---|---|---|---|---|---|---|
| 14394001 | MW-4 | ND | 5000 | ug/L | 01/15/02 | 01/24/02 | Water | 1:1 |
| 14394002 | MW-5 | ND | 5000 | ug/L | 01/15/02 | 01/24/02 | Water | 1:1 |
| 14394003 | MW-6 | ND | 5000 | ug/L | 01/15/02 | 01/24/02 | Water | 1:1 |



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**Method Blank Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38051 |
| **Sample ID** | MB for HBN 119618 [VGXV/2047] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015M DHS | 01/16/02 | 01/16/02 | ND | 50 | ug/L | 1:1 |


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**Lab Control Sample Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38052 |
| **Sample ID** | LCS for HBN 119618 [VGXV/2047] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015M DHS | 01/16/02 | 01/16/02 | 930 | 50 | ug/L | 1:1 |


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**Lab Control Sample Duplicate Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38053 |
| **Sample ID** | LCSD for HBN 119618 [VGXV/2047 |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015M DHS | 01/16/02 | 01/16/02 | 870 | 50 | ug/L | 1:1 |



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**Matrix Spike Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38054 |
| **Sample ID** | MS for HBN 119618 [VGXV/2047] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015M DHS | 01/16/02 | 01/16/02 | 890 | 50 | ug/L | 1:1 |



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**Matrix Spike Duplicate Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38055 |
| **Sample ID** | MSD for HBN 119618 [VGXV/2047] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHgas | 8015M DHS | 01/16/02 | 01/16/02 | 920 | 50 | ug/L | 1:1 |



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**Method Blank Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38349 |
| **Sample ID** | MB for HBN 122225 [DIGV/1312] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Mercury | EPA 7470A | 01/17/02 | 01/18/02 | ND | 0.00020 | mg/L | 1:1 |



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**Lab Control Sample Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38350 |
| **Sample ID** | LCS for HBN 122225 [DIGV/1312] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Mercury | EPA 7470A | 01/17/02 | 01/18/02 | 0.00101 | 0.00020 | mg/L | 1:1 |



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**Lab Control Sample Duplicate Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38351 |
| **Sample ID** | LCSD for HBN 122225 [DIGV/1312 |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Mercury | EPA 7470A | 01/17/02 | 01/18/02 | 0.00102 | 0.00020 | mg/L | 1:1 |



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**Duplicate Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38352 |
| **Sample ID** | DUP for HBN 122225 [DIGV/1312] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Mercury | EPA 7470A | 01/17/02 | 01/18/02 | ND | 0.00020 | mg/L | 1:1 |



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**Matrix Spike Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38353 |
| **Sample ID** | MS for HBN 122225 [DIGV/1312] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Mercury | EPA 7470A | 01/17/02 | 01/18/02 | 0.00101 | 0.00020 | mg/L | 1:1 |



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**Matrix Spike Duplicate Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38354 |
| **Sample ID** | MSD for HBN 122225 [DIGV/1312] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Mercury | EPA 7470A | 01/17/02 | 01/18/02 | 0.00101 | 0.00020 | mg/L | 1:1 |



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## Method Blank Report

**Client ID** IT Corporation
**Workorder ID** 83074-Caltrans, Former Thomas
**Laboratory ID** 38499
**Sample ID** MB for HBN 122840 [ICPV/3261]
**Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Antimony | 6010B | 01/16/02 | 01/17/02 | ND | 0.060 | mg/L | 1:1 |
| Arsenic | 6010B | 01/16/02 | 01/17/02 | ND | 0.080 | mg/L | 1:1 |
| Barium | 6010B | 01/16/02 | 01/17/02 | ND | 0.020 | mg/L | 1:1 |
| Beryllium | 6010B | 01/16/02 | 01/17/02 | ND | 0.0030 | mg/L | 1:1 |
| Cadmium | 6010B | 01/16/02 | 01/17/02 | ND | 0.0050 | mg/L | 1:1 |
| Chromium | 6010B | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Cobalt | 6010B | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Copper | 6010B | 01/16/02 | 01/17/02 | ND | 0.020 | mg/L | 1:1 |
| Lead | 6010B | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Molybdenum | 6010B | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Nickel | 6010B | 01/16/02 | 01/17/02 | ND | 0.040 | mg/L | 1:1 |
| Selenium | 6010B | 01/16/02 | 01/17/02 | ND | 0.10 | mg/L | 1:1 |
| Silver | 6010B | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Thallium | 6010B | 01/16/02 | 01/17/02 | ND | 0.10 | mg/L | 1:1 |
| Vanadium | 6010B | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Zinc | 6010B | 01/16/02 | 01/17/02 | ND | 0.015 | mg/L | 1:1 |



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## Lab Control Sample Report

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**Laboratory ID** 38500
**Sample ID** LCS for HBN 122840 [ICPV/3261]
**Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Antimony | 6010B | 01/16/02 | 01/17/02 | 0.58 | 0.060 | mg/L | 1:1 |
| Arsenic | 6010B | 01/16/02 | 01/17/02 | 0.56 | 0.080 | mg/L | 1:1 |
| Barium | 6010B | 01/16/02 | 01/17/02 | 0.54 | 0.020 | mg/L | 1:1 |
| Beryllium | 6010B | 01/16/02 | 01/17/02 | 0.11 | 0.0030 | mg/L | 1:1 |
| Cadmium | 6010B | 01/16/02 | 01/17/02 | 0.22 | 0.0050 | mg/L | 1:1 |
| Chromium | 6010B | 01/16/02 | 01/17/02 | 0.53 | 0.010 | mg/L | 1:1 |
| Cobalt | 6010B | 01/16/02 | 01/17/02 | 0.20 | 0.050 | mg/L | 1:1 |
| Copper | 6010B | 01/16/02 | 01/17/02 | 0.51 | 0.020 | mg/L | 1:1 |
| Lead | 6010B | 01/16/02 | 01/17/02 | 0.55 | 0.010 | mg/L | 1:1 |
| Molybdenum | 6010B | 01/16/02 | 01/17/02 | 0.53 | 0.050 | mg/L | 1:1 |
| Nickel | 6010B | 01/16/02 | 01/17/02 | 1.1 | 0.040 | mg/L | 1:1 |
| Selenium | 6010B | 01/16/02 | 01/17/02 | 0.57 | 0.10 | mg/L | 1:1 |
| Silver | 6010B | 01/16/02 | 01/17/02 | 0.052 | 0.010 | mg/L | 1:1 |
| Thallium | 6010B | 01/16/02 | 01/17/02 | 0.55 | 0.10 | mg/L | 1:1 |
| Vanadium | 6010B | 01/16/02 | 01/17/02 | 0.20 | 0.050 | mg/L | 1:1 |
| Zinc | 6010B | 01/16/02 | 01/17/02 | 0.55 | 0.015 | mg/L | 1:1 |



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## Lab Control Sample Duplicate Report

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**Laboratory ID** 38501
**Sample ID** LCSD for HBN 122840 [ICPV/3261
**Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Antimony | 6010B | 01/16/02 | 01/17/02 | 0.54 | 0.060 | mg/L | 1:1 |
| Arsenic | 6010B | 01/16/02 | 01/17/02 | 0.53 | 0.080 | mg/L | 1:1 |
| Barium | 6010B | 01/16/02 | 01/17/02 | 0.51 | 0.020 | mg/L | 1:1 |
| Beryllium | 6010B | 01/16/02 | 01/17/02 | 0.11 | 0.0030 | mg/L | 1:1 |
| Cadmium | 6010B | 01/16/02 | 01/17/02 | 0.20 | 0.0050 | mg/L | 1:1 |
| Chromium | 6010B | 01/16/02 | 01/17/02 | 0.50 | 0.010 | mg/L | 1:1 |
| Cobalt | 6010B | 01/16/02 | 01/17/02 | 0.19 | 0.050 | mg/L | 1:1 |
| Copper | 6010B | 01/16/02 | 01/17/02 | 0.51 | 0.020 | mg/L | 1:1 |
| Lead | 6010B | 01/16/02 | 01/17/02 | 0.51 | 0.010 | mg/L | 1:1 |
| Molybdenum | 6010B | 01/16/02 | 01/17/02 | 0.50 | 0.050 | mg/L | 1:1 |
| Nickel | 6010B | 01/16/02 | 01/17/02 | 1.0 | 0.040 | mg/L | 1:1 |
| Selenium | 6010B | 01/16/02 | 01/17/02 | 0.54 | 0.10 | mg/L | 1:1 |
| Silver | 6010B | 01/16/02 | 01/17/02 | 0.051 | 0.010 | mg/L | 1:1 |
| Thallium | 6010B | 01/16/02 | 01/17/02 | 0.52 | 0.10 | mg/L | 1:1 |
| Vanadium | 6010B | 01/16/02 | 01/17/02 | 0.18 | 0.050 | mg/L | 1:1 |
| Zinc | 6010B | 01/16/02 | 01/17/02 | 0.52 | 0.015 | mg/L | 1:1 |



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**Duplicate Report**

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**Laboratory ID** 38502
**Sample ID** DUP for HBN 122840 [ICPV/3261]
**Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Antimony | 6010B | 01/16/02 | 01/17/02 | ND | 0.060 | mg/L | 1:1 |
| Arsenic | 6010B | 01/16/02 | 01/17/02 | ND | 0.080 | mg/L | 1:1 |
| Barium | 6010B | 01/16/02 | 01/17/02 | 0.33 | 0.020 | mg/L | 1:1 |
| Beryllium | 6010B | 01/16/02 | 01/17/02 | ND | 0.0030 | mg/L | 1:1 |
| Cadmium | 6010B | 01/16/02 | 01/17/02 | ND | 0.0050 | mg/L | 1:1 |
| Chromium | 6010B | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Cobalt | 6010B | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Copper | 6010B | 01/16/02 | 01/17/02 | ND | 0.020 | mg/L | 1:1 |
| Lead | 6010B | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Molybdenum | 6010B | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Nickel | 6010B | 01/16/02 | 01/17/02 | ND | 0.040 | mg/L | 1:1 |
| Selenium | 6010B | 01/16/02 | 01/17/02 | ND | 0.10 | mg/L | 1:1 |
| Silver | 6010B | 01/16/02 | 01/17/02 | ND | 0.010 | mg/L | 1:1 |
| Thallium | 6010B | 01/16/02 | 01/17/02 | ND | 0.10 | mg/L | 1:1 |
| Vanadium | 6010B | 01/16/02 | 01/17/02 | ND | 0.050 | mg/L | 1:1 |
| Zinc | 6010B | 01/16/02 | 01/17/02 | ND | 0.015 | mg/L | 1:1 |



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**Matrix Spike Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38503 |
| **Sample ID** | MS for HBN 122840 [ICPV/3261] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Antimony | 6010B | 01/16/02 | 01/17/02 | 0.55 | 0.060 | mg/L | 1:1 |
| Arsenic | 6010B | 01/16/02 | 01/17/02 | 0.56 | 0.080 | mg/L | 1:1 |
| Barium | 6010B | 01/16/02 | 01/17/02 | 0.83 | 0.020 | mg/L | 1:1 |
| Beryllium | 6010B | 01/16/02 | 01/17/02 | 0.10 | 0.0030 | mg/L | 1:1 |
| Cadmium | 6010B | 01/16/02 | 01/17/02 | 0.21 | 0.0050 | mg/L | 1:1 |
| Chromium | 6010B | 01/16/02 | 01/17/02 | 0.54 | 0.010 | mg/L | 1:1 |
| Cobalt | 6010B | 01/16/02 | 01/17/02 | 0.19 | 0.050 | mg/L | 1:1 |
| Copper | 6010B | 01/16/02 | 01/17/02 | 0.49 | 0.020 | mg/L | 1:1 |
| Lead | 6010B | 01/16/02 | 01/17/02 | 0.50 | 0.010 | mg/L | 1:1 |
| Molybdenum | 6010B | 01/16/02 | 01/17/02 | 0.52 | 0.050 | mg/L | 1:1 |
| Nickel | 6010B | 01/16/02 | 01/17/02 | 1.0 | 0.040 | mg/L | 1:1 |
| Selenium | 6010B | 01/16/02 | 01/17/02 | 0.57 | 0.10 | mg/L | 1:1 |
| Silver | 6010B | 01/16/02 | 01/17/02 | 0.053 | 0.010 | mg/L | 1:1 |
| Thallium | 6010B | 01/16/02 | 01/17/02 | 0.50 | 0.10 | mg/L | 1:1 |
| Vanadium | 6010B | 01/16/02 | 01/17/02 | 0.20 | 0.050 | mg/L | 1:1 |
| Zinc | 6010B | 01/16/02 | 01/17/02 | 0.50 | 0.015 | mg/L | 1:1 |



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**Matrix Spike Duplicate Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38504 |
| **Sample ID** | MSD for HBN 122840 [ICPV/3261] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Antimony | 6010B | 01/16/02 | 01/17/02 | 0.54 | 0.060 | mg/L | 1:1 |
| Arsenic | 6010B | 01/16/02 | 01/17/02 | 0.54 | 0.080 | mg/L | 1:1 |
| Barium | 6010B | 01/16/02 | 01/17/02 | 0.84 | 0.020 | mg/L | 1:1 |
| Beryllium | 6010B | 01/16/02 | 01/17/02 | 0.099 | 0.0030 | mg/L | 1:1 |
| Cadmium | 6010B | 01/16/02 | 01/17/02 | 0.21 | 0.0050 | mg/L | 1:1 |
| Chromium | 6010B | 01/16/02 | 01/17/02 | 0.52 | 0.010 | mg/L | 1:1 |
| Cobalt | 6010B | 01/16/02 | 01/17/02 | 0.18 | 0.050 | mg/L | 1:1 |
| Copper | 6010B | 01/16/02 | 01/17/02 | 0.52 | 0.020 | mg/L | 1:1 |
| Lead | 6010B | 01/16/02 | 01/17/02 | 0.51 | 0.010 | mg/L | 1:1 |
| Molybdenum | 6010B | 01/16/02 | 01/17/02 | 0.50 | 0.050 | mg/L | 1:1 |
| Nickel | 6010B | 01/16/02 | 01/17/02 | 1.0 | 0.040 | mg/L | 1:1 |
| Selenium | 6010B | 01/16/02 | 01/17/02 | 0.54 | 0.10 | mg/L | 1:1 |
| Silver | 6010B | 01/16/02 | 01/17/02 | 0.050 | 0.010 | mg/L | 1:1 |
| Thallium | 6010B | 01/16/02 | 01/17/02 | 0.48 | 0.10 | mg/L | 1:1 |
| Vanadium | 6010B | 01/16/02 | 01/17/02 | 0.20 | 0.050 | mg/L | 1:1 |
| Zinc | 6010B | 01/16/02 | 01/17/02 | 0.49 | 0.015 | mg/L | 1:1 |



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**Method Blank Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38755 |
| **Sample ID** | MB for HBN 124406 [SGXV/1622] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHdiesel | 8015M DHS | 01/23/02 | 01/23/02 | ND | 50 | ug/L | 1:1 |



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**Lab Control Sample Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38756 |
| **Sample ID** | LCS for HBN 124406 [SGXV/1622] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHdiesel | 8015M DHS | 01/23/02 | 01/23/02 | 492 | 50 | ug/L | 1:1 |



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**Lab Control Sample Duplicate Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38757 |
| **Sample ID** | LCSD for HBN 124406 [SGXV/1622 |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| TPHdiesel | 8015M DHS | 01/23/02 | 01/23/02 | 498 | 50 | ug/L | 1:1 |



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**Method Blank Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38852 |
| **Sample ID** | MB for HBN 125306 [VMXV/1777] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloromethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Vinyl chloride | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromomethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloroethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Trichlorofluoromethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acrolein | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-Dichloroethene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acetone | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Methyl iodide | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Carbon disulfide | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dichloromethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Acrylonitrile | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| trans-1,2-Dichloroethene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-Dichloroethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Vinyl acetate | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| cis-1,2-Dichloroethene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Butanone (MEK) | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromochloromethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chloroform | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2,2-dichloropropane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,1-Trichloroethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1-dichloropropane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Carbon tetrachloride | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Benzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dichloroethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dibromomethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromodichloromethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dichloropropane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Trichloroethene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Chloroethylvinyl ether | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| cis-1,3-Dichloropropene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 4-Methyl-2-pentanone | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |



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**Method Blank Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38852 |
| **Sample ID** | MB for HBN 125306 [VMXV/1777] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **(continued)** | | | | | | | |
| trans-1,3-Dichloropropene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,2-Trichloroethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Toluene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dibromoethane (EDB) | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3-Dichloropropane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Hexanone | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Dibromochloromethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Tetrachloroethene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,1,2-Tetrachloroethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Chlorobenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Ethylbenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| M+P-Xylene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromoform | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Styrene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| o-Xylene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,1,2,2-Tetrachloroethane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,3-Trichloropropane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Isopropylbenzene (Cumene) | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Bromobenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| n-Propylbenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 2-Chlorotoluene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 4-Chlorotoluene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3,5-Trimethylbenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| tert-Butylbenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,4-Trimethylbenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| sec-Butylbenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,3-Dichlorobenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,4-Dichlorobenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 4-Isopropyltoluene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2-Dichlorobenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| n-Butylbenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |



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**Method Blank Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38852 |
| **Sample ID** | MB for HBN 125306 [VMXV/1777] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| **(continued)** | | | | | | | |
| 1,2-Dibromo-3-chloropropane | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,4-Trichlorobenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Naphthalene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Hexachlorobutadiene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| 1,2,3-Trichlorobenzene | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | 60.7 ug/L | 121 % | (76 - 135) |
| Toluene d8 | 39.9 ug/L | 80 % | (88 - 118) |
| 4-Bromofluorobenzene | 42.7 ug/L | 85 % | (86 - 121) |



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**Lab Control Sample Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38853 |
| **Sample ID** | LCS for HBN 125306 [VMXV/1777] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 8260B | 01/28/02 | 01/28/02 | 49 | 2.0 | ug/L | 1:1 |
| Benzene | 8260B | 01/28/02 | 01/28/02 | 56 | 2.0 | ug/L | 1:1 |
| Trichloroethene | 8260B | 01/28/02 | 01/28/02 | 48 | 2.0 | ug/L | 1:1 |
| Toluene | 8260B | 01/28/02 | 01/28/02 | 50 | 2.0 | ug/L | 1:1 |
| Chlorobenzene | 8260B | 01/28/02 | 01/28/02 | 52 | 2.0 | ug/L | 1:1 |



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**Lab Control Sample Duplicate Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38854 |
| **Sample ID** | LCSD for HBN 125306 [VMXV/1777 |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 8260B | 01/28/02 | 01/28/02 | 46 | 2.0 | ug/L | 1:1 |
| Benzene | 8260B | 01/28/02 | 01/28/02 | 55 | 2.0 | ug/L | 1:1 |
| Trichloroethene | 8260B | 01/28/02 | 01/28/02 | 48 | 2.0 | ug/L | 1:1 |
| Toluene | 8260B | 01/28/02 | 01/28/02 | 54 | 2.0 | ug/L | 1:1 |
| Chlorobenzene | 8260B | 01/28/02 | 01/28/02 | 52 | 2.0 | ug/L | 1:1 |



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**Matrix Spike Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38855 |
| **Sample ID** | MS for HBN 125306 [VMXV/1777] |
| ***Matrix*** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 8260B | 01/28/02 | 01/28/02 | 47 | 2.0 | ug/L | 1:1 |
| Benzene | 8260B | 01/28/02 | 01/28/02 | 55 | 2.0 | ug/L | 1:1 |
| Trichloroethene | 8260B | 01/28/02 | 01/28/02 | 48 | 2.0 | ug/L | 1:1 |
| Toluene | 8260B | 01/28/02 | 01/28/02 | 52 | 2.0 | ug/L | 1:1 |
| Chlorobenzene | 8260B | 01/28/02 | 01/28/02 | 52 | 2.0 | ug/L | 1:1 |



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**Matrix Spike Duplicate Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38856 |
| **Sample ID** | MSD for HBN 125306 [VMXV/1777] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| 1,1-Dichloroethene | 8260B | 01/28/02 | 01/28/02 | 50 | 2.0 | ug/L | 1:1 |
| Benzene | 8260B | 01/28/02 | 01/28/02 | 56 | 2.0 | ug/L | 1:1 |
| Trichloroethene | 8260B | 01/28/02 | 01/28/02 | 50 | 2.0 | ug/L | 1:1 |
| Toluene | 8260B | 01/28/02 | 01/28/02 | 53 | 2.0 | ug/L | 1:1 |
| Chlorobenzene | 8260B | 01/28/02 | 01/28/02 | 54 | 2.0 | ug/L | 1:1 |


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**Method Blank Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38857 |
| **Sample ID** | MB for HBN 125406 [VMXV/1778] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Tertiary butanol | 8260B | 01/28/02 | 01/28/02 | ND | 10 | ug/L | 1:1 |
| Methyl-tert-butyl-ether | 8260B | 01/28/02 | 01/28/02 | ND | 2.0 | ug/L | 1:1 |
| Di-isopropyl ether | 8260B | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |
| Ethyl tert-butyl ether | 8260B | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |
| Tertiaryamyl methylether | 8260B | 01/28/02 | 01/28/02 | ND | 5.0 | ug/L | 1:1 |

| Surrogates | Result | Recovery | Limits |
|---|---|---|---|
| Dibromodifluoromethane | 48.2 ug/L | 96 % | (76 - 135) |



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## Lab Control Sample Report

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**Laboratory ID** 38858
**Sample ID** LCS for HBN 125406 [VMXV/1778]
**Matrix** Water

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Tertiary butanol | 8260B | 01/28/02 | 01/28/02 | 50 | 10 | ug/L | 1:1 |
| Methyl-tert-butyl-ether | 8260B | 01/28/02 | 01/28/02 | 51 | 2.0 | ug/L | 1:1 |
| Di-isopropyl ether | 8260B | 01/28/02 | 01/28/02 | 52 | 5.0 | ug/L | 1:1 |
| Ethyl tert-butyl ether | 8260B | 01/28/02 | 01/28/02 | 56 | 5.0 | ug/L | 1:1 |
| Tertiaryamyl methylether | 8260B | 01/28/02 | 01/28/02 | 53 | 5.0 | ug/L | 1:1 |


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**Lab Control Sample Duplicate Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38859 |
| **Sample ID** | LCSD for HBN 125406 [VMXV/1778 |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Tertiary butanol | 8260B | 01/28/02 | 01/28/02 | 46 | 10 | ug/L | 1:1 |
| Methyl-tert-butyl-ether | 8260B | 01/28/02 | 01/28/02 | 50 | 2.0 | ug/L | 1:1 |
| Di-isopropyl ether | 8260B | 01/28/02 | 01/28/02 | 55 | 5.0 | ug/L | 1:1 |
| Ethyl tert-butyl ether | 8260B | 01/28/02 | 01/28/02 | 52 | 5.0 | ug/L | 1:1 |
| Tertiaryamyl methylether | 8260B | 01/28/02 | 01/28/02 | 52 | 5.0 | ug/L | 1:1 |



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**Matrix Spike Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38860 |
| **Sample ID** | MS for HBN 125406 [VMXV/1778] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Tertiary butanol | 8260B | 01/28/02 | 01/28/02 | 53 | 10 | ug/L | 1:1 |
| Methyl-tert-butyl-ether | 8260B | 01/28/02 | 01/28/02 | 54 | 2.0 | ug/L | 1:1 |
| Di-isopropyl ether | 8260B | 01/28/02 | 01/28/02 | 55 | 5.0 | ug/L | 1:1 |
| Ethyl tert-butyl ether | 8260B | 01/28/02 | 01/28/02 | 55 | 5.0 | ug/L | 1:1 |
| Tertiaryamyl methylether | 8260B | 01/28/02 | 01/28/02 | 54 | 5.0 | ug/L | 1:1 |


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**Matrix Spike Duplicate Report**

| | |
|---|---|
| **Client ID** | IT Corporation |
| **Workorder ID** | 83074 Caltrans, Former Thomas |
| **Laboratory ID** | 38861 |
| **Sample ID** | MSD for HBN 125406 [VMXV/1778] |
| **Matrix** | Water |

| Parameter | Method | Prep Date | Analyzed | Result | RL | Units | Dilution |
|---|---|---|---|---|---|---|---|
| Tertiary butanol | 8260B | 01/28/02 | 01/28/02 | 60 | 10 | ug/L | 1:1 |
| Methyl-tert-butyl-ether | 8260B | 01/28/02 | 01/28/02 | 53 | 2.0 | ug/L | 1:1 |
| Di-isopropyl ether | 8260B | 01/28/02 | 01/28/02 | 56 | 5.0 | ug/L | 1:1 |
| Ethyl tert-butyl ether | 8260B | 01/28/02 | 01/28/02 | 57 | 5.0 | ug/L | 1:1 |
| Tertiaryamyl methylether | 8260B | 01/28/02 | 01/28/02 | 52 | 5.0 | ug/L | 1:1 |



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Environmental Laboratories

Analytical Laboratory Division
Mobile Laboratory Division
Scientific Division

**QC SUMMARY**

| | | | |
|---|---|---|---|
| **Client ID** | IT Corporation | | |
| **Workorder ID** | 83074 Caltrans, Former Thomas | | |
| **QC Batch** | DIG 1318 | **Original** | 14394001 |
| **Matrix** | Water | **Sample** | Duplicate [38352] |

| Parameter | RPD | RPD Limits |
|---|---|---|
| Mercury | 0000 | (35) |



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## QC SUMMARY

| | | | |
|---|---|---|---|
| **Client ID** | IT Corporation | | |
| **Workorder ID** | 83074 Caltrans, Former Thomas | | |
| **QC Batch** | ICPP 3301 | **Original** | 14394001 |
| **Matrix** | Water | **Sample** | Duplicate [38502] |

| Parameter | RPD | RPD Limits |
|---|---|---|
| Antimony | 00 | (35) |
| Arsenic | 00 | (35) |
| Barium | 1.2 | (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 | 31 | (35) |
| Silver | 00 | (35) |
| Thallium | 00 | (35) |
| Vanadium | 00 | (35) |
| Zinc | 00 | (35) |


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## QC SUMMARY

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**QC Batch** VGX 2147
**Matrix** Water

**Original Samples** 14394001
Matrix Spike [38054]
Matrix Spike Duplicate [38055]

| Parameter | Spike %Recovery | Spike Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| TPHgas | 89 | 92 | (65-135) | 3.3 | (20 MAX) |


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## QC SUMMARY

| | | | |
|---|---|---|---|
| **Client ID** | IT Corporation | | |
| **Workorder ID** | 83074 Caltrans, Former Thomas | | |
| **QC Batch** | DIG 1318 | **Original** | 14394001 |
| **Matrix** | Water | **Samples** | Matrix Spike [38353] |
| | | | Matrix Spike Duplicate [38354] |

| Parameter | Spike %Recovery | Spike Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Mercury | 101 | 101 | (75-125) | 0000 | (35 MAX) |



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## QC SUMMARY

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**QC Batch** ICPP 3301
**Matrix** Water

**Original Samples** 14394001
Matrix Spike [38503]
Matrix Spike Duplicate [38504]

| Parameter | Spike %Recovery | Spike Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Antimony | 111 | 108 | (25-125) | 2.7 | (35 MAX) |
| Arsenic | 112 | 107 | (75-125) | 4.6 | (35 MAX) |
| Barium | 99 | 101 | (75-125) | 2.0 | (35 MAX) |
| Beryllium | 105 | 99 | (75-125) | 5.9 | (35 MAX) |
| Cadmium | 103 | 103 | (75-125) | 00 | (35 MAX) |
| Chromium | 108 | 105 | (75-125) | 2.8 | (35 MAX) |
| Cobalt | 95 | 90 | (75-125) | 5.4 | (35 MAX) |
| Copper | 98 | 103 | (75-125) | 5.0 | (35 MAX) |
| Lead | 100 | 102 | (75-125) | 2.0 | (35 MAX) |
| Molybdenum | 103 | 100 | (75-125) | 3.0 | (35 MAX) |
| Nickel | 100 | 103 | (75-125) | 3.0 | (35 MAX) |
| Selenium | 112 | 105 | (75-125) | 6.5 | (35 MAX) |
| Silver | 106 | 99 | (25-125) | 6.8 | (35 MAX) |
| Thallium | 101 | 95 | (50-125) | 6.1 | (35 MAX) |
| Vanadium | 102 | 98 | (75-125) | 4.0 | (35 MAX) |
| Zinc | 101 | 98 | (75-125) | 3.0 | (35 MAX) |


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## QC SUMMARY

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**QC Batch** VMX 1822
**Matrix** Water

**Original Samples** 14395006
Matrix Spike [38855]
Matrix Spike Duplicate [38856]

| Parameter | Spike %Recovery | Spike Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| 1,1-Dichloroethene | 94 | 100 | (61-145) | 6.2 | (20 MAX) |
| Benzene | 110 | 112 | (76-127) | 1.8 | (20 MAX) |
| Trichloroethene | 96 | 100 | (71-135) | 4.1 | (20 MAX) |
| Toluene | 104 | 106 | (76-130) | 1.9 | (20 MAX) |
| Chlorobenzene | 104 | 108 | (75-130) | 3.8 | (20 MAX) |


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## QC SUMMARY

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**QC Batch** VMX 1823
**Matrix** Water

**Original Samples** 14395006
Matrix Spike [38860]
Matrix Spike Duplicate [38861]

| Parameter | Spike %Recovery | Spike Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Tertiary butanol | 106 | 120 | (76-135) | 12 | (20 MAX) |
| Methyl-tert-butyl-ether | 108 | 106 | (76-135) | 1.9 | (20 MAX) |
| Di-isopropyl ether | 110 | 112 | (76-135) | 1.8 | (20 MAX) |
| Ethyl tert-butyl ether | 110 | 114 | (76-135) | 3.6 | (20 MAX) |
| Tertiaryamyl methylether | 108 | 104 | (76-135) | 3.8 | (20 MAX) |


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## QC SUMMARY

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**QC Batch** VGX 2147
**Matrix** Water

**Samples** Lab Control Sample [38052]
Lab Control Sample Duplicate [38053]

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| TPHgas | 93 | 87 | (65-135) | 6.7 | (20 MAX) |



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**QC SUMMARY**

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**QC Batch** DIG 1318
**Matrix** Water

**Samples** Lab Control Sample [38350]
Lab Control Sample Duplicate [38351]

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Mercury | 101 | 102 | (80-120) | 0.9850 | (20 MAX) |


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## QC SUMMARY

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**QC Batch** ICPP 3301
**Matrix** Water

**Samples** Lab Control Sample [38500]
Lab Control Sample Duplicate [38501]

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Antimony | 115 | 108 | (70-120) | 6.3 | (20 MAX) |
| Arsenic | 113 | 106 | (80-120) | 6.4 | (20 MAX) |
| Barium | 107 | 102 | (80-120) | 4.8 | (20 MAX) |
| Beryllium | 106 | 108 | (80-120) | 1.9 | (20 MAX) |
| Cadmium | 110 | 98 | (80-120) | 12 | (20 MAX) |
| Chromium | 107 | 100 | (80-120) | 6.8 | (20 MAX) |
| Cobalt | 98 | 96 | (80-120) | 2.1 | (20 MAX) |
| Copper | 102 | 101 | (80-120) | 1.0 | (20 MAX) |
| Lead | 109 | 102 | (80-120) | 6.6 | (20 MAX) |
| Molybdenum | 105 | 100 | (80-120) | 4.9 | (20 MAX) |
| Nickel | 109 | 102 | (80-120) | 6.6 | (20 MAX) |
| Selenium | 113 | 107 | (80-120) | 5.5 | (20 MAX) |
| Silver | 103 | 103 | (60-120) | 00 | (20 MAX) |
| Thallium | 110 | 104 | (80-120) | 5.6 | (20 MAX) |
| Vanadium | 102 | 91 | (80-120) | 11 | (20 MAX) |
| Zinc | 110 | 104 | (80-120) | 5.6 | (20 MAX) |


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## QC SUMMARY

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**QC Batch** SGX 1663
**Matrix** Water

**Samples** Lab Control Sample [38756]
Lab Control Sample Duplicate [38757]

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| TPHdiesel | 98 | 100 | (65-135) | 2.0 | (20 MAX) |



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## QC SUMMARY

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**QC Batch** VMX 1822
**Matrix** Water

**Samples** Lab Control Sample [38853]
Lab Control Sample Duplicate [38854]

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| 1,1-Dichloroethene | 98 | 92 | (65-145) | 6.3 | (20 MAX) |
| Benzene | 112 | 110 | (71-127) | 1.8 | (20 MAX) |
| Trichloroethene | 96 | 96 | (75-135) | 00 | (20 MAX) |
| Toluene | 100 | 108 | (76-135) | 7.7 | (20 MAX) |
| Chlorobenzene | 104 | 104 | (76-135) | 00 | (20 MAX) |



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## QC SUMMARY

**Client ID** IT Corporation
**Workorder ID** 83074 Caltrans, Former Thomas
**QC Batch** VMX 1823
**Matrix** Water

**Samples** Lab Control Sample [38858]
Lab Control Sample Duplicate [38859]

| Parameter | Check %Recovery | Check Dup %Recovery | Recovery Limits | RPD | RPD Limits |
|---|---|---|---|---|---|
| Tertiary butanol | 100 | 92 | (76-135) | 8.3 | (20 MAX) |
| Methyl-tert-butyl-ether | 102 | 100 | (76-135) | 2.0 | (20 MAX) |
| Di-isopropyl ether | 104 | 110 | (76-135) | 5.6 | (20 MAX) |
| Ethyl tert-butyl ether | 112 | 104 | (76-135) | 7.4 | (20 MAX) |
| Tertiaryamyl methylether | 106 | 104 | (76-135) | 1.9 | (20 MAX) |


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# WORKORDER DATA SHEET
Jan 16, 2002 08:32

ID 14394 WO #14394 83074 Caltrans, Former Thomas STATUS WP
DESC A1D/R1-3 JR

CREATED 01/16/02 08:29 PO QA TYPE CM ACODE REPORT_WO
CLIENT IT Corp. IT Corporation
PROFILE 110 Standard Standard w/o Discount

## WORKORDER SAMPLES

1 **14394001** 14394001 MW-4
WP TYPE SAMPLE MATRIX Water
COLLECTED 01/15/02 00:00 DUE 01/29/02 17:00

| Analyses | | Turndays |
|---|---|---|
| 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 **14394002** 14394002 MW-5
WP TYPE SAMPLE MATRIX Water
COLLECTED 01/15/02 00:00 DUE 01/29/02 17:00

| Analyses | | Turndays |
|---|---|---|
| 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 **14394003** 14394003 MW-6
WP TYPE SAMPLE MATRIX Water
COLLECTED 01/15/02 00:00 DUE 01/29/02 17:00

| Analyses | | Turndays |
|---|---|---|
| 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
Jan 16, 2002 08:32

| | | | | | |
|---|---|---|---|---|---|
| 4 | **14394004** | 14394004 | TRIP BLANK | | |
| | WP | TYPE SAMPLE | | MATRIX | Water |
| | COLLECTED | 01/15/02 00:00 | | DUE | 01/29/02 17:00 |

| Analyses | | Turndays |
|---|---|---|
| OXG/60W | 8260B OXYGENATES WATR | 10 |
| 8260 WATR | 8260B GCMS VOLATILES WATR | 10 |
| 8015M_G W | TPH Gas WATR | 10 |

# CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

IT CORPORATION - 1326 North Market Boulevard, Sacramento, CA 95834
(916) 928-3300 FAX (916) 928-3341

AID/R1-3

Purchase Order:

Lab: Sparger Analyt

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) 928-3341**

Sampler's Signature: Paul Weinhardt

Analysis Requested

| 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. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 1 | 6 | 6 | 3 | Container Types |
| | | | | | | HCl | NP | HCl | NP | Preservations |
| MW-4 | 1.15 | 935 | | Water | 7 | 4 | 1 | 1 | 1 | |
| MW-5 | " | 944 | | Water | 7 | 4 | 1 | 1 | 1 | |
| MW-6 | " | 955 | | Water | 7 | 4 | 1 | 1 | 1 | |
| Trip Blank | " | N/A | | Water | 2 | 2 | | X | X | |

| RELINQUISHED BY | RECEIVED BY | RELINQUISHED BY | RECEIVED BY |
|---|---|---|---|
| Signature: Paul Weinhardt | Signature: Paul Neville | Signature | Signature |
| Printed Name: PAUL WEINHARDT | Printed Name: PAUL NEVILLE | Printed Name | Printed Name |
| Firm: IT Corp | Firm | Firm | Firm |
| Date/Time: 1.15.02 | Date/Time: 1-15-02 3:00 | Date/Time | Date/Time |

**TURNAROUND REQUIREMENTS**

24 hr ___ 48 hr ___ 5 day

X Standard (~10-15 working days)

___ Provide Verbal Preliminary Results

___ Provide FAX Preliminary Results

Requested Report Date: _____

**REPORT REQUIREMENTS**

X I. Routine Report

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

___ III. Data Validation Report (includes All Raw Data)

___ RWQCB (MDLs/PQLs/TRACE#)

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

**Special Instructions/Comments:**

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

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

Container Types Key:

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