PORT OF OAKLAND

February 5, 2003

Mr. Barney Chan
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

RE: Fourth Quarter 2002, Quarterly Groundwater Monitoring and Product Recovery Report – 2277 Seventh Street and Semi-Annual 2002 Groundwater Monitoring Report - 2225 Seventh Street, Oakland, CA

Dear Mr. Chan:

Please find enclosed the respective combined Port of Oakland (Port) groundwater monitoring and product recovery reports for 2277 Seventh Street and 2225 Seventh Street in Oakland, California. These subject reports are being submitted in accordance with Alameda County Health Care Services Agency (ACHCSA) requirements.

The next monitoring event will be performed during the first quarter of 2003, and will be in accordance with the aforementioned requirements. If you have any questions or comments regarding the results, please contact me at (510) 627-1134.

Sincerely,

Jeffrey L. Rubin, CPSS, REA
Associate Port Environmental Scientist
Environmental Health and Safety Compliance

Enclosure: noted

Cc (w encl.): Michele Heffes

Cc (w/o encl.): Jeff Jones
Rogerio Leong (Innovative Technical Solutions, Inc.)
Rachel B. Hess (Innovative Technical Solutions, Inc.)
Jeffrey D. Hess (Innovative Technical Solutions, Inc.)

Innovative Technical Solutions, Inc.

February 3, 2003

Mr. Jeff Rubin
Associate Environmental Scientist
Port of Oakland
530 Water Street
Oakland, California 94607

Fourth Quarter of 2002 Quarterly Groundwater Monitoring and Product Recovery Report
2277 Seventh Street
Oakland, California

Semi-Annual 2002 Groundwater Monitoring Report
2225 Seventh Street
Oakland, California

Dear Mr. Rubin:

Innovative Technical Solutions, Inc. (ITSI) is pleased to submit this report to Port of Oakland (Port) for groundwater monitoring and sampling programs at 2277 7th Street and 2225 7th Street in Oakland, California (Figure 1). This report summarizes the quarterly monitoring of six groundwater monitoring wells (MW-2, MW-4, MW-5, MW-6, MW-7, and MW-8A) at 2277 7th Street and the semi-annual monitoring of two groundwater monitoring wells (MW-1 and MW-2) at 2225 7th Street. The locations of these wells are shown on Figure 2.

This report also summarizes the operation of the product recovery system at the 2277 7th Street site during the fourth quarter of 2002. The product recovery system is currently installed in two wells located at 2277 7th Street. Monitoring well MW-3 contains an active product skimmer that recovers separate-phase petroleum hydrocarbons from the groundwater surface, and monitoring well MW-1 contains a passive product recovery skimmer. ITSI did not perform collection of groundwater samples from these wells due to the presence of separate-phase petroleum hydrocarbons.

BACKGROUND

2277 7th Street

Monitoring wells were installed to assess groundwater quality following the removal of underground storage tanks (USTs) from the site in September 1993. The former USTs, located on the south side of Building C-401, consisted of two 10,000-gallon gasoline tanks (CF-17 and CF-18), one 500-gallon oil tank (CF-19), and one 300-gallon waste oil tank (CF-20). On April 20, 2000, Harding ESE (Harding) performed oversight of the abandonment of monitoring well MW-8, located at the northern edge of the property. This monitoring well was properly destroyed[1] to accommodate the construction of a railroad track associated with the Port of Oakland Vision 2000 improvements. All surface structures, including the well, needed to be removed. Harding monitored MW-8 from 1998 until it was abandoned.

[1] - Destruction and abandonment of all monitoring wells were performed in accordance with Alameda County Public Works Agency Guidelines

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During this time, no groundwater samples were collected because the well contained a thick, viscous, tar-like petroleum product. After the railroad construction was completed, the Port had a replacement well, MW-8A, installed in the same vicinity on October 2, 2001 by ITSI. MW-8A has been sampled since the fourth quarter of 2001, and no separate phase petroleum has been detected.

Site preparation activities were recently initiated for construction of a new Port Field Support Services Complex (PFSSC) at the site. During the month of December 2002, the eastern side of Building C-401 was demolished, and the asphalt pavement east of the building was removed. A concrete ring was placed around each well for protection and prevention from damage by heavy equipment during site demolition. Two monitoring wells (MW-6 and MW-7) were properly destroyed to facilitate the construction plans at the site. Currently, six monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-8A) still remain onsite.

2225 7th Street

Monitoring wells were installed at the adjacent site to assess groundwater quality following the removal of underground storage tanks (USTs) from the site in 1989 and 1992. The former USTs consisted of seven diesel USTs and one bulk oil UST located on the east side of Building C-407 and one waste oil UST located north of Building C-407. The 2225 7th Street site is also currently under modification for the construction of the future PFSSC. Buildings C-406 and C-407 were demolished and the entire surrounding asphalt pavement was removed in November 2002. The three monitoring wells (MW-1, MW-2, and MW-3) located at the site were properly destroyed to facilitate the Port's construction plan.

GROUNDWATER MONITORING

ITSI personnel performed groundwater monitoring and sampling at the 2277 and 2225 7th Street sites on December 12, 2002. Prior to purging and sampling the monitoring wells, ITSI measured the depth to groundwater below the top of the well casing with a water level indicator. After measuring the depth to water, ITSI purged the wells using a disposable bailer. Conductivity, pH, and temperature were monitored periodically during purging. ITSI collected the groundwater samples after removing a minimum of three well-casing volumes of water and upon stabilization of three consecutive measurements of conductivity, pH, and temperature. The depths to groundwater and field parameter measurements were recorded on respective Monitoring Well Water Level Measurement and Monitoring Well Purging and Sampling forms included as Appendix A. The purge water was stored onsite in the treatment system's product recovery tank. Foss Environmental Services Company, Inc. (Foss) periodically removes and appropriately disposes of the purge water along with the product in the tank.

ITSI collected groundwater samples from the monitoring wells using Teflon disposable bailers and then transferred the groundwater into laboratory-provided containers. A duplicate sample was collected for quality assurance. Sample containers were labeled with the sample number, date and time of collection, and sampler's initials, then placed in an insulated cooler with ice. The samples were accompanied by a laboratory-provided trip blank and delivered under chain-of-custody protocol to Curtis & Tompkins in Berkeley, a California certified analytical laboratory.

2277 7th Street

The fourth quarter 2002 groundwater monitoring event at 2277 7th Street involved monitoring and sampling of monitoring wells MW-2, MW-4, MW-5, MW-6, MW-7, and MW-8A, and periodic inspection and maintenance of the free-phase product recovery system installed in monitoring wells

MW-1 and MW-3. Groundwater level measurements are summarized in Table 1 and product thickness measurements are summarized on Table 2. The groundwater gradient direction is presented on Figure 3. Copies of the respective Monitoring Well Water Level Measurement and Monitoring Well Purging and Sampling forms are included in Appendix A.

2225 7th Street

The second semi-annual 2002 groundwater monitoring event at 2225 7th Street involved the monitoring and sampling of monitoring wells MW-1 and MW-2. Groundwater level measurements are summarized in Table 3. Groundwater elevations and the gradient direction are presented on Figure 3. Copies of the respective Monitoring Well Water Level Measurement and Monitoring Well Purging and Sampling forms are included in Appendix A.

LABORATORY ANALYSIS OF GROUNDWATER SAMPLES

Curtis and Tompkins of Berkeley, California performed the chemical analyses of the groundwater samples using the following analytical methods:

- Total petroleum hydrocarbons as gasoline (TPHg) in accordance with EPA Method 8015 modified.
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl t-butyl ether (MTBE) in accordance with EPA Method 8021B with confirmation of MTBE by EPA Test Method 8260.
- TPH as diesel (TPHd) in accordance with EPA Method 8015 modified following a silica-gel cleanup procedure.
- TPH as motor oil (TPHmo) in accordance with EPA Method 8015 modified following a silica-gel cleanup procedure.

The laboratory results for 2277 7th Street are summarized in Table 4 and are shown on Figure 4. The laboratory results for 2225 7th Street are summarized in Table 5 and shown on Figure 5. Copies of the laboratory results and chain-of-custody forms are provided in Appendix B.

MONITORING WELL DESTRUCTION

ITSI oversaw the destruction of five monitoring wells located at 2277 and 2225 7th Street in November and December 2002. Monitoring well destruction was performed in accordance with Alameda County Public Works Agency (ACPWA) guidelines. The five wells were destroyed to facilitate the construction of the future PFSSC. ITSI first destroyed monitoring well MW-3 at 2225 7th Street on November 21, 2002 because the well was irreparably damaged during grading activities. To abandon the well, it was over-drilled and the entire PVC casing was removed. Neat cement was then tremied into the borehole to ground surface. Monitoring well MW-3, therefore, could not be included in the 2002 semi-annual groundwater monitoring event. The four remaining monitoring wells, MW-6 and MW-7 located at 2277 7th Street, and MW-2 and MW-3 located at 2225 7th Street were destroyed on December 18, 2002. Respective fourth quarter and semi-annual groundwater monitoring events were performed for all these wells before they were destroyed. Well destruction first involved removal of each wellhead and upper three feet of PVC casing. The remaining portion of each well was then pressure grouted with neat cement to ground surface. ACPWA permits for well destruction, boring logs, and Department of Water Resource Well Completion Reports are included in Appendix C.

FINDINGS

Groundwater measurements at both sites were conducted on December 12, 2002. The water levels are presented in Tables 1 and 3. The groundwater elevation contour map is presented on Figure 3. According to these contours, the groundwater appears to be flowing towards the north-northeast. The groundwater flow direction observed during December 2002 is consistent with the historic flow direction reported in the previous reports.

2277 7th Street

Results of the December 12, 2002 groundwater sampling at 2277 7th Street are summarized below:

- TPHg was detected in two monitoring wells at concentrations of 53 µg/L in MW-6, and 580 µg/L in MW-4.
- Benzene was detected in three monitoring wells at concentrations of 0.98 µg/L in MW-2, 43 µg/L in MW-6, and 240 µg/L in MW-4.
- Toluene was detected in MW-4 at a concentration of 1.4 µg/L.
- Ethylbenzene was detected in MW-4 at a concentration of 0.56 µg/L.
- Total xylenes were not detected above the reporting limit in any of the wells sampled this quarter.
- MTBE was reported at a concentration of 58 µg/L in MW-7. The laboratory confirmed this detection of MTBE at a concentration of 48 µg/L using EPA Method 8260B. Wells MW-2, MW-4, MW-5, MW-6, and MW-8A did not contain detectable amounts of MTBE this quarter.
- TPHd was reported at a concentration of 110 µg/l in MW-6 and 160 µg/l in MW-8A.
- TPHmo was not detected above the reporting limit in any of the wells sampled this quarter.

2225 7th Street

Results of the December 12, 2002 groundwater sampling at 2225 7th Street revealed no detection above reporting limits of TPHg, TPHd, TPHmo, BTEX, and MTBE in MW-1 and MW-2 during this semi-annual sampling event.

QUALITY ASSURANCE AND QUALITY CONTROL

A duplicate sample was collected from monitoring well MW-4 at 2277 7th Street and at well MW-1 at 2225 7th Street on December 12, 2002 and submitted to the analytical laboratory to evaluate the precision of the analytical results. Precision is an indication of the reproducibility of results and is assessed by calculating the relative percent difference (RPD) between the primary sample result (X_1) and the duplicate sample result (X_2), as follows:

$$RPD = \frac{X_1 - X_2}{(X_1 + X_2)/2} \times 100$$

For example: A low RPD indicates high precision; a RPD of 67 percent indicates the two results differ by a factor of two. As shown below, the RPD was calculated for chemical compounds detected above the

reporting limit in either the duplicate or primary sample.

2277 7th St.	ANALYTE	X_1	X_2	RPD
MW-4	MTBE	<2.0	<2.0	--
12/12/02	B	240	680	96%
	T	1.4	5.0	112.5%
	E	0.56	2.3	121.7%
	X	<0.5	1.4	94.7%
	TPHd	<50	<50	--
	TPHg	580	2,400	122.1%

- The relative percent difference between the analytical results from MW-4 and its duplicate sample ranged from 94.7% to 122.1%. The high RPD values indicate low precision on sample results between the primary and duplicate sample. The ratio benzene/TPHg is approximately 41% in MW-4, and 28% in MW-4D, which indicates good agreement and consistency of concentrations in each individual sample and suggests that a mistake from laboratory analysis is unlikely to have occurred. The discrepancy of the sample results between the primary sample and the duplicate sample is more likely due to the collection of a duplicate sample immediately after the primary sample. Disturbance of the water column during sampling may have contributed to higher concentrations of constituents in the well.

2225 7th St.	ANALYTE	X_1	X_2	RPD
MW-1	MTBE	<2.0	<2.0	--
12/12/02	B	<0.5	<0.5	--
	T	<0.5	<0.5	--
	E	<0.5	<0.5	--
	X	<0.5	<0.5	--
	TPHd	<50	<50	--
	TPHg	<50	<50	--

- No analytes were detected in the original or duplicate samples from MW-1 at 2225 7th Street.

PRODUCT RECOVERY SYSTEM AT 2277 7TH STREET

The product recovery system at 2277 7th Street consists of an air-actuated (active) product skimmer in MW-3. Since MW-1 contained no measurable product, the passive product skimmer was removed on May 22, 2000. However in the following months, product was measured in the well and the passive skimmer was placed back in the well. Harding completed product recovery at MW-6 and removed the passive skimmer on April 19, 1999. The product in MW-3 discharges to a product recovery 1,000-gallon tank. Foss empties liquid and product from the product recovery tank at various times throughout a quarter.

ITSI began performing bi-weekly inspections of the treatment system in November 2002. Approximately 350 gallons of free-phase petroleum product were removed during this reporting period.

ITSI has performed maintenance by replacing a new water repulsive filter, floater and screen on the active skimmer in MW-3. ITSI also adjusted and repaired the automatic shut-off system in the recovery tank. During the month of December, ITSI increased the frequency of the system's inspection to twice weekly. The frequency of these inspections was increased as a result of site changes, specifically the removal of the asphalt pavement and demolition of buildings. The direct exposure of soil to the intense rainfall in December has saturated the ground around the site and, consequently, has caused groundwater level to rise. The groundwater level in MW-3 has risen 3.10 feet from December 6, 2002 to January 3, 2003. The corresponding free-phase petroleum product has decreased in thickness from 1.08 feet to product sheen. Currently, the recovery system is turned off because there has been inadequate amounts of the free-phase petroleum product in both MW-3 and MW-1 to maintain an effective product recovery system. ITSI will continue performing monitoring of free product in wells MW-1 and MW-3 on a bi-weekly basis during the first quarter of 2003.

Table 2 presents a summary of the product thickness data. A summary of the activities during the past quarter associated with the operation and maintenance of the product recovery system is presented in Table 6. Field notes of system's maintenance activities are noted in Daily Field Activity Reports included as Appendix D.

We appreciate the opportunity to present this report and trust that this document meets with your approval. Please do not hesitate to contact us at (925) 946-3105 with any questions or comments.

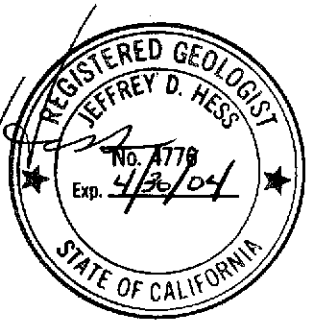
Sincerely yours,

INNOVATIVE TECHNICAL SOLUTIONS, INC.

Rogerio Leong
Project Geologist

Rachel B. Hess
Project Manager

Jeffrey D. Hess, R.G.
Senior Geologist



Attachments:

Table 1 – Groundwater Elevations Data, 2277 7th Street
Table 2 – Summary of Product Removal and Product Thickness, 2277 7th Street
Table 3 – Groundwater Elevations Data, 2225 7th Street
Table 4 – Groundwater Sample Results, 2277 7th Street
Table 5 – Groundwater Sample Results, 2225 7th Street
Table 6 – Summary of Operation and Maintenance Activities
Figure 1 – Site Location Map
Figure 2 – Site Plan
Figure 3 – Groundwater Elevations, 2277 and 2225 7th Street, December 12, 2002
Figure 4 – Groundwater Sample Results, 2277 7th Street, December 12, 2002
Figure 5 – Groundwater Sample Results, 2225 7th Street, December 12, 2002

Appendix A – Monitoring Well Water Level Measurement Form and
Monitoring Well Purging and Sampling Form
Appendix B - Laboratory Reports
Appendix C - Alameda County Public Work Agency permits, boring logs, Department of
Water Resource Well Completion Report
Appendix D – Daily Field Activity Report

Table 1
Groundwater Elevations Data
Port of Oakland, 2277 7th Street, Oakland, California

Well ID	Elevation Top of Casing (feet)	Date Of Monitoring	Depth to Water (feet)	Groundwater Elevation (feet)
MW-1	14.14	4/18/00	8.21	5.93
		5/22/00	8.17	5.97
		7/10/01	10.00	4.14
		12/12/01	NA	NA
		3/8/02	NA	NA
		6/13/02	NA	NA
		9/26/02	NA	NA
		12/12/02	NA	NA
MW-2	14.36	12/31/97	8.73	5.63
		4/13/98	7.72	6.64
		11/6/98	9.43	4.93
		3/19/99	8.21	6.15
		6/24/99	8.91	5.45
		9/28/99	9.42	4.94
		11/12/99	9.63	4.73
		2/11/00	8.54	5.82
		5/22/00	8.10	6.26
		9/6/00	8.79	5.57
		12/19/00	9.19	5.17
		2/21/01	7.99	6.37
		4/3/01	8.23	6.13
		7/10/01	8.70	5.66
		12/12/01	8.16	6.20
		1/22/02	7.64	6.72
		3/8/02	8.31	6.05
		6/13/02	8.64	5.72
		9/26/02	8.95	5.41
		12/12/02	9.17	5.19
MW-4	13.15	12/31/97	7.09	6.06
		4/13/98	7.71	5.44
		11/6/98	8.69	4.46
		3/19/99	8.00	5.15
		6/24/99	8.45	4.70
		9/28/99	8.73	4.42
		11/12/99	8.83	4.32
		2/11/00	7.71	5.44
		5/22/00	8.09	5.06
		9/6/00	8.32	4.83
		12/19/00	8.47	4.68
		2/21/01	7.51	5.64
		4/3/01	8.13	5.02
		7/10/01	8.12	5.03
		12/12/01	7.65	5.50
		1/22/02	7.60	5.55
		3/8/02	7.96	5.19
		6/13/02	8.20	4.95
		9/26/02	8.21	4.94
		12/12/02	8.38	4.77

Table 1
Groundwater Elevations Data
Port of Oakland, 2277 7th Street, Oakland, California

Well ID	Elevation Top of Casing (feet)	Date Of Monitoring	Depth to Water (feet)	Groundwater Elevation (feet)
MW-5	13.49	12/31/97	6.38	7.11
		4/13/98	5.56	7.93
		11/6/98	6.59	6.90
		3/19/99	6.20	7.29
		6/24/99	6.73	6.76
		9/28/99	6.91	6.58
		11/12/99	7.06	6.43
		2/11/00	7.00	6.49
		5/22/00	6.21	7.28
		9/6/00	6.56	6.93
		12/19/00	6.68	6.81
		2/21/01	6.08	7.41
		4/3/01	6.38	7.11
		7/10/01	6.58	6.91
		12/12/01	6.40	7.09
		1/22/02	6.10	7.39
		3/8/02	6.10	7.39
		6/13/02	6.31	7.18
		9/26/02	6.60	6.89
		12/12/02	6.75	6.74
MW-6	14.00	6/24/99	8.61	5.39
		9/28/99	9.26	4.74
		11/12/99	8.01	5.99
		2/11/00	7.20	6.80
		5/22/00	7.13	6.87
		9/6/00	7.12	6.88
		12/19/00	7.57	6.43
		2/21/01	7.50	6.50
		4/3/01	6.88	7.12
		7/10/01	7.15	6.85
		12/12/01	9.50	4.50
		1/22/02	6.69	7.31
		3/8/02	6.98	7.02
		6/13/02	7.45	6.55
		9/26/02	7.95	6.05
		12/12/02	7.71	6.29
		12/18/02	Monitoring well was destroyed	

Table 1
Groundwater Elevations Data
Port of Oakland, 2277 7th Street, Oakland, California

Well ID	Elevation Top of Casing (feet)	Date Of Monitoring	Depth to Water (feet)	Groundwater Elevation (feet)
MW-7	14.35	12/31/97	8.88	5.47
		4/13/98	7.86	6.49
		11/6/98	9.55	4.80
		3/19/99	8.41	5.94
		6/24/99	9.08	5.27
		9/28/99	9.60	4.75
		11/12/99	9.77	4.58
		2/11/00	8.67	5.68
		5/22/00	8.43	5.92
		9/6/00	8.88	5.47
		12/19/00	9.21	5.14
		2/21/01	8.13	6.22
		4/3/01	8.45	5.90
		7/10/01	8.87	5.48
		12/12/01	8.39	5.96
		1/22/02	7.99	6.36
		3/8/02	8.51	5.84
		6/13/02	8.90	5.45
		9/26/02	9.00	5.35
		12/12/02	9.28	5.07
		12/18/02	Monitoring well was destroyed	
MW-8A	12.94	12/12/01	7.20	NA
		1/22/02	7.20	5.74
		3/8/02	7.70	5.24
		6/13/02	7.72	5.22
		9/26/02	7.91	5.03
		12/12/02	8.15	4.79

[1] Elevation data relative to Port of Oakland datum; well surveys performed on September 12, 1996, and February 4, 1998, by PLS Surveys.

- Data prior to November 6, 1998 taken from *Groundwater Monitoring, Sampling and Product Removal System O&M Report* dated July 21, 1998, by Innovative Technical Solutions, Inc.
- Monitoring MW-8 was abandoned on April 20, 2000 in order to construct a railroad track associated with the Port of Oakland Vision 2000.

NA = Not available

Table 2
Summary of Product Removal and Product Thickness
Port of Oakland, 2277 7th Street, Oakland, California

Well ID	Elevation of Top of Casing[1] (feet)	Date Of Monitoring	Depth to Free Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Estimated Product Removed (gallons)	Product Removal Method [2]
MW-1	14.14	12/31/97	-	-	-	0.2	passive skimmer
		1/29/98	-	-	-	0.2	passive skimmer
		3/2/98	-	-	-	0.018	passive skimmer
		5/11/98	-	-	-	0.02	passive skimmer
		6/15/98	-	-	-	0.2	passive skimmer
		11/6/98	9.34	10.3	0.96	1.2	passive skimmer
		1/7/99	-	-	-	0.2	passive skimmer
		2/11/99	-	-	-	0.2	passive skimmer
		3/12/99	-	-	-	0.2	passive skimmer
		3/19/99	NM	8.45	>0.01	0.07	passive skimmer
		4/14/99	-	-	-	0.2	passive skimmer
		5/11/99	-	-	-	0.2	passive skimmer
		6/24/99	8.88	9.63	0.8	0.2	passive skimmer
		7/15/99	--	--	--	0.2	passive skimmer
		7/16/99	--	--	--	0.2	passive skimmer
		8/27/99	--	--	--	0.2	passive skimmer
		9/28/99	--	--	0.65	0.2	passive skimmer
		10/5/99	--	--	--	0.2	passive skimmer
		11/12/99	9.38	10.27	0.89	0.2	passive skimmer
		12/21/99	--	--	--	0.2	passive skimmer
		1/26/00	--	--	--	0.2	passive skimmer
		1/28/00	9.22	9.24	0.02	--	passive skimmer
		2/11/00	--	7.00	0.00	0.2	passive skimmer
		3/1/00	--	7.45	0.00	0.0	passive skimmer
		3/21/00	NM	7.34	0.00	0.0	passive skimmer
		4/18/00	NM	8.21	0.00	0.0	passive skimmer
		5/22/2000 [3]	NM	8.51	0.00	0.0	passive skimmer
		9/6/2000 [4]	8.52	9.24	0.72	0.0	passive skimmer
		9/21/00	8.71	9.26	0.55	0.0	passive skimmer
		10/11/00	--	--	--	0.0	passive skimmer
		11/30/00	--	--	--	0.0	passive skimmer
		12/19/00	9.5	9.89	0.39	0.0	passive skimmer
		2/22/01	8.3	8.4	0.13	0.0	passive skimmer
		4/3/01	8.3	8.55	0.25	0.0	passive skimmer
		4/23/01	--	--	--	0.0	passive skimmer
		5/11/01	--	--	--	0.0	passive skimmer
		5/30/01	8.5	8.9	0.40	0.0	passive skimmer
		6/14/01	--	--	--	0.0	passive skimmer
		7/10/01	8.8	10	1.20	0.0	passive skimmer
		12/12/01	NA	NA	NA	1.0	passive skimmer
		3/8/02	NA	NA	NA	NA	passive skimmer
		4/3/02	8.3	9.2	0.90	--	passive skimmer
		4/23/02	8.5	9.6	1.10	--	passive skimmer
		5/10/02	8.7	9.6	0.90	--	passive skimmer
		5/24/02	8.8	10	1.20	--	passive skimmer
		6/13/02	8.7	10	1.30	--	passive skimmer
		6/21/02	8.8	10	1.20	--	passive skimmer
		7/5/02	8.5	9.4	0.90	0.2	passive skimmer
		7/19/02	8.6	9.6	1.00	0.2	passive skimmer
		7/30/02	8.5	9.3	0.80	0.2	passive skimmer
		8/14/02	8.5	9.3	0.80	0.2	passive skimmer
		9/13/02	8.8	9.6	0.80	0.2	passive skimmer
		9/26/02	8.6	9.5	0.90	0.2	passive skimmer
		10/14/02	9.0	10.1	1.10	0.2	passive skimmer
		11/4/02	9.22	10.12	0.90	0.2	passive skimmer
		11/21/02	8.48	8.86	0.38	0.2	passive skimmer
		12/6/02	8.85	9.38	0.53	0.0	passive skimmer
		12/18/02	[redacted]	8.26	[redacted]	0.2	passive skimmer
		12/30/02	[redacted]	7.63	[redacted]	<0.1	passive skimmer
		1/2/03	[redacted]	7.36	[redacted]	<0.1	passive skimmer
		1/3/03	[redacted]	7.35	[redacted]	<0.1	passive skimmer

Table 2
Summary of Product Removal and Product Thickness
Port of Oakland, 2277 7th Street, Oakland, California

Well ID	Elevation of Top of Casing[1] (feet)	Date Of Monitoring	Depth to Free Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Estimated Product Removed (gallons)	Product Removal Method [2]
MW-3	14.22	12/31/97	-	-	-	30	active skimmer
		1/29/98	-	-	-	10	active skimmer
		4/13/98	-	-	-	240	active skimmer
		5/11/98	-	-	-	1,545	active skimmer
		6/15/98	-	-	-	1,950	active skimmer
		11/6/98	8.84	9.94	1.1	500	active skimmer
		1/5/99	-	-	-	275[2]	active skimmer
		1/14/99	-	-	-	400[2]	active skimmer
		2/3/99	-	-	-	400[2]	active skimmer
		2/26/99	-	-	-	570[2]	active skimmer
		3/19/99	7.52	8.05	0.5	211	active skimmer
		6/16/99	-	-	-	310	active skimmer
		6/24/99	8.38	8.56	0.2	--	active skimmer
		7/14/99	--	--	--	50[2]	active skimmer
		9/28/99	--	--	0.2	--	active skimmer
		10/29/99	--	--	--	125[2]	active skimmer
		11/12/99	9.14	9.23	0.09	--	active skimmer
		1/28/00	--	--	--	135	active skimmer
		2/11/00	7.97	8.37	0.40	40	active skimmer
		3/1/00	6.59	7.24	0.65	0.0	active skimmer
		3/21/00	6.50	6.56	0.06	35	active skimmer
		4/18/00	--	--	--	--	active skimmer
		5/22/00	7.51	8.05	0.54	40	active skimmer
		6/26/00	7.82	8.2	0.38	90	active skimmer
		7/25/00	7.90	8.92	1.02	20	active skimmer
		8/31/00	8.15	9.5	1.35	30	active skimmer
		9/6/00	8.21	9.42	1.21	--	active skimmer
		9/21/00	8.30	8.88	0.58	115	active skimmer
		10/11/00	--	--	--	170	active skimmer
		11/30/00	--	--	--	105	active skimmer
		12/19/00	8.60	9.65	1.05	10	active skimmer
		2/22/01	6.36	8.15	1.79	--	active skimmer
		4/3/01	7.48	8.88	1.40	--	active skimmer
		4/23/01	7.85	9.1	1.25	--	active skimmer
		5/11/01	--	--	--	--	active skimmer
		5/30/01	7.75	9.1	1.35	--	active skimmer
		6/14/01	--	--	--	--	active skimmer
		7/10/01	8.10	9.6	1.50	--	active skimmer
		12/12/01	NA	NA	NA	1,000[5]	active skimmer
		3/8/02	7.80	8	0.20	1,000[5]	active skimmer
		4/3/02	7.60	7.7	0.10	--	active skimmer
		4/23/02	7.90	8.4	0.50	--	active skimmer
		4/25/02	7.90	8.8	0.90	--	active skimmer
		5/10/02	8.10	8.2	0.10	--	active skimmer
		5/24/02	8.05	8.1	0.05	--	active skimmer
		6/13/02	8.10	8.7	0.60	1,000[5]	active skimmer
		7/5/02	8.10	8.95	0.85	--	active skimmer
		7/19/02	8.10	8.9	0.80	--	active skimmer
		7/30/02	8.10	8.9	0.80	--	active skimmer
		8/14/02	8.10	8.9	0.80	--	active skimmer
		9/13/02	8.30	9.3	1.00	--	active skimmer
		9/26/02	8.30	9.0	0.70	--	active skimmer
		10/14/02	8.60	9.5	0.90	--	active skimmer
		11/4/02	8.75	9.99	1.24	--	active skimmer
		11/21/02	8.59	11.29	2.70	150[6]	active skimmer
		12/6/02	8.56	9.3	0.74	150[6]	active skimmer
		12/18/02	[redacted]	8.43	1.08	25[6]	active skimmer
		12/30/02	[redacted]	7.15	0.65	25[6]	active skimmer
		1/2/03	[redacted]	6.20	sheen	--	active skimmer
		1/3/03	[redacted]	6.21	sheen	--	active skimmer

Table 2
Summary of Product Removal and Product Thickness
Port of Oakland, 2277 7th Street, Oakland, California

Well ID	Elevation of Top of Casing[1] (feet)	Date Of Monitoring	Depth to Free Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Estimated Product Removed (gallons)	Product Removal Method [2]
MW-6	14.00	13/31/97	-	-	-	0.0014	passive skimmer
		1/29/98	-	-	-	0.0014	passive skimmer
		3/2/98	-	-	-	0.0014	passive skimmer
		11/6/98	NM	9.62	>0.01	0.0	passive skimmer
		3/19/99	NM	7.37	>0.01	0.0	passive skimmer
MW-8 [1]	12.94	12/31/97	8.49	8.82	0.33	4.38	-
		11/6/98	9.25	10.3	1.1	3.48	-

- Data prior to November 6, 1998 taken from *Groundwater Monitoring, Sampling and Product Removal System O&M Report* dated July 21, 1998, by Innovative Technical Solutions, Inc.
- Data prior to November 6, 1998 taken from *Groundwater Monitoring, Sampling and Product*
- Product removal volumes from 11/6/98 on represent total product removed during that reporting period.

[1] Free product in well is too viscous to allow product thickness or groundwater level measurements.

[2] Product removal totals for MW-3 are estimated from documentation of product removal from the treatment system performed by Performance Excavators, Inc.

[3] The passive skimmer was removed from MW-1 on 5/22/00.

[4] The passive skimmer replaced MW-1 on 9/6/00.

[5] Removal total is the volume of both product and wastewater removed from the treatment system by Foss Environmental Services Company, Inc.

[6] Product removed is based on volume measured in the 1,000-gallon holding poly-tank.

NM - Well checked for free product but not able to detect a measurable amount in the well.

Shaded areas indicate data from this reporting period.

NA - Not Available

Table 3
Groundwater Elevations Data
Port of Oakland, 2225 7th Street, Oakland, California

Well ID	Elevation Top of Casing (feet)	Date Of Monitoring	Depth to Water (feet)	Groundwater Elevation (feet)
MW-1	13.72	1/15/93	5.21	8.51
		9/12/94	6.37	7.35
		11/30/94	5.76	7.96
		3/29/95	4.57	9.15
		5/25/95	5.14	8.58
		6/21/95	5.41	8.31
		6/23/95	5.44	8.28
		11/20/95	6.28	7.44
		12/27/95	5.86	7.86
		3/25/96	5.21	8.51
		6/26/96	5.58	8.14
		10/14/96	6.22	7.50
		3/19/97	5.48	8.24
		6/26/00	5.19	8.53
		9/6/00	5.62	8.10
		12/19/00	5.57	8.15
		4/3/01	5.03	8.69
		7/10/01	5.57	8.15
		12/12/01	5.60	8.12
		1/22/02	5.19	8.53
		3/8/02	5.17	8.55
		6/13/02	5.60	8.12
		9/26/02	6.05	7.67
		12/12/02	6.08	7.64
		12/18/02	Monitoring well was destroyed	
MW-2	13.8	1/15/93	6.21	7.59
		9/12/94	6.47	7.33
		11/30/94	6.34	7.46
		3/29/95	5.51	8.29
		5/25/95	5.60	8.20
		6/21/95	5.72	8.08
		6/23/95	5.72	8.08
		9/28/95	6.15	7.65
		11/20/95	6.42	7.38
		12/27/95	6.31	7.49
		3/25/96	5.74	8.06
		6/26/96	5.85	7.95
		10/14/96	6.36	7.44
		3/19/97	5.90	7.90
		6/26/00	5.37	8.43
		9/6/00	5.62	8.18
		12/19/00	5.81	7.99
		4/3/01	5.38	8.42
		7/10/01	5.80	8.00

Table 3
Groundwater Elevations Data
Port of Oakland, 2225 7th Street, Oakland, California

Well ID	Elevation Top of Casing (feet)	Date Of Monitoring	Depth to Water (feet)	Groundwater Elevation (feet)
MW-2 (cont'd)	13.8	12/12/01	10.00	3.80
		1/22/02	5.45	8.35
		3/8/02	5.49	8.31
		6/13/02	5.79	8.01
		9/26/02	8.15	5.65
		12/12/02	6.35	7.45
		12/18/02	Monitoring well was destroyed	
MW-3	15.06	1/15/93	6.44	8.62
		9/12/94	7.35	7.71
		11/30/94	7.12	7.94
		3/29/95	6.31	8.75
		5/25/95	6.75	8.31
		6/21/95	6.87	8.19
		6/23/95	6.88	8.18
		9/28/95	7.28	7.78
		11/20/95	7.51	7.55
		12/27/95	7.20	7.86
		3/25/96	6.64	8.42
		6/26/96	6.98	8.08
		10/14/96	7.47	7.59
		3/19/97	6.99	8.07
		6/26/00	6.82	8.24
		9/6/00	6.82	8.24
		12/19/00	7.10	7.96
		4/3/01	6.66	8.40
		7/10/01	7.00	8.06
		12/12/01	7.04	8.02
		1/22/02	6.67	8.39
		3/8/02	6.86	8.20
		6/13/02	7.00	8.06
		9/26/02	7.40	7.66
		11/21/02	Monitoring well was destroyed	

[1] Elevation data relative to Port of Oakland datum; well surveys performed on December 6, 1994

- Data prior to June 26, 2000 taken from *First Quarter 1997 Groundwater Monitoring and Sampling report* dated May 6, 1999, by Fluor Daniel GTI.

Table 4
Groundwater Sample Results
Port of Oakland, 2277 7th Street, Oakland California

Monitoring Well ID	Date	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-1	05/22/00	3,600	41,000	<3,000	100	13 [8]	2.9	2.05	3.2 [8]
MW-2	05/27/94	87	470	NA	<0.5	<0.5	<0.5	<0.5	NA
	03/29/95	<50	110	1,400	<0.4	<0.3	<0.3	<0.4	NA
	09/06/95	<50	NA	NA	<0.4	<0.3	<0.3	<0.4	NA
	01/08/96	<50	<50	1200	<0.4	<0.3	<0.3	<0.4	NA
	04/04/96	<50	160	320	<0.5	<0.5	<0.5	<1.0	NA
	07/10/96	<50	120	1400	<0.4	<0.3	<0.3	<0.4	NA
	12/03/96	<50	230 [1,2]	<250	<0.5	<0.5	<0.5	<1.0	NA
	03/28/97	<50	714	<250	<0.5	<0.5	<0.5	<1.0	NA
	06/13/97	51	<50	<250	<0.5	<0.5	<0.5	<1.0	NA
	09/18/97	82	<50	<250	0.56	<0.5	<0.5	<1.0	NA
	12/31/97	<50	<47	<280	1.4	<0.5	<0.5	<1.0	NA
	04/13/98	<50	<50	<300	<0.5	<0.5	<0.5	<1.0	NA
	11/06/98	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	03/19/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	06/24/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	09/28/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	11/12/99	<50	120 [2,6]	<300	<0.5	<0.5	<0.5	<0.5	6.3 [8,9]
	02/11/00	<50	<50	<300	5.4	<0.5	<0.5	<0.5	<2
	05/22/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	09/06/00	<50	<50	<300	0.76 [8]	<0.5	<0.5	<0.5	<0.5 [10]
	12/19/00	200 [3,11]	<50	<300	39	1.8	<0.5	2.6	<0.5 [10,12]
	02/21/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	07/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/05/01	<50	<50	<300	4.4	<0.5	<0.5	<0.5	5.0 [14]
	03/08/02	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	06/13/02	62 [15]	<57	<570	<0.5	<0.5	<0.5	<0.5	<5.0
	09/26/02	69 [2]	<50	<500	1.8	<0.5	<0.5	<0.5	<5.0
	12/12/02	<50	<50	<300	0.98	<0.5	<0.5	<0.5	<2.0
MW-4	09/11/95	150	<200	500	23	<0.3	<0.3	<0.4	NA
	01/08/96	790	90	400	170	1.2	0.6	0.6	NA
	04/04/96	1,100	180	300	320	1.6	1.1	1.2	NA
	07/10/96	1,200	120	300	470	1.5	0.8	0.8	NA
	12/03/96	990	220 [1,2]	<250	350	3.3	1.3	1.3	NA
	03/28/97	440 [2]	<50	<250	190	1.2	0.64	<1.0	NA
	06/13/97	1,300	92 [5]	<250	500	5.5	3.4	2.8	NA
	09/18/97	1,300	150	<250	550	4.9	2.1	2.00	NA
	12/31/97	73 [1,2,3]	<47	<280	110 [1]	1.0 [1]	<0.5	<1.0	NA
	04/13/98	150 [2,3]	<50	<300	520	2.9	<2.5	<5.0	NA
	11/06/98	<50	<50	<300	250	1.7	<1	<1	<4
	03/19/99	81	<50	<300	250	<1	1.2	<1	<4
	06/24/99	190	<50	<300	360	1.4	2.2	1	24
	09/28/99	750 [3,5]	63 [3,5]	<300	280	1.5	<1	<1	<4
	11/12/99	330 [3]	840 [2]	<300	740	<2.5	<2.5	<2.5	42 [9]
	02/11/00	200 [2]	<50	<300	58	0.73	<0.5	<0.5	4.4 [8]
	05/22/00	240	<50	<300	500	<2.5	<2.5	<2.5	17

Table 4
Groundwater Sample Results
Port of Oakland, 2277 7th Street, Oakland California

Monitoring Well ID	Date	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-4	09/06/00	530 [2,3]	<50	<300	190	0.93	0.6	0.57	<0.5 [10]
(cont'd)	12/19/00	960 [3,11]	70 [5]	<300	420	<2.5	<2.5	<2.5	<0.5 [10,12]
Dup.	12/19/00	1,200 [3,11]	<50	<300	440	<2.5	<2.5	<2.5	<0.5 [10,12]
	02/21/01	450 [13]	<50	<300	120	<0.5	<0.5	<0.5	<0.5 [10]
	07/10/01	<250	110 [2,13]	<300	620	2.6	2.9	<2.5	<0.5 [8,10]
	12/05/01	180	<50	<300	61	<0.5	<0.5	<0.5	3.8 [14]
	03/08/02	490 [2]	54 [2]	<500	180	<2.5	<2.5	<2.5	<25
	06/13/02	830 [2]	<50	<500	250	<5.0	<5.0	<5.0	<50
Dup.	06/13/02	820 [2]	<56	<560	240	<5.0	<5.0	<5.0	<50
	09/26/02	390 [2]	57	<500	150	2.1	<1.0	<1.0	<10
Dup.	09/26/02	500 [2]	<50 [16]	<500 [16]	200	1.5	<1.0	<1.0	<10
	12/12/02	580	<50	<300	240	1.4	0.56	<0.5	<2.0
Dup.	12/12/02	2,400	<50	<300	680	5.0	2.3	1.4	<2.0
MW-5	09/11/95	90	<300	2,500	3.3	<0.3	<0.3	<0.4	NA
	04/04/96	<50	180	520	<0.5	<0.5	<0.5	<1.0	NA
	07/10/96	<50	120	1,500	<0.4	<0.3	<0.3	<0.4	NA
	12/03/96	<50	200 [1,2]	<250	<0.5	<0.5	<0.5	<1.0	NA
	03/28/97	<50	<50	<250	<0.5	<0.5	<0.5	<1.0	NA
	06/13/97	<50	<50	<250	<0.5	<0.5	<0.5	<1.0	NA
	09/18/97	<50	<50	<250	<0.5	<0.5	<0.5	<1.0	NA
	12/31/97	<50	<47	<280	<0.5	<0.5	<0.5	<1.0	NA
	04/13/98	<50	<47	<280	<0.5	<0.5	<0.5	<1.0	NA
	11/06/98	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	03/19/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	06/24/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	3.1
	09/28/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	11/12/99	<50	110 [2,6]	<300	<0.5	<0.5	<0.5	<0.5	5.5 [9]
	02/11/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	05/22/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	09/06/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	12/19/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	02/21/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	07/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	12/05/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	03/08/02	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	06/13/02	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	09/26/02	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	12/12/02	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
MW-6	11/06/98	120	12,000	1,200	19	0.65	1.8	<0.5	<2
	03/19/99	170	3,800	580	21	0.86	1.5	2.9	<2
	06/24/99	120	1,700 [7]	<300 [7]	18	<0.5	1.0	<0.5	54
	09/28/99	130 [3,5]	820	<300	20	0.51	2.2	<0.5	<2
	11/12/99	150	11,000 [2,6]	3,000 [3,6]	27	<0.5	2.2	<0.5	13 [9]
	02/11/00	270 [2]	2,300	<300	23	0.51	2.7	<0.5	5.8
	05/22/00	350	3,000	<300	18	0.51	<0.5	<0.5	7.7
	09/06/00	190	610	<300	26	<0.5	1.7	<0.5	<0.5 [10]
	12/19/00	130 [3,11]	620	<300	24	<0.5	1.6	<0.5	<2

Table 4
Groundwater Sample Results
Port of Oakland, 2277 7th Street, Oakland California

Monitoring Well ID	Date	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-6	02/21/01	120[13]	440	<300	21	<0.5	0.96	<0.5	<2
(cont'd)	07/10/01	120	560	<300	29	<0.5	0.99	<0.5	<2
	12/12/01	53	550	<300	27	<0.5	1.3	<0.5	<2.0
	03/08/02	160[2]	640[2]	<500	30	<0.5	<0.5	<0.5	5.0[14]
	06/13/02	160[2]	670[2]	<500	34	<0.5	<0.5	<0.5	<5.0
	09/26/02	230[2]	1400[2]	<500	40	0.64	0.8	<0.5	<5.0
	12/12/02	53	110	<300	43	<0.5	<0.5	<0.5	<2.0
	12/18/02	Monitoring well was destroyed							
MW-7	09/06/95	<50	<300	800	<0.4	<0.3	<0.3	<0.4	NA
	01/08/96	<50	410	110	<0.4	<0.3	<0.3	<0.4	NA
	04/04/96	<50	530	340	<0.5	<0.5	<0.5	<1.0	NA
	07/10/96	80	840	1,700	<0.4	<0.3	<0.3	<0.4	NA
	12/03/96	<50	280[1,2]	<250	<0.5	<0.5	<0.5	<1.0	NA
	03/28/97	65[6]	94[2]	<250	<0.5	<0.5	<0.5	<1.0	NA
	06/13/97	<50	100	<250	<0.5	<0.5	<0.5	<1.0	NA
	09/18/97	<50	240	<250	<0.5	<0.5	<0.5	<1.0	NA
	12/31/97	<50	53[2,3]	<280	<0.5	<0.5	<0.5	<1.0	NA
	04/13/98	<50	<48	<290	<0.5	<0.5	<0.5	<1.0	NA
	11/06/98	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	03/19/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	5.3
	06/24/99	73	<50	<300	<0.5	<0.5	<0.5	<0.5	12
	09/28/99	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	14
	11/12/99	<50	600[2,6]	420[3]	<0.5	<0.5	<0.5	<0.5	15[9]
	02/11/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	51
	05/22/00	110	53[2]	<300	<0.5	<0.5	<0.5	<0.5	75
	09/06/00	50[6]	<50	<300	<0.5	<0.5	<0.5	<0.5	40[10]
	12/19/00	54[11]	51[5]	<300	<0.5	<0.5	<0.5	<0.5	47[10,12]
	02/21/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	66[10]
Dup.	02/21/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	60[10]
	07/10/01	<50	51[2]	<300	<0.5	<0.5	<0.5	<0.5	76[10]
Dup.	07/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	75[10]
	12/12/01	51	<50	<300	<0.5	<0.5	<0.5	<0.5	98[14]
Dup.	12/12/01	64	52[13,15]	<300	<0.5	<0.5	<0.5	<0.5	96[14]
	03/08/02	52[2]	<50	<500	<0.5	<0.5	<0.5	<0.5	24[14]
	06/13/02	87[2]	54[2]	<500	<0.5	<0.5	<0.5	<0.5	51
	09/26/02	83[2]	84[2]	<500	<0.5	<0.5	<0.5	<0.5	75[10]
	12/12/02	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	58[14]
	12/18/02	Monitoring well was destroyed							
MW-8A	12/12/01	68	720[11,15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/08/02	<50	760[2]	<570	<0.5	<0.5	<0.5	<0.5	<5.0
Dup.	03/08/02	<50	350[2]	<580	<0.5	<0.5	<0.5	<0.5	<5.0
	06/13/02	<50	570[2]	<570	<0.5	<0.5	<0.5	<0.5	<5.0
	09/26/02	<50	410[2]	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	12/12/02	<50	160[15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0

Table 4
Groundwater Sample Results
Port of Oakland, 2277 7th Street, Oakland California

Monitoring Well ID	Date	TPHg (µg/l)	TPHd (µg/1)	TPHmo (µg/1)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/1)	MTBE (µg/1)

[1] Analyte found in the associated blank as well as in the sample.
[2] Hydrocarbons present do not match profile of laboratory standard.
[3] Low-boiling-point/lighter hydrocarbons are present in the sample.
[4] Chromatographic pattern matches known laboratory contaminant.
[5] Hydrocarbons are present in the requested fuel quantification range, but do not resemble pattern of available fuel standard.
[6] High-boiling-point/heavier hydrocarbons are present in sample.
[7] Sample did not pass laboratory QA/QC and may be biased low
[8] Presence of this compound confirmed by second column, however, the confirmation concentration differed from the reported result by more than a factor or two.
[9] Trip blank contained MTBE at a concentration of 4.2 µg/l
[10] MTBE detections confirmed by EPA Test Method 8260. 8260 results displayed.
[11] Sample exhibits unknown single peak or peaks
[12] EPA Method 8260 confirmation analyzed past holding time.
[13] Lighter hydrocarbons contributed to the quantitation
[14] MTBE results from EPA Test Method 8021B.
[15] Sample exhibits fuel pattern which does not resemble standard
[16] Sample extracted out of hold time

- Data from December 1997 through April 1998 taken from *Groundwater Monitoring, Sampling and Product Removal System O&M Report* dated July 21, 1998, by Innovative Technical Solutions, Inc.
-Data prior to December 1997 taken from *Groundwater Analytical Results, Quarterly Groundwater Monitoring Report: Third Quarter 1997 , Building C-401, 2277 7 th Street, Oakland, CA,* dated October 24, 1997, by Uribe and Associate

NA Not Analyzed.

Table 5
Groundwater Sample Results
Port of Oakland, 2225 7th Street, Oakland California

Monitoring Well ID	Date	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)
MW-1	1/15/93	<50	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/12/94	<10 [1]	10,000	NA	0.5	<0.3	<0.3	<0.3	NA
	11/30/94	<10	2,800	NA	<0.3	<0.3	<0.3	<0.3	NA
	3/29/95	<50	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	6/21/95	<50	<50 [2]	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/28/95	<50	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	12/27/95	<50	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	3/25/96	<50	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	6/26/96	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	10/14/96	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	3/19/97	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	6/26/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5[5]
	12/19/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
Dup.	12/19/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	7/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
Dup.	7/10/01	<50	<50	310	<0.5	<0.5	<0.5	<0.5	<2
	12/12/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	6/13/02	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0
Dup.	6/13/02	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	12/12/02	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
Dup.	12/12/02	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/18/02	Monitoring well was destroyed							
MW-2	1/15/93	<50	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/12/94	34 [1]	<50	NA	0.5	<0.3	<0.3	<0.3	NA
	11/30/94	<10	81	NA	0.9	<0.3	<0.3	<0.3	NA
	3/29/95	<50 [3]	75	NA	0.3	<0.3	<0.3	<0.3	NA
	6/21/95	<50 [3]	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/28/95	250 [1]	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	12/27/95	220 [1]	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	3/25/96	200 [1]	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	6/26/96	77 [4]	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	10/14/96	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	3/19/97	150	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	6/26/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5[5]
	12/19/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	7/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	12/12/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	6/13/02	<50	<50	<500	<0.5	<0.5	<0.5	<0.5	<5.0
	12/12/02	<50	<50	<300	0.98	<0.5	<0.5	<0.5	<2.0
	12/18/02	Monitoring well was destroyed							

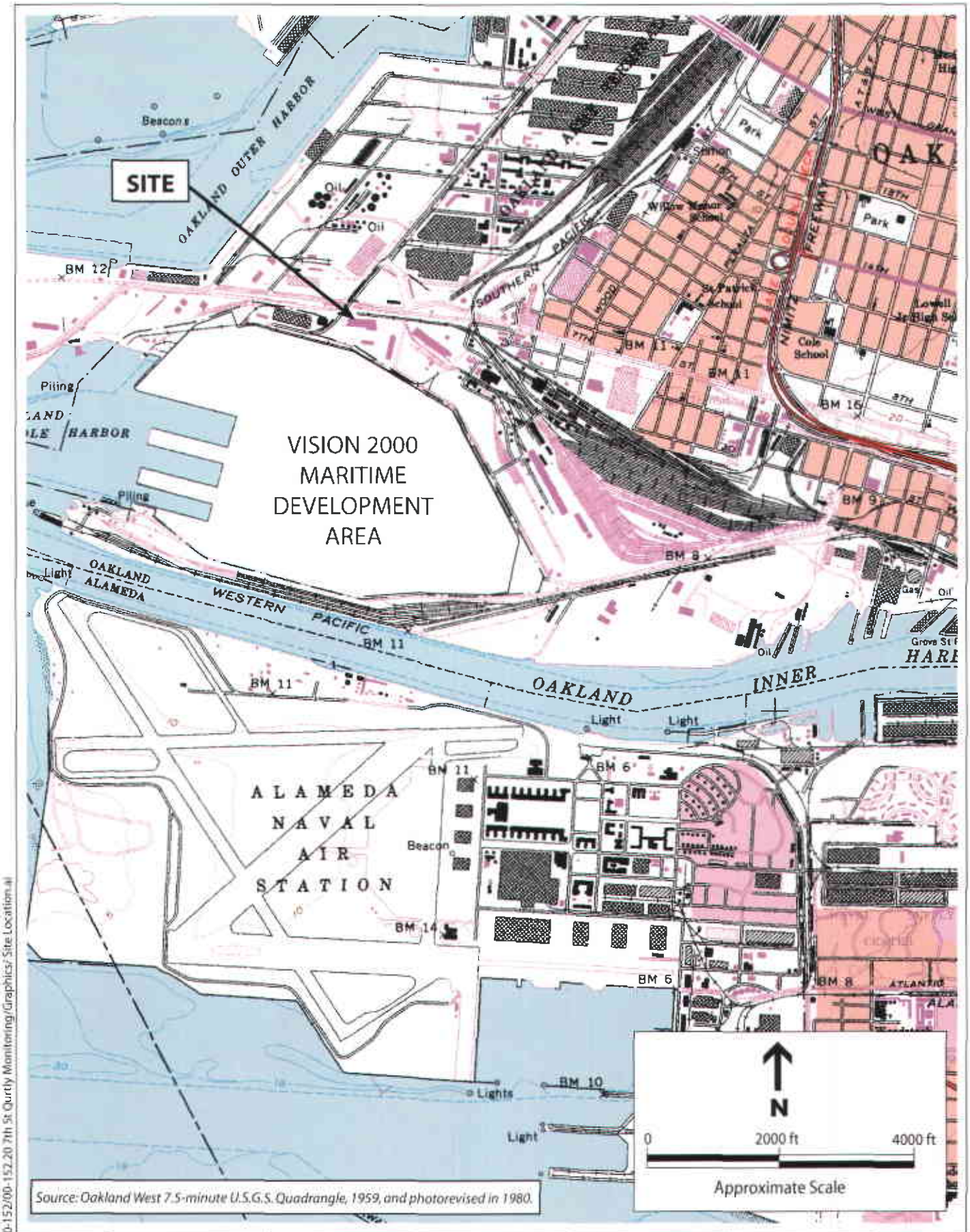
Table 5
Groundwater Sample Results
Port of Oakland, 2225 7th Street, Oakland California

Monitoring Well ID	Date	TPHg (µg/l)	TPHd (µg/1)	TPHmo (µg/1)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/1)	MTBE (µg/1)
MW-3	1/15/93	<50	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/12/94	<50	<50	NA	0.3	<0.3	<0.3	<0.3	NA
	11/30/94	110	150	NA	<0.3	<0.3	<0.3	<0.3	NA
	3/29/95	<50	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	6/21/95	<50 [3]	<50 [2]	NA	<0.3	<0.3	<0.3	<0.3	NA
	9/28/95	51 [1]	<50	NA	<0.3	<0.3	<0.3	<0.3	NA
	12/27/95	55 [1]	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	3/25/96	53	<50	<100	<0.3	<0.3	<0.3	<0.3	NA
	6/26/96	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	10/14/96	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	3/19/97	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	6/26/00	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5[5]
	12/19/00	<50	50 [2]	<300	<0.5	<0.5	<0.5	<0.5	<2
	7/10/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	12/12/01	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2
	6/13/02	<50	<56	<560	<0.5	<0.5	<0.5	<0.5	<5.0
	11/21/02	Monitoring well was destroyed							

NA Not Analyzed.
[1] Hydrocarbon pattern is not characteristic of gasoline
[2] Hydrocarbon pattern present in sample is not characteristic of diesel
[3] Uncategorized compound not included in the gasoline concentration
[4] Product is not typical gasoline
[5] MTBE detected by EPA Test Method 8021B but reported as ND<0.5 by EPA Test Method 8260
[6] Heavier hydrocarbons contributed to the quantitation
- Data prior to June 26, 2000 taken from *First Quarter 1997 Groundwater Monitoring and Sampling report* dated May 6, 1999, by Fluor Daniel GTI.

Table 6
Summary of Operation and Maintenance Activities
Port of Oakland, 2277 7th Street, Oakland, California

Date	System Status	Comments
7/5/02	Off	System is turned off and is in the process of being moved to new location.
7/19/02	Off	System is moved to new location but is not hooked up to electricity.
7/30/02	Off	System is moved to new location but is not hooked up to electricity.
8/14/02	Off	System is moved to new location but is not hooked up to electricity.
9/13/02	On	System is powered and operating.
9/26/02	On	System operating OK.
10/14/02	On	System operating OK.
11/4/02	On	System operating OK.
11/21/02	On	System operating OK.
12/6/02	On	System operating OK.
12/18/02	On	System operating OK.
12/23/02	On	System operating OK.
12/27/02	On	System operating OK.
12/30/02	On	System operating OK.
1/2/03	Off	System is turned off because no free product was detected in well MW-3
1/3/03	Off	System is turned off because no free product was detected in well MW-3



Projects/2000/00-152/00-152-20 7th St Qurtly Monitoring/Graphics/ Site Location.ai

Innovative Technical Solutions, Inc.	**Port of Oakland** 2225 and 2277 Seventh Street Oakland, California	**Figure 1** Site Location Map

N81°53'14"W

MW-8A

MW-4

C-401

MW-2

MW-1

MW-7

MW-5

MW-3

MW-6

2277 7TH STREET

MW-2

2225 7TH STREET

Future Port Field Support Services Building

MW-3

MARITIME STREET

PROPERTY BOUNDARY LINE

MW-1

LEGEND

- Existing Groundwater Monitoring Well (various installations)
- UST Removal Excavation
- Groundwater Treatment System Conveyance Piping
- Groundwater Monitoring Wells at 2277 Seventh Street. Destroyed on December 18, 2002.
- Groundwater Monitoring Wells at 2225 Seventh Street. Destroyed MW-3 on November 21 and MW 1 and 2 on December 18, 2002.

N

0 100 200

SCALE IN FEET

CAD GIS Stations\00-152 Port of Oakland\00-152.20 7th Street\Site Plan.dwg

ITSI Innovative Technical Solutions, Inc.

Fourth Quarter 2002, Quarterly Groundwater Monitoring and Product Recovery
Semi-Annual 2002 Groundwater Monitoring
2225 and 2277 Seventh Street
Oakland, California

Figure 2
Site Plan

N81°53'14"W

MW-8A
(4.79)

MW-4
(4.77)

C-401

MW-2
(5.19)

MW-1

MW-3

MW-5
(6.74)

MW-7
(5.07)

MW-6
(6.29)

2277 7TH STREET

MW-2
(7.45)

2225 7TH STREET

MW-1
(7.64)

PROPERTY
BOUNDARY
LINE

Future Port Field
Support Services
Building

MW-3
(NA)

MARITIME STREET

5.0
5.5
6.0
6.5
7.0
7.5

LEGEND

- Existing Groundwater Monitoring Well (various installations)
- UST Removal Excavation
- Groundwater Treatment System Conveyance Piping
- Groundwater Monitoring Wells at 2277 Seventh Street. Destroyed on December 18, 2002.
- Groundwater Monitoring Wells at 2225 Seventh Street. Destroyed on November 21 and December 18, 2002.
- (7.64) Groundwater Elevation measured on December 12, 2002
- NA Not Available

N

0 100 200
SCALE IN FEET

CAD GIS Station\700-152 Port of Oakland\00-152 20 7th Street\Groundwater Elevations.dwg

ITSI Innovative Technical Solutions, Inc.

Fourth Quarter 2002, Quarterly Groundwater Monitoring and Product Recovery
Semi-Annual 2002 Groundwater Monitoring
2225 and 2277 Seventh Street
Oakland, California

Figure 3
Groundwater Elevations
December 12, 2002

N81°53'14"W

TPHg	580
TPHd	ND<50
TPHmo	ND<300
B	240
T	1.4
E	0.56
X	ND<0.5
MTBE	ND<2.0

MW-4

TPHg	ND<50
TPHd	160 Y
TPHmo	ND<300
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
MTBE	ND<2.0

MW-8A

C-401

TPHg	ND<50
TPHd	ND<50
TPHmo	ND<300
B	0.93
T	ND<0.5
E	ND<0.5
X	ND<0.5
MTBE	ND<2.0

MW-1 FP

MW-2

MW-3 FP

MW-7

TPHg	ND<50
TPHd	ND<50
TPHmo	ND<300
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
MTBE	58

MW-5

2277 7TH STREET

TPHg	ND<50
TPHd	ND<50
TPHmo	ND<300
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
MTBE	ND<2.0

MW-6

MW-2

TPHg	53
TPHd	110
TPHmo	ND<300
B	43
T	ND<0.5
E	ND<0.5
X	ND<0.5
MTBE	ND<2.0

2225 7TH STREET

Future Port Field Support Services Building

MW-3

MARITIME STREET

PROPERTY BOUNDARY LINE

MW-1

LEGEND

- Existing Groundwater Monitoring Well (various installations)
- UST Removal Excavation
- Groundwater Treatment System Conveyance Piping
- Groundwater Monitoring Wells at 2277 Seventh Street. Destroyed on December 18, 2002.
- Groundwater Monitoring Wells at 2225 Seventh Street. Destroyed on November 21 and December 18, 2002.

FP	Presence of Free Product in Well
TPHg	Total Petroleum Hydrocarbon as gasoline
TPHd	Total Petroleum Hydrocarbon as Diesel
TPHmo	Total Petroleum Hydrocarbon as Motor Oil
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylene
MTBE	Methyl t-butyl ether

Results are reported in micrograms per liter.

Y = sample exhibits fuel pattern which does not resemble standard

N

0 100 200

SCALE IN FEET

CAD GIS Station\00-152 Port of Oakland\000-152.20 7th Street\Groundwater Samples.dwg

ITSI Innovative Technical Solutions, Inc.

Fourth Quarter 2002, Quarterly Groundwater Monitoring and Product Recovery
2277 Seventh Street
Oakland, California

Figure 4
Groundwater Sample Results
December 12, 2002

N81°53'14"W

MW-8A

MW-4

C-401

MW-1
FP

MW-2

MW-7

MW-5

MW-3
FP

MW-6

2277 7TH STREET

TPHg	ND<50
TPHd	ND<50
TPHmo	ND<300
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
MTBE	ND<2.0

MW-2

2225 7TH STREET

PROPERTY
BOUNDARY
LINE

TPHg	ND<50
TPHd	ND<50
TPHmo	ND<300
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
MTBE	ND<2.0

MW-1

Future Port Field
Support Services
Building

MW-3
(NA)

MARITIME STREET

LEGEND

- Existing Groundwater Monitoring Well (various installations)
- UST Removal Excavation
- Groundwater Treatment System Conveyance Piping
- Groundwater Monitoring Wells at 2277 Seventh Street. Destroyed on December 18, 2002.
- Groundwater Monitoring Wells at 2225 Seventh Street. Destroyed on November 21 and December 18, 2002.

FP	Presence of Free Product in Well
TPHg	Total Petroleum Hydrocarbon as gasoline
TPHd	Total Petroleum Hydrocarbon as Diesel
TPHmo	Total Petroleum Hydrocarbon as Motor Oil
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylene
MTBE	Methyl t-butyl ether
NA	Not Available

Results are reported in micrograms per liter.

N

0 100 200

SCALE IN FEET

CAD GIS Station\00-152 Port of Oakland\00-152 20 7th Street\Groundwater Samples 2.dwg

ITSI Innovative Technical Solutions, Inc.

Semi-Annual 2002 Groundwater Monitoring
2225 Seventh Street
Oakland, California

Figure 5
Groundwater Sample Results
December 12, 2002

Innovative Technical Solutions, Inc.

APPENDIX A

MONITORING WELL WATER LEVEL MEASUREMENT FORM
AND
MONITORING WELL PURGING AND SAMPLING FORM

Innovative Technical Solutions, Inc.

MONITORING WELL WATER LEVEL MEASUREMENT FORM

PROJECT NAME: 2225 & 2277 7th Street PROJECT NO.: 00-152.20

MEASURED BY: JA & RL DATE: 12/12/2002

Monitoring Well I.D.	Depth to Water (feet)	Total Well Depth (feet)	Time
Second Semi-Annual Groundwater Monitoring - 2225 7th Street			
MW-1	6.08	15.0	10:52
MW-2	6.35	15.0	9:30
MW-3	monitoring well destroyed on November 21, 2002		
Fourth Quarter Groundwater Monitoring - 2277 7th Street			
MW-2	9.17	15.0	13:50
MW-4	8.38	18.50	16:20
MW-5	6.75	17.00	15:45
MW-6	7.71	18.50	12:05
MW-7	9.28	18.00	13:15
MW-8A	8.15	20.50	17:00

Innovative Technical Solutions, Inc.

MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: Port of Oakland – 2225 7th Street PROJECT NO.: 00-152.20

WELL NO.: MW-1 TESTED BY: JA & RL DATE: 12/12/2002

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 6.08

Total Well Depth (ft.): 15.0 Purge Method: Disposable Bailer

Water Level Measurement Method: Solinst W. L. Purge Rate (gpm): 6

Time Start Purge: 10:56 Time End Purge: 11:26

Comments :

Well Volume Calculation (fill in before purging)	Total Depth (ft)		Depth to Water (ft)		Water Column (ft)		Multiplier for Casing Diameter (in)				Casing Volume (gal)
							2	4	6		
	15.0	-	6.08	=	8.92	x	0.16	0.64	1.44	=	5.7

Time	10:56	11:05	11:13	11:26			
Cumulative Volume Purged (gals)	0	6	12	18			
Cumulative Number of Casing Volumes	0	~1	~2	3			
Temperature (F°/C°)	18.7	18.7	18.9	18.5			
pH	7.60	7.53	7.51	7.52			
Specific Conductivity (mS/cm)	1.05	1.20	1.29	1.17			
Turbidity (NTU)	7	5	5	5			

WELL SAMPLING

Sampling Time: 11:45 Sampling Method: Disposable Bailer

Duplicate Sample & Time: 2225 MW-1D @ 11:50

Sample ID	Volume/ Container	Analysis Requested	Preservatives	Lab
2225 MW-1	2 (1 L Amber)	TPHd, TPHmo	none	C&T
2225 MW-1	5 voas	TPHg, MTBE, BTEX	HCL	C&T

Innovative Technical Solutions, Inc.

MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: Port of Oakland – 2225 7th Street PROJECT NO.: 00-152.20

WELL NO.: MW-2 TESTED BY: JA & RL DATE: 12/12/2002

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 6.35

Total Well Depth (ft.): 15.0 Purge Method: Disposable Bailer

Water Level Measurement Method: Solinst W. L. Purge Rate (gpm): 0.50

Time Start Purge: 9:45 Time End Purge: 10:30

Comments :

Well Volume Calculation (fill in before purging)	Total Depth (ft)		Depth to Water (ft)		Water Column (ft)		Multiplier for Casing Diameter (in)				Casing Volume (gal)
							2	4	6		
	15.0	-	6.35	=	8.65	x	0.16	0.64	1.44	=	5.5

Time	9:45	10:00	10:15	10:30			
Cumulative Volume Purged (gals)	0	6.0	11.0	17			
Cumulative Number of Casing Volumes	0	1	2	3			
Temperature (F°/C°)	19.4	19.0	18.6	18.9			
pH	7.22	7.14	7.21	7.24			
Specific Conductivity (mS/cm)	2.57	2.04	2.15	2.22			
Turbidity (NTU)	41	37	22	10			

WELL SAMPLING

Sampling Time: 10:40 Sampling Method: Disposable Bailer

Duplicate Sample & Time: None

Sample ID	Volume/ Container	Analysis Requested	Preservatives	Lab
2225 MW-2	2 (1 L Amber)	TPHd, TPHmo	none	C&T
2225 MW-2	5 voas	TPHg, MTBE, BTEX	HCL	C&T

Innovative Technical Solutions, Inc.

MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: Port of Oakland – 2277 7th Street PROJECT NO.: 00-152.20

WELL NO.: MW-2 TESTED BY: JA & RL DATE: 12/12 /2002

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 9.17

Total Well Depth (ft.): 15.0 Purge Method: Disposable Bailer

Water Level Measurement Method: Solinst W. L. Purge Rate (gpm): 0.27

Time Start Purge: 13:50 Time End Purge: 14:01

Comments :

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in)			=	Casing Volume (gal)
							2	4	6		
	15.0		9.17		5.83		0.16	0.64	1.44		0.93

Time	13:50	13:52	13:58	14:01			
Cumulative Volume Purged (gals)	0	1	2	3			
Cumulative Number of Casing Volumes	0	1	2	3			
Temperature (F°(C°))	18.7	20.8	20.9	20.1			
pH	7.46	7.42	7.46	7.45			
Specific Conductivity (mS/cm)	2.36	2.52	2.39	2.41			
Turbidity (NTU)	2	5	6	31			

WELL SAMPLING

Sampling Time: 14:20 Sampling Method: Disposable Bailer

Duplicate Sample & Time: None

Sample ID	Volume/ Container	Analysis Requested	Preservatives	Lab
MW-2	2 (1 L Amber)	TPHd, TPHmo	none	C&T
MW-2	5 voas	TPHg, MTBE, BTEX	HCL	C&T

Innovative Technical Solutions, Inc.

Sheet 1 of 1

MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: Port of Oakland – 2277 7th Street PROJECT NO.: 00-152.20

WELL NO.: MW-4 TESTED BY: JA & RC DATE: 12/12/2002

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 8.38

Total Well Depth (ft.): 18.50 Purge Method: Disposable Bailer

Water Level Measurement Method: Solinst W. L. Purge Rate (gpm): 0.5

Time Start Purge: 16:24 Time End Purge: 16:33

Comments :

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in)			=	Casing Volume (gal)
							2	4	6		
	18.50		8.38		10.12		0.16	0.64	1.44		1.62

Time	16:24	16:26	16:30	16:33			
Cumulative Volume Purged (gals)	0	1.60	3.30	4.90			
Cumulative Number of Casing Volumes	0	1	2	3			
Temperature (F°/C°)	19.3	20.4	20.3	19.9			
pH	7.20	7.13	7.43	7.40			
Specific Conductivity (mS/cm)	1.26	1.35	1.48	1.46			
Turbidity (NTU)	9	55	73	40			

WELL SAMPLING

Sampling Time: 16:45 Sampling Method: Disposable Bailer

Duplicate Sample & Time: MW-4D @ 16:50

Sample ID	Volume/ Container	Analysis Requested	Preservatives	Lab
MW-4	2 (1 L Amber)	TPHd, TPHmo	none	C&T
MW-4	5 voas	TPHg, MTBE, BTEX	HCL	C&T

Innovative Technical Solutions, Inc.

Sheet 1 of 1

MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: Port of Oakland – 2277 7th Street PROJECT NO.: 00-152.20

WELL NO.: MW-5 TESTED BY: JA & RL DATE: 12/12/2002

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 6.75

Total Well Depth (ft.): 17.0 Purge Method: Disposable Bailer

Water Level Measurement Method: Solinst W. L. Purge Rate (gpm): 0.46

Time Start Purge: 15:47 Time End Purge: 15:58

Comments :

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in)			=	Casing Volume (gal)
							2	4	6		
	17.0		6.75		10.25		0.16	0.64	1.44		1.64

Time	15:47	15:50	15:55	15:58			
Cumulative Volume Purged (gals)	0	1.70	3.40	5.1			
Cumulative Number of Casing Volumes	0	1	2	3			
Temperature (F/C)	18.8	19.7	19.8	18.6			
pH	7.31	7.42	7.48	7.48			
Specific Conductivity (mS/cm)	1.39	2.04	2.08	2.02			
Turbidity (NTU)	1	29	32	42			

WELL SAMPLING

Sampling Time: 16:05 Sampling Method: Disposable Bailer

Duplicate Sample & Time: None

Sample ID	Volume/ Container	Analysis Requested	Preservatives	Lab
MW-5	2 (1 L Amber)	TPHd, TPHmo	none	C&T
MW-5	5 voas	TPHg, MTBE, BTEX	HCL	C&T

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MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: Port of Oakland – 2877th Street PROJECT NO.: 00-152.20

WELL NO.: MW-6 TESTED BY: JA & RL DATE: 12/12/2002

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 7.71

Total Well Depth (ft.): 18.50 Purge Method: Disposable Bailer

Water Level Measurement Method: Solinst W. L. Purge Rate (gpm): 0.13

Time Start Purge: 12:12 Time End Purge: 12:52

Comments : SLOW RECHARGE AFTER PURGING ~2 GALLONS OF WATER. GROUNDWATER HAS MODERATE HYDROCARBON ODOR.

Well Volume Calculation (fill in before purging)	Total Depth (ft)		Depth to Water (ft)		Water Column (ft)	x	Multiplier for Casing Diameter (in)				Casing Volume (gal)
							2	4	6		
	18.50	-	7.71	=	10.79		0.16	0.64	1.44	=	1.73

Time	12:12	12:18	12:30	12:52			
Cumulative Volume Purged (gals)	0	2.22	3.50	5.50			
Cumulative Number of Casing Volumes	0	>1	2	>3			
Temperature (F° (C°))	19.1	19.9	20.2	19.4			
pH	6.96	7.43	7.60	7.62			
Specific Conductivity (mS/cm)	3.53	3.84	3.92	3.85			
Turbidity (NTU)	52	379	63	25			

WELL SAMPLING

Sampling Time: 1305 Sampling Method: Disposable Bailer

Duplicate Sample & Time: None

Sample ID	Volume/ Container	Analysis Requested	Preservatives	Lab
MW-6	2 (1 L Amber)	TPHd, TPHmo	none	C&T
MW-6	5 voas	TPHg, MTBE, BTEX	HCL	C&T

Innovative Technical Solutions, Inc.

MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: Port of Oakland – 2277 7th Street PROJECT NO.: 00-152.20

WELL NO.: MW-7 TESTED BY: JA & RL DATE: 12/12/2002

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 9.28

Total Well Depth (ft.): 18.0 Purge Method: Disposable Bailer

Water Level Measurement Method: Solinst W. L. Purge Rate (gpm): 0.42

Time Start Purge: 13:20 Time End Purge: 13:30

Comments :

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in)			=	Casing Volume (gal)
							(2)	4	6		
	18.0	-	9.28	=	8.72	x	(0.16)	0.64	1.44	=	1.395

Time	13:20	13:22	13:26	13:30			
Cumulative Volume Purged (gals)	0	1.4	2.8	4.2			
Cumulative Number of Casing Volumes	0	1	2	3			
Temperature (F° (C°))	19.5	19.9	20.0	19.5			
pH	7.43	7.47	7.53	7.51			
Specific Conductivity (mS/cm)	1.53	1.65	1.71	1.72			
Turbidity (NTU)	1	434	654	593			

WELL SAMPLING

Sampling Time: 13:40 Sampling Method: Disposable Bailer

Duplicate Sample & Time: None

Sample ID	Volume/ Container	Analysis Requested	Preservatives	Lab
MW-7	2 (1 L Amber)	TPHd, TPHmo	none	C&T
MW-7	5 voas	TPHg, MTBE, BTEX	HCL	C&T

Innovative Technical Solutions, Inc.

MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: Port of Oakland – 2277 7th Street PROJECT NO.: 00-152.20

WELL NO.: MW-8A TESTED BY: JA & RL DATE: 12/12/2002

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 8.15

Total Well Depth (ft.): 20.50 Purge Method: Disposable Bailer

Water Level Measurement Method: Solinst W. L. Purge Rate (gpm): 0.5

Time Start Purge: 17:05 Time End Purge: 17:17

Comments :

Well Volume Calculation (fill in before purging)	Total Depth (ft)	-	Depth to Water (ft)	=	Water Column (ft)	x	Multiplier for Casing Diameter (in)			=	Casing Volume (gal)
							2	4	6		
	20.50		8.15		12.35		0.16	0.64	1.44		2.03

Time	17:05	17:08	17:12	17:17			
Cumulative Volume Purged (gals)	0	2	4	6			
Cumulative Number of Casing Volumes	0	1	2	3			
Temperature (F°/C°)	19.1	19.8	19.9	18.5			
pH	7.46	7.54	7.63	7.66			
Specific Conductivity (mS/cm)	2.35	2.76	2.78	2.77			
Turbidity (NTU)	68	43	33	37			

WELL SAMPLING

Sampling Time: 17:30 Sampling Method: Disposable Bailer

Duplicate Sample & Time: None

Sample ID	Volume/ Container	Analysis Requested	Preservatives	Lab
MW-8A	2 (1 L Amber)	TPHd, TPHmo	none	C&T
MW-8A	5 voas	TPHg, MTBE, BTEX	HCL	C&T

ITSI Innovative Technical Solutions, Inc.
2730 Shadelands Drive, Suite 100
Walnut Creek, California 94598
(925) 946-3100 – (925) 256-8998 (fax)

Local Address: 2277 7th Street, Oakland, California

Chain-Of-Custody

Project Name and Number: Port of Oakland - 00-152.20
Project Manager: Rachel Hess
Site Location: 2277 7th Street, Oakland Ca

Laboratory Name: Curtis & Tompkins
Address: 2323 5th Street, Berkeley Ca
Contact Name: John Goyette
Phone: (510) 486-0900

Date: 12/12/2002
Page: 1 of 2

Sample I.D.	Date	Time	Sample Depth	No. of Containers	Sample Matrix	TPHd by EPA 8015B	TPH mo by EPA 8015B	TPHg by EPA 8015B	BTEX + MTBE by 8021B	MTBE confirmation by 8260					Special Instructions/Comments
Preservative:						None	None	HCL	HCL	HCL					
Container Type:						1L Amber	1L Amber	VOA	VOA	VOA					
2225 MW-1	12/12/02	1145	~7.0	7	H2O	X	X	X	X	X					silica gel clean up for TPHd, mo
2225 MW-1D	12/12/02	1150	~7.0	7	H2O	X	X	X	X	X					
2225 MW-2	12/12/02	1040	~5.0	7	H2O	X	X	X	X	X					
MW-2	12/12/02	1420	~13	7	H2O	X	X	X	X	X					
MW-4	12/12/02	1645	~12	7	H2O	X	X	X	X	X					
MW-4D	12/12/02	1650	~12	7	H2O	X	X	X	X	X					
MW-5	12/12/02	1605	~12	7	H2O	X	X	X	X	X					
MW-6	12/12/02	1305	~18	7	H2O	X	X	X	X	X					

Sampled By: Tim Anderson and Raymond Leong
Signature: [signature]
Special Instructions: Direct Bill - please contact Port of Oakland - Jeff Rubin @ (510) 627-1134
Send Results to: (w/fax #) Rachel Hess @ (925) 256-8998
Turnaround Time: STANDARD

Courier/Airbill No.:

Relinquished By/Affiliation:	Date:	Time:	Received By/Affiliation:	Date:	Time:
[signature] Raymond Leong / ITSI	12/13	0835	[signature] / C&T	12/13/02	0835

Original – Laboratory   Yellow – Field/Office

ITSI 5/02

Chain-Of-Custody

Innovative Technical Solutions, Inc.
2730 Shadelands Drive, Suite 100
Walnut Creek, California 94598
(925) 946-3100 – (925) 256-8998 (fax)

Local Address: 2277 7th Street, Oakland, California

Project Name and Number: City of Oakland CO152-20
Project Manager: Rachel Hess
Site Location: 2277 7th Street, Oakland, Ca

Laboratory Name: Curtis & Tompkins
Address: 2323 5th Street, Berkeley, Ca
Contact Name: John Goyette
Phone: (510) 486-0900

Date: 12/12/2002
Page: 2 of 2

Sample I.D.	Date	Time	Sample Depth	No. of Containers	Sample Matrix	Analysis: TPHd by EPA 8015	Analysis: TPHg by EPA 8015	Analysis: TPHg by EPA 8021B BTEX + MTBE by EPA 8021B	Analysis: MTBE confirmation by EPA 8260		Special Instructions/Comments
						Preservative: None	None	HCl	HCl	HCl	Silica gel cleanup for TPHd, no
						Container Type: 1L Amber	1L Amber	VOA	VOA	VOA	
MW-7	12/12/02	1340	~10	7	H_2O	X	X	X	X	X	
MW-8A	12/12/02	1730	~10	7	H_2O	X	X	X	X	X	
Trip Blank	12/12/02	800	—	2	H_2O			X	X	X	

Sampled By: Jim Anderson & Peggie Leung
Signature:
Special Instructions: Direct Bill City of Oakland
Jeff Dubin @ (510) 627-1124
Send Results to: Rachel Hess @
(w/fax #) (925) 256-8998
Turnaround Time: STANDARD

Courier/Airbill No.:

Relinquished By/Affiliation:	Date:	Time:	Received By/Affiliation:	Date:	Time:
Peggie Leung/ITS	12/13/02	830		12/13/02	0855

Original – Laboratory Yellow – Field/Office

ITSI 5/02

Innovative Technical Solutions, Inc.

APPENDIX B

LABORATORY REPORTS

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

ANALYTICAL REPORT

Prepared for:

Innovative Technical Solutions,Inc.
2730 Shadelands Drive
Suite 100
Walnut Creek, CA 94598-2540

Date: 31-DEC-02
Lab Job Number: 162622
Project ID: 00-152.2
Location: 2277 7th Street POO

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis.

Reviewed by: _____
Project Manager

Reviewed by: _____
Operations Manager

Curtis & Tompkins, Ltd.

Login Number: 162622 **Receipt Date:** 12/13/02
Client: Innovative Technical Solutions, Inc.
Location: 2277 7th Street, Port of Oakland
Project#: 00-152.2

CASE NARRATIVE

This hardcopy data package contains sample and QC results for eleven water samples that were received on December 13, 2002. The samples were received intact on ice but a temperature blank was missing for the temperature check.

TVH/BTEX/MTBE by EPA Method 8015B(M)/8021B:

High trifluorotoluene surrogate recoveries were observed in samples 2225-MW-2 and MW-4D. High bromofluorobenzene surrogate recovery was observed in sample MW-6. These outliers can be attributed to hydrocarbons coeluting with the surrogate peaks. The second surrogate in each of these samples met acceptance criteria. No other analytical problems were encountered.

Total Extractable Hydrocarbons by EPA Method 8015B(M):

Low spike and surrogate recoveries, and high relative percent difference, were observed in the matrix spike of sample 162551-003. The matrix spike sample was not a sample from this site. The associated laboratory control sample met acceptance criteria. No other analytical problems were encountered.

MTBE confirmation by EPA 8260B:

The MTBE detected in sample MW-7 was confirmed by GCMS. No analytical problems were encountered.

162622

Innovative Technical Solutions, Inc.
2730 Shadelands Drive, Suite 100
Walnut Creek, California 94598
(925) 946-3100 – (925) 256-8998 (fax)

Local Address: 2277 7th Street
Oakland, California

Chain-Of-Custody

Project Name and Number: Port of Oakland - 00-152.20
Project Manager: Rachel Hess
Site Location: 2277 7th Street, Oakland Ca

Laboratory Name: Curtis & Tomkins
Address: 2323 5th Street
Berkeley Ca
Contact Name: John Goyette
Phone: (510) 486-0900

Date: 12/12/2002
Page: 1 of 2

Sample I.D.	Date	Time	Sample Depth	No. of Containers	Sample Matrix	Analysis: TPHd by EPA 8015B	TPHmo by EPA 8015B	TPHg by EPA 8015 G	BTEX + MTBE by 8021B	MTBE CONFIRMATION BY 8260	Special Instructions/Comments
						Preservative: None	None	HCL	HCL	HCL	Silica gel Clean up for TPHd, mo
						Container Type: 1L AMBER	1L AMBER	VOA	VOA	VOA	
2225 MW-1	12/12/02	1145	~7.0	7	H_2O	X	X	X	X	X	
2225 MW-1D	12/12/02	1150	~7.0	7	H_2O	X	X	X	X	X	
2225 MW-2	12/12/02	1040	~5.0	7	H_2O	X	X	X	X	X	
MW-2	12/12/02	1420	~13	7	H_2O	X	X	X	X	X	
MW-4	12/12/02	1645	~12	7	H_2O	X	X	X	X	X	
MW-4D	12/12/02	1650	~12	7	H_2O	X	X	X	X	X	
MW-5	12/12/02	1605	~12	7	H_2O	X	X	X	X	X	
MW-6	12/12/02	1305	~18	7	H_2O	X	X	X	X	X	

Sampled By: Jim Anderson and Rogerio Leong
Signature:
Special Instructions: Direct Bill please contact Port of Oakland - Jeff Rubin @ (510) 627-1134
Send Results to: (w/fax #) RACHEL HESS @ (925) 256-8998
Turnaround Time: STANDARD

Courier/Airbill No.:

Relinquished By/Affiliation:	Date:	Time:	Received By/Affiliation:	Date:	Time:
Rogerio Leong / ITSI	12/13/02	8:50		12/13/02	0850

Original – Laboratory Yellow – Field/Office

ITSI 5/02

162622

Chain-Of-Custody

Innovative Technical Solutions, Inc.
2730 Shadelands Drive, Suite 100
Walnut Creek, California 94598
(925) 946-3100 – (925) 256-8998 (fax)

Local Address: 2277 7th Street Oakland, California

Project Name and Number: Port of Oakland 00.152-20
Project Manager: Rachel Hess
Site Location: 2277 7th Street, Oakland, Ca

Laboratory Name: Curtis & Tomkins
Address: 2323 5th Street Berkeley Ca
Contact Name: John Goyette
Phone: (510) 486-0900

Date: 12/12/2002
Page: 2 of 2

Sample I.D.	Date	Time	Sample Depth	No. of Containers	Sample Matrix	TPHd by EPA 8015B	TPHmo by EPA 8015B	TPHg by EPA 8015B	BTEX + MTBE by EPA 8021B	MTBE confirmation by 8260
						Analysis:				
						None	None	Hcl	Hcl	Hcl
						1L Amber	1L Amber	VOA	VOA	VOA
MW-7	12/12/02	1340	~10	7	H2O	X	X	X	X	X
MW-8A	12/12/02	1730	~10	7	H2O	X	X	X	X	X
Trip Blank	12/12/02	800	—	2	H2O			X	X	X

Special Instructions/Comments: Silica gel – clean up for TPHd, mo

Preservative:

Container Type:

Sampled By: Jim Andersson & Rogerio Leong
Signature:
Special Instructions: Direct Bill Port of Oakland
Jeff Rubin @ (510) 627-1134
Send Results to: Rachel Hess @ (925) 256-8998 (w/fax #)
Turnaround Time: STANDARD

Courier/Airbill No.:

Relinquished By/Affiliation:	Date:	Time:	Received By/Affiliation:	Date:	Time:
Rogerio Leong ITSI	12/13/02	8:50		12/13/02	0850

Original – Laboratory Yellow – Field/Office

ITSI 5/02

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1
Effective Date: 10-May-99
Revision: 1 Number 3 of 3
Filename: F:\QC\Forms\QC\Cooler.wpd

Curtis & Tompkins, Ltd.

COOLER RECEIPT CHECKLIST

Login#: 162622 Date Received: 12/13/02 Number of Coolers: 2
Client: ITSI Project: Port of Oakland

A. Preliminary Examination Phase
Date Opened: 12/13/02 By (print): Anup Patel (sign) [signature]

1. Did cooler come with a shipping slip (airbill, etc.)? ..... YES (NO)
   If YES, enter carrier name and airbill number: _____
2. Were custody seals on outside of cooler? ..... YES (NO)
   How many and where? _____ Seal date: _____ Seal name: _____
3. Were custody seals unbroken and intact at the date and time of arrival? ..... YES NO N/A
4. Were custody papers dry and intact when received? ..... (YES) NO
5. Were custody papers filled out properly (ink, signed, etc.)? ..... (YES) NO
6. Did you sign the custody papers in the appropriate place? ..... (YES) NO
7. Was project identifiable from custody papers? ..... (YES) NO
   If YES, enter project name at the top of this form.
8. If required, was sufficient ice used? Samples should be 2-6 degrees C. ..... YES NO
   Type of ice: Wet Temperature: Chilled

B. Login Phase
Date Logged In: 12/18/02 By (print): Anup Patel (sign) [signature]

1. Describe type of packing in cooler: Bagged in Ice
2. Did all bottles arrive unbroken? ..... (YES) NO
3. Were labels in good condition and complete (ID, date, time, signature, etc.)? ..... (YES) NO
4. Did bottle labels agree with custody papers? ..... (YES) NO
5. Were appropriate containers used for the tests indicated? ..... (YES) NO
6. Were correct preservatives added to samples? ..... (YES) NO
7. Was sufficient amount of sample sent for tests indicated? ..... (YES) NO
8. Were bubbles absent in VOA samples? If NO, list sample Ids below ..... (YES) NO
9. Was the client contacted concerning this sample delivery? ..... YES NO
   If YES, give details below.
   Who was called? _____ By whom? _____ Date: _____

Additional Comments:

_____
_____
_____
_____
_____
_____

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 5030B
Project#:	00-152.2		
Matrix:	Water	Sampled:	12/12/02
Units:	ug/L	Received:	12/13/02
Batch#:	77726	Analyzed:	12/20/02

Field ID: 2225-MW-1 Lab ID: 162622-001
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B(M)
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	97	68-145	8015B(M)
Bromofluorobenzene (FID)	117	66-143	8015B(M)
Trifluorotoluene (PID)	114	53-143	EPA 8021B
Bromofluorobenzene (PID)	115	52-142	EPA 8021B

Field ID: 2225-MW1D Lab ID: 162622-002
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B(M)
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	96	68-145	8015B(M)
Bromofluorobenzene (FID)	113	66-143	8015B(M)
Trifluorotoluene (PID)	119	53-143	EPA 8021B
Bromofluorobenzene (PID)	117	52-142	EPA 8021B

*= Value outside of QC limits; see narrative
b= See narrative
ND= Not Detected
RL= Reporting Limit
>LR= Response exceeds instrument's linear range

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Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 5030B
Project#:	00-152.2		
Matrix:	Water	Sampled:	12/12/02
Units:	ug/L	Received:	12/13/02
Batch#:	77726	Analyzed:	12/20/02

Field ID: 2225-MW-2 Lab ID: 162622-003
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B(M)
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	204 *	>LR b 68-145	8015B(M)
Bromofluorobenzene (FID)	120	66-143	8015B(M)
Trifluorotoluene (PID)	119	53-143	EPA 8021B
Bromofluorobenzene (PID)	118	52-142	EPA 8021B

Field ID: MW-2 Lab ID: 162622-004
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B(M)
MTBE	ND	2.0	EPA 8021B
Benzene	0.98	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	112	68-145	8015B(M)
Bromofluorobenzene (FID)	117	66-143	8015B(M)
Trifluorotoluene (PID)	120	53-143	EPA 8021B
Bromofluorobenzene (PID)	119	52-142	EPA 8021B

*= Value outside of QC limits; see narrative
b= See narrative
ND= Not Detected
RL= Reporting Limit
>LR= Response exceeds instrument's linear range

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Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 5030B
Project#:	00-152.2		
Matrix:	Water	Sampled:	12/12/02
Units:	ug/L	Received:	12/13/02
Batch#:	77726	Analyzed:	12/20/02

Field ID: MW-4 Lab ID: 162622-005
Type: SAMPLE

Analyte	Result	RL	Diln Fac	Analysis
Gasoline C7-C12	580	50	1.000	8015B(M)
MTBE	ND	2.0	1.000	EPA 8021B
Benzene	240	1.0	2.000	EPA 8021B
Toluene	1.4	0.50	1.000	EPA 8021B
Ethylbenzene	0.56	0.50	1.000	EPA 8021B
m,p-Xylenes	ND	0.50	1.000	EPA 8021B
o-Xylene	ND	0.50	1.000	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Analysis
Trifluorotoluene (FID)	125	68-145	1.000	8015B(M)
Bromofluorobenzene (FID)	124	66-143	1.000	8015B(M)
Trifluorotoluene (PID)	133	53-143	1.000	EPA 8021B
Bromofluorobenzene (PID)	123	52-142	1.000	EPA 8021B

Field ID: MW-4D Lab ID: 162622-006
Type: SAMPLE

Analyte	Result	RL	Diln Fac	Analysis
Gasoline C7-C12	2,400	50	1.000	8015B(M)
MTBE	ND	2.0	1.000	EPA 8021B
Benzene	680	10	20.00	EPA 8021B
Toluene	5.0	0.50	1.000	EPA 8021B
Ethylbenzene	2.3	0.50	1.000	EPA 8021B
m,p-Xylenes	1.4	0.50	1.000	EPA 8021B
o-Xylene	ND	0.50	1.000	EPA 8021B

Surrogate	%REC	Limits	Diln Fac	Analysis
Trifluorotoluene (FID)	143	68-145	1.000	8015B(M)
Bromofluorobenzene (FID)	130	66-143	1.000	8015B(M)
Trifluorotoluene (PID)	156 *	53-143	1.000	EPA 8021B
Bromofluorobenzene (PID)	130	52-142	1.000	EPA 8021B

*= Value outside of QC limits; see narrative
b= See narrative
ND= Not Detected
RL= Reporting Limit
>LR= Response exceeds instrument's linear range

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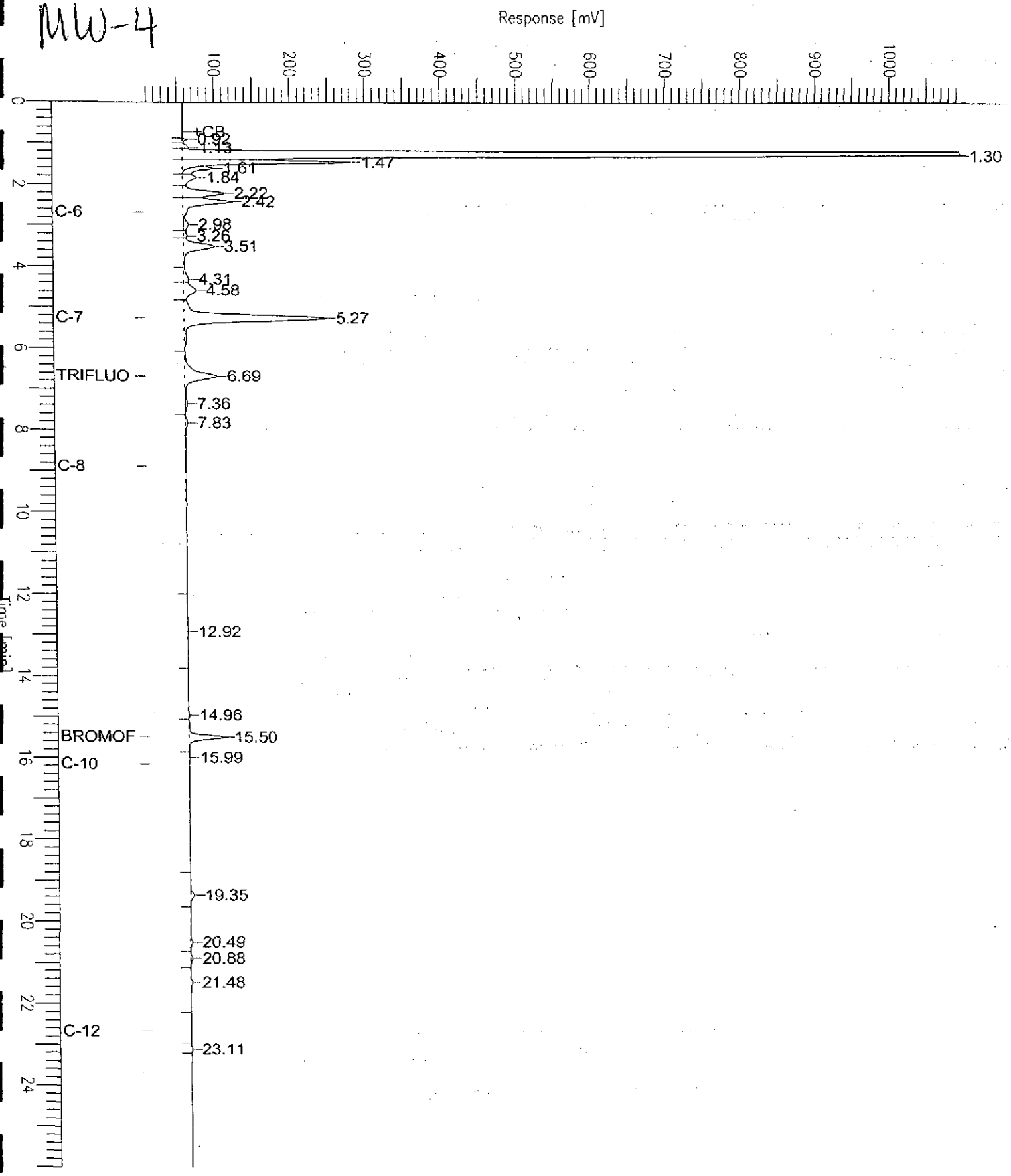
GC04 TVH 'J' Data File FID

Sample Name : 162622-005,77726
leName : G:\GC04\DATA\353J042.raw
thod : TVHBTXE
tart Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 6 mV

Sample #: a1 Page 1 of 1
Date : 12/20/02 09:24 AM
Time of Injection: 12/20/02 08:58 AM
Low Point : 6.25 mV High Point : 1094.39 mV
Plot Scale: 1088.1 mV

MW-4

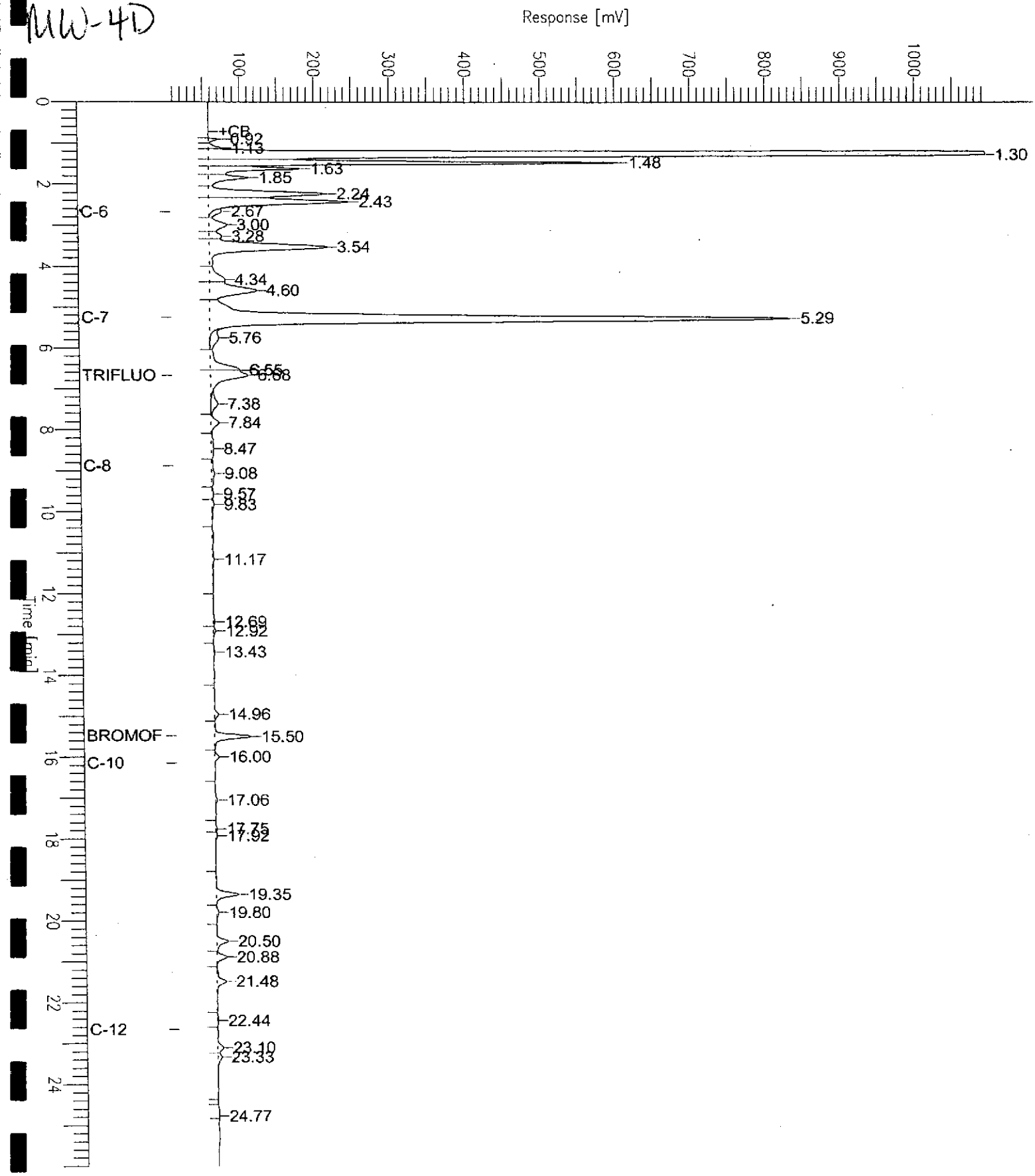


GC04 TVH 'J' Data File FID

Sample Name : 162622-006,77726
leName : G:\GC04\DATA\353J043.raw
thod : TVHBTXE
tart Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 6 mV

Sample #: a1 Page 1 of 1
Date : 12/20/02 12:11 PM
Time of Injection: 12/20/02 09:34 AM
Low Point : 6.26 mV High Point : 1094.40 mV
Plot Scale: 1088.1 mV

MW-4D



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 5030B
Project#:	00-152.2		
Matrix:	Water	Sampled:	12/12/02
Units:	ug/L	Received:	12/13/02
Batch#:	77726	Analyzed:	12/20/02

Field ID: MW-5 Lab ID: 162622-007
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B(M)
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	98	68-145	8015B(M)
Bromofluorobenzene (FID)	112	66-143	8015B(M)
Trifluorotoluene (PID)	122	53-143	EPA 8021B
Bromofluorobenzene (PID)	121	52-142	EPA 8021B

Field ID: MW-6 Lab ID: 162622-008
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	53	50	8015B(M)
MTBE	ND	2.0	EPA 8021B
Benzene	43	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	127	68-145	8015B(M)
Bromofluorobenzene (FID)	157 *	66-143	8015B(M)
Trifluorotoluene (PID)	125	53-143	EPA 8021B
Bromofluorobenzene (PID)	121	52-142	EPA 8021B

*= Value outside of QC limits; see narrative
b= See narrative
ND= Not Detected
RL= Reporting Limit
>LR= Response exceeds instrument's linear range

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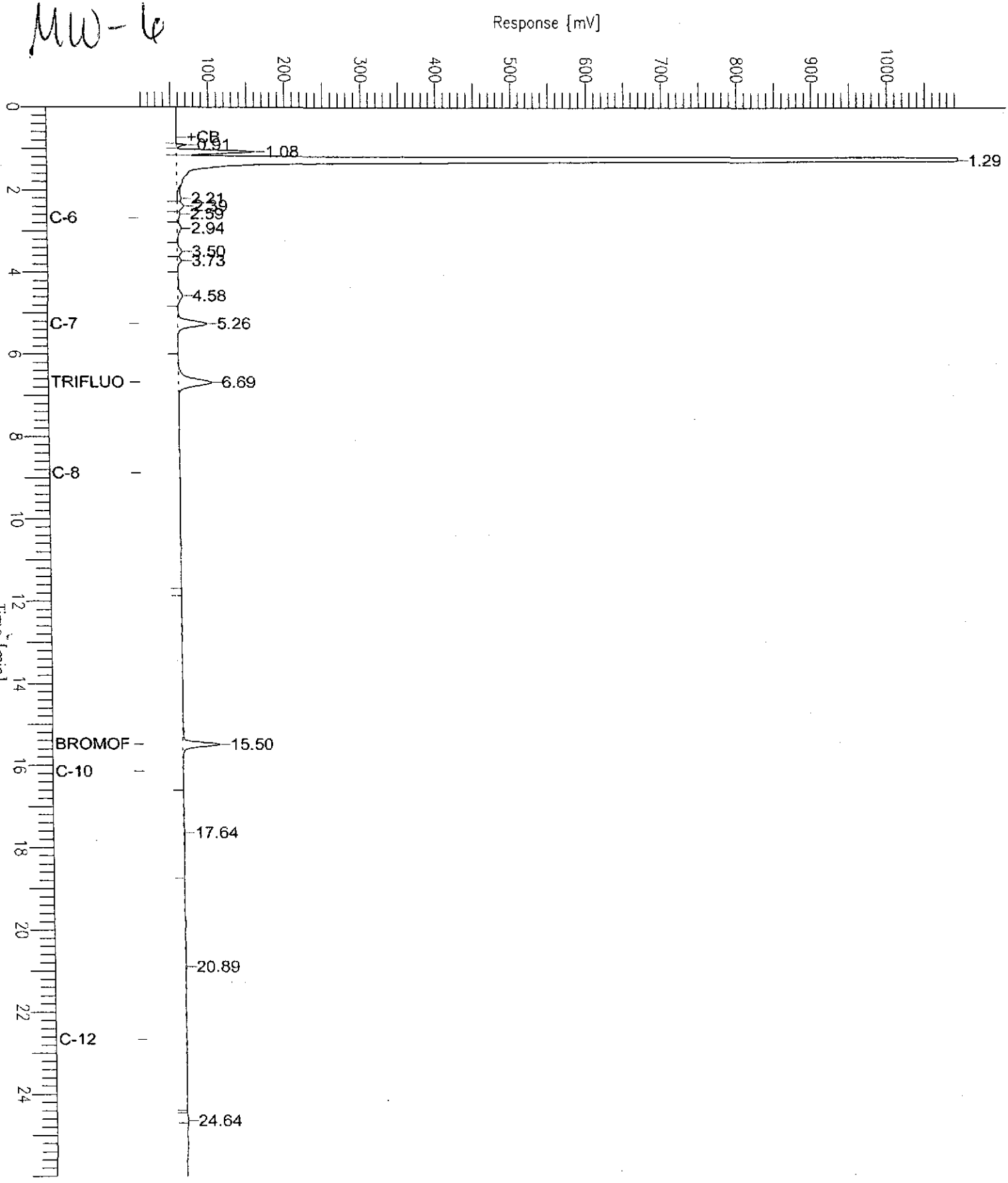
GC04 TVH 'J' Data File FID

Sample Name : 162622-008,77726
FileName : G:\GC04\DATA\353J045.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 6 mV

Sample #: a1 Page 1 of 1
Date : 12/20/02 11:12 AM
Time of Injection: 12/20/02 10:46 AM
Low Point : 6.12 mV High Point : 1094.38 mV
Plot Scale: 1088.3 mV

MW-6

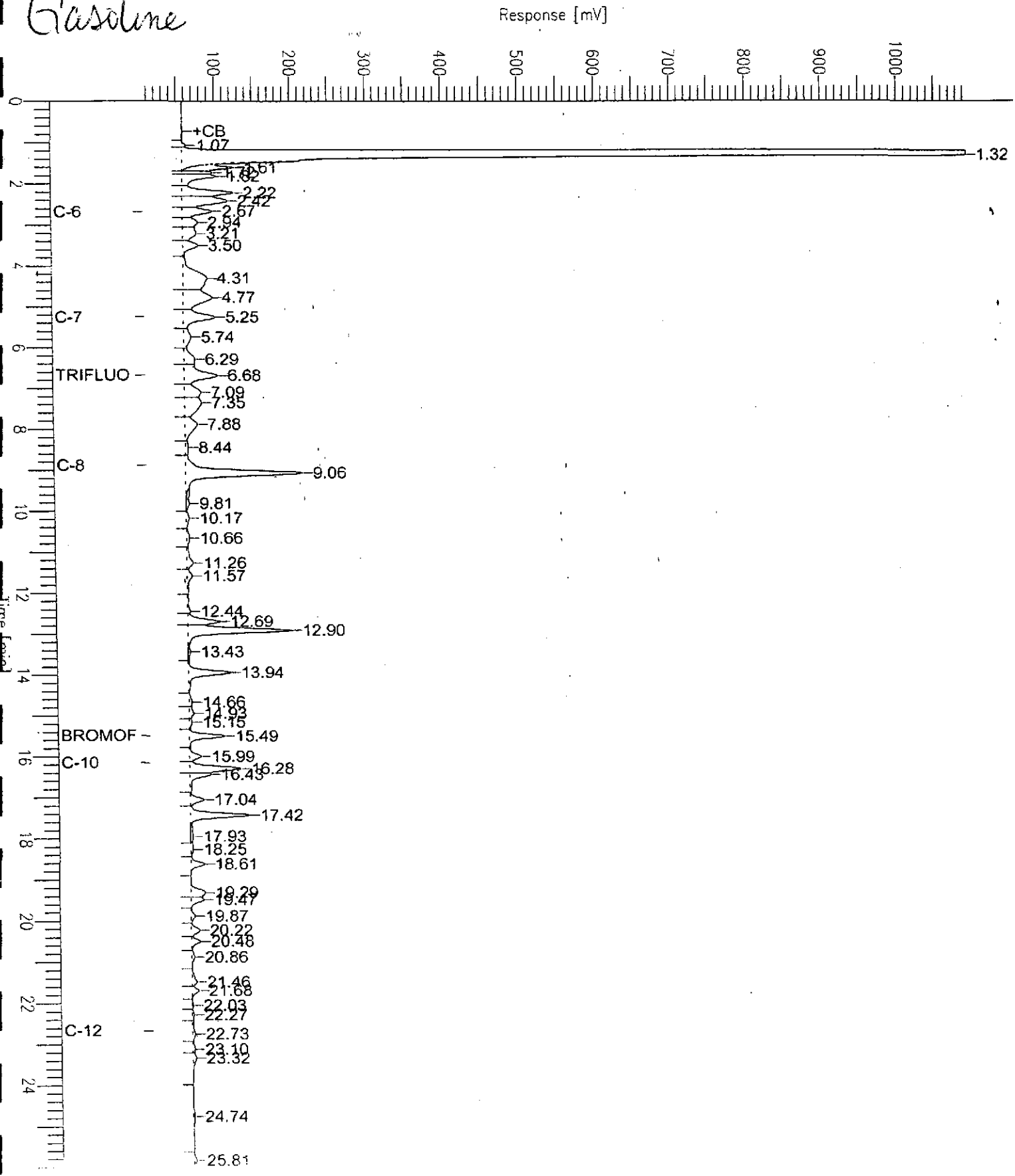


GC04 TVH 'J' Data File FID

Sample Name : lcs,qc199250,77726,02ws1992,S/5000
FileName : G:\GC04\DATA\353J028.raw
Method : TVHBTXE
Start Time : 0.00 min End Time : 26.00 min
Scale Factor: 1.0 Plot Offset: 6 mV

Sample #: Page 1 of 1
Date : 12/20/02 01:01 AM
Time of Injection: 12/20/02 12:35 AM
Low Point : 6.32 mV High Point : 1094.43 mV
Plot Scale: 1088.1 mV

Gasoline



Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions, Inc.	Prep:	EPA 5030B
Project#:	00-152.2		
Matrix:	Water	Sampled:	12/12/02
Units:	ug/L	Received:	12/13/02
Batch#:	77726	Analyzed:	12/20/02

Field ID: MW-7 Lab ID: 162622-009
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B(M)
MTBE	58	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	98	68-145	8015B(M)
Bromofluorobenzene (FID)	137	66-143	8015B(M)
Trifluorotoluene (PID)	122	53-143	EPA 8021B
Bromofluorobenzene (PID)	120	52-142	EPA 8021B

Field ID: MW-8A Lab ID: 162622-010
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B(M)
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	101	68-145	8015B(M)
Bromofluorobenzene (FID)	141	66-143	8015B(M)
Trifluorotoluene (PID)	119	53-143	EPA 8021B
Bromofluorobenzene (PID)	120	52-142	EPA 8021B

*= Value outside of QC limits; see narrative
b= See narrative
ND= Not Detected
RL= Reporting Limit
>LR= Response exceeds instrument's linear range

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Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 5030B
Project#:	00-152.2		
Matrix:	Water	Sampled:	12/12/02
Units:	ug/L	Received:	12/13/02
Batch#:	77726	Analyzed:	12/20/02

Field ID: TRIP BLANK
Type: SAMPLE
Lab ID: 162622-011
Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B(M)
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	96	68-145	8015B(M)
Bromofluorobenzene (FID)	110	66-143	8015B(M)
Trifluorotoluene (PID)	113	53-143	EPA 8021B
Bromofluorobenzene (PID)	112	52-142	EPA 8021B

Type: BLANK
Lab ID: QC199249
Diln Fac: 1.000

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	8015B(M)
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	93	68-145	8015B(M)
Bromofluorobenzene (FID)	103	66-143	8015B(M)
Trifluorotoluene (PID)	115	53-143	EPA 8021B
Bromofluorobenzene (PID)	109	52-142	EPA 8021B

*= Value outside of QC limits; see narrative
b= See narrative
ND= Not Detected
RL= Reporting Limit
>LR= Response exceeds instrument's linear range

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Total Volatile Hydrocarbons

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions, Inc.	Prep:	EPA 5030B
Project#:	00-152.2	Analysis:	8015B(M)
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC199250	Batch#:	77726
Matrix:	Water	Analyzed:	12/20/02
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	2,000	2,082	104	79-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	128	68-145
Bromofluorobenzene (FID)	119	66-143

Curtis & Tompkins, Ltd.

Benzene, Toluene, Ethylbenzene, Xylenes

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions, Inc.	Prep:	EPA 5030B
Project#:	00-152.2	Analysis:	EPA 8021B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC199251	Batch#:	77726
Matrix:	Water	Analyzed:	12/19/02
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	20.40	102	59-135
Benzene	20.00	20.37	102	65-122
Toluene	20.00	18.86	94	67-121
Ethylbenzene	20.00	19.14	96	70-121
m,p-Xylenes	40.00	36.91	92	72-125
o-Xylene	20.00	20.23	101	73-122

Surrogate	%REC	Limits
Trifluorotoluene (PID)	110	53-143
Bromofluorobenzene (PID)	108	52-142

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions, Inc.	Prep:	EPA 5030B
Project#:	00-152.2	Analysis:	8015B(M)
Field ID:	2225-MW-1	Batch#:	77726
MSS Lab ID:	162622-001	Sampled:	12/12/02
Matrix:	Water	Received:	12/13/02
Units:	ug/L	Analyzed:	12/20/02
Diln Fac:	1.000		

Type: MS Lab ID: QC199252

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<7.700	2,000	1,996	100	67-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	130	68-145
Bromofluorobenzene (FID)	115	66-143

Type: MSD Lab ID: QC199253

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,101	105	67-120	5	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	131	68-145
Bromofluorobenzene (FID)	122	66-143

RPD= Relative Percent Difference

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Total Extractable Hydrocarbons

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 3520C
Project#:	00-152.2	Analysis:	EPA 8015B(M)
Matrix:	Water	Sampled:	12/12/02
Units:	ug/L	Received:	12/13/02
Diln Fac:	1.000	Analyzed:	12/20/02

Field ID:	2225-MW-1	Batch#:	77736
Type:	SAMPLE	Prepared:	12/18/02
Lab ID:	162622-001	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	91	39-137

Field ID:	2225-MW1D	Batch#:	77736
Type:	SAMPLE	Prepared:	12/18/02
Lab ID:	162622-002	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	73	39-137

Field ID:	2225-MW-2	Batch#:	77736
Type:	SAMPLE	Prepared:	12/18/02
Lab ID:	162622-003	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	72	39-137

Field ID:	MW-2	Batch#:	77736
Type:	SAMPLE	Prepared:	12/18/02
Lab ID:	162622-004	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	74	39-137

Y= Sample exhibits fuel pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit
SGCU= Silica gel cleanup

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Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 3520C
Project#:	00-152.2	Analysis:	EPA 8015B(M)
Matrix:	Water	Sampled:	12/12/02
Units:	ug/L	Received:	12/13/02
Diln Fac:	1.000	Analyzed:	12/20/02

Field ID:	MW-4	Batch#:	77736
Type:	SAMPLE	Prepared:	12/18/02
Lab ID:	162622-005	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	84	39-137

Field ID:	MW-4D	Batch#:	77736
Type:	SAMPLE	Prepared:	12/18/02
Lab ID:	162622-006	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	94	39-137

Field ID:	MW-5	Batch#:	77783
Type:	SAMPLE	Prepared:	12/19/02
Lab ID:	162622-007	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	76	39-137

Field ID:	MW-6	Batch#:	77736
Type:	SAMPLE	Prepared:	12/18/02
Lab ID:	162622-008	Cleanup Method:	EPA 3630C

Analyte	Result	RL
Diesel C10-C24 (SGCU)	110	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	68	39-137

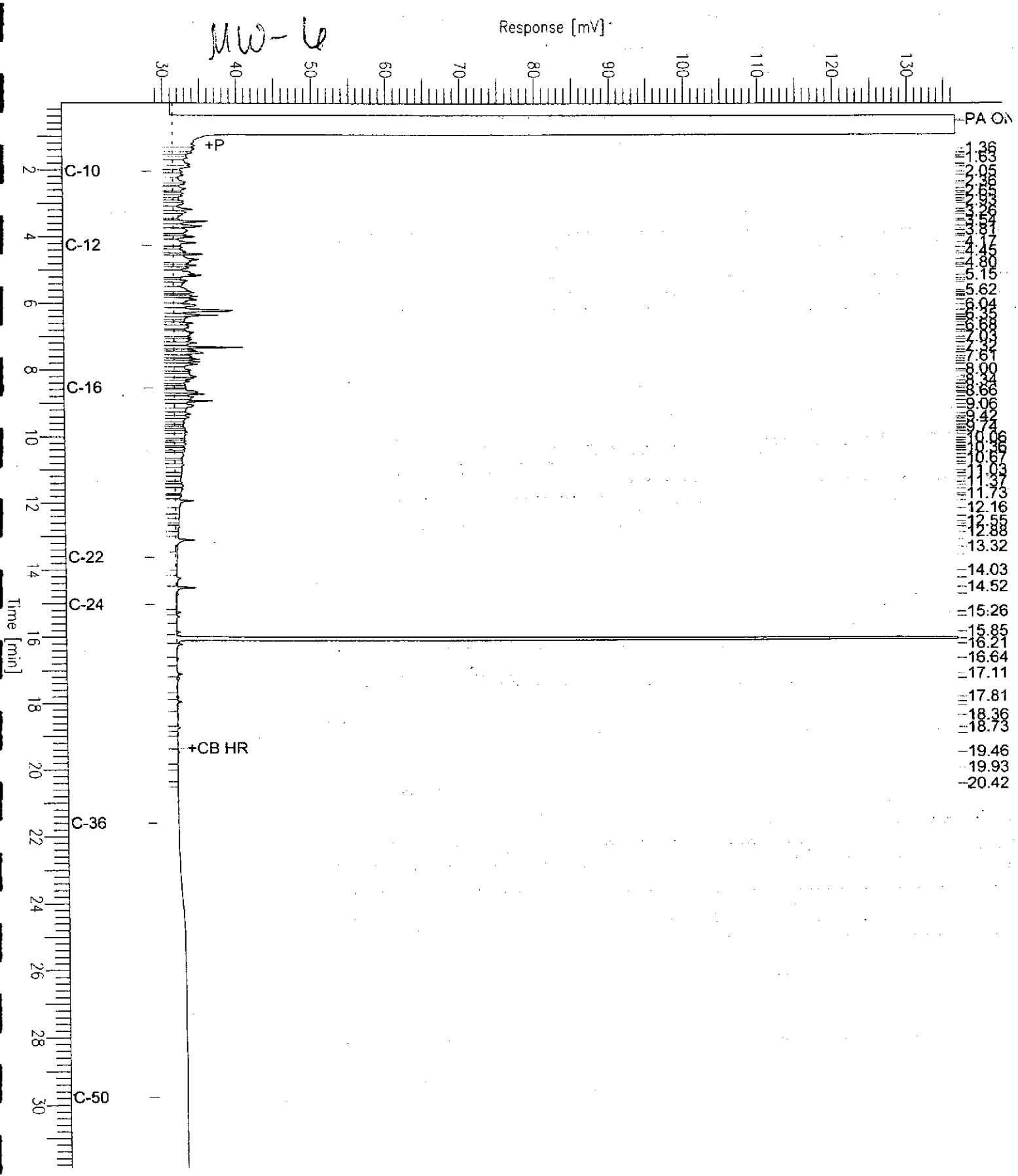
Y= Sample exhibits fuel pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit
SGCU= Silica gel cleanup

Chromatogram

Sample Name : 162622-008sg,77736
FileName : G:\GC11\CHA\351A101.RAW
Method : ATEH351.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 29 mV

Sample #: 77736 Page 1 of 1
Date : 12/20/02 01:26 PM
Time of Injection: 12/20/02 10:53 AM
Low Point : 28.51 mV High Point : 136.58 mV
Plot Scale: 108.1 mV

MW-6



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions, Inc.	Prep:	EPA 3520C
Project#:	00-152.2	Analysis:	EPA 8015B(M)
Matrix:	Water	Sampled:	12/12/02
Units:	ug/L	Received:	12/13/02
Diln Fac:	1.000	Analyzed:	12/20/02

Field ID: MW-7 Batch#: 77736
Type: SAMPLE Prepared: 12/18/02
Lab ID: 162622-009 Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	80	39-137

Field ID: MW-8A Batch#: 77736
Type: SAMPLE Prepared: 12/18/02
Lab ID: 162622-010 Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24 (SGCU)	160 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	71	39-137

Type: BLANK Prepared: 12/18/02
Lab ID: QC199295 Cleanup Method: EPA 3630C
Batch#: 77736

Analyte	Result	RL
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	79	39-137

Type: BLANK Prepared: 12/19/02
Lab ID: QC199460 Cleanup Method: EPA 3630C
Batch#: 77783

Analyte	Result	RL
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	115	39-137

Y= Sample exhibits fuel pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit
SGCU= Silica gel cleanup

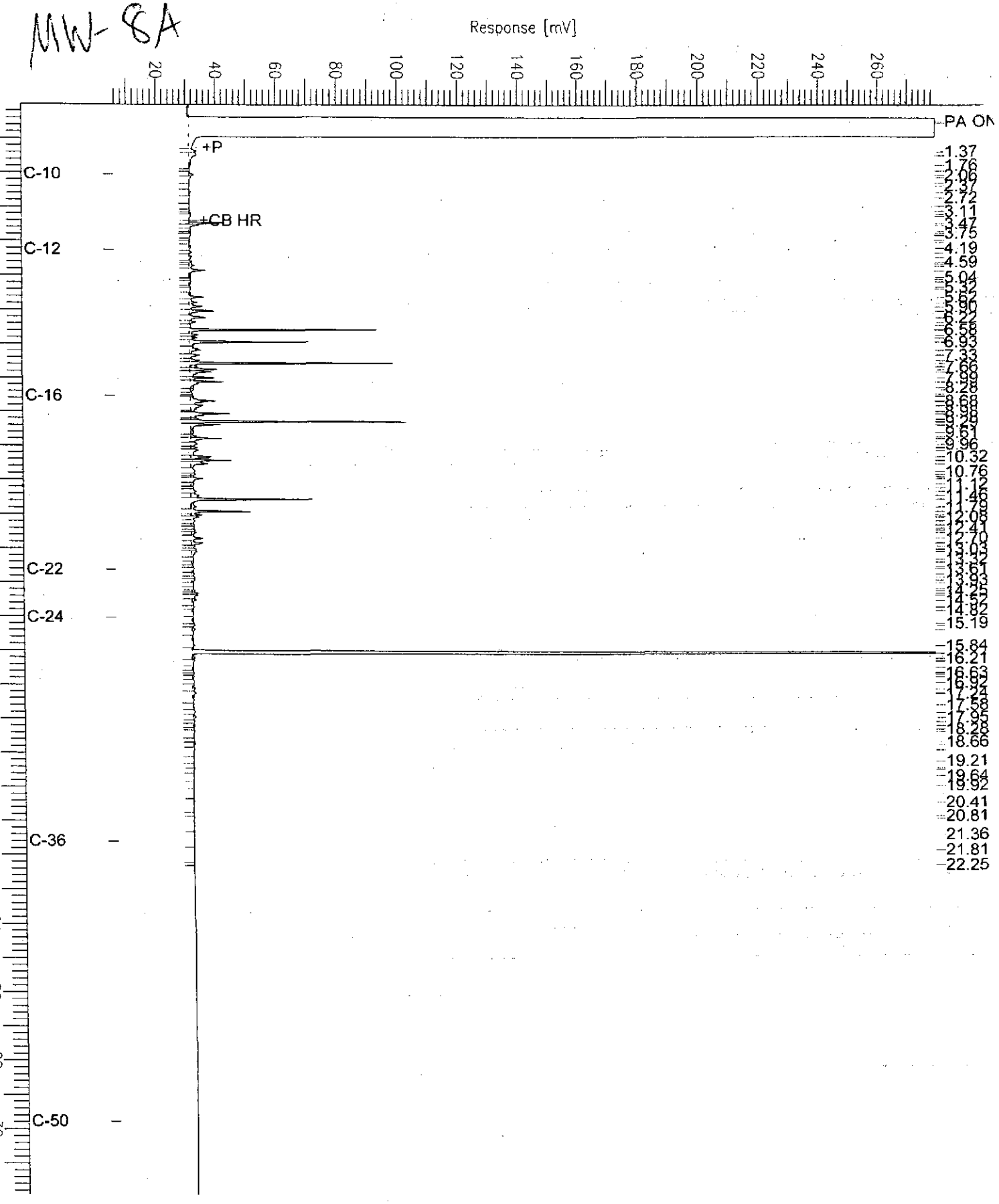
5.0

Chromatogram

Sample Name : 162622-010sg,77736
FileName : G:\GC11\CHA\351A103.RAW
Method : ATEH351.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 6 mV

Sample #: 77736 Page 1 of 1
Date : 12/20/02 01:27 PM
Time of Injection: 12/20/02 12:13 PM
Low Point : 5.85 mV High Point : 279.38 mV
Plot Scale: 273.5 mV

MW-8A



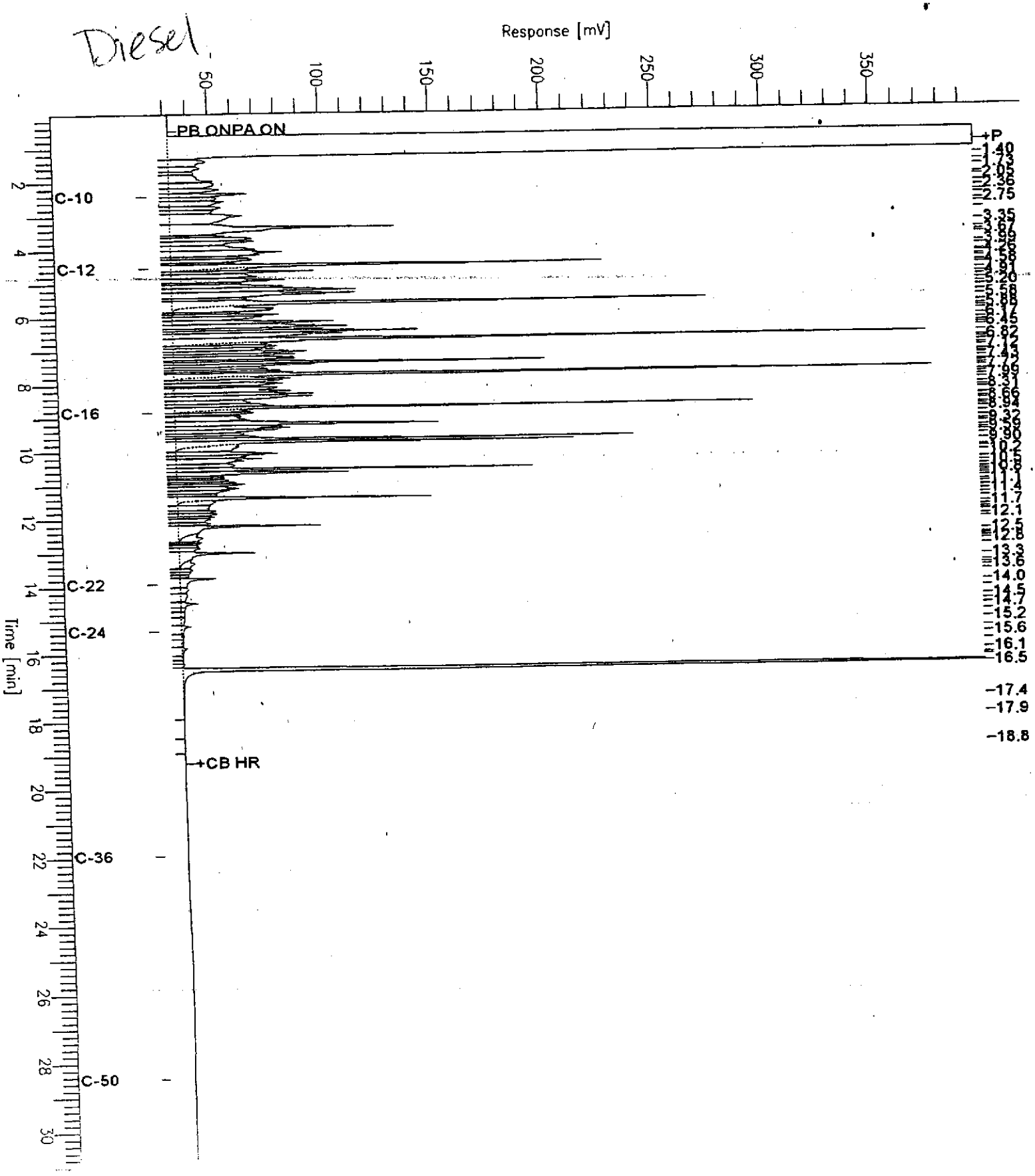
Chromatogram

ple Name : ccv,02ws2005,dsl
eName : G:\GC15\CHB\350B002.RAW
ethod : BTEH309.MTH
Start Time : 0.01 min
ale Factor: 0.0

End Time : 31.91 min
Plot Offset: 22 mV

Sample #: 500mg/L
Date : 12/16/2002 11:32 AM
Time of Injection: 12/16/2002 10:11 AM
Low Point : 22.06 mV
Plot Scale: 374.7 mV
High Point : 396.75 mV

Diesel

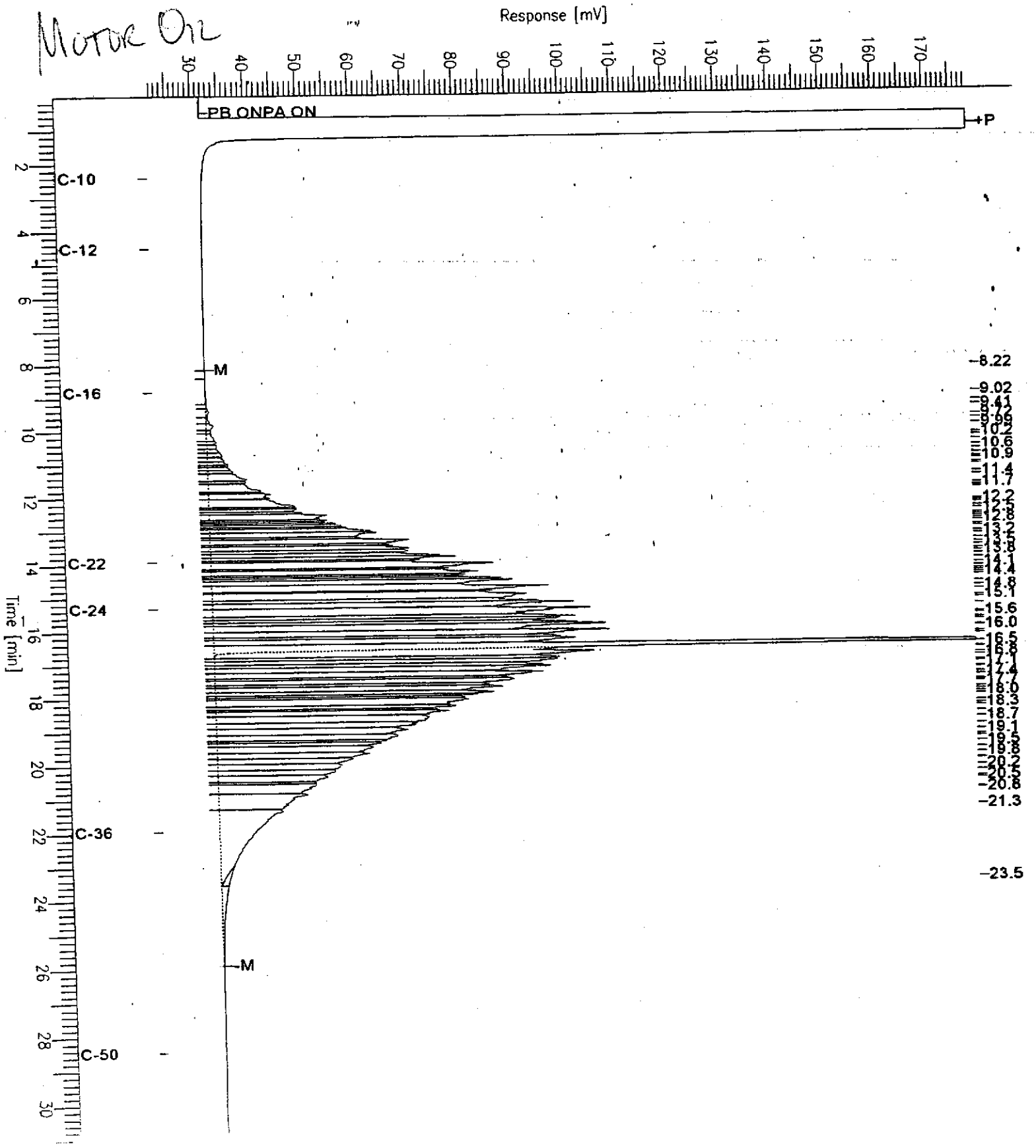


Chromatogram

ample Name : ccv,02ws1984,mo
ileName : G:\GC15\CHB\350B003.RAW
Method : BTEH309.MTH
Start Time : 0.01 min End Time : 31.91 min
Scale Factor: 0.0 Plot Offset: 22 mV

Sample #: 500mg/L
Date : 12/16/2002 11:33 AM
Time of Injection: 12/16/2002 10:52 AM
Low Point : 21.57 mV High Point : 178.46 mV
Plot Scale: 156.9 mV

Motor Oil



Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 3520C
Project#:	00-152.2	Analysis:	EPA 8015B(M)
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC199296	Batch#:	77736
Matrix:	Water	Prepared:	12/18/02
Units:	ug/L	Analyzed:	12/20/02

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24 (SGCU)	2,500	1,773	71	37-120

Surrogate	%REC	Limits
Hexacosane	78	39-137

SGCU= Silica gel cleanup

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 3520C
Project#:	00-152.2	Analysis:	EPA 8015B(M)
Matrix:	Water	Batch#:	77783
Units:	ug/L	Prepared:	12/19/02
Diln Fac:	1.000	Analyzed:	12/20/02

Type: BS
Lab ID: QC199461
Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24 (SGCU)	2,500	1,609	64	37-120

Surrogate	%REC	Limits
Hexacosane	77	39-137

Type: BSD
Lab ID: QC199462
Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24 (SGCU)	2,500	2,045	82	37-120	24	26

Surrogate	%REC	Limits
Hexacosane	86	39-137

RPD= Relative Percent Difference
SGCU= Silica gel cleanup

8.0

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 3520C
Project#:	00-152.2	Analysis:	EPA 8015B(M)
Field ID:	ZZZZZZZZZZ	Batch#:	77736
MSS Lab ID:	162551-003	Sampled:	12/11/02
Matrix:	Water	Received:	12/11/02
Units:	ug/L	Prepared:	12/18/02
Diln Fac:	1.000	Analyzed:	12/21/02

Type: MS
Lab ID: QC199297

Cleanup Method: EPA 3630C

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24 (SGCU)	<33.00	2,500	641.1	26 *	44-131

Surrogate	%REC	Limits
Hexacosane	31 *	39-137

Type: MSD
Lab ID: QC199298

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24 (SGCU)	2,500	1,976	79	44-131	102 *	26

Surrogate	%REC	Limits
Hexacosane	88	39-137

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference
SGCU= Silica gel cleanup

7.0

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 5030B
Project#:	00-152.2	Analysis:	EPA 8260B
Field ID:	MW-7	Batch#:	77925
Lab ID:	162622-009	Sampled:	12/12/02
Matrix:	Water	Received:	12/13/02
Units:	ug/L	Analyzed:	12/26/02
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	48	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	77-130
Toluene-d8	100	80-120
Bromofluorobenzene	105	80-120

RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 5030B
Project#:	00-152.2	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC199985	Batch#:	77925
Matrix:	Water	Analyzed:	12/26/02
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	77-130
Toluene-d8	101	80-120
Bromofluorobenzene	108	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	162622	Location:	2277 7th Street POO
Client:	Innovative Technical Solutions,Inc.	Prep:	EPA 5030B
Project#:	00-152.2	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	77925
Units:	ug/L	Analyzed:	12/26/02
Diln Fac:	1.000		

Type: BS Lab ID: QC199983

Analyte	Spiked	Result	%REC	Limits
MTBE	50.00	39.54	79	54-131

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	77-130
Toluene-d8	99	80-120
Bromofluorobenzene	104	80-120

Type: BSD Lab ID: QC199984

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	50.00	42.28	85	54-131	7	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	101	77-130
Toluene-d8	102	80-120
Bromofluorobenzene	98	80-120

RPD= Relative Percent Difference

Innovative Technical Solutions, Inc.

APPENDIX C

ALAMEDA COUNTY PUBLIC WORKS AGENCY

BORING LOGS

DEPARTMENT OF WATER RESOURCES WELL COMPLETION REPORT

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD, CA. 94544-1395
PHONE (510) 670-6633 James Yoo FAX (510) 782-1939

PERMIT NO. W02-1140

WATER RESOURCES SECTION
GROUNDWATER PROTECTION ORDINANCE
Destruction of Monitoring Wells (Less than 45 feet in depth)

Destruction Requirements: **PRESSURE GROUTING # 1**

1. Remove any casing(s) and annular seal to 3-5 feet below finished grade of original ground, whichever is the lower elevation.

2. Destroy well by grouting neat cement with a tremie pipe or pressure grouting (25 psi for 5min.) to the bottom of the well and by filling with neat cement to three (3-5) feet below surface grade. Allow the sealing material to spill over the top of the casing to fill any annular space between casing and soil.

3. After the seal has set, backfill the remaining hole with concrete or compacted material to match existing conditions.

4. Drilling permits are valid from the start date to the completion date. Permits can be extended by a phone call, but drilling permit applications will not be extended beyond 90 days from the approved start date.

5. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate state reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days.

6. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, property damage, personal injury and wrongful death.

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
399 ELMHURST ST. HAYWARD CA. 94544-1395
PHONE (510) 670-5564- 6633
FAX (510)782-1939

USA # 480942

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 2225 7th Street, Oakland
Well destruction due to damaged caused by building demolition activities.

CLIENT
Name Port of Oakland - EH&SC Dept
Address 530 Water ST Phone 510 627-1373
City Oakland CA Zip 94607

APPLICANT
Name Innovative Technical Solutions, Inc. Fax 925 256 8998
Address 2730 Shadelands Ste 100 Phone 925 946 3105
City Walnut Creek CA Zip 94598

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	0	General	0
Water Supply	0	Contamination	0
Monitoring	0	Well Destruction	X

PROPOSED WATER SUPPLY WELL USE NA

New Domestic	0	Replacement Domestic	0
Municipal	0	Irrigation	0
Industrial	0	Other	0

DRILLING METHOD:

Mud Rotary	0	Air Rotary	0	Auger	X
Cable	0	Other	0		

DRILLER'S NAME Gregg Drilling
DRILLER'S LICENSE NO. 485165 (C57)

WELL PROJECTS
Drill Hole Diameter 10-12 in. Maximum
Casing Diameter 4 in. Depth 15 ft.
Surface Seal Depth 3 ft. Owner's Well Number MW-3*
* Next to Former C-406 Building

GEOTECHNICAL PROJECTS NA
Number of Borings _____ Maximum
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE NOV 21, 2002
ESTIMATED COMPLETION DATE NOV 26, 2002

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Rachel B Hess DATE 11/18/02

PLEASE PRINT NAME RACHEL B HESS

Rev. 5-11-00

FOR OFFICE USE

PERMIT NUMBER WO2-1140
WELL NUMBER _____
APN _____

PERMIT CONDITIONS
Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted original Department of Water Resources Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

D. GEOTECHNICAL
Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC
Fill hole anode zone with concrete placed by tremie.

(F.) WELL DESTRUCTION – PG#1
Send a map of work site. A separate permit is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED _____ DATE 11-18-02

ALISTO ENGINEERING GROUP
WALNUT CREEK, CALIFORNIA

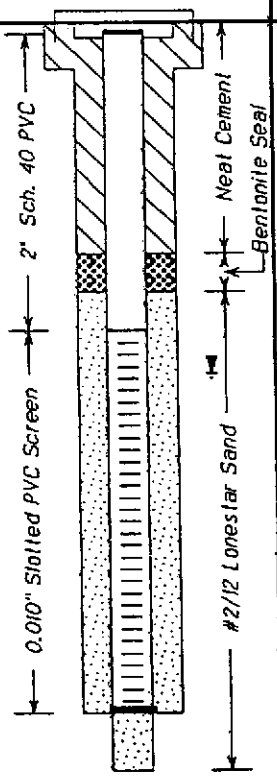
LOG OF BORING MW-7

SEE SITE PLAN

ALISTO PROJECT NO: 10-270-01 DATE DRILLED: 08/25/95
CLIENT: Port of Oakland
LOCATION: 2277 E. 7th Street, Oakland, CA.
DRILLING METHOD: Hollow-stem auger (7 3/4"); 2" split-spoon sampler
DRILLING COMPANY: Mitchell Drilling Envtl. CASING ELEVATION: 14.35 'MSL
LOGGED BY: C. Ladd APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	DEPTH feet	SOIL CLASS	GEOLOGIC DESCRIPTION
				4" asphalt
10,12,15	0	5	SM	SAND: gray, damp, medium dense; fine- to medium-grained sand; clayey blebs to 5%.
12,12,17	0	10	SC	sandy CLAY: brown to black gray, moist, very stiff; organics as blebs to appproximately 2%.
11,11,17	0	15	SP	SAND: black gray, wet, medium dense; fine- to medium-grained sand; shell fragments present to 3%.
12,14,20				Same: olive brown, wet, dense; fine- to medium-grained sand.
		20		Stabilized water level measured on September 6, 1995.
		25		
		30		

WELL DIAGRAM



CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
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(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

Innovative Technical Solutions, Inc.

APPENDIX D

DAILY FIELD ACTIVITY REPORT

Innovative Technical Solutions, Inc.
2730 Shadelands Drive, Suite 100
Walnut Creek, California 94598
(925) 946-3100 (Tel), (925) 256-8998 (Fax)

PROJECT NAME: PORT OF OAKLAND
PROJECT NUMBER: 00-152.15
SITE LOCATION: 2225 7TH STREET

DAILY ACTIVITY REPORT

DATE: 4 NOV 2002
PAGE 1 OF 1

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

1200 PUT TOGETHER EQUIPMENT NEEDED FOR TODAYS WORK AT 2225 7TH STREET.
1225 DEPART OFFICE FOR SITE.
1300 ARRIVE AT SITE. SET UP TO TAKE WATER LEVELS
1315 AT MW-3 (WELL LID NOT SECURED - BOLTS/CHRISTY BOX STRIPPED) PRODUCT DEPTH 8.75', WATER DEPTH 9.99' = 1.24' OF FREE PRODUCT.
1320 REPLACE PUMP AND WELL COVER.
1325 AT MW-1 DEPTH TO PRODUCT 9.22', DEPTH TO WATER 10.12' = 0.90' OF PRODUCT.
1330 RACHEL HESS ONSITE - DISCUSS JOB EQUIPMENT NEEDS.
1335 EMPTY PASSIVE SKIMMER INTO STORAGE TANK - SKIMMER FULL.
1345 PLACE SKIMMER BACK INTO MW-1. WELL COVER BOLT HOLES STRIPPED OTHER IS BROKEN OFF. UNABLE TO SECURE WELL COVER WITH BOLTS - COVER DUMMY PLACED - LOOK SECURE.
1350 MEASURE DEPTH OF PRODUCT IN HOLDING TANK. PRODUCT DEPTH AT 5.00' MEASURED FROM TOP OF RING COLLER. WATER AT 5.25', BOTTOM AT 5.30' = 0.25' OF PRODUCT IN HOLDING TANK.
1400 FIX GATE AT TREATMENT SYSTEM SO THAT IT OPENS AND CLOSES BETTER.
1420 RACHEL HESS BACK ONSITE - PUT EQUITMENT AWAY
1435 SECURE TREATMENT SYSTEM STORAGE BOX (CONTROL BOX) AND GATE - DEPART SITE FOR OFFICE.
1505 IN WALNUT CREEK, PICK UP LUNCH.
1535 BACK FROM LUNCH, DECON OIL INTERFACE PROBE.
1600 COMPLETE PAPERWORK.

PREPARED BY: JAMES ANDERSON DATE: 4 NOV 2002
PREPARER'S SIGNATURE: James Anderson

Dly Activities "Reviewed by"

Innovative Technical Solutions, Inc.
7700 Edgewater Drive, Suite 306
Oakland, California 94621
(510) 638-5841 (Tel), (510) 638-5871 (Fax)

PROJECT NAME: PORT OF OAKLAND
PROJECT NUMBER: 00-152.15
SITE LOCATION: 2225 7TH STREET

DAILY ACTIVITY REPORT

DATE: 21 Nov 2002
PAGE 1 OF 1

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

0710 ARRIVE ONSITE. PLACE EQUIPMENT FOR TREATMENT SYSTEM MONITORING INTO TREATMENT SYSTEM CAGE. REVIEW HEALTH & SAFETY PLAN, AND BEGIN TODAY'S PAPERWORK.

0735 RACHEL HESS ONSITE. DISCUSS JOB.

0800 GREGG DRILLING CREW (TONY LONGORIA & RAY JEFFREY) ARRIVE ONSITE. HEAD ONTO SITE.

0810 HOLD DAILY HEALTH & SAFETY MEETING.

0850 MOVE EQUIPMENT ONTO SITE. BOTTOM OF CASING TAGGED AT 10' BELOW GROUND SURFACE.

0915 CENTERING ROD INSTALLED INTO CASING.

0925 BEGIN DRILLING OUT WELL/CASING.

1000 DRILLER HITS HARDER MATERIAL @ ~15.5' (NATIVE). DRILL 6" DEEPER.

1020 MIX UP FIRST BATCH OF NEAT CEMENT. 20 GALLONS OF WATER TO FOUR BAGS OF PORTLAND CEMENT.

1030 NEAT CEMENT TREMIED INTO BOREHOLE VIA THE AUGERS.

1035 FIVE FOOT SECTION OF AUGER PULLED.

1045 SECOND BATCH OF NEAT CEMENT MIXED.

1050 SECOND BATCH TREMIED INTO BOREHOLE.

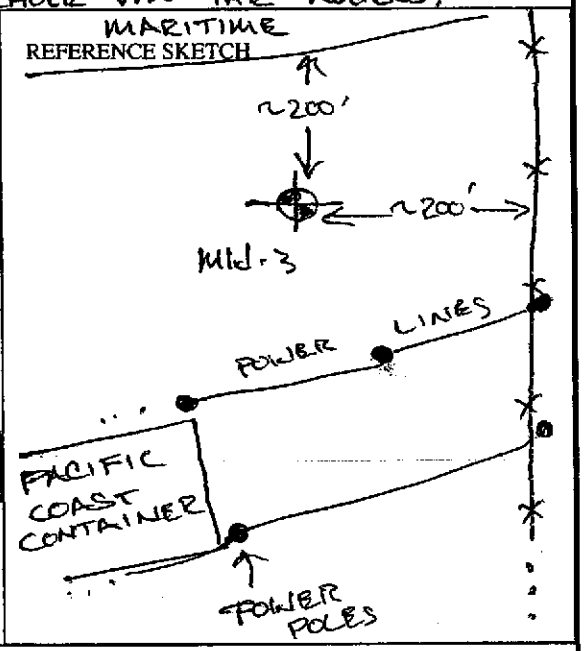
1055 PULL 2ND AUGER, TOP OFF NEAT CEMENT INTO REMAINING AUGER.

1105 PULL REMAINING AUGER. CLEAN AUGERS.

1120 TOP OFF SETTLING GROUT. MOVE DRUM.

1200 CLEAN SITE. FINISH JOB. 1 DRUM OF CUTTINGS

MARITIME
REFERENCE SKETCH



PREPARED BY: JAMES ANDERSON
DATE: 21 NOVEMBER 2002
CHECKED BY*:
DATE:
DISTRIBUTION:

PREPARERS SIGNATURE:
REVIEWERS SIGNATURE:

* *Not appropriate for a field activity report when only one responsible person is in the field.*

ITSI Innovative Technical Solutions, Inc.
7700 Edgewater Drive, Suite 306
Oakland, California 94621
(510) 638-5841 (Tel), (510) 638-5871 (Fax)

PROJECT NAME: PORT OF OAKLAND
PROJECT NUMBER: 00-152.20
SITE LOCATION: 2277 7TH STREET

DAILY ACTIVITY REPORT

DATE: 21 Nov 2002
PAGE 1 OF 1

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

1200 FINISH WITH WELL ABANDONMENT (MW-3 @ 2225 7TH STREET). UNLOCK TREATMENT CAGE AND GET EQUIPMENT NEEDED FOR MONITORING.

1220 OPEN MW-3 WELL COVER - DISCONNECT HOSES - AND PLACE PRODUCT SKIMMER INTO BUCKET.

1230 MEASURE TOP OF PRODUCT AT 8.59', BOTTOM OF PRODUCT (TOP OF WATER) AT 11.29'. PRODUCT THICKNESS AT 2.70'.

1235 REPLACE SKIMMER - HOOK UP HOSES AND REPLACE WELL COVER. SKIMMER SCREEN AT APPROXIMATELY 9' B.G.S.. WITHIN PRODUCT COLUMN.

1240 AT MW-1. OPEN WELL COVER AND REMOVE PASSIVE SKIMMER. SKIMMER IS FULL OF PRODUCT. EMPTY PRODUCT INTO TREATMENT CAGE HOLDING TANK.

1255 MEASURE DEPTH TO PRODUCT AT 8.48', TOP OF WATER AT 8.86', PRODUCT THICKNESS 0.38'.

1305 CHECK HOLDING TANK. LEVEL IS AT APPROXIMATELY 600 GALLONS. PRODUCT DEPTH IS 2.65', WATER IS AT 3.25' = PRODUCT THICKNESS IS 0.6'

1320 SECURE SITE.

1330 DEPART SITE FOR OFFICE.

REFERENCE SKETCH

PREPARED BY: JAMES ANDERSON
DATE: 21 Nov 2002
CHECKED BY*:
DATE:
PREPARERS SIGNATURE: James Anderson

DISTRIBUTION:

REVIEWERS SIGNATURE:

* *Not appropriate for a field activity report when only one responsible person is in the field.*

ITSI Innovative Technical Solutions, Inc.
2730 Shadelands Drive, Suite 100
Walnut Creek, California 94598
(925) 946-3100 (Tel), (925) 256-8998 (Fax)

PROJECT NAME: Port of Oakland
PROJECT NUMBER: 00-152.20

DAILY ACTIVITY REPORT

DATE: 12/06/02
PAGE 1 OF 1

SITE LOCATION: 2225 & 2277 Seventh street

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

13:30 Arrive on site (Jim Anderson + Rogerio Leong)

14:00 Open top of poly tank (±1,000 gallon) and measure thickness of product + total volume. The tank contains approximately 600 gallons of fluid, of which aproximately 150 gallons is product measured at a thickness of 0.57 feet

14:30 Pull active skimmer from MW-3 and measure floating product at 8.56' - 9.30' = 0.74' thick

15:05 Pull passive skimmer from MW-1 and measure floating product at 8.85' - 9.38' = 0.53' thick. No product was observed in skimmer reservoir due to probably skimmer intake screen was not positioned correctly.

15:45 Check all wells around site for condition. All wells appear in good condition.

16:00 Go by Curtis & Tomkins and pick-up sampling containers for the 4th Quarter + Semi-Annual Event.

16:15 Return to office

PREPARED BY: Rogerio Leong

DATE: 12/06/02

PREPARER'S SIGNATURE: [signature]

Innovative Technical Solutions, Inc.
2730 Shadelands Drive, Suite 100
Walnut Creek, California 94598
(925) 946-3100 (Tel), (925) 256-8998 (Fax)

PROJECT NAME: Port of Oakland
PROJECT NUMBER: 00.152-20
SITE LOCATION: 2225 & 2277 7th Street, Oakland, Ca.

DAILY ACTIVITY REPORT

DATE: 12-12-2002
PAGE 1 OF 1

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

7:30 Load up sampling van at office
8:00 Leave office
9:05 Arrive on site and meet Jim Anderson
9:30 Measure ground water level at (2225) MW-2 and begin purging well
10:40 Sample 2225 MW-2
10:52 Measure ground water level at (2225) MW-1
11:45 Sample 2225 MW-1
11:50 Sample 2225 MW-1D as duplicate
12:05 Measure groundwater level at MW-6
13:05 Sample MW-6 ; 13:40 Sample MW-7
13:50 Measure groundwater level at MW-2
14:20 Sample MW-2
14:30 -15:00 Lunch break
15:00 Purchase more ice bags and distilled water
15:45 Measure Groundwater at MW-5
16:05 Sample MW-5
16:20 Measure groundwater at MW-4
16:45 Sample MW-4
16:50 Sample MW-4D as duplicate
17:00 Measure groundwater at MW-8A
17:30 Sample MW-8A
17:45 Put away equipment and lock treatment system gate
18:00 Leave site

Not used 12/12/2002

PREPARED BY: Rogerio Leong DATE: 12/12/2002

PREPARER'S SIGNATURE:

Only Applies to "Reviewed by"

Innovative Technical Solutions, Inc.
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PROJECT NAME: Port of Oakland
PROJECT NUMBER: 00-152.20
SITE LOCATION: 2225 & 2277 Seventh Street, Oakland, Ca

DAILY ACTIVITY REPORT

DATE: 12/18/02
PAGE 1 OF 2

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

7:15 Arrive at site

7:30 Meet Brian Elkner the onsite demolition foreman. Point out four wells to be abandoned and request concrete rings placed over the wells to be removed.

8:00 Meet Precision Sampling (Nika + Felipe), do a briefing on scope of work and safety meeting. Notice that they did not bring a drum to contain well debris. Nika calls office and requests a drum and asphalt patching.

8:15 Set up at NW-6. Pressure grout at 25 Psi for a duration of at least 5 minutes. Break up and dig down three feet below grade by removing well box, seal and well casing. Backfill remaining hole to grade with neat cement.

9:15 Move and set up at NW-7. Destroy well by following same procedure as NW-6.

9:45 Move and set up at 2225 (NW-1). Asphalt cap surrounding NW-1 has been removed ~~heating~~ Well is full of water due to the surrounding surface water. This well was destroyed by tremmie grouting.

10:00 Rachel onsite

11:00 Move to 2225 (NW-2) and get set up. Pressure grout and remove well box, seal and casing to three feet below grade. Backfill with Cement and complete with asphalt patch to match the surface.

12:30 Driller (Precision) leaves site.

13:30 Return from lunch and get prepared for system maintenance.

14:00 Pull passive skimmer in NW-1, empties liquid in the reservoir (partially full) and take apart skimmer screen, Do a general Cleaning by brushing, blowing and letting it dry. Put set the skimmer back and measure product in well.

Depth to product = 8.05'
Depth to water = 8.26'
Product thickness = 0.21'

PREPARED BY: Rogerio Lopez DATE: 12/18/2002

PREPARER'S SIGNATURE:

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PROJECT NAME: Port of Oakland
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DAILY ACTIVITY REPORT

DATE: 12/18/02
PAGE 2 OF 2

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

14:30 Measures volume of liquid in 1,000 -tank
Depth to product = 1.7' | Approximately 800 gallons of liquid in tank
Depth to water = 1.8' | product was measured at ~ 25 gallons.
Call Rachel and let her know of the volume in tank.
15:00 Pull active skimmer in MW-3 and pull apart the screen.
Measures Depth to product = 7.35'
Depth to water = 8.43'
Product thickness = 1.08'
Do a general maintenance on the screen as described in MW-1.
15:30 Place skimmer back in well
15:45 Lock gate and leave site.

PREPARED BY: Rogerio Leong DATE: 12/18/02
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PROJECT NAME: Port of Oakland
PROJECT NUMBER: 00-152.20
SITE LOCATION: 2277 7th Street, Oakland, California

DATE: 12/23/02
PAGE 1 OF 1

DAILY ACTIVITY REPORT

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

9:50 Arrive on site and open gate.
8:00 Open tank top. Tank is empty and System ~~not~~ is down.
8:10 Turn the system back on
8:15 Go to MW-3 and raises skimmer pump ~~for~~ 1/4-foot, and check discharge hosing in the tank. (It is discharging water + product)
8:45 Lock gate and leave site.

Not used

12/23/02

PREPARED BY: Rogerio Leano
PREPARER'S SIGNATURE:
DATE: 12/23/02

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PROJECT NAME: Port of Oakland
PROJECT NUMBER: 00.152-20
SITE LOCATION: 2277 Seventh Street, Oakland, Ca

DAILY ACTIVITY REPORT

DATE: 12/27/02
PAGE 1 OF 1

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

8:00 Arrive onsite and open system's gate
8:10 Open tank top and measure liquid volume at approximately 500 gallons with very little product recovered. Active skimmer has been pumping more water as observed in the discharging hose.
8:25 Adjust skimmer in MW-3 by raising intake at about 1.5 feet. Observes more product being discharged in tank.
8:40 Empties 0.5-gallon of product from passive skimmer in MW-1
9:10 Lock gate and leave site.

12/27/2002

PREPARED BY: Rogelio Leong DATE: 12/27/2002

PREPARER'S SIGNATURE:

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PROJECT NAME: Port of Oakland
PROJECT NUMBER: 00.152-20
SITE LOCATION: 2277 Seventh Street, Oakland, Ca

DAILY ACTIVITY REPORT

DATE: 12/30/02
PAGE 1 OF 1

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

8:15 Arrive at site and unlock system's gate
8:30 Measure volume in tank (800 gal of liquid containing approximately 25 gallons of product)
8:45 Pull skimmer from MW-3 to monitor for product level. DTP = 6.5'; DTW = 7.15'; Product thickness = 0.65'. Set skimmer intake at 7.0' based on measured product level. Check discharge in tank and observes liquid being discharged consists of water and product sheen (More ~~prod~~ water being discharged)
9:30 Pull passive skimmer from MW-1 and observe that 1.5-inch of product was recovered in skimmer reservoir. Monitor product in well. DTP = 7.61'; DTW = 7.63' product = 0.02'. Set skimmer at 7-8 feet range.
10:00 Leave site to office.

15:50 Return to site to perform testing of skimmer with Clean Environment Equipment. Under because more water has been extracted from the skimmer than product.
16:15 Meet Mario with Clean Environment Equipment (QED).
16:30 Perform testing in water repulsive filter and find out that it is no longer repulsive to water. ~~Ch~~ Replace a new filter + floater + screen in active skimmer. Set the skimmer back and let it on.
17:00 Perform repair in Automatic Shut off system. The system is operating ok after minor adjustments on valve shut off and hoses sealing.
17:15 Update Rachel and decide to leave system on because shut off system has been repaired and Foss is scheduled to empty tank tomorrow.
17:25 Lock gate and leave site

PREPARED BY: Rogerio Leong
DATE: 12/30/02
PREPARER'S SIGNATURE: [signature]

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PROJECT NAME: Port of Oakland
PROJECT NUMBER: 00.152-20
SITE LOCATION: 2277 seventh street, Oakland, Ca

DAILY ACTIVITY REPORT

DATE: 01/02/03
PAGE 1 OF 1

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

8:15 Arrive onsite
8:30 Tank has been emptied by Foss and system was off.
8:45 Troubleshoot shut off system and bring system back on.
9:00 Observe discharge in tank to continue to be ~~most~~ water only.
9:10 Disconnect discharge line in MW-3. Raise pump above water level and slowly lower it to be certain that pump intake is positioned correctly. It still observes discharges water with sheen. Use interface Probe (IP) to monitor for product. IP detects water at 6.2' and product at 9.6'. Suspects IP is defective or not accurate and use a bailer to confirm that no product exists in well
9:30 Pull passive skimmer in MW-1 and use bailer to check for product. Product was observed at 1/4-inch (less) and measured at 7.36'. (DTW)
10:00 Update Rachel and decide to leave system off.

Not used 01/02/03

PREPARED BY: Rogerio Leong
DATE: 01/02/2003
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PROJECT NAME: Port of Oakland
PROJECT NUMBER: 00.152-20
SITE LOCATION: 2277 Seventh street, Oakland, Ca

DAILY ACTIVITY REPORT

DATE: 01/03/03
PAGE 1 OF 1

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

8:00 Onsite to perform groundwater monitoring and free product check in all wells and Confirmation test on MW-3 for water and product.

Well ID	DTW	DTP	Color	Odor
MW-8A	6.50	-	Clear	Slight hydrocarbon
MW-4	7.21	-	Clear	None
MW-5	6.54	-	Clear	None
MW-3	6.21	Sheen	Clear	Strong
MW-1	7.35	<1/4-in	Turbid	Strong

9:00 Perform color test by using paste for detection of water/oil spread in a steel measuring tape. Stick measuring tape to the bottom of well. Only water paste changed from gold to pink at 9.8'-15'. No change of color was observed in hydrocarbon paste, therefore, no product exists in this well MW-3.

10:00 Leave site to office

01/03/03

PREPARED BY: Rogerio Leong
DATE: 01/03/03
PREPARER'S SIGNATURE:

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