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Alameda County

SEP 29 2005

Environmental Health

PORT OF OAKLAND

September 26, 2005

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

RE: 2nd Quarter 2005, Quarterly Groundwater Monitoring and Product Recovery Report – 2277 Seventh Street, Oakland, CA

Dear Mr. Chan:

Please find enclosed the subject Port of Oakland (Port) groundwater monitoring and product recovery report for 2277 Seventh Street in Oakland, California. This report is being submitted in accordance with Alameda County Health Care Services Agency (ACHCSA) requirements.

The next monitoring event will be performed during the third quarter of 2005, 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
Port Associate 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.)
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2010

Alameda County

SEP 29 2005

Environmental Health

Innovative Technical Solutions, Inc.

September 22, 2005

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

Second Quarter of 2005 Quarterly Groundwater Monitoring and Product Monitoring Report
2277 Seventh Street
Oakland, California

Dear Mr. Rubin:

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

Collection of groundwater samples from monitoring wells MW-1 and MW-3 was not performed this quarter due to the presence of measurable thickness of separate-phase petroleum hydrocarbons floating on the groundwater surface.

Three sampling events were respectively performed on June 14, July 06, and August 10, 2005 as part of the second quarter. The analytical results of the samples collected on June 14, reported by Severn Trent Laboratories (STL) in Pleasanton, California, were inconsistent with the history of detections and concentration ranges of Total Petroleum Hydrocarbons as diesel (TPHd) and motor oil (TPHmo) in all wells. The highest discrepancy was reported in MW-5, a well that has not had detections of TPHd and TPHmo since February 2000. The anomalous results triggered a confirmatory sampling effort in all wells on July 06, 2005. Samples were again submitted to the STL and a single split sample from MW-5 was also submitted to a second California certified laboratory in Pacheco, McCampbell Analytical, Inc. (MAI), for quality assurance. The results of the confirmatory sampling for MW-5 indicated a disagreement between the two laboratories. MAI's result indicated a much more reasonable degree of consistency with the range of historical TPHd detection in MW-5. Further discussions and evaluations of the TPHd and TPHmo in well MW-5 and laboratory procedures are presented in the ITSI Technical Memorandum dated August 9, 2005, included in Appendix D. Based on the questionable validity of analytical results for TPHd and TPHmo in MW-5, STL's data for the June 14 and July 06, 2005 events were considered anomalous and unreliable. A final sampling effort for the second quarter 2005 event was then performed on August 10, 2005. The results of this event are presented in this report.

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BACKGROUND

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. 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 for the construction of a new Harbor Facilities Center (HFC) were initiated in November 2002 at 2277 7th Street site. The eastern side of Building C-401 was demolished, and the asphalt pavement east of the building was removed in December 2002. 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, and six monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, MW-8A) still remain onsite. The surface grade was raised approximately 2 feet in the vicinity of wells MW-2 and MW-3 during the first quarter of 2003.

Three additional monitoring wells were previously installed at the adjacent 2225 7th Street site to assess groundwater quality following the removal of USTs in 1989 and 1992. The 2225 7th Street site was also modified and included for the expansion plan of HFC. Buildings C-406 and C-407 were demolished and the entire surrounding asphalt pavement was removed in November 2002. The three former monitoring wells (MW-1, MW-2, and MW-3) located at the site were also properly destroyed to facilitate the Port's construction plans.

On April 16, 2003, ITSI on behalf of the Port oversaw the removal of a 100-foot section of the product recovery conveyance system (refer to Figure 2). The Port contracted Dillard Environmental Services (Dillard) to perform the work. The section of product recovery system was removed to minimize interference with site development. The conveyance system consisted of a PVC conduit pipe containing the pneumatic and product recovery lines. These lines connected the system control box and the recovery tank to the skimmer pump installed in well MW-3. Portions of the surface concrete pieces and asphalt from the trench line were excavated, removed and stockpiled onsite. Sections of the removed conduit pipes and product line were appropriately disposed of and transported offsite by Dillard as non-RCRA hazardous solid waste material under the Uniform Hazardous Waste Manifest. A new product removal system was installed as part of the HFC construction activities. The system was operational in November 2004 after the HFC development activities were completed.

On November 17 and 18, 2003, ITSI personnel raised monitoring wells MW-2 and MW-3 to match the asphalt

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

surface elevation of the future HFC parking lot. New traffic rated well boxes were placed on the two wells and the elevation of the top of each well box was set with a laser level instrument. The elevations of the wells were subsequently surveyed on November 26, 2003 to a relative Port of Oakland datum by PLS Surveys, Inc. (PLS).

GROUNDWATER MONITORING

ITSI personnel performed groundwater monitoring and sampling at the 2277 7th Street site on August 10, 2005. Prior to purging and sampling the monitoring wells, the depth to groundwater below the top of the well casing was measured with a water level indicator. After measuring the depth to water, the wells were purged using a disposable bailer. Conductivity, pH, and temperature were monitored periodically during purging. Collection of groundwater samples was performed 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 the respective Monitoring Well Water Level Measurement and Monitoring Well Purging and Sampling forms included as Appendix A. The purge water was stored onsite in a 55-gallon DOT drum. Dillard Environmental Services Company, Inc. (Dillard) periodically removes and appropriately disposes of the purge water.

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, and 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 McCampbell Analytical, Inc. (MAI) in Pacheco, a California certified analytical laboratory.

The second quarter 2005 groundwater monitoring event at 2277 7th Street involved monitoring and sampling of monitoring wells MW-2, MW-4, MW-5, and MW-8A, and monitoring of the free-phase petroleum product in 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.

LABORATORY ANALYSIS OF GROUNDWATER SAMPLES

MAI performed the chemical analyses of the groundwater samples using the following analytical methods:

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

The laboratory results for 2277 7th Street are summarized in Table 3 and are shown on Figure 4. Copies of the laboratory results and chain-of-custody forms are provided in Appendix B.

FINDINGS

Groundwater measurements were conducted on August 10, 2005. The water levels are presented in Table 1. 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 August 2005 is consistent with the historic flow direction reported in the previous reports.

Results of the August 10, 2005 groundwater sampling at 2277 7th Street are summarized below:

- TPHg was detected in one well at a concentration of 500 µg/L in MW-4.
- Benzene was detected in one well at a concentration of 180 µg/L in MW-4.
- Toluene was not detected above the reporting limit in any of the wells sampled this quarter.
- Ethylbenzene was not detected above the reporting limit in any of the wells sampled this quarter.
- Total xylenes were not detected above the reporting limit in any of the wells sampled this quarter.
- MTBE was not detected above the reporting limit in any of the wells sampled this quarter.
- TPHd was detected in one well at a concentration of 150 µg/L in well MW-8A.
- TPHmo was not detected above reporting limit in any of the wells sampled this quarter.

QUALITY ASSURANCE AND QUALITY CONTROL

A duplicate sample was collected simultaneously from monitoring well MW-5 and labeled as MW-5D at 2277 7th Street on August 10, 2005 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 of 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.
MW-5
08/10/05

ANALYTE	X_1	X_2	RPD
MTBE	<0.5	<0.5	--
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	--

- The overall RPD values indicate that the results from the sample and the duplicate analysis are in agreement.

PRODUCT RECOVERY SYSTEM AT 2277 7TH STREET

Until April 16, 2003 the product recovery system at 2277 7th Street consisted of an air-actuated (active) product skimmer in MW-3. The product in MW-3 was discharged to a product recovery 1,000-gallon tank that Foss Environmental Services Company, Inc.*(former contractor) emptied at various times throughout a quarter. A passive skimmer was installed in MW-1, and it was subsequently removed on May 22, 2000 because no measurable product appeared in the well. The passive skimmer was reinstalled in MW-1 after free product was detected in the well on September 6, 2000. The active and passive product recovery skimmers were subsequently removed from the wells in April 2003 due to activities related to the construction of the new HFC.

The Port recently replaced the former free product recovery system with the installation of two new mitigation systems at the site. Overaa Construction (Overaa) completed the installation of a soil gas venting system beneath the new HFC's building slab. The system was completed in early 2005 and initial testing was performed in April 2005. Final "as built" drawings and an operation and maintenance manual have been prepared for the soil gas venting system. Beliveau Engineering Contractors, Inc., subcontracted to Dillard, completed a new product recovery system in November 2004 designed to recover the product floating on the groundwater beneath the site. Initial testing and calibration began during December 2004. The system is currently fully operational and free product is being removed from the surface of shallow groundwater. Further testing and calibration of the system will continue for a full year through the end of 2005 accounting for seasonal variations. Final "as built" drawings and an operation and maintenance manual have been prepared for the free product recovery system.

The free-phase petroleum product has been monitored in wells MW-1 and MW-3 on a quarterly basis in conjunction with the quarterly groundwater sampling event. During this second quarter monitoring event, free-phase petroleum product was measured at 0.50 feet and 1.24 feet in MW-1 and MW-3, respectively. Table 2 presents a summary of the product thickness data. A summary of the activities during the past quarters associated with the operation and maintenance of the product recovery system is presented in Table 4.

* Effective October 31, 2003, Foss Environmental Services, Inc was acquired as a wholly owned subsidiary of National Response Corporation, Inc (NRC)

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.

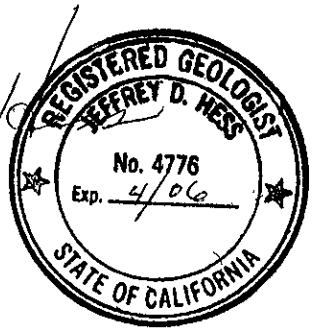
Sincerely yours,

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 Sample Results, 2277 7th Street
Table 4 – Summary of Operation and Maintenance Activities

Figure 1 – Site Location Map
Figure 2 – Site Plan
Figure 3 – Groundwater Elevations, 2277 7th Street, August 10, 2005
Figure 4 – Groundwater Sample Results, 2277 7th Street, August 10, 2005

Appendix A – Monitoring Well Water Level Measurement Form and
Monitoring Well Purging and Sampling Form
Appendix B - Laboratory Reports
Appendix C - Daily Field Activity Report
Appendix D - Technical Memorandum – August 9, 2005

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	4/18/2000	8.21	5.93
		5/22/2000	8.17	5.97
		7/10/2001	10.00	4.14
		12/12/2001	NA	NA
		3/8/2002	NA	NA
		6/13/2002	NA	NA
		9/26/2002	NA	NA
		12/12/2002	NA	NA
		3/17/2003	NA	NA
		6/18/2003	NA	NA
		9/3/2003	NA	NA
		11/26/2003	NA	NA
		3/5/2004	NA	NA
		6/2/2004	NA	NA
		9/3/2004	NA	NA
		12/16/2004	NA	NA
		3/29/2005	NA	NA
		6/14/2005	NA	NA
		8/10/2005	NA	NA
MW-2	14.36	12/31/1997	8.73	5.63
		4/13/1998	7.72	6.64
		11/6/1998	9.43	4.93
		3/19/1999	8.21	6.15
		6/24/1999	8.91	5.45
		9/28/1999	9.42	4.94
		11/12/1999	9.63	4.73
		2/11/2000	8.54	5.82
		5/22/2000	8.10	6.26
		9/6/2000	8.79	5.57
		12/19/2000	9.19	5.17
		2/21/2001	7.99	6.37
		4/3/2001	8.23	6.13
		7/10/2001	8.70	5.66
		12/12/2001	8.16	6.20
		1/22/2002	7.64	6.72
		3/8/2002	8.31	6.05
		6/13/2002	8.64	5.72
		9/26/2002	8.95	5.41
		12/12/2002	9.17	5.19
		3/17/2003	7.77	6.59
		6/18/2003	8.44	5.92
		9/3/2003	8.98	5.38
	17.21	11/26/2003	12.01	5.20
		3/5/2004	9.75	7.46
		6/2/2004	11.22	5.99
		9/3/2004	11.62	5.59
		12/16/2004	10.80	6.41
		3/29/2005	9.67	7.54
		6/14/2005	10.68	6.53
		8/10/2005	11.05	6.16

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-4	13.15	12/31/1997	7.09	6.06
		4/13/1998	7.71	5.44
		11/6/1998	8.69	4.46
		3/19/1999	8.00	5.15
		6/24/1999	8.45	4.70
		9/28/1999	8.73	4.42
		11/12/1999	8.83	4.32
		2/11/2000	7.71	5.44
		5/22/2000	8.09	5.06
		9/6/2000	8.32	4.83
		12/19/2000	8.47	4.68
		2/21/2001	7.51	5.64
		4/3/2001	8.13	5.02
		7/10/2001	8.12	5.03
		12/12/2001	7.65	5.50
		1/22/2002	7.60	5.55
		3/8/2002	7.96	5.19
		6/13/2002	8.20	4.95
		9/26/2002	8.21	4.94
		12/12/2002	8.38	4.77
		3/17/2003	7.72	5.43
		6/18/2003	8.02	5.13
		9/3/2003	8.29	4.86
		11/26/2003	8.69	4.46
		3/5/2004	7.45	5.70
		6/2/2004	8.25	4.90
		9/3/2004	8.31	4.84
		12/16/2004	7.96	5.19
		3/29/2005	7.11	6.04
		6/14/2005	7.90	5.25
		8/10/2005	7.86	5.29

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	12/31/1997	6.38	7.11
		4/13/1998	5.56	7.93
		11/6/1998	6.59	6.90
		3/19/1999	6.20	7.29
		6/24/1999	6.73	6.76
		9/28/1999	6.91	6.58
		11/12/1999	7.06	6.43
		2/11/2000	7.00	6.49
		5/22/2000	6.21	7.28
		9/6/2000	6.56	6.93
		12/19/2000	6.68	6.81
		2/21/2001	6.08	7.41
		4/3/2001	6.38	7.11
		7/10/2001	6.58	6.91
		12/12/2001	6.40	7.09
		1/22/2002	6.10	7.39
		3/8/2002	6.10	7.39
		6/13/2002	6.31	7.18
		9/26/2002	6.60	6.89
		12/12/2002	6.75	6.74
		3/17/2003	5.73	7.76
		6/18/2003	6.10	7.39
		9/3/2003	6.50	6.99
		11/26/2003	6.70	6.79
		3/5/2004	5.70	7.79
		6/2/2004	6.27	7.22
		9/3/2004	6.61	6.88
		12/16/2004	6.02	7.47
		3/29/2005	5.25	8.24
		6/14/2005	5.82	7.67
		8/10/2005	6.00	7.49

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-6	14.00	6/24/1999	8.61	5.39
		9/28/1999	9.26	4.74
		11/12/1999	8.01	5.99
		2/11/2000	7.20	6.80
		5/22/2000	7.13	6.87
		9/6/2000	7.12	6.88
		12/19/2000	7.57	6.43
		2/21/2001	7.50	6.50
		4/3/2001	6.88	7.12
		7/10/2001	7.15	6.85
		12/12/2001	9.50	4.50
		1/22/2002	6.69	7.31
		3/8/2002	6.98	7.02
		6/13/2002	7.45	6.55
		9/26/2002	7.95	6.05
		12/12/2002	7.71	6.29
		12/18/2002	Monitoring well was destroyed	
MW-7	14.35	12/31/1997	8.88	5.47
		4/13/1998	7.86	6.49
		11/6/1998	9.55	4.80
		3/19/1999	8.41	5.94
		6/24/1999	9.08	5.27
		9/28/1999	9.60	4.75
		11/12/1999	9.77	4.58
		2/11/2000	8.67	5.68
		5/22/2000	8.43	5.92
		9/6/2000	8.88	5.47
		12/19/2000	9.21	5.14
		2/21/2001	8.13	6.22
		4/3/2001	8.45	5.90
		7/10/2001	8.87	5.48
		12/12/2001	8.39	5.96
		1/22/2002	7.99	6.36
		3/8/2002	8.51	5.84
		6/13/2002	8.90	5.45
		9/26/2002	9.00	5.35
		12/12/2002	9.28	5.07
		12/18/2002	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-8A	12.94	12/12/2001	7.20	NA
		1/22/2002	7.20	5.74
		3/8/2002	7.70	5.24
		6/13/2002	7.72	5.22
		9/26/2002	7.91	5.03
		12/12/2002	8.15	4.79
		3/17/2003	7.28	5.66
		6/18/2003	7.72	5.22
		9/3/2003	8.18	4.76
		11/26/2003	8.55	4.39
		3/5/2004	6.92	6.02
		6/2/2004	7.92	5.02
		9/3/2004	8.16	4.78
		12/16/2004	7.62	5.32
		3/29/2005	6.63	6.31
		6/14/2005	7.60	5.34
		8/10/2005	7.50	5.44

[1] Elevation data relative to Port of Oakland datum; well surveys performed on September 12, 1996, February 4, 1998, and November 26, 2003, 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's New Harbor Facility.

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 (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	12/31/1997	-	-	-	0.2	passive skimmer
		1/29/1998	-	-	-	0.2	passive skimmer
		3/2/1998	-	-	-	0.018	passive skimmer
		5/11/1998	-	-	-	0.02	passive skimmer
		6/15/1998	-	-	-	0.2	passive skimmer
		11/6/1998	9.34	10.3	0.96	1.2	passive skimmer
		1/7/1999	-	-	-	0.2	passive skimmer
		2/11/1999	-	-	-	0.2	passive skimmer
		3/12/1999	-	-	-	0.2	passive skimmer
		3/19/1999	NM	8.45	>0.01	0.07	passive skimmer
		4/14/1999	-	-	-	0.2	passive skimmer
		5/11/1999	-	-	-	0.2	passive skimmer
		6/24/1999	8.88	9.63	0.8	0.2	passive skimmer
		7/15/1999	--	--	--	0.2	passive skimmer
		7/16/1999	--	--	--	0.2	passive skimmer
		8/27/1999	--	--	--	0.2	passive skimmer
		9/28/1999	--	--	0.65	0.2	passive skimmer
		10/5/1999	--	--	--	0.2	passive skimmer
		11/12/1999	9.38	10.27	0.89	0.2	passive skimmer
		12/21/1999	--	--	--	0.2	passive skimmer
		1/26/2000	--	--	--	0.2	passive skimmer
		1/28/2000	9.22	9.24	0.02	--	passive skimmer
		2/11/2000	--	7.00	0.00	0.2	passive skimmer
		3/1/2000	--	7.45	0.00	0.0	passive skimmer
		3/21/2000	NM	7.34	0.00	0.0	passive skimmer
		4/18/2000	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
		9/21/2000	8.71	9.26	0.55	0.0	passive skimmer
		10/11/2000	--	--	--	0.0	passive skimmer
		11/30/2000	--	--	--	0.0	passive skimmer
		12/19/2000	9.5	9.89	0.39	0.0	passive skimmer
		2/22/2001	8.3	8.4	0.13	0.0	passive skimmer
		4/3/2001	8.3	8.55	0.25	0.0	passive skimmer
		4/23/2001	--	--	--	0.0	passive skimmer
		5/11/2001	--	--	--	0.0	passive skimmer
		5/30/2001	8.5	8.9	0.40	0.0	passive skimmer
		6/14/2001	--	--	--	0.0	passive skimmer
		7/10/2001	8.8	10	1.20	0.0	passive skimmer
		12/12/2001	NA	NA	NA	1.0	passive skimmer
		3/8/2002	NA	NA	NA	NA	passive skimmer
		4/3/2002	8.3	9.2	0.90	--	passive skimmer
		4/23/2002	8.5	9.6	1.10	--	passive skimmer
		5/10/2002	8.7	9.6	0.90	--	passive skimmer
		5/24/2002	8.8	10	1.20	--	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 (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 (Cont'd)	14.14	6/13/2002	8.7	10	1.30	--	passive skimmer
		6/21/2002	8.8	10	1.20	--	passive skimmer
		7/5/2002	8.5	9.4	0.90	0.2	passive skimmer
		7/19/2002	8.6	9.6	1.00	0.2	passive skimmer
		7/30/2002	8.5	9.3	0.80	0.2	passive skimmer
		8/14/2002	8.5	9.3	0.80	0.2	passive skimmer
		9/13/2002	8.8	9.6	0.80	0.2	passive skimmer
		9/26/2002	8.6	9.5	0.90	0.2	passive skimmer
		10/14/2002	9.0	10.1	1.10	0.2	passive skimmer
		11/4/2002	9.22	10.12	0.90	0.2	passive skimmer
		11/21/2002	8.48	8.86	0.38	0.2	passive skimmer
		12/6/2002	8.85	9.38	0.53	0.0	passive skimmer
		12/18/2002	8.05	8.26	0.21	0.2	passive skimmer
		12/30/2002	7.61	7.63	0.02	<0.1	passive skimmer
		1/2/2003	7.36	7.36	sheen	<0.1	passive skimmer
		1/3/2003	7.35	7.35	sheen	<0.1	passive skimmer
		1/14/2003	7.35	7.36	sheen	<0.1	passive skimmer
		1/30/2003	7.75	7.81	0.06	<0.1	passive skimmer
		2/18/2003	7.81	8.35	0.54	<0.1	passive skimmer
		2/26/2003	7.72	8.62	0.90	<0.1	passive skimmer
		3/13/2003	7.80	8.11	0.89	0.2	passive skimmer
		3/17/2003	7.61	8.88	1.27	0.2	passive skimmer
		4/16/2003	7.42	8.71	1.29	<0.2	passive skimmer
		6/18/2003	8.20	9.44	1.24	<0.2	passive skimmer
		9/3/2003	8.50	9.40	0.90	--	[8]
		11/26/2003	8.85	9.25	0.40	--	[8]
		3/5/2004	6.76	7.07	0.31	--	[8]
		6/2/2004	8.26	8.71	0.45	--	[8]
		9/3/2004	8.70	9.11	0.41	--	[8]
		12/16/2004	7.75	7.92	0.17	--	[8]
		3/29/2005	6.21	6.38	0.17	--	[8]
		6/14/2005	7.41	7.61	0.20	--	[8]
		8/10/2005	8.05	8.55	0.50	--	[8]
MW-3	14.22	12/31/1997	-	-	-	30	active skimmer
		1/29/1998	-	-	-	10	active skimmer
		4/13/1998	-	-	-	240	active skimmer
		5/11/1998	-	-	-	1,545	active skimmer
		6/15/1998	-	-	-	1,950	active skimmer
		11/6/1998	8.84	9.94	1.1	500	active skimmer
		1/5/1999	-	-	-	275[2]	active skimmer
		1/14/1999	-	-	-	400[2]	active skimmer
		2/3/1999	-	-	-	400[2]	active skimmer
		2/26/1999	-	-	-	570[2]	active skimmer
		3/19/1999	7.52	8.05	0.5	211	active skimmer
		6/16/1999	-	-	-	310	active skimmer
		6/24/1999	8.38	8.56	0.2	--	active skimmer
		7/14/1999	--	--	--	50[2]	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 (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	9/28/1999	--	--	0.2	--	active skimmer
(Cont'd)		10/29/1999	--	--	--	125[2]	active skimmer
		11/12/1999	9.14	9.23	0.09	--	active skimmer
		1/28/2000	--	--	--	135	active skimmer
		2/11/2000	7.97	8.37	0.40	40	active skimmer
		3/1/2000	6.59	7.24	0.65	0.0	active skimmer
		3/21/2000	6.50	6.56	0.06	35	active skimmer
		4/18/2000	--	--	--	--	active skimmer
		5/22/2000	7.51	8.05	0.54	40	active skimmer
		6/26/2000	7.82	8.2	0.38	90	active skimmer
		7/25/2000	7.90	8.92	1.02	20	active skimmer
		8/31/2000	8.15	9.5	1.35	30	active skimmer
		9/6/2000	8.21	9.42	1.21	--	active skimmer
		9/21/2000	8.30	8.88	0.58	115	active skimmer
		10/11/2000	--	--	--	170	active skimmer
		11/30/2000	--	--	--	105	active skimmer
		12/19/2000	8.60	9.65	1.05	10	active skimmer
		2/22/2001	6.36	8.15	1.79	--	active skimmer
		4/3/2001	7.48	8.88	1.40	--	active skimmer
		4/23/2001	7.85	9.1	1.25	--	active skimmer
		5/11/2001	--	--	--	--	active skimmer
		5/30/2001	7.75	9.1	1.35	--	active skimmer
		6/14/2001	--	--	--	--	active skimmer
		7/10/2001	8.10	9.6	1.50	--	active skimmer
		12/12/2001	NA	NA	NA	1,000[5]	active skimmer
		3/8/2002	7.80	8	0.20	1,000[5]	active skimmer
		4/3/2002	7.60	7.7	0.10	--	active skimmer
		4/23/2002	7.90	8.4	0.50	--	active skimmer
		4/25/2002	7.90	8.8	0.90	--	active skimmer
		5/10/2002	8.10	8.2	0.10	--	active skimmer
		5/24/2002	8.05	8.1	0.05	--	active skimmer
		6/13/2002	8.10	8.7	0.60	1,000[5]	active skimmer
		7/5/2002	8.10	8.95	0.85	--	active skimmer
		7/19/2002	8.10	8 9	0.80	--	active skimmer
		7/30/2002	8.10	8.9	0.80	--	active skimmer
		8/14/2002	8.10	8.9	0.80	--	active skimmer
		9/13/2002	8.30	9.3	1.00	--	active skimmer
		9/26/2002	8.30	9.0	0.70	--	active skimmer
		10/14/2002	8.60	9.5	0.90	--	active skimmer
		11/4/2002	8.75	9.99	1.24	--	active skimmer
		11/21/2002	8.59	11.29	2.70	150[6]	active skimmer
		12/6/2002	8.56	9.3	0.74	150[6]	active skimmer
		12/18/2002	7.35	8.43	1.08	25[6]	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 (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 (Cont'd)	14.22	12/30/2002	6.50	7.15	0.65	25 [6]	active skimmer
		1/2/2003	6.20	6.20	sheen	--	active skimmer
		1/3/2003	6.21	6.21	sheen	--	active skimmer
		1/14/2003	6.20	6.21	0.01	--	active skimmer
		1/30/2003	6.81	6.85	0.04	--	active skimmer
		2/18/2002	7.09	7.15	0.06	--	active skimmer
		2/26/2003	7.04	7.11	0.07	--	active skimmer
		3/13/2003	7.22	8.11	0.89	--	active skimmer
		3/17/2003	7.15	7.50	0.35	5 [6]	active skimmer
		4/16/2003	7.27	8.25	0.98	--	active skimmer
		6/18/2003	7.78	9.00	1.22	--	[7]
		9/3/2003	8.31	9.96	1.65	--	[7]
	16.18 [9]	11/26/2003	10.79	12.85	2.06	--	[7]
		3/5/2004	8.39	9.85	1.46	--	[7]
		6/2/2004	10.03	11.35	1.32	--	[7]
		9/3/2004	10.46	12.06	1.59	--	[7]
		12/16/2004	9.41	10.38	0.97	--	[7]
		3/29/2005	8.17	9.01	0.84	--	[7]
		6/14/2005	9.59	10.55	0.96	--	[7]
		8/10/2005	9.91	11.15	1.24		
MW-6	14.00	13/31/97	-	-	-	0.0014	passive skimmer
		1/29/1998	-	-	-	0.0014	passive skimmer
		3/2/1998	-	-	-	0.0014	passive skimmer
		11/6/1998	NM	9.62	>0.01	0.0	passive skimmer
		3/19/1999	NM	7.37	>0.01	0.0	passive skimmer
MW-8 [1]	12.94	12/31/1997	8.49	8.82	0.33	4.38	-
		11/6/1998	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.

[7] The active skimmer was removed from MW-3 on 04/16/2003

[8] Passive skimmer was removed from MW-1

[9] Elevation data relative to Port of Oakland datum; well surveys performed on November 26, 2003, by PLS Survey.

NM - Well checked for free product but not able to detect a measurable amount in the well.
Shaded area indicates data from this reporting period.

NA - Not Available

Table 3
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 [13]	<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
	03/17/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	06/18/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/03	<50	<50	<300	3.2	<0.5	<0.5	<0.5	<2.0
	11/26/03	<50	<50	<300	3.0	<0.5	<0.5	<0.5	<2.0
	03/05/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	06/02/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/16/04	<50	96 [6,15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/29/05	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	08/10/05	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
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	09/11/95	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
Dup.	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
	09/06/00	530 [2,3]	<50	<300	190	0.93	0.6	0.57	<0.5 [10]
	12/19/00	960 [3,11]	70 [5]	<300	420	<2.5	<2.5	<2.5	<0.5 [10,12]
	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
	03/17/03	130 [15]	<50	<300	320 [17]	<0.5	<0.5	<0.5	<0.5 [10]
Dup.	03/17/03	82 [15]	<50	<300	190	0.64 [17]	0.56	0.53	<0.5 [10]
	06/18/03	360 [11, 15]	<50	<300	150	<0.5	<0.5	<0.5	<2.0
Dup.	06/18/03	330 [11, 15]	<50	<300	140	<0.5	<0.5	<0.5	<2.0
	09/03/03	140 [11, 15]	<50	<300	240	1.3	<0.5	<0.5	<2.0
Dup.	09/03/03	83 [11, 15]	<50	<300	130	0.58 [17]	<0.5	<0.5	<2.0
	11/26/03	160 [15]	68 [15]	<300	320	0.91 [17]	<0.5	0.53	<2.0
Dup.	11/26/03	120 [15]	<50	<300	210	0.66 [17]	<0.5	<0.5	<2.0
	03/05/04	90 [11]	<50	<300	190	1.1	0.55	0.50 [17]	23 [14, 17], <0.5 [10]
Dup.	03/05/04	84 [11]	<50	<300	180	0.81	<0.5	<0.5	21 [14, 17], <0.5 [10]
	06/02/04	620 [13]	<50	<300	210	0.55 [17]	<0.5	<0.5	<2.0
Dup.	06/02/04	400 [13]	<50	<300	130	<0.5	<0.5	<0.5	<2.0
	09/03/04	780 [13, 15]	<50	<300	<0.5	1.0 [17]	<0.5	0.57	<2.0
Dup.	09/03/04	370 [13, 15]	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0

Table 3
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	12/16/04	840	<50	<300	290	1.3 [17]	0.69	0.75	<2.0
Dup.	12/16/04	670	<50	<300	230	1.3 [17]	<0.5	<0.5	<2.0
	03/29/05	440 [13]	<50	<300	140	0.57	<0.5	<0.5	<2.0
Dup.	03/29/05	540 [13]	<50	<300	170	0.72	<0.5	<0.5	<2.0
	08/10/05	500 [18]	<50	<250	180	<2.5	<2.5	<2.5	<2.5
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 [12]	<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
	03/17/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5 [10]
	06/18/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	11/26/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	4.1 [14], <0.5 [10]
	03/05/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	06/02/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/16/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	2.2 [14], <0.5 [10]
	03/29/05	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	08/10/05	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<0.5
MW-5D	08/10/05	<50 [19]	<50 [19]	<250	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3
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	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
	02/21/01	120 [13]	440	<300	21	<0.5	0 96	<0.5	<2
	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							

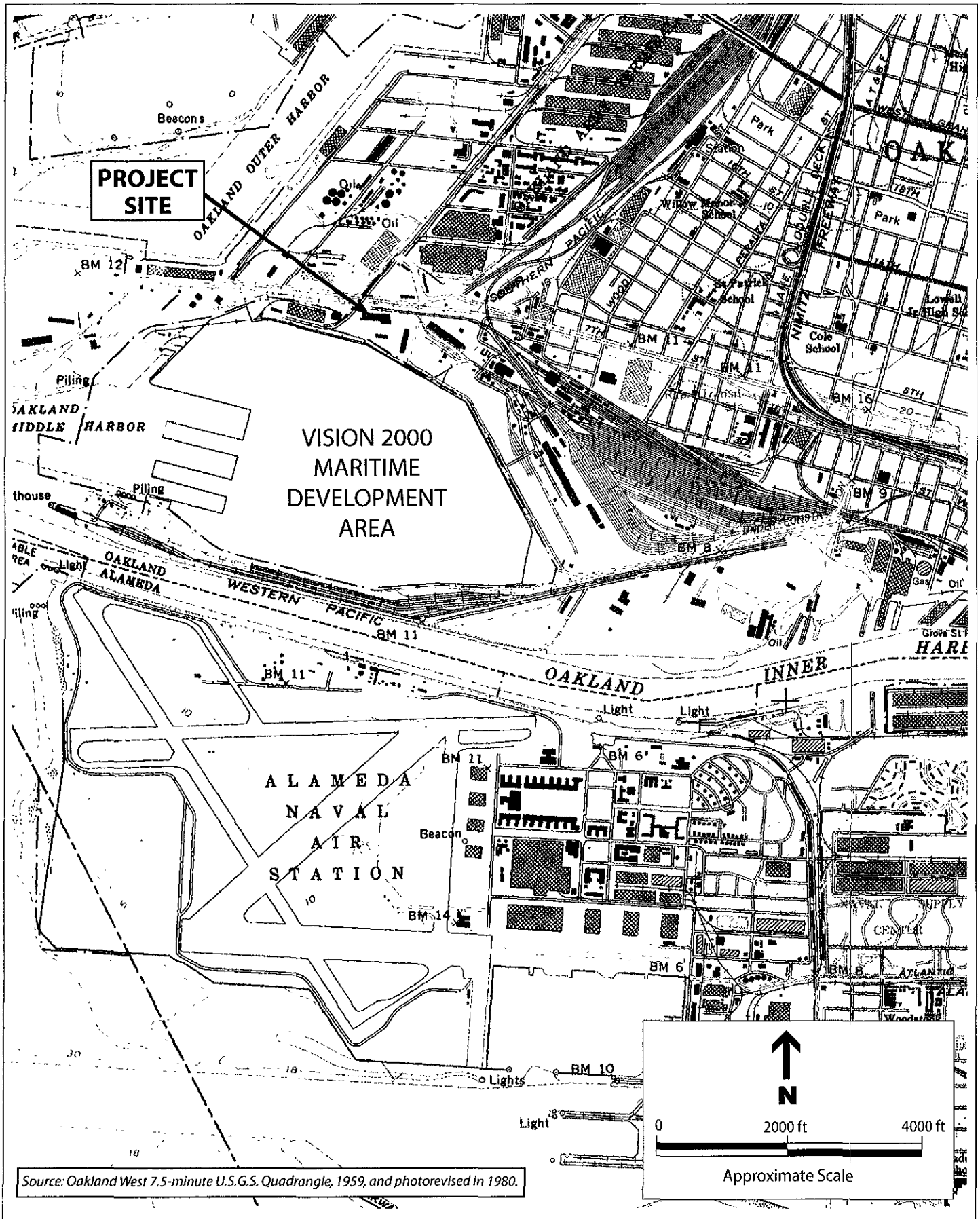
Table 3
Groundwater Sample Results
Port of Oakland, 2277 7th Street, Oakland California

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-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
	03/17/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5 [10]
	06/18/03	<50	74 [15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/03	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	3.0 [14], <0.5 [10]
	11/26/03	<50	94 [15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/05/04	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	06/02/04	<50	67 [15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	09/03/04	<50	86 [15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	12/16/04	<50	160 [6, 15]	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	03/29/05	<50	53	<300	<0.5	<0.5	<0.5	<0.5	<2.0
	08/10/05	<50 [19]	150 [15, 19]	<250	<0.5	<0.5	<0.5	<0.5	<0.5

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 7th Street, Oakland, CA, dated October 24, 1997, by Uribe and Associate*
17 Presence confirmed, but Relative Percent Difference (RPD) between columns exceeds 40%
NA Not Analyzed.
18 Unmodified or weakly modified gasoline is significant
19 Liquid Sample contains greater than ~1 vol.% sediment

Table 4
Summary of Operation and Maintenance Activities
Port of Oakland, 2277 7th Street, Oakland, California

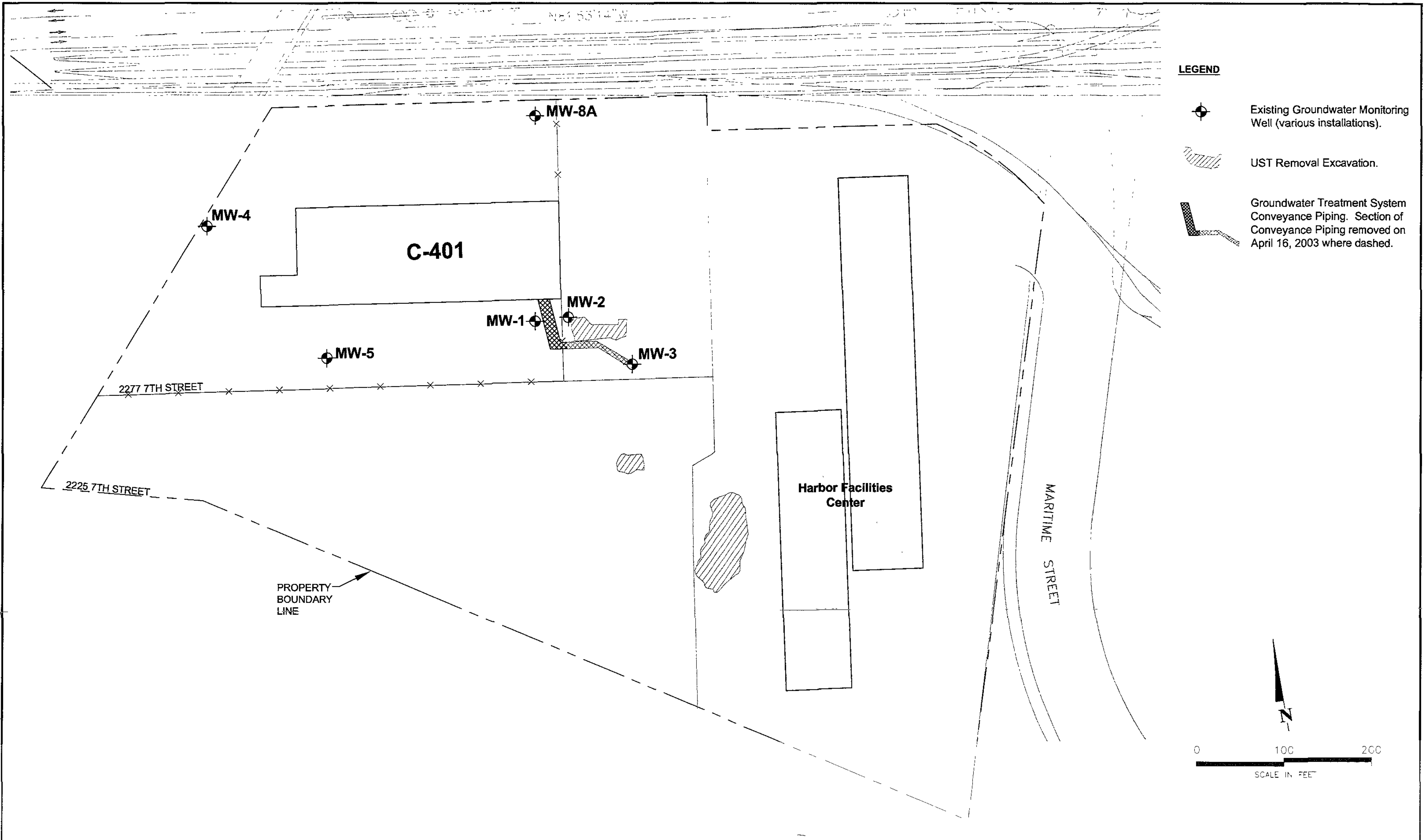
Date	System Status	Comments
7/5/2002	Off	System is turned off and is in the process of being moved to new location.
7/19/2002	Off	System is moved to new location but is not hooked up to electricity.
7/30/2002	Off	System is moved to new location but is not hooked up to electricity.
8/14/2002	Off	System is moved to new location but is not hooked up to electricity.
9/13/2002	On	System is powered and operating.
9/26/2002	On	System operating OK.
10/14/2002	On	System operating OK.
11/4/2002	On	System operating OK.
11/21/2002	On	System operating OK.
12/6/2002	On	System operating OK.
12/18/2002	On	System operating OK.
12/23/2002	On	System operating OK.
12/27/2002	On	System operating OK.
12/30/2002	On	System operating OK.
1/2/2003	Off	System is turned off because no free product was detected in well MW-3
1/3/2003	Off	System is turned off because no free product was detected in well MW-3
1/14/2003	Off	System is turned off because only product sheen was detected in well MW-3
1/30/2003	Off	System is turned off because only product sheen was detected in well MW-3
2/18/2003	Off	System is turned off because only product sheen was detected in well MW-3
2/26/2003	Off	System is turned off because only product sheen was detected in well MW-3
3/13/2003	Off	System is kept off because of the expected rainfall during weekend
3/17/2003	On	System is tested to verify that only product is being recovered from well MW-3
4/16/2003	Off	Product recovery line was removed due to Port's construction upgrades at the site
6/18/2003	Off	Product recovery line was removed on 04/16/2003
9/3/2003	Off	Product recovery line was removed on 04/16/2003
11/26/2003	Off	Product recovery line was removed on 04/16/2003
3/5/2004	Off	Product recovery line was removed on 04/16/2003
6/2/2004	Off	Product recovery line was removed on 04/16/2003
9/3/2004	Off	Product recovery line was removed on 04/16/2003
12/16/2004	Off	Product recovery line was removed on 04/16/2003
3/29/2005	Off	Product recovery line was removed on 04/16/2003
6/14/2005	Removed	Replaced by a new system fully operational at the site



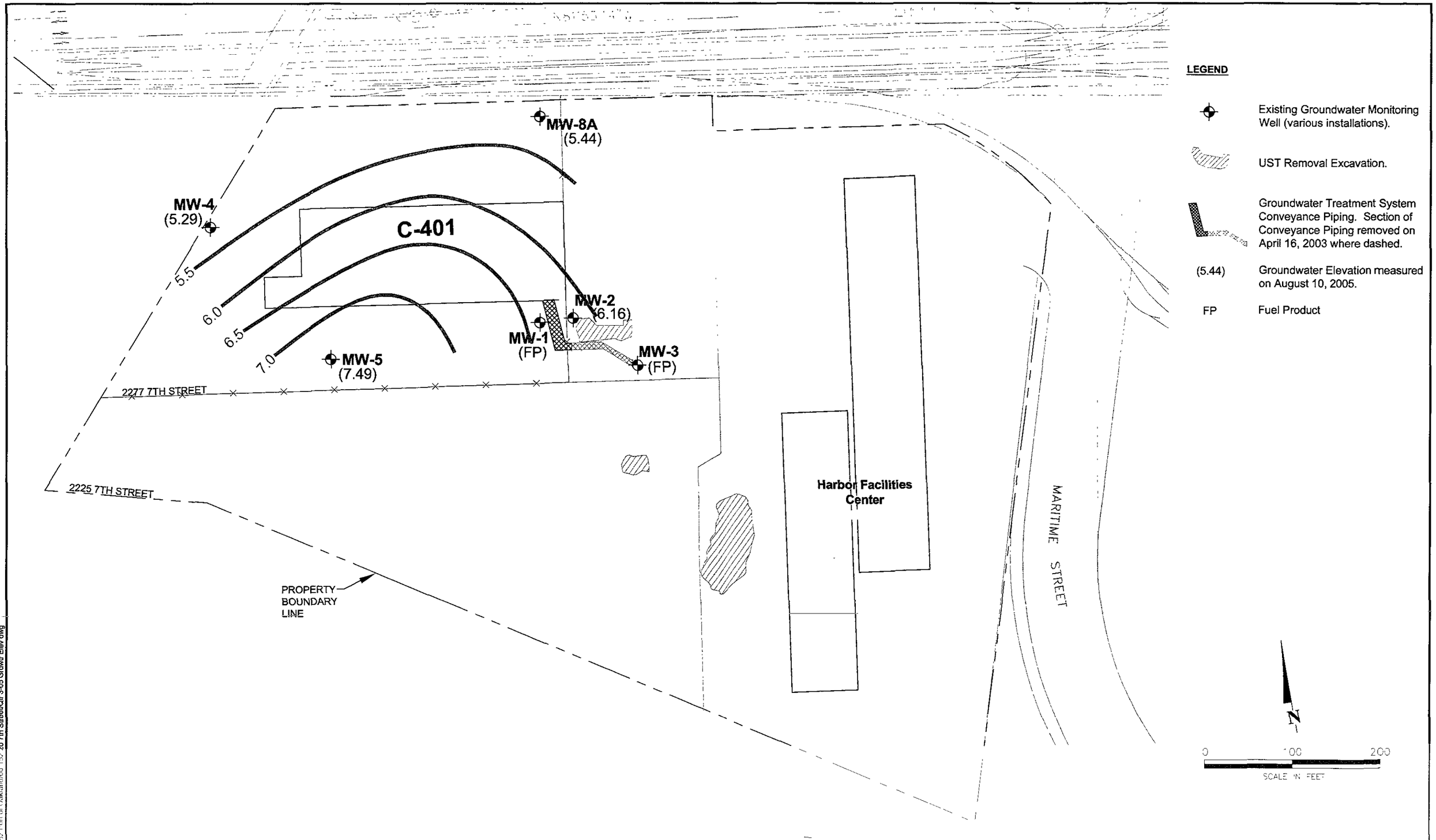
Source: Oakland West 7.5-minute U.S.G.S. Quadrangle, 1959, and photorevised in 1980.

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

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

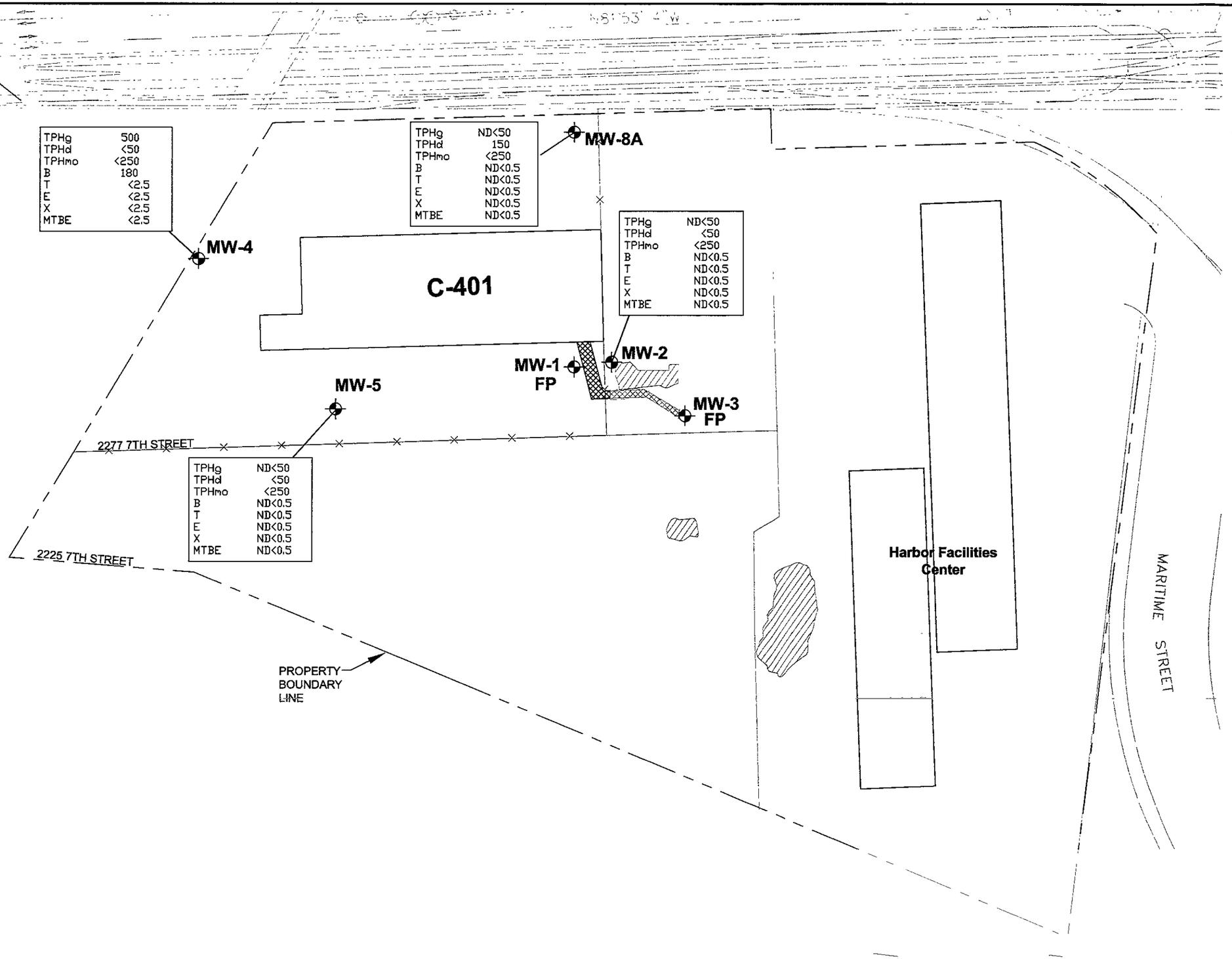


Innovative Technical Solutions, Inc.	Second Quarter 2005, Quarterly Groundwater Monitoring and Product Recovery 2277 Seventh Street Oakland, California	Figure 2 Site Plan



CAD GIS Station/001 152 Port of Oakland/000 152 20 7th Street/Qtr 3-05 Grdwtr Elev.dwg

Innovative Technical Solutions, Inc.	Second Quarter 2005, Quarterly Groundwater Monitoring and Product Recovery 2277 Seventh Street Oakland, California	Figure 3 Groundwater Elevations August 10, 2005



LEGEND

	Existing Groundwater Monitoring Well (various installations).
	UST Removal Excavation.
	Groundwater Treatment System Conveyance Piping. Section of Conveyance Piping removed on April 16, 2003 where dashed.
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 Xylenes
MTBE	Methyl t-butyl ether
ND	Not Detected

Projects\00 152 Part of Oakland\00 152 20 7th Street\Graphics\CAD\Qtr 3-05 Grdwtr Samples.dwg

Innovative Technical Solutions, Inc.

Second Quarter 2005, Quarterly Groundwater Monitoring and Product Recovery
2277 Seventh Street
Oakland, California

Figure 4
Groundwater Sample Results
August 10, 2005

Innovative Technical Solutions, Inc.

MONITORING WELL WATER LEVEL MEASUREMENT FORM

PROJECT NAME: 2277 7th Street PROJECT NO.: 00-152.25

MEASURED BY: R. LEONG DATE: 08/10/2005

Monitoring Well ID	Depth to Water (feet)	Total Well Depth (feet)	Time
MW-2	11.05	17.75	11:04
MW-4	7.86	18.70	9:38
MW-5	6.00	16.40	10:32
MW-6	Well was destroyed on December 18, 2002		
MW-7	Well was destroyed on December 18, 2002		
MW-8A	7.50	20.50	8:57
———	DEPTH TO WATER	DEPTH TO PRODUCT	THICKNESS (feet)
MW-1	8.55	8.05	0.50
MW-3	11.15	9.91	1.24

Document

ITSI Innovative Technical Solutions, Inc.

MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: PORTOF OAKLAND – 2277 7th STREET PROJECT NO.: 00-152.28

WELL NO.: MW-5 TESTED BY: RLEONG DATE: 08/10/2005

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 6.0

Total Well Depth (ft.): 16.40 Purge Method: Disposable Bailer

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

Time Start Purge: 10:15 Time End Purge:

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		
	16.40	-	6.0	=	10.40	x	0.16	0.64	1.44	=	1.70

Time	10:17	10:19	10:21	10:22	10:24	10:26	
Cumulative Volume Purged (gals)	1.0	2.0	3.0	3.5	4.5	5.5	
Cumulative Number of Casing Volumes	>0.5	>1.0	>1.5	~2.0	>2.5	>3.0	
Temperature (F°/C°)	22.8	22.4	22.5	22.5	22.5	22.6	
pH	8.51	8.32	8.67	8.81	8.83	8.87	
Specific Conductivity (mS/cm)	1.90	1.85	1.97	2.05	2.02	1.99	
Turbidity (NTU)	157	201	551	705	749	751	

WELL SAMPLING

Sampling Time: 10:30 Sampling Method: Disposable Bailer

Duplicate Sample & Time: NW-5D @ 10:45

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

NCCAMPBELL

Innovative Technical Solutions, Inc.

MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: PORTOF OAKLAND – 2277 7th STREET PROJECT NO.: 00-152.28

WELL NO.: MW-4 TESTED BY: RLEONG DATE: 08/10/2005

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 7.86

Total Well Depth (ft.): 18.70 Purge Method: Disposable Bailer

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

Time Start Purge: 9:40 Time End Purge: 9:51

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		
	7.86	-	18.70	=	10.84	x	0.16	0.64	1.44	=	1.75

Time	9:42	9:43	9:45	9:47	9:49	9:51	
Cumulative Volume Purged (gals)	1.0	1.50	2.5	3.5	4.50	5.50	
Cumulative Number of Casing Volumes	>0.5	~1.0	<1.5	2.0	>2.5	>3.0	
Temperature (F°C°)	22.0	21.8	21.8	21.9	21.8	21.8	
pH	9.00	8.66	8.88	8.93	8.90	8.87	
Specific Conductivity (mS/cm)	1.53	1.46	1.50	1.53	1.56	1.57	
Turbidity (NTU)	95	160	158	159	235	230	

WELL SAMPLING

Sampling Time: 10:00 Sampling Method: Disposable Bailer

Duplicate Sample & Time: None

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

MCCAMPBELL

Innovative Technical Solutions, Inc.

MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: PORTOF OAKLAND – 2277 7th STREET PROJECT NO.: 00-152.28

WELL NO.: MW-8A TESTED BY: R. LEONG DATE: 08/10/2005

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 7.50

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: 9:00 Time End Purge: 9:12

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	-	7.50	=	13.0	x	0.16	0.64	1.44	=	2.0

Time	9:02	9:04	9:06	9:08	9:10	9:12	
Cumulative Volume Purged (gals)	1.0	2.0	3.0	4.0	5.0	6.0	
Cumulative Number of Casing Volumes	0.5	1.0	1.5	2.0	2.5	3.0	
Temperature (°F) (C°)	21.1	19.9	20.5	20.4	20.3	20.3	
pH	8.49	8.44	8.86	8.90	8.93	8.95	
Specific Conductivity (mS/cm)	1.90	1.86	2.43	2.46	2.47	2.49	
Turbidity (NTU)	320	544	>999	>999	>999	>999	

WELL SAMPLING

Sampling Time: 9:25 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~~ HCl	~~C&T~~ McCAMPB
MW-8A	4 ~~5~~ voas	TPHg, MTBE, BTEX	HCL	~~C&T~~ " "

ITSI Innovative Technical Solutions, Inc.

Sheet ___ of ___

MONITORING WELL PURGING AND SAMPLING FORM

PROJECT NAME: PORTOF OAKLAND – 2277 7th STREET PROJECT NO.: 00-152.28

WELL NO.: MW-2 TESTED BY: R. LEONG DATE: 08/10/2005

WELL PURGING

Measuring Point Description: Top of Casing (TOC) Static Water Level (ft.): 11.05

Total Well Depth (ft.): 17.75 Purge Method: Disposable Bailer

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

Time Start Purge: 11:15 Time End Purge: 11:21

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		
	17.75	-	11.05	=	6.70	x	(0.16)	0.64	1.44	=	1.0

Time	11:17	11:18	11:19	11:20	11:21		
Cumulative Volume Purged (gals)	1.0	1.5	2.0	2.5	3.0		
Cumulative Number of Casing Volumes	1.0	1.5	2.0	2.5	3.0		
Temperature (F° (C°))	20.2	20.2	20.4	20.2	20.0		
pH	8.94	8.83	8.74	8.78	8.80		
Specific Conductivity (mS/cm)	1.76	1.76	1.76	1.77	1.77		
Turbidity (NTU)	32	35	23	31	36		

WELL SAMPLING

Sampling Time: 11:45 Sampling Method: Disposable Bailer

Duplicate Sample & Time: None

Sample ID	Volume/ Container	Analysis Requested	Preservatives	Lab
MW-2	3 (1 L Amber)	TPHd, TPHmo	~~none~~ HCL	~~C&T~~
MW-2	4 voas	TPHg, MTBE, BTEX	HCL	~~C&T~~

NCCAMPBELL

Chain-Of-Custody

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 Ca

Project Name and Number: Port of Oakland 100-152.25
Project Manager: Rachel Hess
Site Location: 7th street site

Laboratory Name: McCampbell Analytical Inc.
Address: 110 Second Ave South #D Contact Name: Angela Rydelius
Pacheco CA 94553 Phone: 925 798 1620

Date: 08/10/2005
Page: 1 of 1

Sample I.D.	Date	Time	Sample Depth	No. of Containers	Sample Matrix	Analysis: TPH diesel 8015B	TPH mo 8015B	TPH g 8015B	BTEX+MTBE 8260B	Special Instructions/Comments
						HCl	HCl	HCl	HCl	Preservative:
						1 lt	1 lt	VOA	VOA	Container Type:
TRIP BLANK	08/10/2005	700	—	2	H2O				X	Perform Silica Gel cleanup on TPH diesel and motor oil analyses
MW-2		1145	14'	5		X	X	X	X	
MW-4		1000	15'	5		X	X	X	X	
MW-5		1030	15'	5		X	X	X	X	
MW-5D		1045	15.5'	5		X	X	X	X	
MW-8A		0925	17.0'	5		X	X	X	X	

Sampled By: Rogerio Leovy
Signature:
Special Instructions: Fax result to Rachel Hess / Rogerio Leovy @ (925) 258 8998
Send Results to: (w/fax #) Direct Bill Port of Oakland, w/ Jeff Rubin
Turnaround Time: Standard

Courier/Airbill No.:

Relinquished By/Affiliation:	Date:	Time:	Received By/Affiliation:	Date:	Time:
Rogerio Leovy	08/10/05	13:45		8/10	1345

Original – Laboratory Yellow – Field/Office

ITSI 5/02

RECEIVED
AUG 1 8 2005

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

ITSI 2730 Shadelands Drive Suite 100 Walnut Creek, CA 94598	Client Project ID: #00-152.25; Port of Oakland	Date Sampled: 08/10/05
		Date Received: 08/10/05
	Client Contact: Rachel Hess	Date Reported: 08/16/05
	Client P.O.:	Date Completed: 08/16/05

WorkOrder: 0508174

August 16, 2005

Dear Rachel:

Enclosed are:

1). the results of **6** analyzed samples from your **#00-152.25; Port of Oakland project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

ITSI	*Client Project ID: #00-152.25; Port of Oakland*	Date Sampled: 08/10/05
2730 Shadelands Drive Suite 100		Date Received: 08/10/05
Walnut Creek, CA 94598	Client Contact: Rachel Hess	Date Extracted: 08/10/05-08/11/05
	Client P.O.:	Date Analyzed: 08/10/05-08/11/05

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*

Extraction method: SW5030B Analytical methods: SW8015Cm Work Order: 0508174

Lab ID	Client ID	Matrix	TPH(g)	DF	% SS
002A	MW-2	W	ND	1	99
003A	MW-4	W	500,a	1	96
004A	MW-5	W	ND	1	116
005A	MW-5D	W	ND,i	1	99
006A	MW-8A	W	ND,i	1	97

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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ITSI 2730 Shadelands Drive Suite 100 Walnut Creek, CA 94598	Client Project ID: #00-152.25; Port of Oakland	Date Sampled: 08/10/05
		Date Received: 08/10/05
	Client Contact: Rachel Hess	Date Extracted: 08/10/05
	Client P.O.:	Date Analyzed: 08/11/05-08/12/05

Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0508174

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0508174-002A	MW-2	W	ND	ND	1	100
0508174-003A	MW-4	W	ND	ND	1	101
0508174-004A	MW-5	W	ND	ND	1	102
0508174-005A	MW-5D	W	ND,i	ND	1	102
0508174-006A	MW-8A	W	150,b,i	ND	1	97

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

#) cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; &) low or no surrogate due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel (asphalt); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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ITSI 2730 Shadelands Drive Suite 100 Walnut Creek, CA 94598	Client Project ID: #00-152.25; Port of Oakland	Date Sampled: 08/10/05
		Date Received: 08/10/05
	Client Contact: Rachel Hess	Date Extracted: 08/10/05-08/11/05
	Client P.O.:	Date Analyzed: 08/10/05-08/11/05

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0508174

Lab ID	0508174-001A	0508174-002B	0508174-003B	0508174-004B	Reporting Limit for DF =1	
Client ID	Trip Blank	MW-2	MW-4	MW-5		
Matrix	W	W	W	W		
DF	1	1	5	1	S	W
Compound	**Concentration**				ug/kg	µg/L
Benzene	ND	ND	180	ND	NA	0.5
Ethylbenzene	ND	ND	ND<2.5	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND	ND<2.5	ND	NA	0.5
Toluene	ND	ND	ND<2.5	ND	NA	0 5
Xylenes	ND	ND	ND<2.5	ND	NA	0.5
Surrogate Recoveries (%)						
%SS:	97	95	95	95		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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ITSI 2730 Shadelands Drive Suite 100 Walnut Creek, CA 94598	Client Project ID: #00-152.25; Port of Oakland	Date Sampled: 08/10/05
		Date Received: 08/10/05
	Client Contact: Rachel Hess	Date Extracted: 08/10/05-08/11/05
	Client P.O.:	Date Analyzed: 08/10/05-08/11/05

MTBE and BTEX by GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 0508174

Lab ID	0508174-005B	0508174-006B			Reporting Limit for DF =1	
Client ID	MW-5D	MW-8A				
Matrix	W	W				
DF	1	1			S	W
Compound	**Concentration**				ug/kg	µg/L
Benzene	ND	ND			NA	0.5
Ethylbenzene	ND	ND			NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND			NA	0.5
Toluene	ND	ND			NA	0.5
Xylenes	ND	ND			NA	0.5
Surrogate Recoveries (%)						
%SS:	94	94				
Comments	i	i				

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0508174

EPA Method: SW8021B/8015Cm **Extraction: SW5030B** **BatchID: 17516** **Spiked Sample ID: 0508174-002A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex)£	ND	60	87.9	89.4	1.68	84.8	85.2	0.438	70 - 130	70 - 130
MTBE	ND	10	100	96.8	3.44	99.7	97.7	2.05	70 - 130	70 - 130
Benzene	ND	10	90.9	88.6	2.57	90.6	89.2	1.54	70 - 130	70 - 130
Toluene	ND	10	91.2	89.5	1.98	89.6	88.4	1.39	70 - 130	70 - 130
Ethylbenzene	ND	10	92	90.4	1.71	91.5	90.6	0.923	70 - 130	70 - 130
Xylenes	ND	30	94.7	90.7	4.32	94.3	90.7	3.96	70 - 130	70 - 130
%SS:	99	10	97	96	0.241	99	98	1.54	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17516 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0508174-002A	8/10/05 10:00 AM	8/10/05	8/10/05 11:20 PM	0508174-003A	8/10/05 10:00 AM	8/11/05	8/11/05 8:18 PM
0508174-004A	8/10/05 10:30 AM	8/11/05	8/11/05 12:25 AM	0508174-005A	8/10/05 10:45 AM	8/11/05	8/11/05 12:57 AM
0508174-006A	8/10/05 9:25 AM	8/11/05	8/11/05 8:52 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation

% Recovery = 100 * (MS-Sample) / (Amount Spiked), RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0508174

EPA Method: SW8015C	Extraction: SW3510C	BatchID: 17517	Spiked Sample ID: N/A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	98.3	98.7	0.342	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	96	96	0	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17517 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0508174-002A	8/10/05 10:00 AM	8/10/05	8/11/05 3:15 AM	0508174-003A	8/10/05 10:00 AM	8/10/05	8/11/05 4:25 AM
0508174-004A	8/10/05 10:30 AM	8/10/05	8/11/05 5:34 AM	0508174-005A	8/10/05 10:45 AM	8/10/05	8/11/05 6:44 AM
0508174-006A	8/10/05 9:25 AM	8/10/05	8/12/05 12:33 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate, LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content

DHS Certification No. 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0508174

EPA Method: SW8260B **Extraction: SW5030B** **BatchID: 17510** **Spiked Sample ID: 0508174-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
Benzene	ND	10	109	108	1.11	106	110	3.50	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	109	110	0.350	105	109	3.57	70 - 130	70 - 130
Toluene	ND	10	96.6	95.6	0.979	92.3	99.6	7.55	70 - 130	70 - 130
%SS:	118	10	112	111	0.500	116	112	3.37	70 - 130	70 - 130
%SS:	104	10	97	97	0	96	99	2.45	70 - 130	70 - 130
%SS:	97	10	95	98	3.01	95	97	2.64	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17510 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0508174-001A	8/10/05 7:00 AM	8/10/05	8/10/05 3:54 PM	0508174-002B	8/10/05 10:00 AM	8/10/05	8/10/05 4:42 PM
0508174-003B	8/10/05 10:00 AM	8/11/05	8/11/05 12:33 AM	0508174-004B	8/10/05 10:30 AM	8/10/05	8/10/05 6:09 PM
0508174-005B	8/10/05 10:45 AM	8/10/05	8/10/05 6:52 PM	0508174-006B	8/10/05 9:25 AM	8/10/05	8/10/05 7:35 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate, LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate, RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS Certification No. 1644

QA/QC Officer

0508174

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 Ca

Chain-Of-Custody

Project Name and Number: Port of Oakland 100-152.25
Project Manager: Rachel Hess
Site Location: 7th street site

Laboratory Name: McCampbell Analytical Inc.
Address: 110 Second Ave South #D Pacheco CA 94553
Contact Name: Angela Rydelius
Phone: 925 798 1620

Date: 08/10/2005
Page: 1 of 1

Sample I.D.	Date	Time	Sample Depth	No. of Containers	Sample Matrix	Analysis: TPH diesel 8015B	TPH mo 8015B	TPH gx 8015B	BTEX+MTBE 8260B	Special Instructions/Comments
										Perform Silica Gel cleanup on TPH diesel and motor oil analyses
						Preservative: HCl	HCl	HCl	HCl	
						Container Type: 1 Lt	1 Lt	VOA	VOA	
✓ TRIP BLANK	08/10/2005	700	–	2	Water				X	
+ MW-2		1145	14'	5		X	X	X	X	
+ MW-4		1000	15'	5		X	X	X	X	
+ MW-5		1030	15'	5		X	X	X	X	
+1 MW-5D		1045	15.5'	5		X	X	X	X	
+1 MW-8A		0925	17.0'	5		X	X	X	X	

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB
PRESERVATION: VOAS ✓ | O&G | METALS | OTHER diesel

Sampled By: Rogerio Leovy
Signature:
Special Instructions: Fax results to Rachel Hess / Rogerio Leovy @ (925) 256 8993
Send Results to: (w/fax #) Direct Bill Port of Oakland, w/ Jeff Rubin
Turnaround Time: Standard

Courier/Airbill No.:

Relinquished By/Affiliation:	Date:	Time:	Received By/Affiliation:	Date:	Time:
Rogerio Leovy	08/10/05	13:45		8/10	1345

Original – Laboratory Yellow – Field/Office

ITSI 5/02

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0508174 **ClientID: ITSI** **EDF: NO**

Report to:
Rachel Hess
ITSI
2730 Shadelands Drive Suite 100
Walnut Creek, CA 94598

TEL: (510) 719-6858
FAX: (925) 256-8998
ProjectNo: #00-152.25; Port of Oakland
PO:

Bill to:
Jeff Rubin
Port of Oakland
530 Water Street
Oakland, CA 94607

Requested TAT: 5 days

Date Received: 08/10/2005
Date Printed: 08/10/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0508174-001	Trip Blank	Water	8/10/05 7:00:00 AM	☐		A													
0508174-002	MW-2	Water	8/10/05 10:00:00	☐	A	B													
0508174-003	MW-4	Water	8/10/05 10:00:00	☐	A	B													
0508174-004	MW-5	Water	8/10/05 10:30:00	☐	A	B													
0508174-005	MW-5D	Water	8/10/05 10:45:00	☐	A	B													
0508174-006	MW-8A	Water	8/10/05 9:25:00 AM	☐	A	B													

Test Legend:

1	G-MBTEX_W	2	MBTEX-8260B_W	3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Maria Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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: 00-152.25
SITE LOCATION: Interim Sampling for 7th Street Site

DATE: 08/10/2005
PAGE 1 OF 1

DAILY ACTIVITY REPORT

DESCRIPTION OF FIELD ACTIVITIES AND EVENTS

7:30 Set up Van for Sampling
8:50 Arrive at site
8:55 set up at MW-8A
9:25 Sample MW-8A
9:35 Set up at MW-4
10:00 Sample MW-4
10:10 Set up at MW-5
10:30 Sample MW-5
10:45 Sample MW-5D as duplicate
11:00 Set up at MW-2
11:45 Sample MW-2
12:15 Monitor Free product at MW-1
Depth to water = 8.55
Depth to Product = 9.05
12:30 Monitor Free product at MW-3 0.50' → Free Product in MW-1
Depth to water = 11.15
Depth to Product = 9.91
1.24' of free product in MW-3
13:45 Drop Samples off at McCampbell Lab in Pacheco
14:30 Return water level meter for Equipco

PREPARED BY: Roque Leon	REVIEWED BY:
DATE: 08/10/2005	DATE:
PREPARERS SIGNATURE:	REVIEWERS SIGNATURE:

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

Innovative
Technical
Solutions, Inc.

August 9, 2005

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

Re: Severn-Trent Laboratories (STL) Report 2005-06-0355; STL Report 2005-07-0091; McCampbell Analytical, Inc. (MAI) report 0507064

Dear Mr. Rubin:

As part of your ongoing groundwater monitoring project at 7th street, one trip blank, one field duplicate sample and four primary samples were collected on June 14, 2005. Samples were submitted to the San Francisco branch of Severn Trent Laboratories, Inc., (STL) located in Pleasanton, California. Due to the results of the first round of sampling, a second set of four samples and one field duplicate were collected and submitted to STL on July 6, 2005. In addition, a quality assurance split sample from monitoring well MW-5 was forwarded to McCampbell Analytical, Inc., (MAI) of Pacheco, California. Samples were couriered directly from the field to each laboratory under chain-of-custody procedures and delivered on the same day the sampling occurred. A list of all samples collected for this effort is attached.

STL is accredited under the California Department of Health Services (DHS) Environmental Laboratory Accreditation Program (ELAP) with an expiration of January 31, 2006. MAI is also accredited under the DHS ELAP with an expiration of October 31, 2005.

The first round of samples were tested for Total Extractable Petroleum Hydrocarbons (TEPH) as Diesel and Motor Oil, Fuel Oxygenates and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), and Gasoline by standard Environmental Protection Agency (EPA) analytical methods EPA 8015M, EPA 8260B, and EPA 8015M/8021. To avoid a potential high bias from interferences, the samples for TEPH were pretreated using Silica Gel to remove polar organic compounds which are often contributed from natural sources. The second round of samples were tested for TEPH as Diesel and Motor Oil only.

Results of Samples Collected June 14, 2005

Surrogate compounds added by the laboratory to monitor analytical performance were recovered within acceptable control limits. No analytes were detected above the reporting limit in all laboratory method blanks. The recovery of known analytes for the laboratory control samples for all tests were within acceptable control limits. The trip blank was analyzed for volatile components only (Fuel Oxygenates, BTEX and Gasoline), and no analytes were detected above

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the reporting limit. Sample MW-4 and MW-4D were field duplicates, and reproducible results were obtained for these samples for analytes detected above the reporting limit.

TEPH with Silica Gel Cleanup

STL reported concentrations of diesel range organics (DRO) 240 µg/L in sample MW-2; 310 µg/L and 190 µg/L in sample MW-4 and its duplicate MW-4D, respectively; 1500 µg/L in sample MW-5; and 600 µg/L in sample MW-8. STL also reported a concentration of motor oil range organics of 1000 µg/L in sample MW-5.

The ITSI Field Sampler did not note any odor, sheen or any other obvious evidence of hydrocarbon products. Although hydrocarbons are generally considered to be insoluble in water, a small amount may be soluble and therefore would not be evident to the Field Sampler. All of the measured concentrations are generally low (less than 1,000 µg/L). I reviewed the laboratory chromatograms for this analysis. The chromatogram for sample MW-5, in particular, shows a chromatogram consistent with a mixture of hydrocarbon products of mid-range boiling points.

Fuel oxygenates by Method 8260B

STL reported concentrations of benzene of 130 µg/L and 150 µg/L in sample MW-4 and its duplicate MW-4D, respectively. No other analytes for this method were detected in any other sample. Method 8260B employs mass-spectroscopic confirmation of the individual analytes. The results between the field duplicate and the parent sample are reproducible. The concentrations of benzene reported from the Fuel Oxygenates analysis is consistent with the amount of Gas/BTEX compounds detected from EPA Method 8015M/8021.

Gas/BTEX compounds by Method 8015M/8021

STL reported concentrations of gasoline of 490 µg/L and 480 µg/L in sample MW-4 and its duplicate MW-4D, respectively. No other analytes for this method were detected in any other sample. Method 8015M/8021 uses a flame-ionization detection (FID), which does not provide specific compound confirmation like EPA Method 8260B.

I reviewed the laboratory chromatograms for these samples. The chromatographic patterns for samples MW-4 and MW-4D are nearly identical, and are consistent with a low-boiling refined petroleum product. Due to the wide variety of commercial products and the non-specific nature of EPA Method 8015M/8021, it is not possible to unequivocally identify the material from this analysis. However, examples of these products include but are not limited to some grades of gasoline, aviation gas, and other general hydrocarbon solvents.

Reconciliation with Historical Data Results

Although the results of this set of samples were generally higher than past results, the results were generally within the range of previous rounds of sampling. One exception was evident with MW-5, which initially had a reported concentration of 1,500 µg/l of TEPH as Diesel. The highest previously detected concentration in this well was 200 µg/l, and TEPH results were less than 50

µg/l for the previous 20 rounds of sampling (extending back to February 11, 2000). This anomalous result led to further scrutiny of the results from STL, and the decision to resample the wells on July 6, 2005.

Results of Samples Collected July 6, 2005

Surrogate compounds added by the laboratory to monitor analytical performance were recovered within acceptable control limits. No analytes were detected above the reporting limit in all laboratory method blanks. The recovery of known analytes for the laboratory control samples for all tests were within acceptable control limits. Because no analysis was intended for these samples for volatile analytes (TEPH-gasoline, BTEX and MTBE), trip blanks were not required and were not included with this round of samples.

TEPH with Silica Gel Cleanup

STL reported concentrations of DRO of 110 µg/l in sample MW-2; 190 µg/L in sample MW-4; 450 µg/L and 500 µg/L in sample MW-5 and its duplicate MW-5D, respectively; and 350 µg/L in sample MW-8A. As requested, STL also included the chromatograms of the analysis for review.

MAI reported concentrations of DRO of 77 µg/l in sample MW-5. The results between both laboratories for sample MW-5 are in sufficient disagreement to cause concern. Sufficient original sample remained at MAI for further investigation, and MAI performed the following additional analysis on sample MW-5:

Sample MW-5 Diesel Range Organic Comparison

Laboratory Sample ID	Extraction Type	Silica Gel Clean Up	DRO µg/l (ppb)	Comment	Surrogate Recovery (%)	
					S1	S2
0507064-001A	Original	Yes	77	Silica-gel cleanup used	109	107
0507064-001A	Original	No	164.5	Silica-gel cleanup not used	114	137
0507064-001A	Re-extract	Yes	10.5	Re-extracted with silica-gel cleanup	98	103
0507064-001A	Re-extract	No	140.3	Re-extracted without silica-gel cleanup	98	103
LCS	N/A	Yes	92%	% Recovery of analyte	108	94
LCSD	N/A	Yes	91%	% Recovery of analyte	108	95
LCS	N/A	No	105%	% Recovery of analyte	103	104
LCSD	N/A	No	104%	% Recovery of analyte	102	105

As a final check to check that MAI's silica gel cleanup procedure does not affect diesel and hydrocarbon results, a standard diesel mixture was analyzed using MAI's cleanup procedure. The results of this final check confirmed that the specific procedure that MAI uses does not affect the hydrocarbon results.

Innovative Technical Solutions, Inc.

Overall Conclusion

Quality control results within STL reports 2005-06-0355 and 2005-07-0091 and MAI report 0507064 indicate that the laboratory analytical methods were operating within acceptable performance parameters. The result of the trip blank indicates that the samples remained free from external effects. The results from the field duplicate sample indicates good reproducibility of the results. The chromatograms are even consistent with patterns that would be expected for hydrocarbon mixtures.

However, the additional analysis by MAI indicates that the silica-gel cleanup procedure employed by STL for these samples is not sufficiently effective to remove all of the interferences for the TEPH diesel and motor-oil hydrocarbon analyses in these samples. Therefore the results reported by STL for the samples collected on June 20 and July 6 for TEPH-Diesel should be regarded as having a high bias.

Recommendations

The results from MAI for the sample collected in MW-5 on July 6 are valid data. All other TEPH diesel results reported by STL (on both June 20 and July 6) should be rejected as unusable. These changes to the reports must also be included in any electronic data submittal.

Please let me know if you have any questions or concerns. I can be contacted by email at pwest@itsi.com and at 925-946-3138.

Thank you,

Paul West
ITSI Program Chemist

Rachel B. Hess
ITSI Project Manager

cc: Surinder Sidhu, STL Project Manager
Ed Hamilton, MAI Laboratory Director

Attachment:

List of Samples

SEVERN TRENT STL

Submission#: 2005-06-0355

Innovative Technical Solutions, Inc

June 29, 2005

2730 Shadelands Drive
Walnut Creek, CA 94598

Attn.: Rachel Hess

Project#: 00.152-28
Project: Port of Oakland

Dear Ms. Hess,

Attached is our report for your samples received on 06/14/2005 14:15
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 07/29/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: ssidhu@stl-inc.com

Sincerely,

Surinder Sidhu

Surinder Sidhu
Project Manager

SEVERN TRENT STL

Submission: 2005-06-0355

TEPH w/ Silica Gel Clean-up

Innovative Technical Solutions, Inc
Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-2	06/14/2005 13:15	Water	2
MW-4	06/14/2005 11:45	Water	3
MW-4D	06/14/2005 11:55	Water	4
MW-5	06/14/2005 12:35	Water	5
MW-8A	06/14/2005 11:00	Water	6

TEPH w/ Silica Gel Clean-up

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	**MW-2**	Lab ID:	2005-06-0355 - 2
Sampled:	06/14/2005 13:15	Extracted:	6/15/2005 13:03
Matrix:	Water	QC Batch#:	2005/06/15-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Motor Oil	ND	500	ug/L	1.00	06/16/2005 22:07	
DRO (C10-C28)	240	50	ug/L	1.00	06/16/2005 22:07	
Surrogate(s)						
o-Terphenyl	85.8	60-130	%	1.00	06/16/2005 22:07	

TEPH w/ Silica Gel Clean-up

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Attn.: Rachel Hess

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 3510/8015M
Test(s): 8015M
Sample ID: **MW-4**
Lab ID: 2005-06-0355 - 3
Sampled: 06/14/2005 11:45
Extracted: 6/15/2005 13:03
Matrix: Water
QC Batch#: 2005/06/15-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Motor Oil	ND	500	ug/L	1.00	06/16/2005 22:34	
DRO (C10-C28)	310	50	ug/L	1.00	06/16/2005 22:34	
Surrogate(s)						
o-Terphenyl	120.8	60-130	%	1.00	06/16/2005 22:34	

TEPH w/ Silica Gel Clean-up

Innovative Technical Solutions, Inc
Attn.: Rachel Hess

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Walnut Creek, CA 94598
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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	**MW-4D**	Lab ID:	2005-06-0355 - 4
Sampled:	06/14/2005 11:55	Extracted:	6/15/2005 13:03
Matrix:	Water	QC Batch#:	2005/06/15-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Motor Oil	ND	500	ug/L	1.00	06/16/2005 23:01	
DRO (C10-C28)	190	50	ug/L	1.00	06/16/2005 23:01	
Surrogate(s)						
o-Terphenyl	96.6	60-130	%	1.00	06/16/2005 23:01	

TEPH w/ Silica Gel Clean-up

Innovative Technical Solutions, Inc
Attn.: Rachel Hess

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Walnut Creek, CA 94598
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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 3510/8015M
Sample ID: **MW-5**
Sampled: 06/14/2005 12:35
Matrix: Water

Test(s): 8015M
Lab ID: 2005-06-0355 - 5
Extracted: 6/15/2005 13:03
QC Batch#: 2005/06/15-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Motor Oil	1000	500	ug/L	1.00	06/16/2005 23:27	Q3
DRO (C10-C28)	1500	50	ug/L	1.00	06/16/2005 23:27	
Surrogate(s)						
o-Terphenyl	94.6	60-130	%	1.00	06/16/2005 23:27	

TEPH w/ Silica Gel Clean-up

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 3510/8015M
Sample ID: **MW-8A**
Sampled: 06/14/2005 11:00
Matrix: Water

Test(s): 8015M
Lab ID: 2005-06-0355 - 6
Extracted: 6/15/2005 13:03
QC Batch#: 2005/06/15-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Motor Oil	ND	500	ug/L	1.00	06/17/2005 01:15	
DRO (C10-C28)	600	50	ug/L	1.00	06/17/2005 01:15	
Surrogate(s)						
o-Terphenyl	94.2	60-130	%	1.00	06/17/2005 01:15	

TEPH w/ Silica Gel Clean-up

Innovative Technical Solutions, Inc

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Walnut Creek, CA 94598
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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 3510/8015M
Method Blank
MB: 2005/06/15-03.10-001

Water

Test(s): 8015M
QC Batch # 2005/06/15-03.10
Date Extracted: 06/15/2005 13:03

Compound	Conc.	RL	Unit	Analyzed	Flag
Motor Oil	ND	500	ug/L	06/16/2005 11:20	
DRO (C10-C28)	ND	50	ug/L	06/16/2005 11:20	
Surrogates(s)					
o-Terphenyl	88.1	60-130	%	06/16/2005 11:20	

TEPH w/ Silica Gel Clean-up

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2005/06/15-03.10**

LCS 2005/06/15-03.10-002 Extracted: 06/15/2005 Analyzed: 06/16/2005 12:15
LCSD 2005/06/15-03.10-003 Extracted: 06/15/2005 Analyzed: 06/16/2005 12:43

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
DRO (C10-C28)	777	763	1000	77.7	76.3	1.8	60-130	25		
Surrogates(s)										
o-Terphenyl	18.0	18.1	20.0	90.2	90.4		60-130	0		

TEPH w/ Silica Gel Clean-up

Innovative Technical Solutions, Inc

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Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Legend and Notes

Result Flag

Q3

Quantit. of unknown hydrocarbon(s) in sample based on motor oil.

SEVERN TRENT STL

Submission: 2005-06-0355

Fuel Oxygenates by 8260B

Innovative Technical Solutions, Inc
Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-2	06/14/2005 13:15	Water	2
MW-4	06/14/2005 11:45	Water	3
MW-4D	06/14/2005 11:55	Water	4
MW-5	06/14/2005 12:35	Water	5
MW-8A	06/14/2005 11:00	Water	6

Fuel Oxygenates by 8260B

Innovative Technical Solutions, Inc
Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 5030B
Sample ID: **MW-2**
Sampled: 06/14/2005 13:15
Matrix: Water
pH: <2

Test(s): 8260B
Lab ID: 2005-06-0355 - 2
Extracted: 6/23/2005 14:00
QC Batch#: 2005/06/23-01.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/23/2005 14:00	
Benzene	ND	0.50	ug/L	1.00	06/23/2005 14:00	
Toluene	ND	0.50	ug/L	1.00	06/23/2005 14:00	
Ethylbenzene	ND	0.50	ug/L	1.00	06/23/2005 14:00	
Total xylenes	ND	1.0	ug/L	1.00	06/23/2005 14:00	
Surrogate(s)						
1,2-Dichloroethane-d4	91.7	73-130	%	1.00	06/23/2005 14:00	
Toluene-d8	91.4	81-114	%	1.00	06/23/2005 14:00	

Fuel Oxygenates by 8260B

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

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Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 5030B
Test(s): 8260B
Sample ID: **MW-4**
Lab ID: 2005-06-0355 - 3
Sampled: 06/14/2005 11:45
Extracted: 6/24/2005 02:11
Matrix: Water
QC Batch#: 2005/06/23-02.66
Analysis Flag: L2, pH: <2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	4.00	06/24/2005 02:11	
Benzene	130	2.0	ug/L	4.00	06/24/2005 02:11	
Toluene	ND	2.0	ug/L	4.00	06/24/2005 02:11	
Ethylbenzene	ND	2.0	ug/L	4.00	06/24/2005 02:11	
Total xylenes	ND	4.0	ug/L	4.00	06/24/2005 02:11	
Surrogate(s)						
1,2-Dichloroethane-d4	109.1	73-130	%	4.00	06/24/2005 02:11	
Toluene-d8	91.8	81-114	%	4.00	06/24/2005 02:11	

Fuel Oxygenates by 8260B

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 5030B
Test(s): 8260B
Sample ID: **MW-4D**
Lab ID: 2005-06-0355 - 4
Sampled: 06/14/2005 11:55
Extracted: 6/24/2005 02:36
Matrix: Water
QC Batch#: 2005/06/23-02.66
Analysis Flag: L2, pH: <2 (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	1.0	ug/L	2.00	06/24/2005 02:36	
Benzene	150	1.0	ug/L	2.00	06/24/2005 02:36	
Toluene	ND	1.0	ug/L	2.00	06/24/2005 02:36	
Ethylbenzene	ND	1.0	ug/L	2.00	06/24/2005 02:36	
Total xylenes	ND	2.0	ug/L	2.00	06/24/2005 02:36	
Surrogate(s)						
1,2-Dichloroethane-d4	111.3	73-130	%	2.00	06/24/2005 02:36	
Toluene-d8	93.9	81-114	%	2.00	06/24/2005 02:36	

Fuel Oxygenates by 8260B

Innovative Technical Solutions, Inc
Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 5030B
Sample ID: **MW-5**
Sampled: 06/14/2005 12:35
Matrix: Water
pH: <2

Test(s): 8260B
Lab ID: 2005-06-0355 - 5
Extracted: 6/24/2005 05:31
QC Batch#: 2005/06/23-02.66

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/24/2005 05:31	
Benzene	ND	0.50	ug/L	1.00	06/24/2005 05:31	
Toluene	ND	0.50	ug/L	1.00	06/24/2005 05:31	
Ethylbenzene	ND	0.50	ug/L	1.00	06/24/2005 05:31	
Total xylenes	ND	1.0	ug/L	1.00	06/24/2005 05:31	
Surrogate(s)						
1,2-Dichloroethane-d4	101.0	73-130	%	1.00	06/24/2005 05:31	
Toluene-d8	91.8	81-114	%	1.00	06/24/2005 05:31	

Fuel Oxygenates by 8260B

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 5030B
Sample ID: **MW-8A**
Sampled: 06/14/2005 11:00
Matrix: Water
pH: <2

Test(s): 8260B
Lab ID: 2005-06-0355 - 6
Extracted: 6/24/2005 05:57
QC Batch#: 2005/06/23-04.69

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	06/24/2005 05:57	
Benzene	ND	0.50	ug/L	1.00	06/24/2005 05:57	
Toluene	ND	0.50	ug/L	1.00	06/24/2005 05:57	
Ethylbenzene	ND	0.50	ug/L	1.00	06/24/2005 05:57	
Total xylenes	ND	1.0	ug/L	1.00	06/24/2005 05:57	
Surrogate(s)						
1,2-Dichloroethane-d4	95.7	73-130	%	1.00	06/24/2005 05:57	
Toluene-d8	96.7	81-114	%	1.00	06/24/2005 05:57	

Fuel Oxygenates by 8260B

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

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Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2005/06/23-01.66-037

Water

Test(s): 8260B
QC Batch # 2005/06/23-01.66
Date Extracted: 06/23/2005 07:37

Compound	Conc.	RL	Unit	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/23/2005 07:37	
Benzene	ND	0.5	ug/L	06/23/2005 07:37	
Toluene	ND	0.5	ug/L	06/23/2005 07:37	
Ethylbenzene	ND	0.5	ug/L	06/23/2005 07:37	
Total xylenes	ND	1.0	ug/L	06/23/2005 07:37	
Surrogates(s)					
1,2-Dichloroethane-d4	101.8	73-130	%	06/23/2005 07:37	
Toluene-d8	95.0	81-114	%	06/23/2005 07:37	

Fuel Oxygenates by 8260B

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Batch QC Report

Prep(s): 5030B | Test(s): 8260B

Method Blank | **Water** | **QC Batch # 2005/06/23-02.66**

MB: 2005/06/23-02.66-050 | Date Extracted: 06/23/2005 19:50

Compound	Conc.	RL	Unit	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/23/2005 19:50	
Benzene	ND	0.5	ug/L	06/23/2005 19:50	
Toluene	ND	0.5	ug/L	06/23/2005 19:50	
Ethylbenzene	ND	0.5	ug/L	06/23/2005 19:50	
Total xylenes	ND	1.0	ug/L	06/23/2005 19:50	
Surrogates(s)					
1,2-Dichloroethane-d4	99.8	73-130	%	06/23/2005 19:50	
Toluene-d8	89.8	81-114	%	06/23/2005 19:50	

Fuel Oxygenates by 8260B

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Batch QC Report

Prep(s): 5030B
Test(s): 8260B

Method Blank **Water** **QC Batch # 2005/06/23-04.69**

MB: 2005/06/23-04.69-016

Date Extracted: 06/23/2005 23:16

Compound	Conc.	RL	Unit	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/23/2005 23:16	
Benzene	ND	0.5	ug/L	06/23/2005 23:16	
Toluene	ND	0.5	ug/L	06/23/2005 23:16	
Ethylbenzene	ND	0.5	ug/L	06/23/2005 23:16	
Total xylenes	ND	1.0	ug/L	06/23/2005 23:16	
Surrogates(s)					
1,2-Dichloroethane-d4	95.9	73-130	%	06/23/2005 23:16	
Toluene-d8	98.6	81-114	%	06/23/2005 23:16	

Fuel Oxygenates by 8260B

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Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/06/23-01.66**

LCS 2005/06/23-01.66-012 Extracted: 06/23/2005 Analyzed: 06/23/2005 07:12

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	24.6		25.0	98.4			65-165	20		
Benzene	23.9		25.0	95.6			69-129	20		
Toluene	26.2		25.0	104.8			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	463		500	92.6			73-130			
Toluene-d8	482		500	96.4			81-114			

Fuel Oxygenates by 8260B

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Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/06/23-02.66**

LCS 2005/06/23-02.66-025 Extracted: 06/23/2005 Analyzed: 06/23/2005 19:25
LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	26.1		25.0	104.4			65-165	20		
Benzene	21.1		25.0	84.4			69-129	20		
Toluene	23.0		25.0	92.0			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	447		500	89.4			73-130			
Toluene-d8	444		500	88.8			81-114			

Fuel Oxygenates by 8260B

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2005/06/23-04.69**

LCS 2005/06/23-04.69-057 Extracted: 06/23/2005 Analyzed: 06/23/2005 22:57
LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	22.3		25.0	89.2			65-165	20		
Benzene	23.2		25.0	92.8			69-129	20		
Toluene	24.0		25.0	96.0			70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	434		500	86.8			73-130			
Toluene-d8	487		500	97.4			81-114			

Fuel Oxygenates by 8260B

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/06/23-01.66**

MS/MSD

Lab ID: 2005-06-0314 - 001

MS: 2005/06/23-01.66-014 Extracted: 06/23/2005 Analyzed: 06/23/2005 10:14
Dilution: 10.00

MSD: 2005/06/23-01.66-039 Extracted: 06/23/2005 Analyzed: 06/23/2005 10:39
Dilution: 10.00

Compound	Conc. ug/L			Spk Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	954	891	660	250	117.6	92.4	24.0	65-165	20		R1
Benzene	186	202	ND	250	74.4	80.8	8.2	69-129	20		
Toluene	218	234	ND	250	87.2	93.6	7 1	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	494	487		500	98.8	97.4		73-130			
Toluene-d8	502	493		500	100.4	98.6		81-114			

Fuel Oxygenates by 8260B

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/06/23-02.66**

MS/MSD

Lab ID: 2005-06-0423 - 001

MS: 2005/06/23-02.66-056 Extracted: 06/24/2005 Analyzed: 06/24/2005 00:56

Dilution: 1.00

MSD: 2005/06/23-02.66-021 Extracted: 06/24/2005 Analyzed: 06/24/2005 01:21

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Benzene	21.0	20.0	ND	25.0	84.0	80.0	4.9	69-129	20		
Toluene	22.8	19.8	ND	25 0	91.2	79 2	14.1	70-130	20		
Methyl tert-butyl ether	55.3	57.4	29.4	25.0	103.6	112 0	7.8	65-165	20		
Surrogate(s)											
1,2-Dichloroethane-d4	474	487		500	94.8	97.4		73-130			
Toluene-d8	469	438		500	93 8	87.6		81-114			

Fuel Oxygenates by 8260B

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/06/23-04.69**

MS/MSD

Lab ID: 2005-06-0356 - 004

MS: 2005/06/23-04.69-047 Extracted: 06/24/2005 Analyzed: 06/24/2005 00:47

Dilution: 1.00

MSD: 2005/06/23-04.69-005 Extracted: 06/24/2005 Analyzed: 06/24/2005 01:05

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	19.4	20.1	ND	25.0	77.6	80 4	3.5	65-165	20		
Benzene	20.5	19.7	ND	25.0	82.0	78.8	4.0	69-129	20		
Toluene	21.7	21.0	ND	25.0	86.8	84.0	3.3	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	467	481		500	93.3	96.2		73-130			
Toluene-d8	512	503		500	102.4	100.6		81-114			

Fuel Oxygenates by 8260B

Innovative Technical Solutions, Inc

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Legend and Notes

Analysis Flag

L2

Reporting limits were raised due to high level of analyte present in the sample.

Result Flag

R1

Analyte RPD was out of QC limits.

SEVERN TRENT STL

Submission: 2005-06-0355

Gas/BTEX Compounds by 8015M/8021

Innovative Technical Solutions, Inc
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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
TRIP BLANK	06/14/2005 14:20	Water	1
MW-2	06/14/2005 13:15	Water	2
MW-4	06/14/2005 11:45	Water	3
MW-4D	06/14/2005 11:55	Water	4
MW-5	06/14/2005 12:35	Water	5
MW-8A	06/14/2005 11:00	Water	6

Gas/BTEX Compounds by 8015M/8021

Innovative Technical Solutions, Inc

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 5030 Test(s): 8015M

Sample ID: **TRIP BLANK** Lab ID: 2005-06-0355 - 1

Sampled: 06/14/2005 14:20 Extracted: 6/21/2005 13:41

Matrix: Water QC Batch#: 2005/06/21-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/21/2005 13:41	
Surrogate(s)						
4-Bromofluorobenzene-FID	73.6	50-150	%	1.00	06/21/2005 13:41	

Gas/BTEX Compounds by 8015M/8021

Innovative Technical Solutions, Inc

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s):	5030	Test(s):	8015M
Sample ID:	**MW-2**	Lab ID:	2005-06-0355 - 2
Sampled:	06/14/2005 13:15	Extracted:	6/25/2005 19:49
Matrix:	Water	QC Batch#:	2005/06/25-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/25/2005 19:49	
Surrogate(s)						
4-Bromofluorobenzene-FID	79.0	50-150	%	1.00	06/25/2005 19:49	

Gas/BTEX Compounds by 8015M/8021

Innovative Technical Solutions, Inc

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 5030
Test(s): 8015M
Sample ID: **MW-4**
Lab ID: 2005-06-0355 - 3
Sampled: 06/14/2005 11:45
Extracted: 6/25/2005 20:16
Matrix: Water
QC Batch#: 2005/06/25-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	490	50	ug/L	1.00	06/25/2005 20:16	Q6
Surrogate(s)						
4-Bromofluorobenzene-FID	75.2	50-150	%	1.00	06/25/2005 20:16	

Gas/BTEX Compounds by 8015M/8021

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Project: 00.152-28
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Received: 06/14/2005 14:15

Prep(s): 5030
Sample ID: **MW-4D**
Sampled: 06/14/2005 11:55
Matrix: Water

Test(s): 8015M
Lab ID: 2005-06-0355 - 4
Extracted: 6/25/2005 20:42
QC Batch#: 2005/06/25-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	480	50	ug/L	1.00	06/25/2005 20:42	Q6
Surrogate(s)						
4-Bromofluorobenzene-FID	74.3	50-150	%	1.00	06/25/2005 20:42	

Gas/BTEX Compounds by 8015M/8021

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 5030
Sample ID: **MW-5**
Sampled: 06/14/2005 12:35
Matrix: Water

Test(s): 8015M
Lab ID: 2005-06-0355 - 5
Extracted: 6/25/2005 21:09
QC Batch#: 2005/06/25-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/25/2005 21:09	
Surrogate(s)						
4-Bromofluorobenzene-FID	77.0	50-150	%	1.00	06/25/2005 21:09	

Gas/BTEX Compounds by 8015M/8021

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Port of Oakland

Received: 06/14/2005 14:15

Prep(s): 5030 Test(s): 8015M

Sample ID: **MW-8A** Lab ID: 2005-06-0355 - 6

Sampled: 06/14/2005 11:00 Extracted: 6/25/2005 21:36

Matrix: Water QC Batch#: 2005/06/25-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/25/2005 21:36	
Surrogate(s)						
4-Bromofluorobenzene-FID	79.5	50-150	%	1.00	06/25/2005 21:36	

Gas/BTEX Compounds by 8015M/8021

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 5030 Test(s): 8015M

Method Blank **Water** **QC Batch # 2005/06/21-01.05**

MB: 2005/06/21-01.05-003 Date Extracted: 06/21/2005 08:43

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/21/2005 08:43	
Surrogates(s)					
4-Bromofluorobenzene-FID	73.0	50-150	%	06/21/2005 08:43	

Gas/BTEX Compounds by 8015M/8021

Innovative Technical Solutions, Inc

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 5030 Test(s): 8015M

Method Blank **Water** **QC Batch # 2005/06/25-01.05**

MB: 2005/06/25-01.05-003 Date Extracted: 06/25/2005 12:27

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/25/2005 12:27	
Surrogates(s)					
4-Bromofluorobenzene-FID	81.4	50-150	%	06/25/2005 12:27	

Gas/BTEX Compounds by 8015M/8021

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 5030

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2005/06/21-01.05**

LCS 2005/06/21-01.05-005 Extracted: 06/21/2005 Analyzed: 06/21/2005 09:34

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Gasoline	270		250	108.0			75-125	20		
Surrogates(s)										
4-Bromofluorobenzene-FID	363		500	72.6			50-150			

Gas/BTEX Compounds by 8015M/8021

Innovative Technical Solutions, Inc

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Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 5030

Test(s): 8015M

Laboratory Control Spike

Water

QC Batch # 2005/06/25-01.05

LCS 2005/06/25-01.05-005

Extracted: 06/25/2005

Analyzed: 06/25/2005 13:21

LCSD

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Gasoline	250		250	100.0			75-125	20		
Surrogates(s)										
4-Bromofluorobenzene-FID	441		500	88.2			50-150			

Gas/BTEX Compounds by 8015M/8021

Innovative Technical Solutions, Inc

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Batch QC Report

Prep(s): 5030

Test(s): 8015M

Matrix Spike (MS / MSD) **Water** **QC Batch # 2005/06/25-01.05**

MS/MSD

Lab ID: 2005-06-0447 - 002

MS: 2005/06/25-01.05-030 Extracted: 06/26/2005

Analyzed: 06/26/2005 01:07

Dilution: 1.00

MSD: 2005/06/25-01.05-031 Extracted: 06/26/2005

Analyzed: 06/26/2005 01:33

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample	ug/L	MS	MSD	RPD	Rec.	RPD	MS	MSD
Gasoline	230	229	ND	250	92.0	91.6	0 4	65-135	20		
Surrogate(s)											
4-Bromofluorobenzene-FID	409	417		500	81.8	83 4		50-150			

Gas/BTEX Compounds by 8015M/8021

Innovative Technical Solutions, Inc

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Project: 00.152-28
Port of Oakland

Received: 06/14/2005 14:15

Legend and Notes

Result Flag

Q6

The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern.

STL San Francisco

Sample Receipt Checklist

Submission #:2005- 06-0355

Checklist completed by:	SA	DATE	2/14/06
Courier: ☐ STL SF	Courier ☐ Fedex UPS Other		Client ☒

	Log-In Details	Yes	No	Comments
1	Custody seals intact on shipping container/samples		✓	
2	Chain of custody present?	✓		
3	Chain of custody signed when relinquished and received?	✓		☐ Picked Up at Secure Location ☐ Client signed off at time pr or to pick up
4	All samples checked when COC relinquished		✓	
5	Chain of custody agrees with sample labels?	✓		
6	Samples in proper container/bottle?	✓		
7	Sample containers intact?	✓		
8	Sufficient sample volume for indicated test?	✓		
9	All samples received within holding time?	✓		

Cooler Temperature Compliance Check

Temperature Blank Reading	If no trip blank is submitted individual temperatures must be taken as per SOP	Cooler Sample Temperature #1	#2	#3	Average
8°C	→				

Reason for Elevated Temperature	Samples with Temp > 6°C - Comments
☐ Ice Melted ☐ Insufficient Ice ☐	
☐ Samp. in boxes ☒ Sampled < 4hr ☐ Ice not req.	

VOA Sample Inspection

	Sample #	Small	Med.	Large	Samples with broken, cracked or leaking containers
Are bubbles present in any of the VOA vials ?		0	0	0	
		☐	☐	☐	
		☐	☐	☐	
		☐	☐	☐	

Water - pH acceptable upon receipt?	Yes	No	Samples with Unacceptable pH
	☐		

☐ pH adjusted– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc –Lot #(s) _____

Comments:

Project Management (Routing for instruction of indicated discrepancy(ies))

Project Manager: (initials) _____ Date: ____/____/05 Client contacted: Yes☐ No☐

Summary of discussion:

Corrective Action (per PM/Client):

2005 Checklist Ver 2.0

2005-06-0355

116565

Innovative Technical Solutions, Inc.
~~2855 Mitchell Drive, Suite 111~~ 2730 Shadelands Dr. Ste 100
Walnut Creek, California 94598
~~(925) 256-8898~~ – (925) 256-8998 (fax)

Chain-Of-Custody

Project Name and Number: Port of Oakland 100.152-28
Project Manager: Rachel Hess
Site Location: 2277 7th Street, Oakland Ca

Laboratory Name: STL
Address: 1220 Quarry Lane, Pleasanton, Ca
Contact Name: Surinder Sidhu
Phone: 925 484 1919

Date: 06/14/2005
Page: 1 of 1

Sample I.D.	Sample Depth	Date	Time	No. of Containers	Sample Matrix	Analysis: TPHd by 8015B	TPHmo by 8015B	TPHg, BTEX & MTBE by 8021B	MTBE by confirmation 8260B	Preservative:	Container Type:
TripBlank	–	06/14/05	1000	1	H2O			X			
MW-2	13'	06/14/05	1315	6		X	X	X	X	X	
MW-4	16'	06/14/05	1145	6		X	X	X	X	X	
MW-4D	16'	06/14/05	1155	6		X	X	X	X	X	
MW-5	16'	06/14/05	1235	6		X	X	X	X	X	
MW-8A	16'	06/14/05	1100	6		X	X	X	X	X	

Special Instructions/Comments: Silica Gel Cleanup for TPHd, mo
MTBE confirmation by 8260B only if detected by 8021B

TEMP: 8°C

Sampled By: ROGERIO LEONG
Signature:
Special Instructions: DIRECT BILL PORT OF OAKLAND
CONTACT Jeff Rubin @ (510) 627-1134
Send Results to: Rogerio Leong @ (925) 256 8998 (w/fax #)
Turnaround Time: Standard

Samplers: Rogerio Leong
Courier/Airbill No.:

Relinquished By/Affiliation:	Date:	Time:	Received By/Affiliation:	Date:	Time:
	06/14/05	14:10	STL-SF	06/14/05	14:15

Original – Laboratory Yellow – Field/Office

SEVERN TRENT **STL**

Fax message

To: Paul West From: Surinder Sidhu

Company: ITSI Date: 06/06/05

Fax: 925-256-8998 Pages: 10

Subject:

Faxed gm before too

The American Council of Independent Laboratories (ACIL) has named STL San Francisco as a Seal of Excellence Award recipient for 2004

Qualification for this award requires Proficiency Testing score of > 96.9%, average timeliness of > 3.3 out of a possible 4.0 and an overall customer satisfaction score of > 3.6 out of a possible 4.0

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Severn Trent Laboratories Inc.
STL San Francisco • 1220 Quarry Lane, Pleasanton, California 94566
Telephone 925-484-1919 Fax 925-600-3002 • www.stl-inc.com

A part of Severn Trent plc

Software Version	: 6.2.1.0.104:0104	Date	: 6/21/2005 11:29:14 AM
Reprocess Number	: sf-w00028: 1139		
Operator	: manager	Sample Name	: 060355-002
Sample Number	: 126	Study	: 061503.10
AutoSampler	: NONE	Rack/Vial	: 0/0
Instrument Name	: DGC3 HP 6890	Channel	: B
Interface Serial #	: 2303570742	A/D mV Range	: 10000
Delay Time	: 0.00 min	End Time	: 19.69 min
Sampling Rate	: 5.0000 pts/s		
Sample Volume	: 1.000000 mL	Area Reject	: 0.000000
Sample Amount	: 0.2500	Dilution Factor	: 1.00
Data Acquisition Time	: 6/16/2005 10:07:15 PM	Cycle	: 1

Raw Data File : E:\Diesel3\200506\raw\50616027.raw <Modified>
Result File : E:\Diesel3\200506\raw\50616027.rst
Inst Method : e:\diesel3\method\3dro060405 from E:\Diesel3\200506\raw\50616027.raw
Proc Method : e:\diesel3\method\5dro060405.mth from E:\Diesel3\200506\raw\50616027.rst
Calib Method : e:\diesel3\method\5dro060405.mth from E:\Diesel3\200506\raw\50616027.rst
Report Format File: e:\diesel3\method\5tph060405.rpt
Sequence File : E:\Diesel3\200506\seq\061605.seq

HP6890-B [ZB-5] TEPH SCAN

Peak #	Time [min]	Area [µV·s]	RAW AMOUNT mg/L	Component Name	CALC.CONC. FOR LIMS WATER:PPB/SOIL:PPM
	7.735	529359.34	88.9081	DRO [C10-C28]	355.6323
	8.641	128792.78	29.4764	OTP AS DIESEL	-117.9057
	12.110	196567.16	56.0514	MOTOR OIL [C24-C36]	224.2058
	12.110	196567.16	56.0514	CANCEL MOTOR OIL	-224.2058
		1051286.43	230.4874		237.7266

Group Report For : OTP AS DIESEL

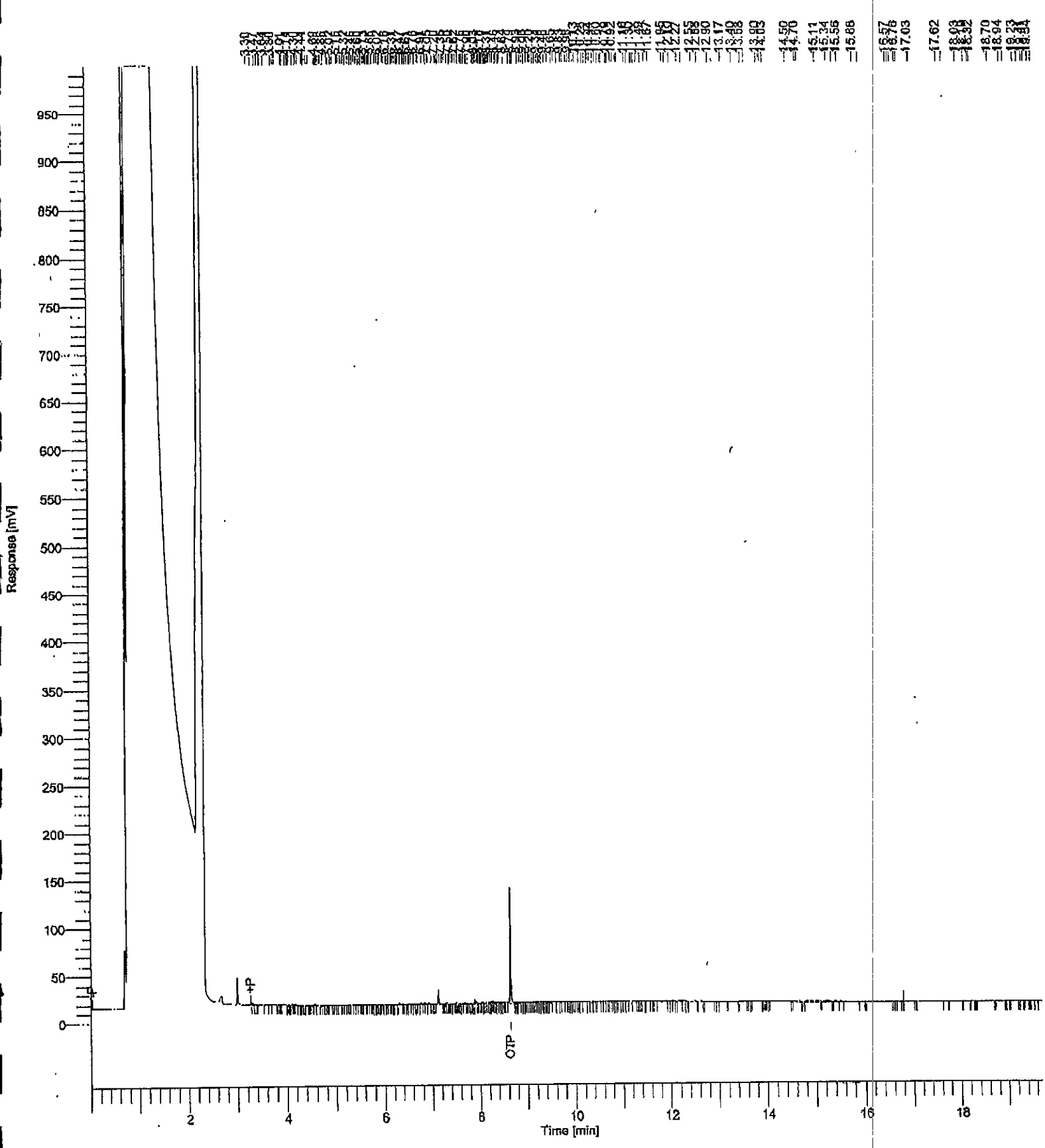
Peak #	Time [min]	Area [µV·s]	RAW AMOUNT mg/L	Component Name	CALC.CONC. FOR LIMS WATER:PPB/SOIL:PPM
125	8.641	128792.78	17.1528	OTP	68.6110
		128792.78	17.1528		68.6110

Report stored in ASCII file: E:\Diesel3\200506\raw\50616027.TX0

M06/21/05

06/21/05 M

Sample Name : 060355-002 Sample #: 126 Page 1 of 1
FileName : E:\Diesel3\200506\raw\50616027.raw
Date : 6/21/2005 11:29:18 AM
Method : 3dro060405 Time of Injection: 6/16/2005 10:07:15 PM
Start Time : 0.00 min End Time : 19.69 min Low Point : 0.00 mV High Point : 1000.00 mV
Plot Offset: 0.00 mV Plot Scale: 1000.0 mV



Software Version	: 6.2.1.0.104:0104	Date	: 6/17/2005 8:38:01 AM
Reprocess Number	: sf-d00034: 12580		
Operator	: manager	Sample Name	: 060355-003
Sample Number	: 127	Study	: 061503.10
AutoSampler	: NONE	Rack/Vial	: 0/0
Instrument Name	: DGC3 HP 6890	Channel	: B
Interface Serial #	: 2303570742	A/D mV Range	: 10000
Delay Time	: 0.00 min	End Time	: 19.69 min
Sampling Rate	: 5.0000 pts/s		
Sample Volume	: 1.000000 mL	Area Reject	: 0.000000
Sample Amount	: 0.2500	Dilution Factor	: 1.00
Data Acquisition Time	: 6/16/2005 10:34:06 PM	Cycle	: 9

Raw Data File : E:\Diesel3\200506\raw\50616028.raw
Result File : E:\Diesel3\200506\raw\50616028.rst
Inst Method : e:\diesel3\method\3dro060405 from E:\Diesel3\200506\raw\50616028.raw
Proc Method : e:\diesel3\method\5dro060405.mth from E:\Diesel3\200506\raw\50616028.rst
Calib Method : e:\diesel3\method\5dro060405.mth from E:\Diesel3\200506\raw\50616028.rst
Report Format File: e:\diesel3\method\5tph060405.rpt
Sequence File : E:\Diesel3\200506\seq\061605.seq

HP6890-B [ZB-5] TEPH SCAN

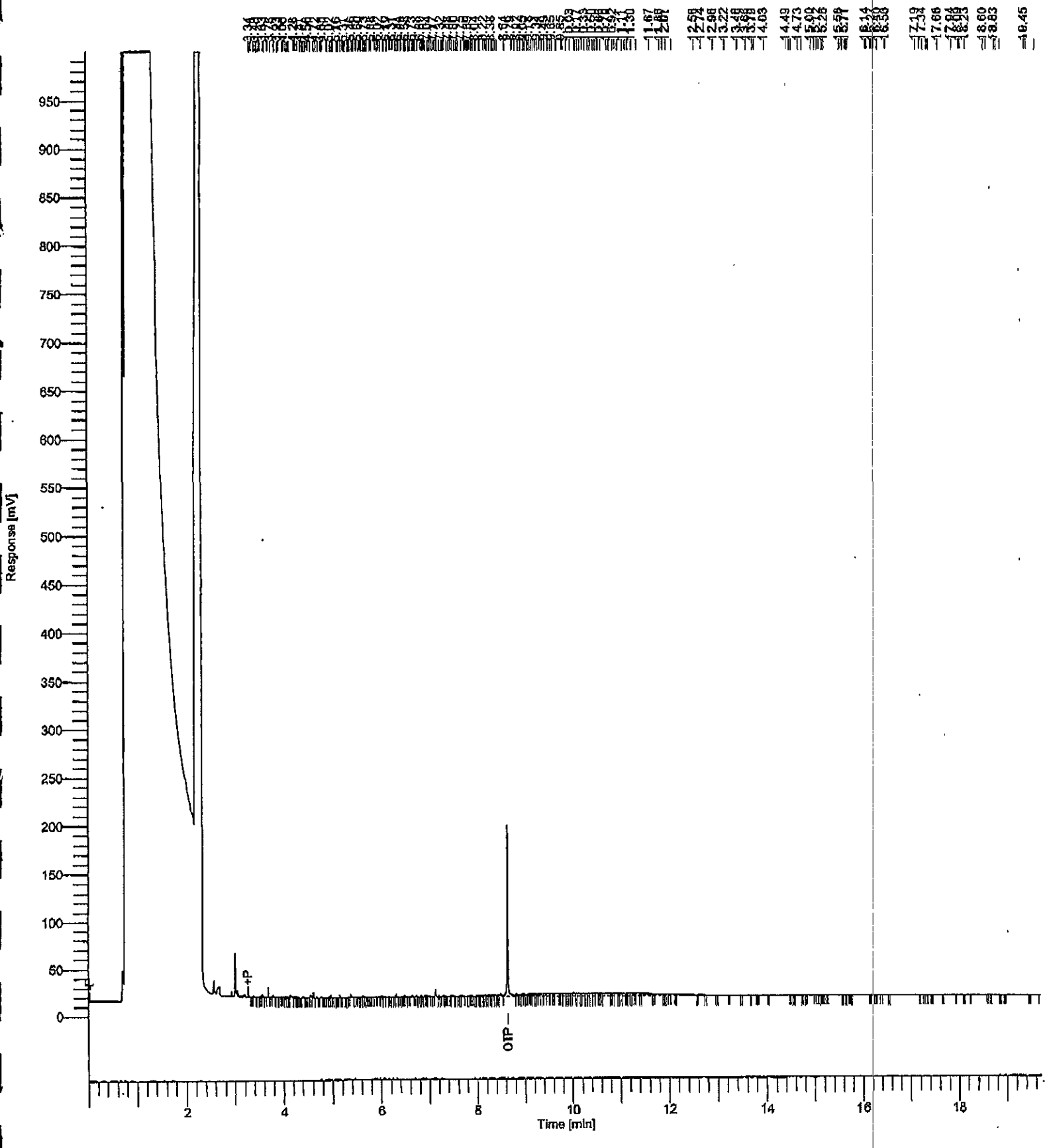
Peak #	Time [min]	Area [µV·s]	RAW AMOUNT mg/L	Component Name	CALC.CONC. FOR LIMS WATER:PPB/SOIL:PPM
	7.745	729022.88	118.5320	DRO [C10-C28]	474.1279
	8.642	201275.53	40.2306	OTP AS DIESEL	-160.9225
	12.140	188251.39	53.6802	CANCEL MOTOR OIL	-214.7208
	12.140	188251.39	53.6802	MOTOR OIL [C24-C36]	214.7208
		1306801.20	266.1230		313.2054

Group Report For : OTP AS DIESEL

Peak #	Time [min]	Area [µV·s]	RAW AMOUNT mg/L	Component Name	CALC.CONC. FOR LIMS WATER:PPB/SOIL:PPM
130	8.642	201275.53	26.8061	OTP	107.2243
		201275.53	26.8061		107.2243

Report stored in ASCII file: E:\Diesel3\200506\raw\50616028.TX0

Sample Name : 060355-003 Sample #: 127 Page 1 of 1
FileName : E:\Diesel\3\200506\raw\50616028.raw
Date : 6/17/2005 8:38:02 AM
Method : 3dro060405 Time of Injection: 6/16/2005 10:34:06 PM
Start Time : 0.00 min End Time : 19.99 min Low Point : 0.00 mV High Point : 1000.00 mV
Plot Offset: 0.00 mV Plot Scale: 1000.0 mV



Software Version	: 6.2.1.0.104:0104	Date	: 6/17/2005 8:38:02 AM
Reprocess Number	: sf-d00034: 12581		
Operator	: manager	Sample Name	: 060355-004
Sample Number	: 128	Study	: 061503.10
AutoSampler	: NONE	Rack/Vial	: 0/0
Instrument Name	: DGC3 HP 6890	Channel	: B
Interface Serial #	: 2303570742	A/D mV Range	: 10000
Delay Time	: 0.00 min	End Time	: 19.69 min
Sampling Rate	: 5.0000 pts/s		
Sample Volume	: 1.000000 mL	Area Reject	: 0.000000
Sample Amount	: 0.2500	Dilution Factor	: 1.00
Data Acquisition Time	: 6/16/2005 11:01:09 PM	Cycle	: 10

Raw Data File : E:\Diesel3\200506\raw\50616029.raw
Result File : E:\Diesel3\200506\raw\50616029.rst
Inst Method : e:\diesel3\method\3dro060405 from E:\Diesel3\200506\raw\50616029.raw
Proc Method : e:\diesel3\method\5dro060405.mth from E:\Diesel3\200506\raw\50616029.rst
Calib Method : e:\diesel3\method\5dro060405.mth from E:\Diesel3\200506\raw\50616029.rst
Report Format File: e:\diesel3\method\5tph060405.rpt
Sequence File : E:\Diesel3\200506\seq\061605.seq

HP6890-B [ZB-5] TEPH SCAN

Peak #	Time [min]	Area [µV·s]	RAW AMOUNT mg/L	Component Name	CALC.CONC. FOR LIMS WATER:PPB/SOIL:PPM
	7.745	465912.98	79.4946	DRO [C10-C28]	317.9784
	8.640	144997.86	31.8808	OTP AS DIESEL	-127.5230
	12.140	113771.35	32.4421	CANCEL MOTOR OIL	-129.7683
	12.140	113771.35	32.4421	MOTOR OIL [C24-C36]	129.7683
		838453.55	176.2595		190.4554

Group Report For : OTP AS DIESEL

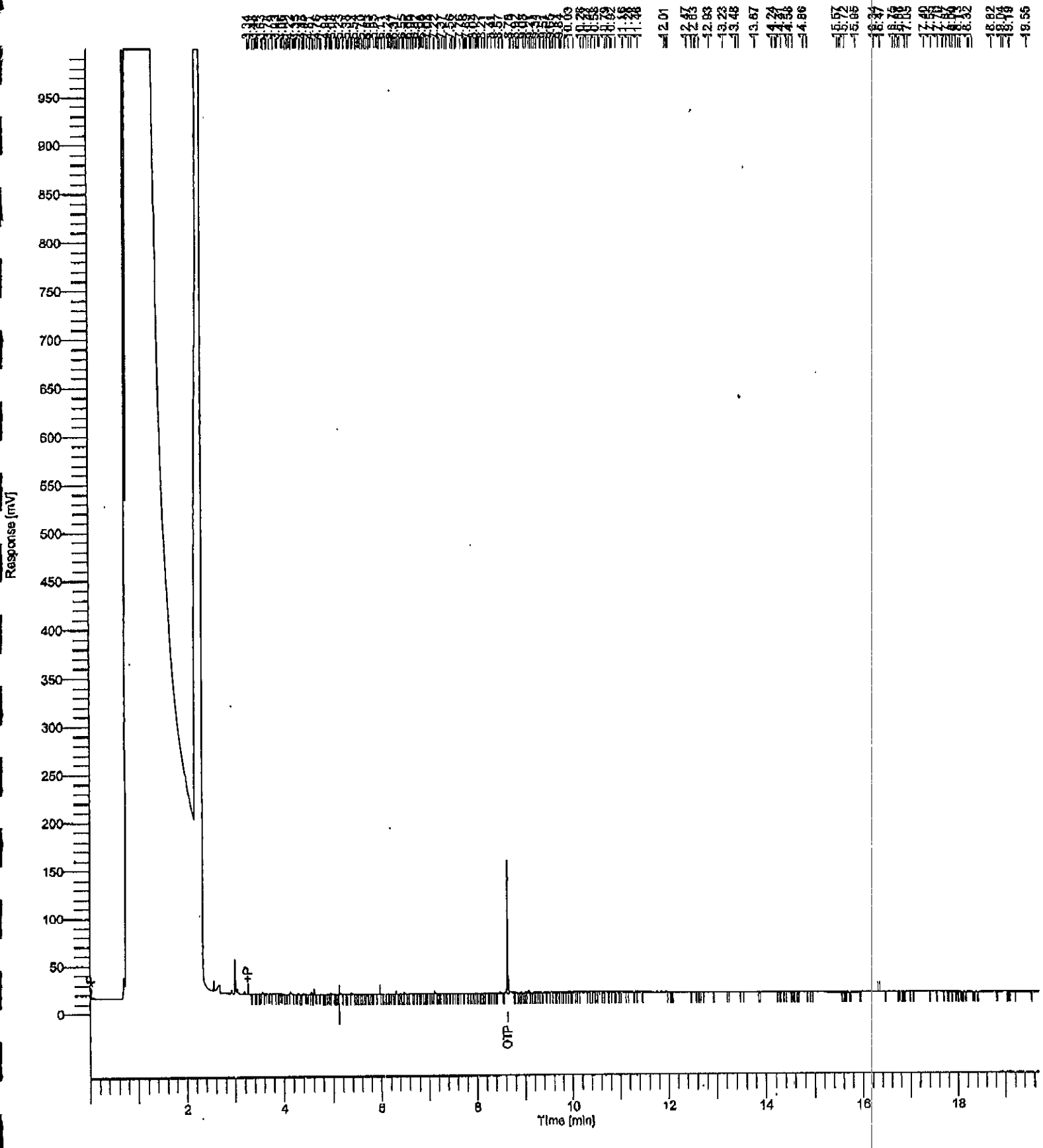
Peak #	Time [min]	Area [µV·s]	RAW AMOUNT mg/L	Component Name	CALC.CONC. FOR LIMS WATER:PPB/SOIL:PPM
127	8.640	144997.86	19.3110	OTP	77.2439
		144997.86	19.3110		77.2439

Report stored in ASCII file: E:\Diesel3\200506\raw\50616029.TX0

6/20/05

06205 TM

Sample Name : 060356-004 Sample #: 128 Page 1 of 1
FileName : E:\Diesel3\200506\raw\50616029.raw
Date : 6/17/2005 8:38:03 AM
Method : 3dro060405 Time of Injection: 6/16/2005 11:01:09 PM
Start Time : 0.00 min End Time : 19.69 min Low Point : 0.00 mV High Point : 1000.00 mV
Plot Offset: 0.00 mV Plot Scale: 1000.0 mV



Software Version	: 6.2.1.0.104:0104	Date	: 6/17/2005 8:38:03 AM
Reprocess Number	: sf-d00034: 12582		
Operator	: manager	Sample Name	: 060355-005
Sample Number	: 129	Study	: 061503.10
AutoSampler	: NONE	Rack/Vial	: 0/0
Instrument Name	: DGC3 HP 6890	Channel	: B
Interface Serial #	: 2303570742	A/D mV Range	: 10000
Delay Time	: 0.00 min	End Time	: 19.69 min
Sampling Rate	: 5.0000 pts/s		
Sample Volume	: 1.000000 mL	Area Reject	: 0.000000
Sample Amount	: 0.2500	Dilution Factor	: 1.00
Data Acquisition Time	: 6/16/2005 11:27:56 PM	Cycle	: 11

Raw Data File : E:\Diesel3\200506\raw\50616030.raw
Result File : E:\Diesel3\200506\raw\50616030.rst
Inst Method : e:\diesel3\method\3dro060405 from E:\Diesel3\200506\raw\50616030.raw
Proc Method : e:\diesel3\method\5dro060405.mth from E:\Diesel3\200506\raw\50616030.rst
Calib Method : e:\diesel3\method\5dro060405.mth from E:\Diesel3\200506\raw\50616030.rst
Report Format File: e:\diesel3\method\5tph060405.rpt
Sequence File : E:\Diesel3\200506\seq\061605.seq

HP6890-B [ZB-5] TEPH SCAN

Peak #	Time [min]	Area [µV·s]	RAW AMOUNT mg/L	Component Name	CALC.CONC. FOR LIMS WATER:PPB/SOIL:PPM
	7.745	2857083.86	434.2703	DRO [C10-C28]	1737.0810
	8.641	252145.44	47.7781	OTP AS DIESEL	-191.1125
	12.140	916079.76	261.2216	CANCEL MOTOR OIL	-1044.8865
	12.140	916079.76	261.2216	MOTOR OIL [C24-C36]	1044.8865
		4941388.82	1004.4916		1545.9685

Group Report For : OTP AS DIESEL

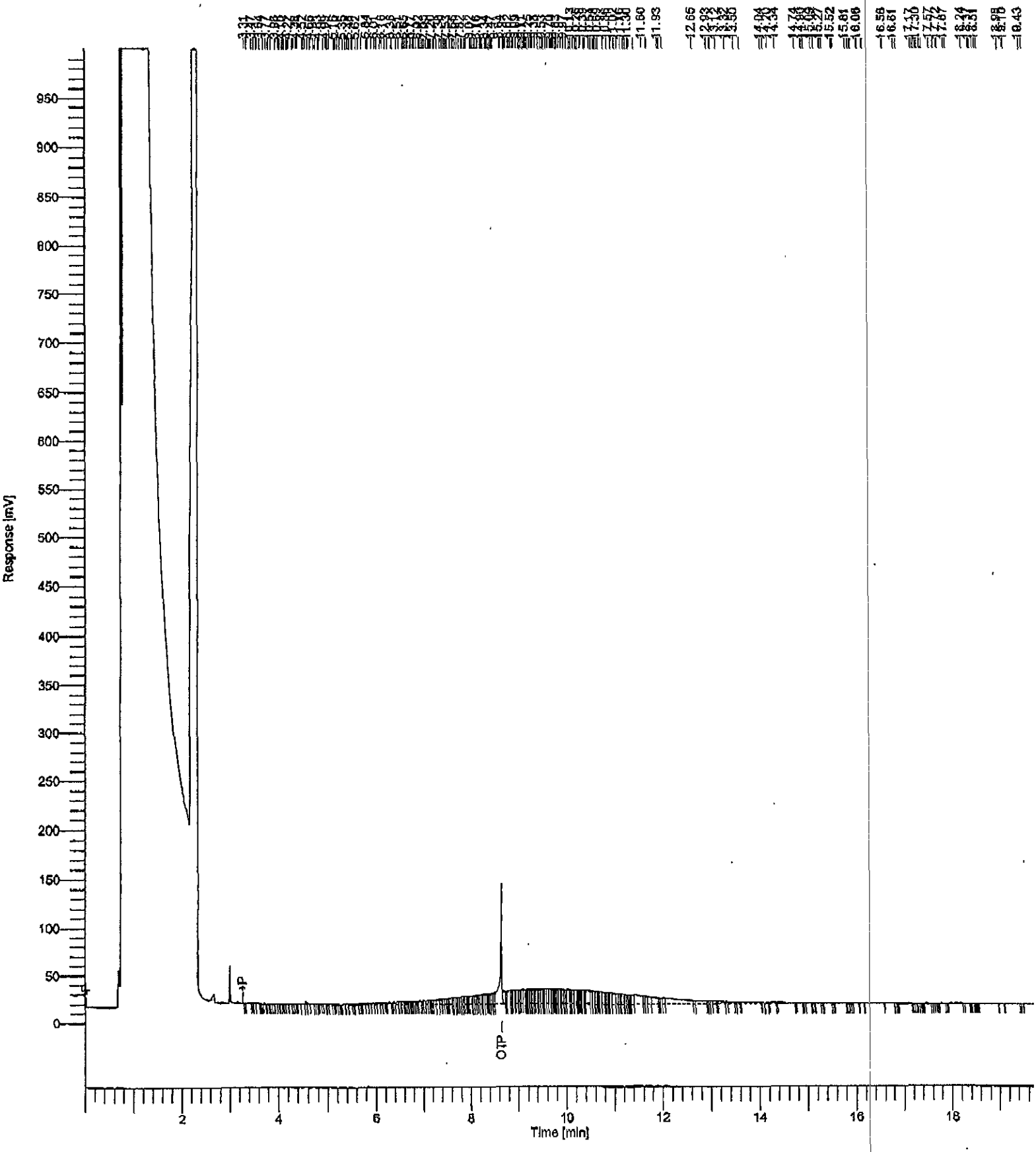
Peak #	Time [min]	Area [µV·s]	RAW AMOUNT mg/L	Component Name	CALC.CONC. FOR LIMS WATER:PPB/SOIL:PPM
115	8.641	252145.44	33.5810	OTP	134.3239
		252145.44	33.5810		134.3239

Report stored in ASCII file: E:\Diesel3\200506\raw\50616030.TX0

6/16/05

06/16/05 M

Sample Name : 060365-005 Sample #: 129 Page 1 of 1
FileName : E:\Diesel3\200506\raw\50616030.raw
Date : 6/17/2006 8:38:03 AM
Method : 3dro060405 Time of Injection: 6/16/2005 11:27:56 PM
Start Time : 0.00 min End Time : 19.69 min Low Point : 0.00 mV High Point : 1000.00 mV
Plot Offset: 0.00 mV Plot Scale: 1000.0 mV



Software Version	: 6.2.1.0.104:0104	Date	: 6/17/2005 8:38:05 AM
Reprocess Number	: sf-d00034: 12586		
Operator	: manager	Sample Name	: 060355-006
Sample Number	: 133	Study	: 061503.10
AutoSampler	: NONE	Rack/Vial	: 0/0
Instrument Name	: DGC3 HP 6890	Channel	: B
Interface Serial #	: 2303570742	A/D mV Range	: 10000
Delay Time	: 0.00 min	End Time	: 19.69 min
Sampling Rate	: 5.0000 pts/s		
Sample Volume	: 1.000000 mL	Area Reject	: 0.000000
Sample Amount	: 0.2500	Dilution Factor	: 1.00
Data Acquisition Time	: 6/17/2005 1:15:18 AM	Cycle	: 15

Raw Data File : E:\Diesel3\200506\raw\50616034.raw
Result File : E:\Diesel3\200506\raw\50616034.rst
Inst Method : e:\diesel3\method\3dro060405 from E:\Diesel3\200506\raw\50616034.raw
Proc Method : e:\diesel3\method\5dro060405.mth from E:\Diesel3\200506\raw\50616034.rst
Calib Method : e:\diesel3\method\5dro060405.mth from E:\Diesel3\200506\raw\50616034.rst
Report Format File: e:\diesel3\method\5tph060405.rpt
Sequence File : E:\Diesel3\200506\seq\061605.seq

HP6890-B [ZB-5] TEPH SCAN

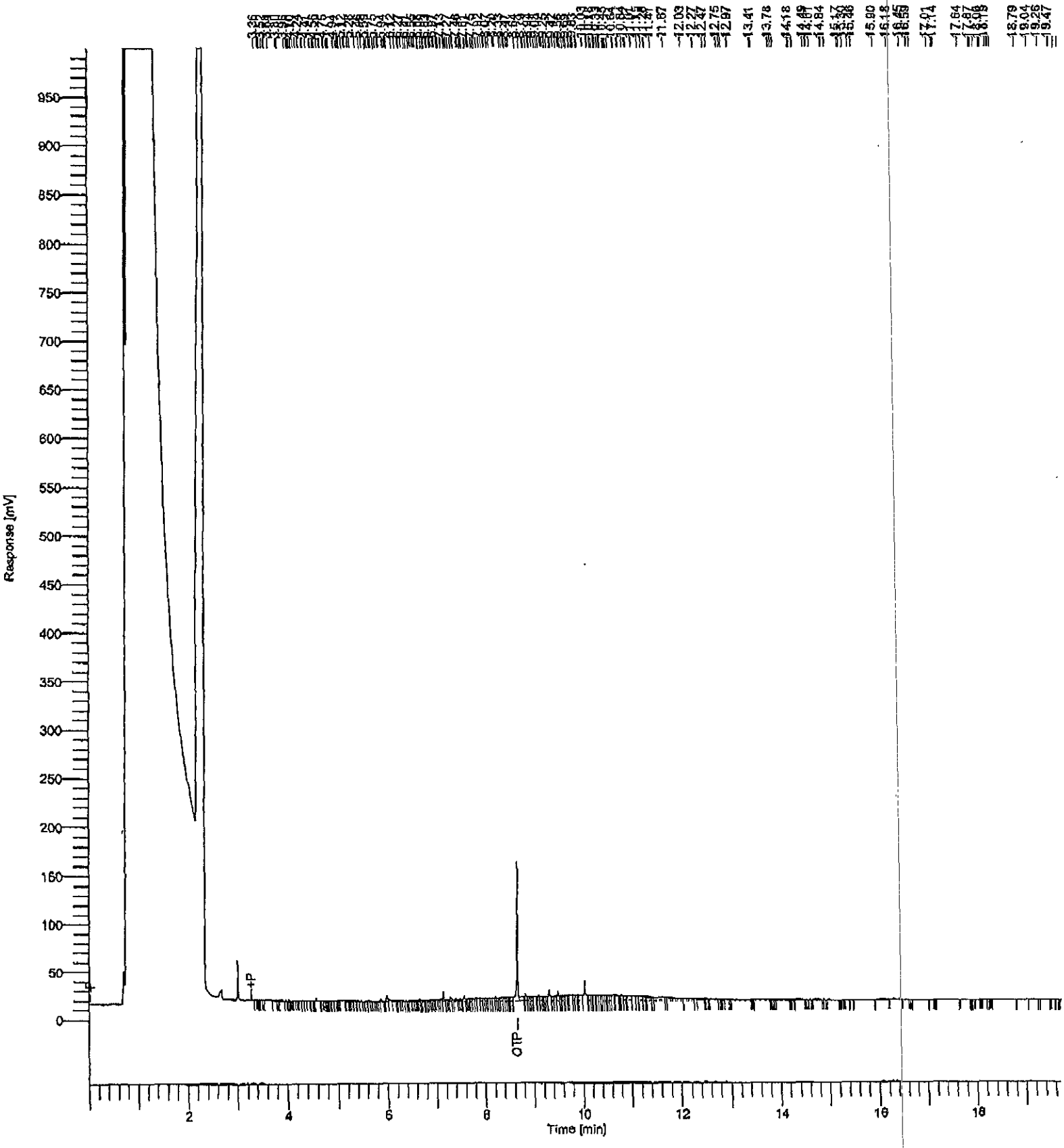
Peak #	Time [min]	Area [µV·s]	RAW AMOUNT mg/L	Component Name	CALC.CONC. FOR LIMS WATER:PPB/SOIL:PPM
	7.745	1191674.17	187.1751	DRO [C10-C28]	748.7003
	8.641	172266.57	35.9266	OTP AS DIESEL	-143.7063
	12.140	347772.00	99.1677	CANCEL MOTOR OIL	-396.6710
	12.140	347772.00	99.1677	MOTOR OIL [C24-C36]	396.6710
		2059484.74	421.4372		604.9940

Group Report For : OTP AS DIESEL

Peak #	Time [min]	Area [µV·s]	RAW AMOUNT mg/L	Component Name	CALC.CONC. FOR LIMS WATER:PPB/SOIL:PPM
111	8.641	172266.57	22.9426	OTP	91.7705
		172266.57	22.9426		91.7705

Report stored in ASCII file: E:\Diesel3\200506\raw\50616034.TX0

Sample Name : 050355-008 Sample #: 133 Page 1 of 1
FileName : E:\Diesel3\200506\raw\50616034.raw
Date : 6/17/2005 8:38:06 AM
Method : 3dro050405 Time of Injection: 6/17/2005 1:15:18 AM
Start Time : 0.00 min End Time : 19.69 min Low Point : 0.00 mV High Point : 1000.00 mV
Plot Offset: 0.00 mV Plot Scale: 1000.0 mV



SEVERN TRENT **STL**

Fax message

To: Paul West From: Surinder Sidhu

Company: ITSI Date: 07/06/05

Fax: 925-256-8998 Pages:

Subject:

The American Council of Independent Laboratories (ACIL) has named STL San Francisco as a Seal of Excellence Award recipient for 2004

Qualification for this award requires Proficiency Testing score of > 96.9%, average timeliness of > 3.3 out of a possible 4.0 and an overall customer satisfaction score of > 3.6 out of a possible 4.0

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STL San Francisco • 1220 Quarry Lane, Pleasanton, California 94566
Telephone 925-484-1919 Fax 925-600-3002 • *www.stl-inc.com*

A part of Severn Trent plc

Software Version: 4.1<2F12>
Sample Name : SA-WA-2005-06-0355-001 => TRIP BLANK Time : 06/22/2005 08:09
Sample Number: Study : GBX-8021SE || REGULA
Operator : manager

Instrument : 3400-5 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 6318272716 Data Acquisition Time: 06/21/2005 13:41
Delay Time : 0.00 min.
End Time : 18.99 min.
Sampling Rate : 2.9410 pts/sec

Raw Data File : J:\200506\DATA\5G062113.RAW
Result File : J:\200506\DATA\5G062113.RST
Inst Method : O:\5G061805 from J:\200506\DATA\5G062113.RST
Proc Method : O:\5G061805 from J:\200506\DATA\5G062113.RST
Calib Method : O:\5G061805 from J:\200506\DATA\5G062113.RST
Sequence File : J:\200506\SEQ\5B050621.SEQ

Sample Volume : 1.0000 ng Area Reject : 0.000000
Sample Amount : 10.0000 Dilution Factor : 1.00

Sample Notes:

8015M (GAS) REPORT 3400-5

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
6.002	4884243.48	TFT AS GAS	0.3829	-38.29316	-0.3829
7.872	10025494.78	RAW GASOLI	0.7860	78.60129	0.7860
10.917	2804066.66	BFB AS GAS	0.2198	-21.98428	-0.2198
	17713804.92		1.3888	18.32386	0.1832

Group Report For : TFT AS GAS

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
6.002	4884243.48	TFT-FID	507.8652	50786.52468	507.8652

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
	4884243.48		507.8652	50786.52468	507.8652

Group Report For : BFB AS GAS

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
10.917	2804066.66	BFB-FID	368.0966	36809.65850	368.0966
	2804066.66		368.0966	36809.65850	368.0966

Group Report For : RAW GASOLINE

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
1.609	485596.74		0.0184	----------	----------
2.203	52019.72		0.0020	----------	----------
2.489	82499.15		0.0031	----------	----------
2.834	37334.24		0.0014	----------	----------
3.737	107640.26		0.0041	----------	----------
4.419	22097.93		0.0008	----------	----------
4.885	20839.85		0.0008	----------	----------
5.497	3692.62		0.0001	----------	----------
5.651	1856.51		0.0001	----------	----------
6.002	4884243.48	TFT-FID	507.8652	50786.52468	507.8652
7.316	119381.16		0.0045	----------	----------
7.550	87086.03		0.0033	----------	----------
8.133	136637.20		0.0052	----------	----------
8.637	31196.87		0.0012	----------	----------
8.879	9816.39		0.0004	----------	----------
9.025	19455.97		0.0007	----------	----------
9.209	15654.54		0.0006	----------	----------
9.352	7701.46		0.0003	----------	----------
9.486	14661.68		0.0006	----------	----------
9.635	50935.06		0.0019	----------	----------
10.031	4712.68		0.0002	----------	----------
10.183	35168.31		0.0013	----------	----------
10.741	26868.41		0.0010	----------	----------
10.917	2804066.66	BFB-FID	368.0966	36809.65850	368.0966
11.465	569486.57		0.0216	----------	----------
12.036	100992.86		0.0038	----------	----------
12.513	46902.41		0.0018	----------	----------
12.761	55525.33		0.0021	----------	----------
13.131	34148.25		0.0013	----------	----------
13.357	32961.58		0.0013	----------	----------

Time [min]	Area [µV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
13.693	15168.31		0.0006	----------	----------
13.877	109146.55		0.0041	----------	----------
	10025494.78		876.0505	87596.18318	875.9618

Missing Component Report

Component	Expected Retention (Calibration File)

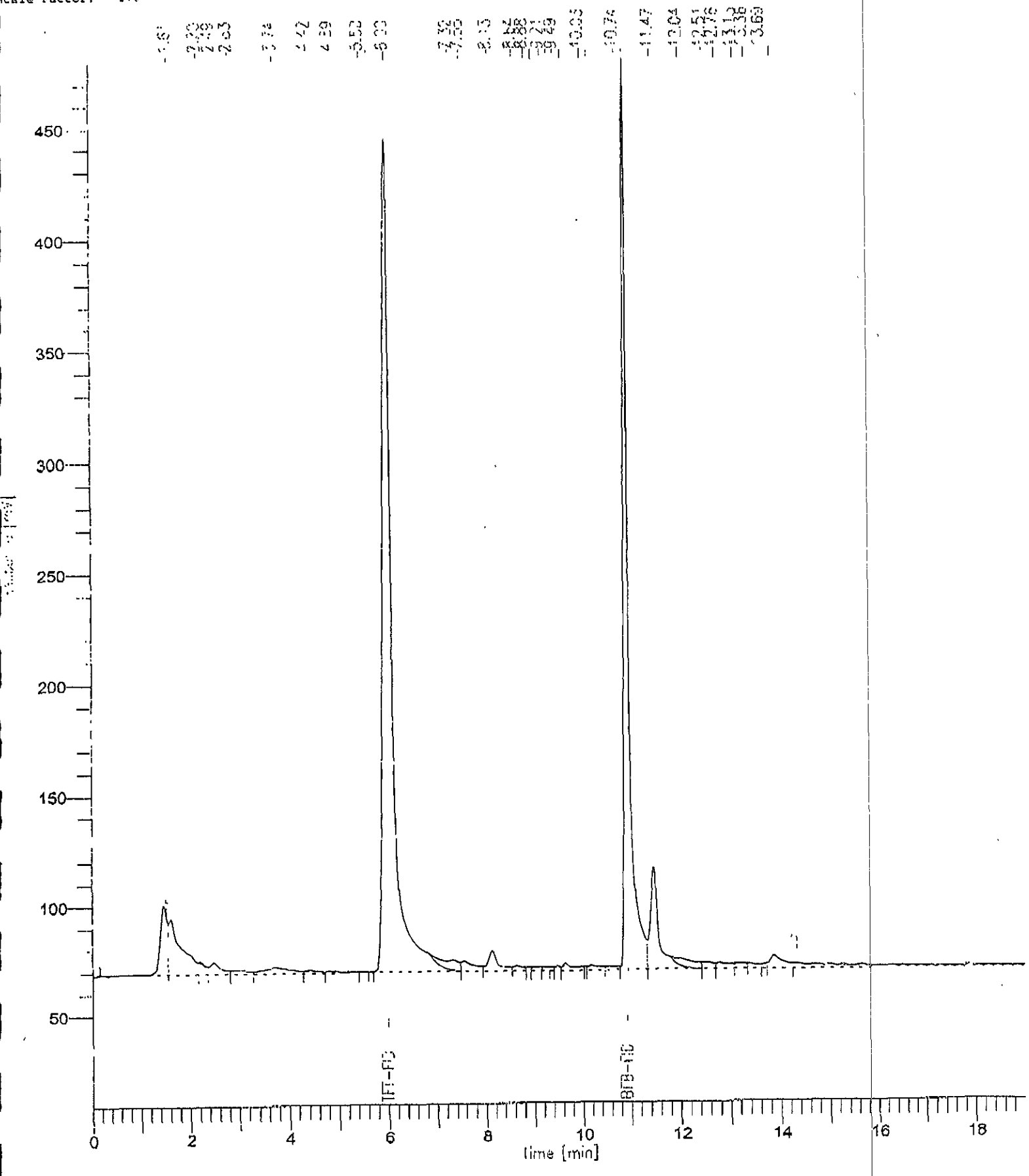
All components were found

Report stored in ASCII file: J:\200506\DATA\5G062113.TXO

Gasoline Chromatogram

Sample Name : SA-WA-2005-06-0355-001 -> TRIP BLANK
FileName : J:\200506\DATA\5G062113.RAW
Method :
Start Time : 0.00 min End Time : 18.99 min
Scale Factor: 1.0 Plot Offset: 48 mV

Sample #:
Date : 06/22/2005 08:09
Time of Injection: 06/21/2005 13:41
Low Point : 48.04 mV High Point : 479.88 mV
Plot Scale: 431.8 mV



Software Version: 4.1<2F12>
Sample Name : SA-WA-2005-06-0355-002 => MW-2 Time : 06/25/2005 20:08
Sample Number: Study : GBX-8021SE || REGULA
Operator : manager

Instrument : 3400-5 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 6318272716 Data Acquisition Time: 06/25/2005 19:49
Delay Time : 0.00 min.
End Time : 18.99 min.
Sampling Rate : 2.9410 pts/sec

Raw Data File : J:\200506\DATA\5G062518.RAW
Result File : J:\200506\DATA\5G062518.RST
Inst Method : O:\5GS62405 from J:\200506\DATA\5G062518.RST
Proc Method : O:\5GS62405
Calib Method : O:\5GS62405
Sequence File : J:\200506\SEQ\5B050625.SEQ

Sample Volume : 1.0000 ng Area Reject : 0.000000
Sample Amount : 10.0000 Dilution Factor : 1.00

Sample Notes:

8015M (GAS) REPORT 3400-5

Time [min]	Area [µV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
5.964	8127834.11	TFT AS GAS	0.4166	-41.66456	-0.4166
7.974	14875872.23	RAW GASOLI	0.7626	76.25607	0.7626
10.960	2831173.09	BFB AS GAS	0.1451	-14.51304	-0.1451
	25834879.43		1.3243	20.07847	0.2008

Group Report For : TFT AS GAS

Time [min]	Area [µV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
5.964	8127834.11	TFT-FID	505.0827	50508.26862	505.0827

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
	8127834.11		505.0827	50508.26862	505.0827

Group Report For : BFB AS GAS

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
10.960	2831173.09	BFB-FID	395.1047	39510.47232	395.1047
	2831173.09		395.1047	39510.47232	395.1047

Group Report For : RAW GASOLINE

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
3.132	59595.38		0.0023	----------	----------
3.762	238697.72		0.0091	----------	----------
4.303	106137.37		0.0040	----------	----------
4.740	84923.50		0.0032	----------	----------
5.281	7123.43		0.0003	----------	----------
5.964	8127834.11	TFT-FID	505.0827	50508.26862	505.0827
7.328	245100.31		0.0093	----------	----------
7.580	145474.33		0.0055	----------	----------
8.143	131033.66		0.0050	----------	----------
8.523	127616.46		0.0048	----------	----------
8.890	46749.41		0.0018	----------	----------
9.003	41788.51		0.0016	----------	----------
9.513	127402.24		0.0048	----------	----------
9.681	141829.31		0.0054	----------	----------
10.045	55902.75		0.0021	----------	----------
10.214	58157.09		0.0022	----------	----------
10.348	42397.14		0.0016	----------	----------
10.506	56348.18		0.0021	----------	----------
10.727	57749.07		0.0022	----------	----------
10.960	2831173.09	BFB-FID	395.1047	39510.47232	395.1047
11.493	568140.09		0.0216	----------	----------
12.065	122444.75		0.0046	----------	----------
12.273	133502.21		0.0051	----------	----------
12.568	99547.77		0.0038	----------	----------
12.798	139364.16		0.0053	----------	----------
12.975	41791.91		0.0016	----------	----------
13.064	108180.89		0.0041	----------	----------
13.281	70955.46		0.0027	----------	----------
13.395	75338.32		0.0029	----------	----------
13.467	64444.07		0.0024	----------	----------

Result File : 5G062518.RST, Printed On 06/25/2005 20:06 Page 3

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
13.549	81958.52		0.0031	----------	----------
13.778	372376.74		0.0141	----------	----------
14.115	157310.44		0.0060	----------	----------
14.318	107483.85		0.0041	----------	----------
	14875872.23		900.3360	90018.74093	900.1874

Missing Component Report

Component	Expected Retention (Calibration File)

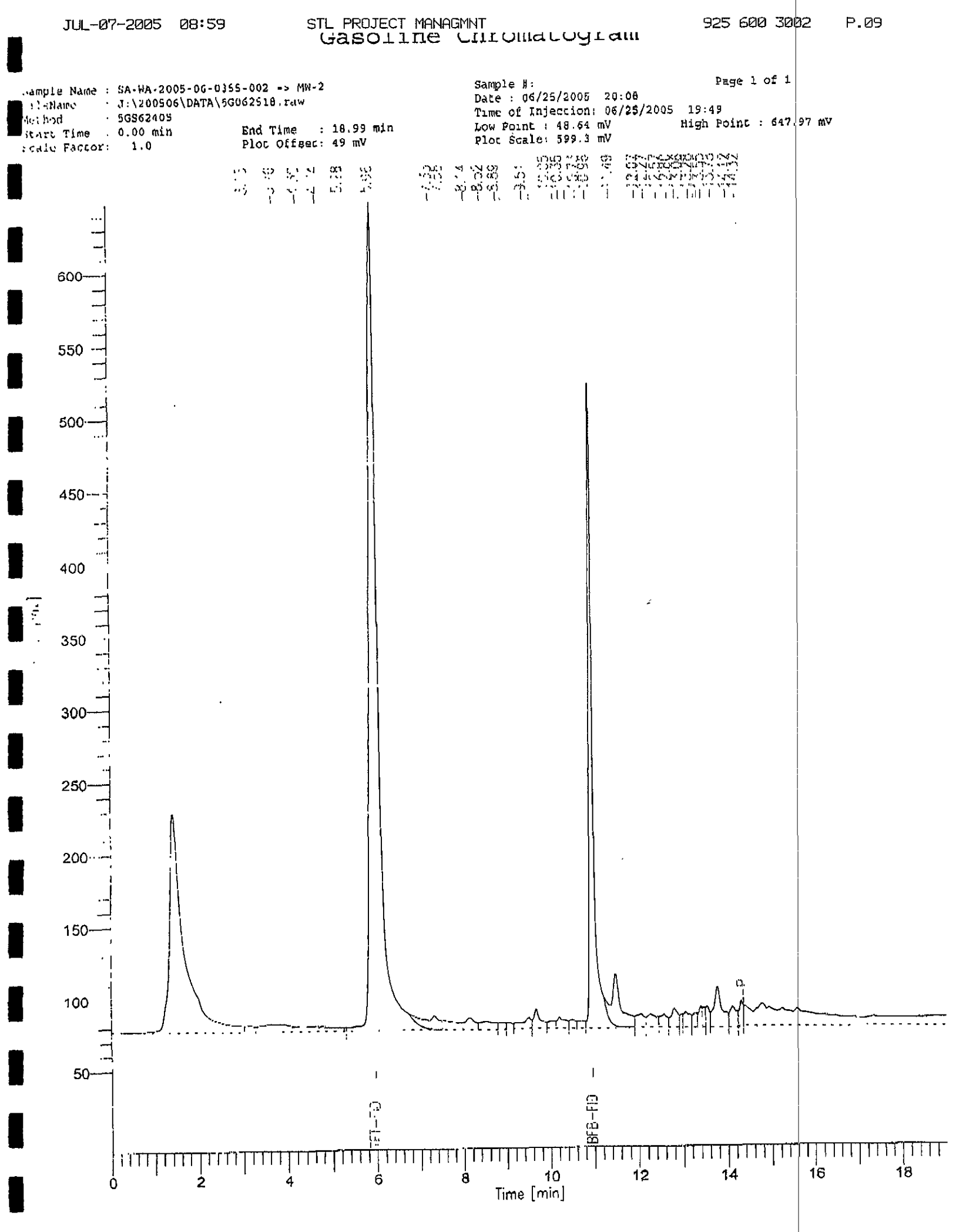
All components were found

Report stored in ASCII file: J:\200506\DATA\5G062518.TXO

Gasoline Chromatogram

Sample Name : SA-WA-2005-06-0355-002 => MW-2
File Name : J:\200506\DATA\5G062518.raw
Method : 5GS62405
Start Time : 0.00 min End Time : 18.99 min
Scale Factor: 1.0 Plot Offset: 49 mV

Sample #:
Date : 06/25/2005 20:08
Time of Injection: 06/25/2005 19:49
Low Point : 48.64 mV High Point : 647.97 mV
Plot Scale: 599.3 mV



Software Version: 4.1<2F12>
Sample Name : SA-WA-2005-06-0355-003 => MW-4 Time : 06/25/2005 20:35
Sample Number: Study : GBX-8021SE || REGULA
Operator : manager

Instrument : 3400-5 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 6318272716 Data Acquisition Time: 06/25/2005 20:16
Delay Time : 0.00 min.
End Time : 18.99 min.
Sampling Rate : 2.9410 pts/sec

Raw Data File : J:\200506\DATA\5G062519.RAW
Result File : J:\200506\DATA\5G062519.RST
Inst Method : O:\5GS62405 from J:\200506\DATA\5G062519.RST
Proc Method : O:\5GS62405
Calib Method : O:\5GS62405
Sequence File : J:\200506\SEQ\5B050625.SEQ

Sample Volume : 1.0000 ng Area Reject : 0.000000
Sample Amount : 10.0000 Dilution Factor : 1.00

Sample Notes:

8015M (GAS) REPORT 3400-5

Time [min]	Area [µV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
5.937	10813628.07	TFT AS GAS	0.5543	-55.43237	-0.5543
7.974	110029283.13	RAW GASOLI	5.6403	564.02750	5.6403
10.941	2693084.00	BFB AS GAS	0.1381	-13.80517	-0.1381
	123535995.20		6.3327	494.78996	4.9479

Group Report For : TFT AS GAS

Time [min]	Area [µV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
5.937	10813628.07	TFT-FID	671.9842	67198.42260	671.9842

Result File : 5G062519.RST, Printed On 06/25/2005 20:55

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
	10813628.07		671.9842	67198.42260	671.9842

Group Report For : BFB AS GAS

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
10.941	2693084.00	BFB-FID	375.8337	37583.36831	375.8337
	2693084.00		375.8337	37583.36831	375.8337

Group Report For : RAW GASOLINE

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
2.185	28930850.20		1.0975	----------	----------
3.123	14206691.68		0.5389	----------	----------
3.969	6411734.14		0.2432	----------	----------
4.321	36954736.68		1.4019	----------	----------
5.937	10813628.07	TFT-FID	671.9842	67198.42260	671.9842
6.457	1919024.15		0.0728	----------	----------
7.092	493502.21		0.0187	----------	----------
7.313	465756.55		0.0177	----------	----------
7.587	439935.40		0.0167	----------	----------
7.915	284369.26		0.0108	----------	----------
8.131	203981.64		0.0077	----------	----------
8.414	311370.28		0.0118	----------	----------
8.811	111516.49		0.0042	----------	----------
9.041	68816.73		0.0026	----------	----------
9.332	133536.21		0.0051	----------	----------
9.491	131111.87		0.0050	----------	----------
9.661	198160.49		0.0075	----------	----------
9.825	86079.57		0.0033	----------	----------
10.028	59217.95		0.0022	----------	----------
10.196	121730.70		0.0046	----------	----------
10.560	53481.81		0.0020	----------	----------
10.730	193740.23		0.0073	----------	----------
10.941	2693084.00	BFB-FID	375.8337	37583.36831	375.8337
11.293	171791.91		0.0065	----------	----------
11.480	1341482.50		0.0509	----------	----------
11.816	131380.48		0.0050	----------	----------
11.971	176582.80		0.0067	----------	----------
12.243	291237.68		0.0110	----------	----------
12.562	48551.51		0.0018	----------	----------
12.775	466582.80		0.0177	----------	----------

Result File : [illegible]

Time [min]	Area [µV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
12.959	71774.91		0.0027	-----------	----------
13.058	167667.46		0.0064	-----------	----------
13.383	228847.33		0.0087	-----------	----------
13.456	314753.49		0.0119	-----------	----------
13.744	1009642.98		0.0383	-----------	----------
14.099	140537.23		0.0053	-----------	----------
14.307	182393.74		0.0069	-----------	----------
	110029283.13		1051.4795	1.04782e+05	1047.8179

Missing Component Report

Component	Expected Retention (Calibration File)
All components were found	

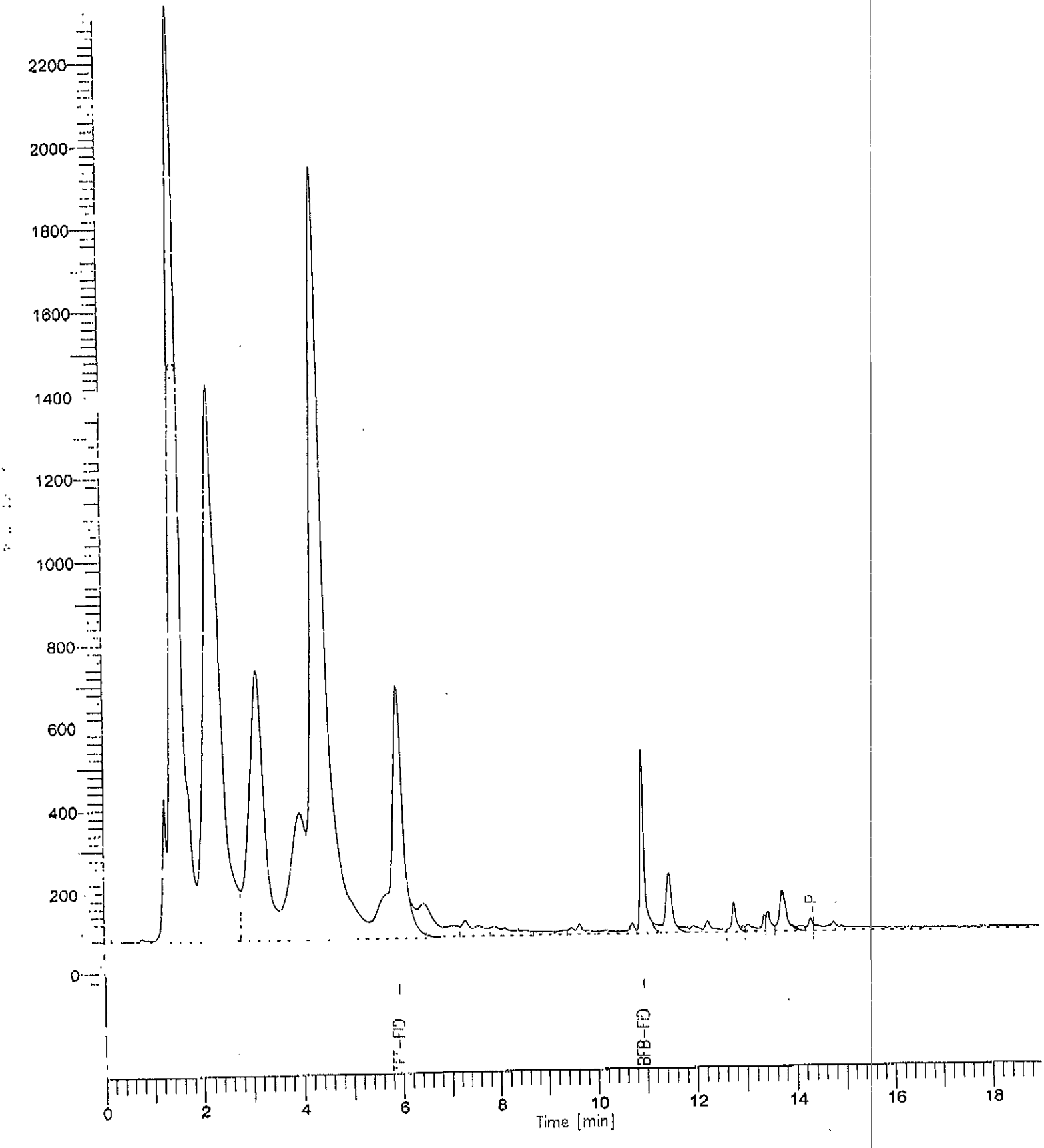
Report stored in ASCII file: J:\200506\DATA\5G062519.TX0

Gasoline Chromatogram

Page 1 of 1

Sample Name : SA-WA-2005-06-0355-003 => MW-4
FileName : J:\200506\DATA\5G062519.raw
Method : 5GS62105
Start Time : 0.00 min End Time : 18.99 min
Scale Factor: 1.0 Plot Offset: -35 mV

Sample #:
Date : 06/25/2005 20:35
Time of Injection: 06/25/2005 20:16
Low Point : -35.04 mV High Point : 2336.91 mV
Plot Scale: 2371.9 mV



Software Version: 4.1<2F12>
Sample Name : SA-WA-2005-06-0355-004 => MW-4D Time : 06/25/2005 21:02
Sample Number: Study : GBX-8021SE || REGULA
Operator : manager

Instrument : 3400-5 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 6318272716 Data Acquisition Time: 06/25/2005 20:42
Delay Time : 0.00 min.
End Time : 18.99 min.
Sampling Rate : 2.9410 pts/sec

Raw Data File : J:\200506\DATA\5G062520.RAW
Result File : J:\200506\DATA\5G062520.RST
Inst Method : O:\5GS62405 from J:\200506\DATA\5G062520.RST
Proc Method : O:\5GS62405
Calib Method : O:\5GS62405
Sequence File : J:\200506\SEQ\5B050625.SEQ

Sample Volume : 1.0000 ng Area Reject : 0.000000
Sample Amount : 10.0000 Dilution Factor : 1.00

Sample Notes:

8015M (GAS) REPORT 3400-5

Time [min]	Area [µV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
5.940	11028350.96	TFT AS GAS	0.5653	-56.53307	-0.5653
7.974	106935287.87	RAW GASOLI	5.4817	548.16720	5.4817
10.924	2663570.23	BFB AS GAS	0.1365	-13.65388	-0.1365
	120627209.06		6.1835	477.98024	4.7798

Group Report For : TFT AS GAS

Time [min]	Area [µV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
5.940	11028350.96	TFT-FID	685.3276	68532.76099	685.3276

Result File : 5G062520.RST, Printed on 07/07/----

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
	11028350.96		685.3276	68532.76099	685.3276

Group Report For : BFB AS GAS

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
10.924	2663570.23	BFB-FID	371.7149	37171.48850	371.7149
	2663570.23		371.7149	37171.48850	371.7149

Group Report For : RAW GASOLINE

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
2.203	30986457.15		1.1755	----------	----------
3.141	14630601.91		0.5550	----------	----------
3.984	6603699.46		0.2505	----------	----------
4.329	31842366.71		1.2079	----------	----------
5.940	11028350.96	TFT-FID	685.3276	68532.76099	685.3276
6.443	1960605.25		0.0744	----------	----------
7.083	469996.60		0.0178	----------	----------
7.305	434127.85		0.0165	----------	----------
7.582	432077.53		0.0164	----------	----------
7.905	288667.12		0.0110	----------	----------
8.117	254879.29		0.0097	----------	----------
8.382	300193.81		0.0114	----------	----------
8.785	112210.13		0.0043	----------	----------
9.022	73281.20		0.0028	----------	----------
9.315	127069.02		0.0048	----------	----------
9.480	120554.23		0.0046	----------	----------
9.646	165273.72		0.0063	----------	----------
9.808	82764.37		0.0031	----------	----------
10.019	63145.19		0.0024	----------	----------
10.181	68918.74		0.0026	----------	----------
10.303	62125.13		0.0024	----------	----------
10.713	199238.36		0.0076	----------	----------
10.924	2663570.23	BFB-FID	371.7149	37171.48850	371.7149
11.271	164182.25		0.0062	----------	----------
11.463	1102754.17		0.0418	----------	----------
11.799	119081.95		0.0045	----------	----------
11.951	167721.86		0.0064	----------	----------
12.225	272539.95		0.0103	----------	----------
12.554	51417.89		0.0020	----------	----------
12.756	382233.94		0.0145	----------	----------

Result File : 5G062520.RST, Printed on 07/25/2005

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
12.938	59010.54		0.0022	----------	---------
13.037	158031.28		0.0060	----------	---------
13.363	192135.33		0.0073	----------	---------
13.435	267143.83		0.0101	----------	---------
13.732	741890.52		0.0281	----------	---------
14.072	123798.03		0.0047	----------	---------
14.286	163172.39		0.0062	----------	---------
	106935287.87		1060.5797	1.05704e+05	1057.0425

Missing Component Report

Component	Expected Retention (Calibration File)
All components were found	

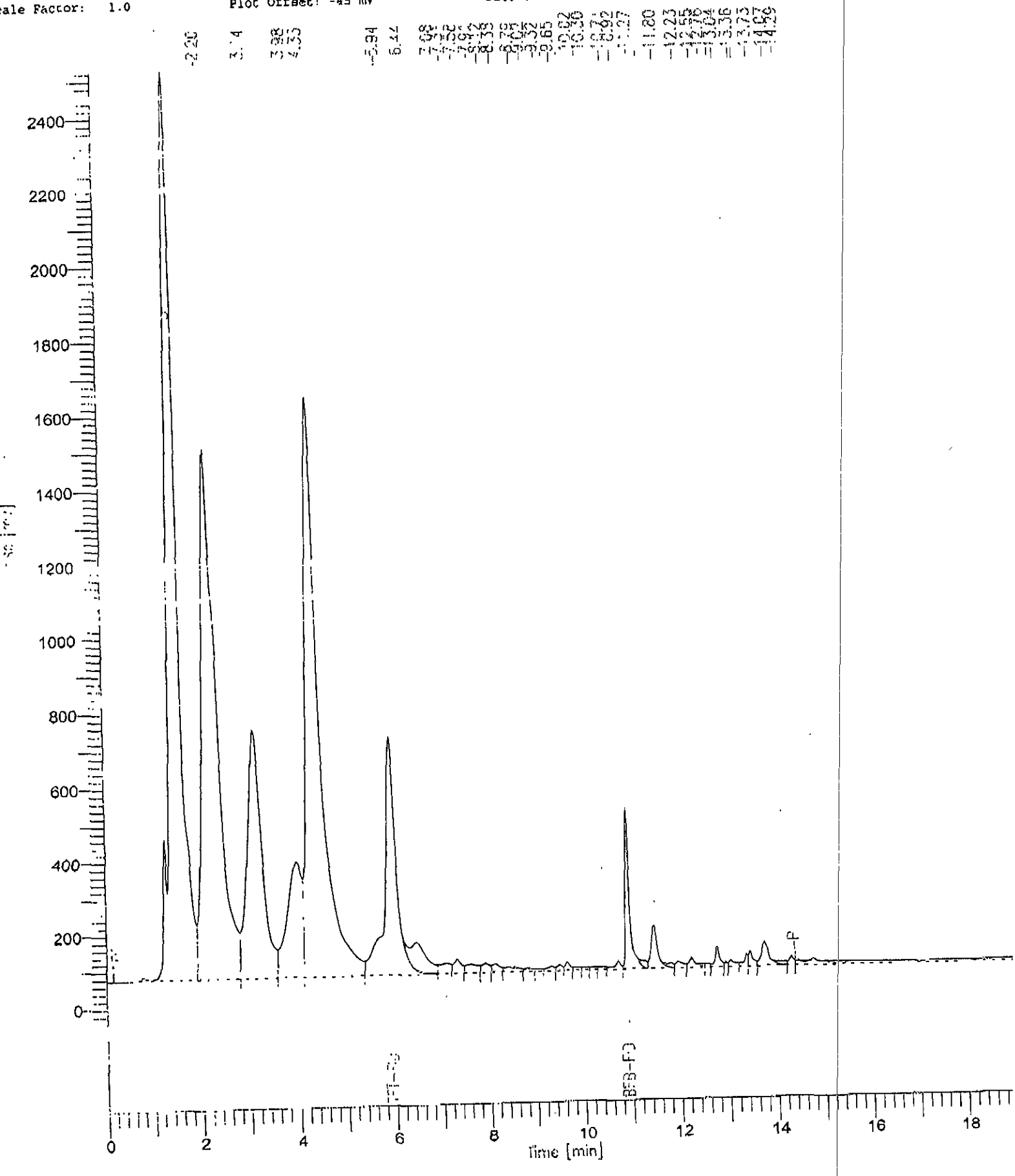
Report stored in ASCII file: J:\200506\DATA\5G062520.TX0

Gasoline Chromatogram

Sample Name : SA-WA-2005-06-0355-004 => MW-4D
FileName : J:\200506\DATA\SG062520.raw
Method : SGS62405
Start Time : 0.00 min
Scale Factor: 1.0

End Time : 18.99 min
Ploc Offset: -45 mV

Sample #:
Date : 06/25/2005 21:02
Time of Injection: 06/25/2005 20:42
Low Point : -45.10 mV
High Point : 2525.42 mV
Plot Scale: 2570.5 mV



Software Version: 4.1<2F12>
Sample Name : SA-WA-2005-06-0355-005 => MW-5 Time : 06/25/2005 21:29
Sample Number: Study : GBX-8021SE || REGULA
Operator : manager

Instrument : 3400-5 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 6318272716 Data Acquisition Time: 06/25/2005 21:09
Delay Time : 0.00 min.
End Time : 18.99 min.
Sampling Rate : 2.9410 pts/sec

Raw Data File : J:\200506\DATA\5G062521.RAW
Result File : J:\200506\DATA\5G062521.RST
Inst Method : O:\5GS62405 from J:\200506\DATA\5G062521.RST
Proc Method : O:\5GS62405
Calib Method : O:\5GS62405
Sequence File : J:\200506\SEQ\5B050625.SEQ

Sample Volume : 1.0000 ng Area Reject : 0.000000
Sample Amount : 10.0000 Dilution Factor : 1.00

Sample Notes:

8015M (GAS) REPORT 3400-5

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
5.917	7903498.85	TFT AS GAS	0.4051	-40.51458	-0.4051
7.974	14744311.54	RAW GASOLI	0.7558	75.58167	0.7558
10.937	2758395.12	BFB AS GAS	0.1414	-14.13997	-0.1414
	25406205.50		1.3024	20.92712	0.2093

Group Report For : TFT AS GAS

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
5.917	7903498.85	TFT-FID	491.1420	49114.19666	491.1420

Result File : 5G062521.R31, Printed on 7/7/...

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
	7903498.85		491.1420	49114.19666	491.1420

Group Report For : BFB AS GAS

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
10.937	2758395.12	BFB-FID	384.9482	38494.81847	384.9482
	2758395.12		384.9482	38494.81847	384.9482

Group Report For : RAW GASOLINE

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
2.322	232315.54		0.0088	----------	----------
3.255	493672.22		0.0187	----------	----------
4.284	236780.01		0.0090	----------	----------
4.955	25586.54		0.0010	----------	----------
5.357	512764.37		0.0195	----------	----------
5.917	7903498.85	TFT-FID	491.1420	49114.19666	491.1420
7.301	172798.37		0.0066	----------	----------
7.531	107565.45		0.0041	----------	----------
8.075	220401.23		0.0084	----------	----------
8.607	60088.41		0.0023	----------	----------
8.835	30856.85		0.0012	----------	----------
9.028	45433.53		0.0017	----------	----------
9.219	43379.80		0.0016	----------	----------
9.485	53097.59		0.0020	----------	----------
9.659	83022.78		0.0031	----------	----------
9.877	41757.91		0.0016	----------	----------
10.168	88194.49		0.0033	----------	----------
10.517	59068.34		0.0022	----------	----------
10.717	46579.40		0.0018	----------	----------
10.937	2758395.12	BFB-FID	384.9482	38494.81847	384.9482
11.478	481955.12		0.0183	----------	----------
11.851	78925.54		0.0030	----------	----------
12.048	59704.18		0.0023	----------	----------
12.221	73866.03		0.0028	----------	----------
12.454	123716.42		0.0047	----------	----------
12.772	69115.95		0.0026	----------	----------
12.953	40068.00		0.0015	----------	----------
13.060	30255.02		0.0011	----------	----------
13.163	45487.93		0.0017	----------	----------
13.266	26164.57		0.0010	----------	----------

Result File : 5G062521.RST, Printed on ...

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
13.373	110510.03		0.0042	----------	----------
13.765	269374.36		0.0102	----------	----------
14.131	62074.12		0.0024	----------	----------
14.303	57837.47		0.0022	----------	----------
	14744311.54		876.2450	87609.01512	876.0902

Missing Component Report

Component	Expected Retention (Calibration File)

All components were found

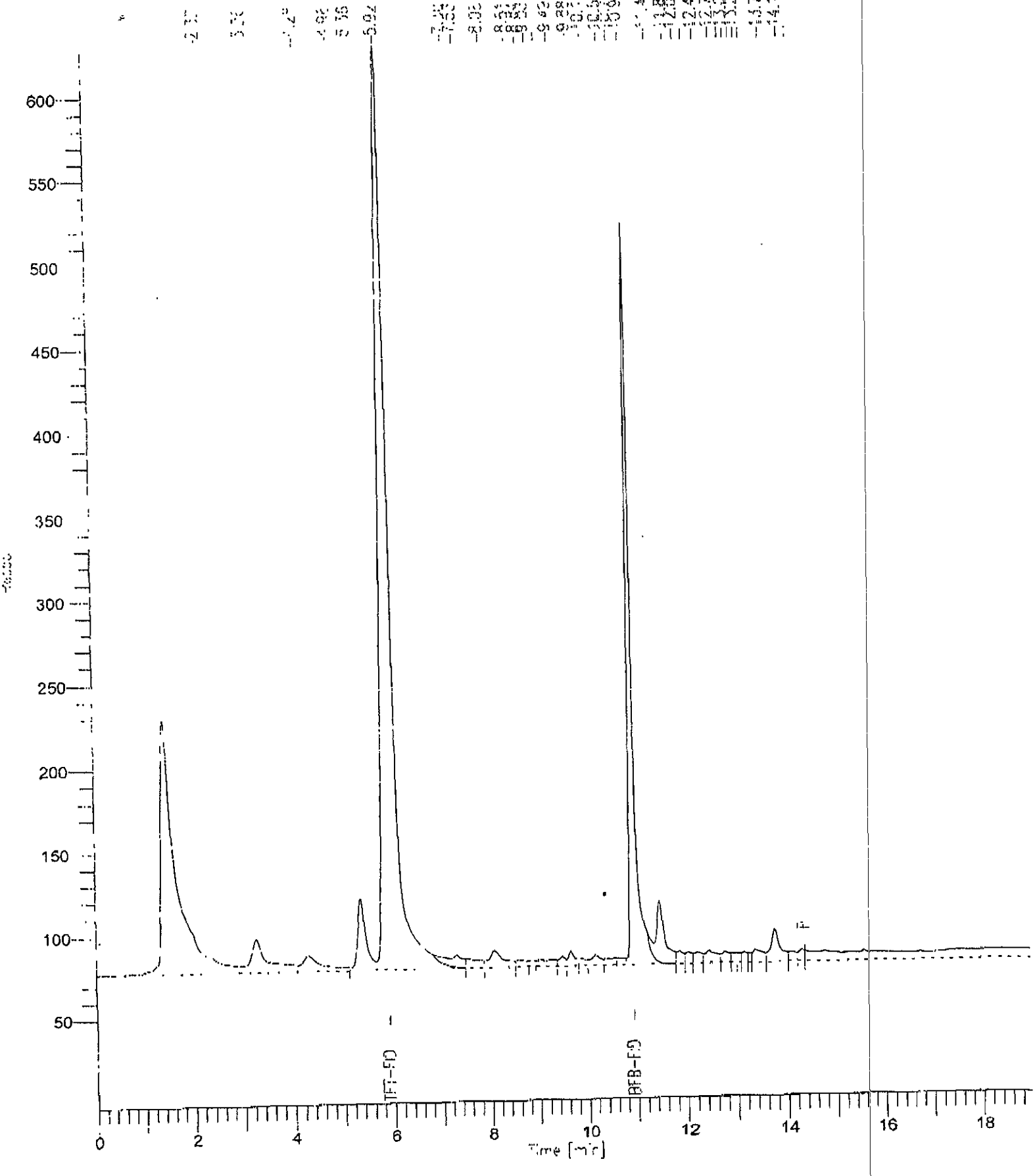
Report stored in ASCII file: J:\200506\DATA\5G062521.TXO

Gasoline Chromatogram

Sample Name : SA-WA-2005-06-0355-005 -> MW-5
FileName : J:\200506\DATA\SG062521.raw
Method : SGS62405
Start Time : 0.00 min
Scale Factor: 1.0

End Time : 18.99 min
Plot Offset: 49 mV

Sample #:
Date : 06/25/2005 21:29
Time of Injection: 06/25/2005 21:09
Low Point : 49.34 mV
High Point : 628.25 mV
Plot Scale: 578.9 mV



Software Version: 4.1<2F12>
Sample Name : SA-WA-2005-06-0355-006 => MW-8A Time : 06/25/2005 21:55
Sample Number: Study : GBX-8021SE || REGULA
Operator : manager

Instrument : 3400-5 Channel : B A/D mV Range : 10000
AutoSampler :
Rack/Vial : 0/0

Interface Serial # : 6318272716 Data Acquisition Time: 06/25/2005 21:36
Delay Time : 0.00 min.
End Time : 18.99 min.
Sampling Rate : 2.9410 pts/sec

Raw Data File : J:\200506\DATA\5G062522.RAW
Result File : J:\200506\DATA\5G062522.RST
Inst Method : O:\5GS62405 from J:\200506\DATA\5G062522.RST
Proc Method : O:\5GS62405
Calib Method : O:\5GS62405
Sequence File : J:\200506\SEQ\5B050625.SEQ

Sample Volume : 1.0000 ng Area Reject : 0.000000
Sample Amount : 10.0000 Dilution Factor : 1.00

Sample Notes:

8015M (GAS) REPORT 3400-5

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
5.904	8144423.71	TFT AS GAS	0.4175	-41.74960	-0.4175
7.974	15089391.44	RAW GASOLI	0.7735	77.35061	0.7735
10.910	2847823.88	BFB AS GAS	0.1460	-14.59840	-0.1460
	26081639.03		1.3370	21.00261	0.2100

Group Report For : TFT AS GAS

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
5.904	8144423.71	TFT-FID	506.1136	50611.36026	506.1136

Result File : 5G002522.RD1

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
	8144423.71		506.1136	50611.36026	506.1136

Group Report For : BFB AS GAS

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
10.910	2847823.88	BFB-FID	397.4284	39742.84276	397.4284
	2847823.88		397.4284	39742.84276	397.4284

Group Report For : RAW GASOLINE

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
2.147	573305.00		0.0217	----------	----------
3.065	115525.33		0.0044	----------	----------
3.626	126678.00		0.0048	----------	----------
3.875	119449.17		0.0045	----------	----------
4.255	234988.10		0.0089	----------	----------
5.334	41856.51		0.0016	----------	----------
5.904	8144423.71	TFT-FID	506.1136	50611.36026	506.1136
7.272	215239.72		0.0082	----------	----------
7.519	113264.20		0.0043	----------	----------
7.849	37286.64		0.0014	----------	----------
8.094	206664.40		0.0078	----------	----------
8.596	65855.15		0.0025	----------	----------
8.813	40724.24		0.0015	----------	----------
8.979	37099.63		0.0014	----------	----------
9.211	56246.18		0.0021	----------	----------
9.464	66361.78		0.0025	----------	----------
9.630	109785.79		0.0042	----------	----------
9.997	38259.10		0.0015	----------	----------
10.165	77069.02		0.0029	----------	----------
10.378	18735.12		0.0007	----------	----------
10.458	29207.75		0.0011	----------	----------
10.704	54110.85		0.0021	----------	----------
10.910	2847823.88	BFB-FID	397.4284	39742.84276	397.4284
11.458	563900.04		0.0214	----------	----------
11.942	73267.60		0.0028	----------	----------
12.024	59833.39		0.0023	----------	----------
12.211	67177.83		0.0025	----------	----------
12.371	59020.74		0.0022	----------	----------
12.536	68429.11		0.0026	----------	----------
12.753	86011.56		0.0033	----------	----------

Result File : 5G062522.RD1

Time [min]	Area [μV·s]	Component Name	Raw Amount	Concentration (WA:PPB/SO:PPM)	GASOLINE NET SPIKE
12.921	38962.94		0.0015	----------	----------
13.033	42363.14		0.0016	----------	----------
13.128	40292.42		0.0015	----------	----------
13.250	44535.87		0.0017	----------	----------
13.436	112876.57		0.0043	----------	----------
13.750	317099.63		0.0120	----------	----------
14.089	78857.53		0.0030	----------	----------
14.295	66803.81		0.0025	----------	----------
	15089391.44		903.6975	90354.20301	903.5420

Missing Component Report

Component	Expected Retention (Calibration File)

All components were found

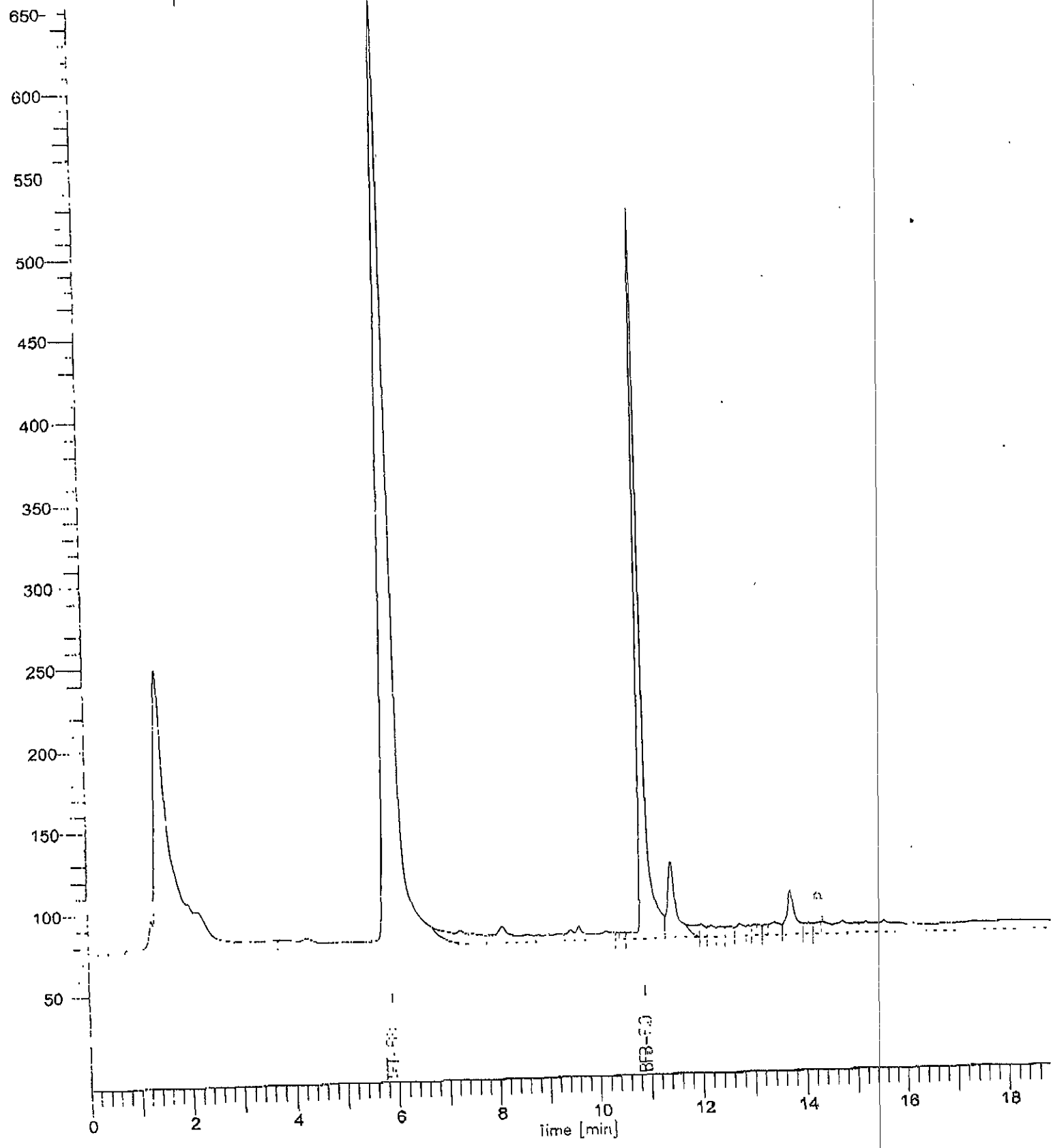
Report stored in ASCII file: J:\200506\DATA\5G062522.TXO

Page 1 of 1

Sample Name : SA-WA-2005-06-0355-006 => MW-8A
FileName : J:\200506\DATA\5G062522.raw
Method : 5GS62405
Start Time : 0.00 min
Scale Factor: 1.0

End Time : 18.99 min
Plot Offset: 48 mV

Sample #:
Date : 06/25/2005 21:55
Time of Injection: 06/25/2005 21:36
Low Point : 47.58 mV
Plot Scale: 605.1 mV
High Point : 652.66 mV



SEVERN TRENT STL

Submission#: 2005-07-0091

Innovative Technical Solutions, Inc

July 20, 2005

2730 Shadelands Drive
Walnut Creek, CA 94598

Attn.: Rachel Hess

Project#: 00-152.28
Project: Port of Oakland
Site: 2277 Seventh Street, Oakland

Dear Ms. Hess,

Attached is our report for your samples received on 07/06/2005 13:50
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 08/20/2005 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: ssidhu@stl-inc.com

Sincerely,

Surinder Sidhu

Surinder Sidhu
Project Manager

SEVERN TRENT STL

Submission: 2005-07-0091

Total Extractable Petroleum Hydrocarbons (TEPH) by 8015m (Silical Gel Clean-up)

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00-152.28
Port of Oakland

Received: 07/06/2005 13:50

Site: 2277 Seventh Street, Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-2	07/06/2005 12:30	Water	1
MW-5	07/06/2005 11:45	Water	3
MW-5D	07/06/2005 11:50	Water	4
MW-8A	07/06/2005 10:40	Water	5

Total Extractable Petroleum Hydrocarbons (TEPH) by 8015m (Silical Gel Clean-up)

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00-152.28
Port of Oakland

Received: 07/06/2005 13:50

Site: 2277 Seventh Street, Oakland

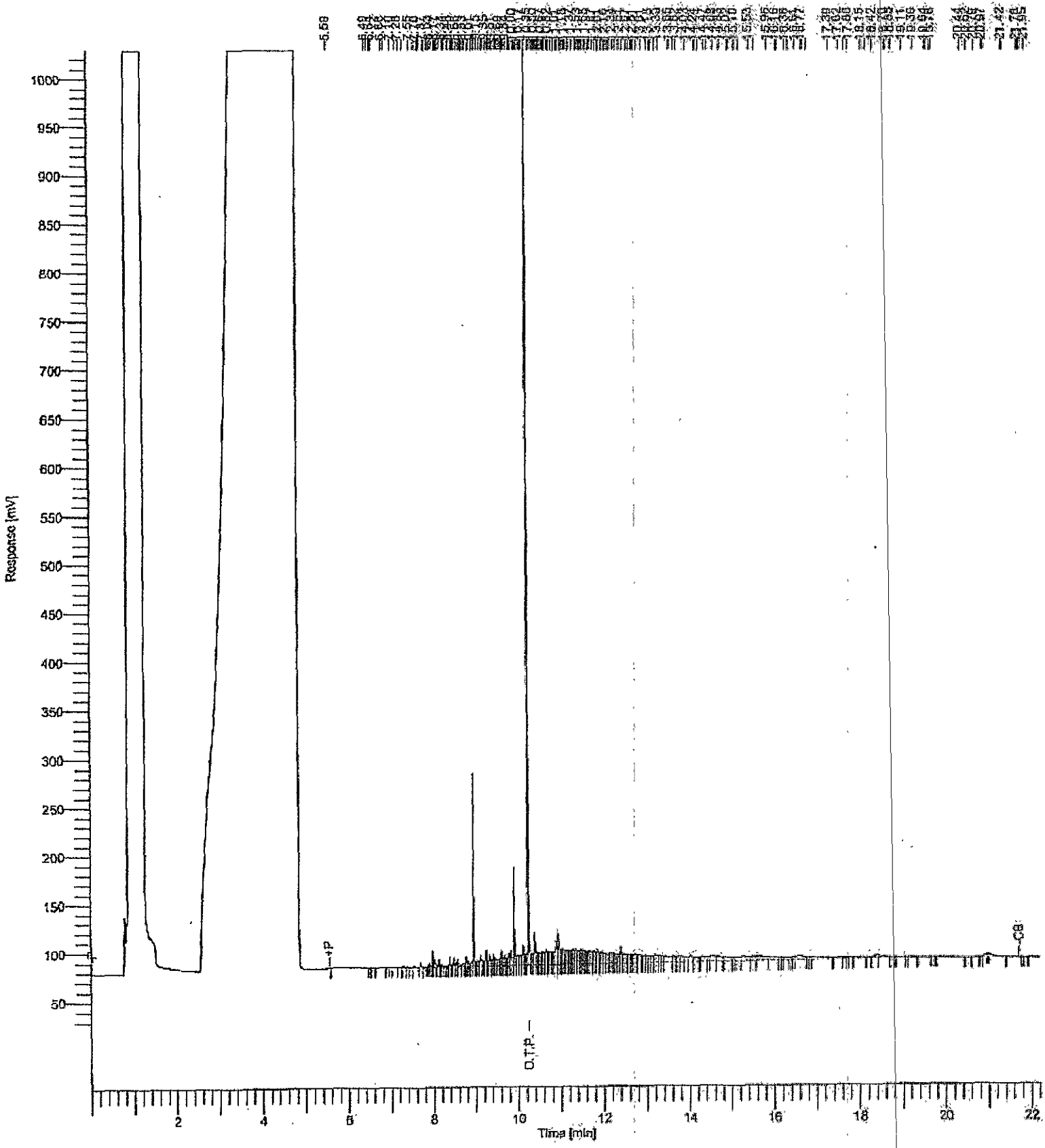
Prep(s): 3511
Sample ID: **MW-2**
Sampled: 07/06/2005 12:30
Matrix: Water

Test(s): 8015M
Lab ID: 2005-07-0091 - 1
Extracted: 7/13/2005 17:53
QC Batch#: 2005/07/13-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Motor Oil	ND	500	ug/L	1.00	07/14/2005 12:52	
DRO (C10-C28)	110	50	ug/L	1.00	07/14/2005 12:52	
Surrogate(s)						
o-Terphenyl	103.7	74-193	%	1.00	07/14/2005 12:52	

Chromatogram

Sample Name : 070091-0016g Sample #: 008
FileName : E:\Diesel4\200507\raw\70714008.raw
Date : 7/15/2005 12:39:48 PM
Method : 7lvl83005 Time of Injection: 7/14/2005 12:52:30 PM
Start Time : 0.00 min End Time : 22.20 min Low Point : 28.94 mV High Point : 1026.94 mV
Plot Offset: 28.94 mV Plot Scale: 1000.0 mV



Total Extractable Petroleum Hydrocarbons (TEPH) by 8015m (Silical Gel Clean-up)

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00-152.28
Port of Oakland

Received: 07/06/2005 13:50

Site: 2277 Seventh Street, Oakland

Prep(s): 3511
Test(s): 8015M

Sample ID: **MW-5**
Lab ID: 2005-07-0091 - 3

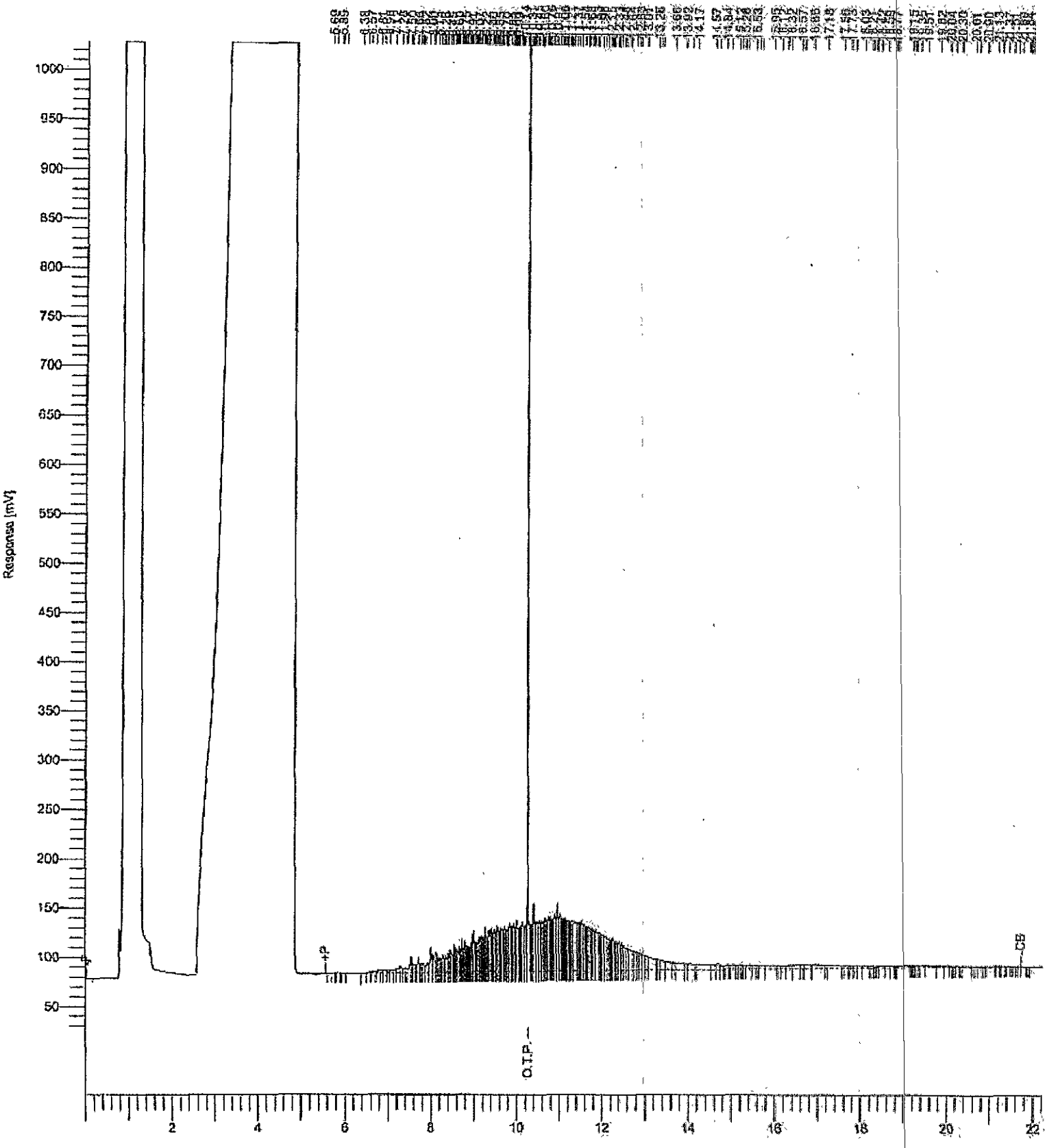
Sampled: 07/06/2005 11:45
Extracted: 7/13/2005 17:53

Matrix: Water
QC Batch#: 2005/07/13-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Motor Oil	ND	500	ug/L	1.00	07/14/2005 14:13	
DRO (C10-C28)	450	50	ug/L	1.00	07/14/2005 14:13	
Surrogate(s)						
o-Terphenyl	108.1	74-193	%	1.00	07/14/2005 14:13	

Chromatogram

Sample Name : 070091-003sg Sample #: 011
FileName : E:\Diesel4\200507\raw\70714012.raw
Date : 7/15/2005 12:39:50 PM
Method : 7lvl63005 Time of Injection: 7/14/2005 2:13:37 PM
Start Time : 0.00 min End Time : 22.20 min Low Point : 28.21 mV High Point : 1028.21 mV
Plot Offset: 28.21 mV Plot Scale: 1000.0 mV



Total Extractable Petroleum Hydrocarbons (TEPH) by 8015m (Silical Gel Clean-up)

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00-152.28
Port of Oakland

Received: 07/06/2005 13:50

Site: 2277 Seventh Street, Oakland

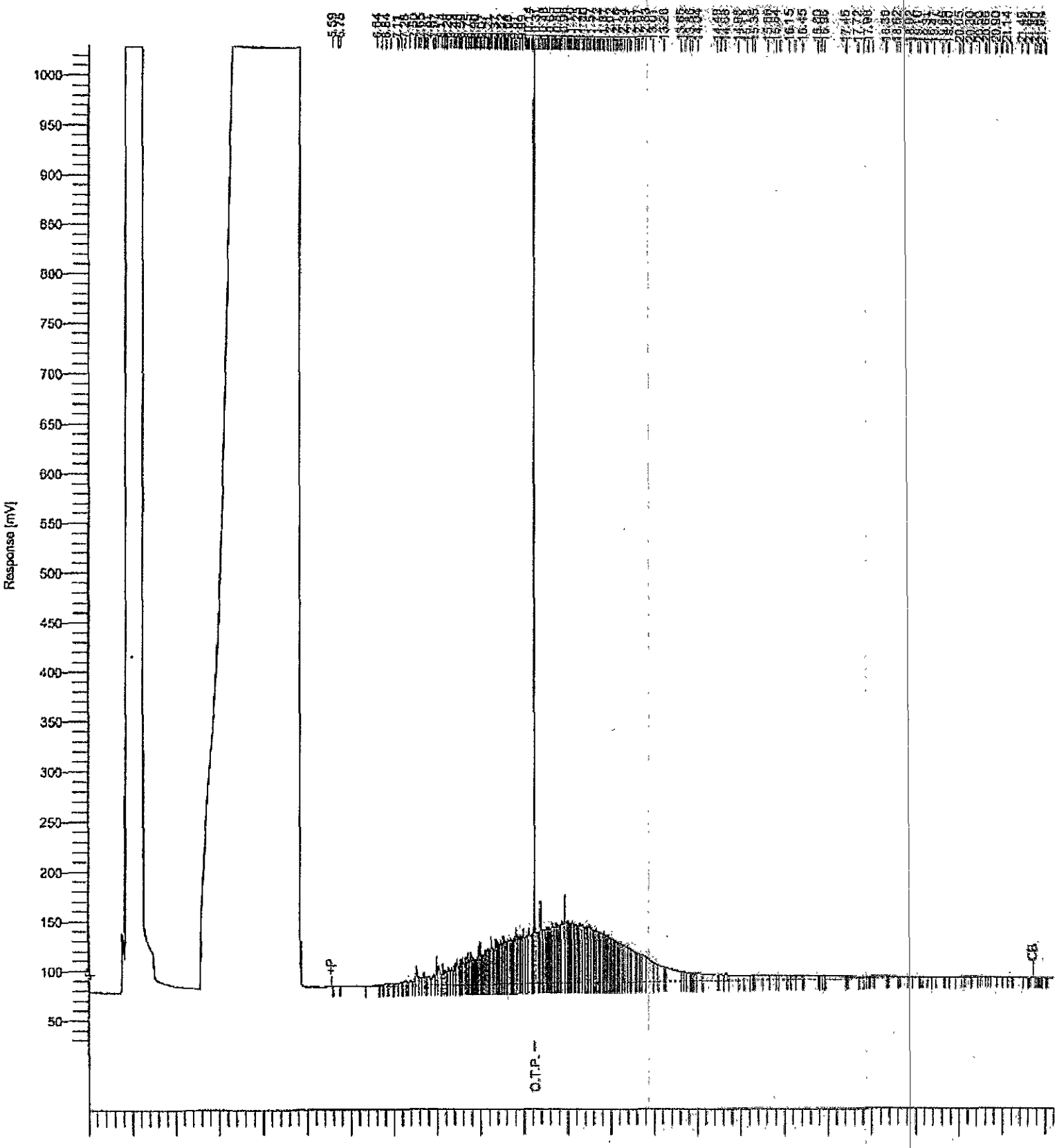
Prep(s): 3511
Sample ID: **MW-5D**
Sampled: 07/06/2005 11:50
Matrix: Water

Test(s): 8015M
Lab ID: 2005-07-0091 - 4
Extracted: 7/13/2005 17:53
QC Batch#: 2005/07/13-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Motor Oil	ND	500	ug/L	1.00	07/14/2005 14:40	
DRO (C10-C28)	500	50	ug/L	1.00	07/14/2005 14:40	
Surrogate(s)						
o-Terphenyl	103.7	74-193	%	1.00	07/14/2005 14:40	

Chromatogram

Sample Name : 070091-004sg Sample #: 012
FileName : E:\Diesel4\200507\raw\70714013.raw
Date : 7/15/2005 12:39:51 PM
Method : 7lv63005 Time of Injection: 7/14/2005 2:40:42 PM
Start Time : 0.00 min End Time : 22.20 min Low Point : 28.04 mV High Point : 1028.04 mV
Plot Offset: 28.04 mV Plot Scale: 1000.0 mV



Total Extractable Petroleum Hydrocarbons (TEPH) by 8015m (Silical Gel Clean-up)

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00-152.28
Port of Oakland

Received: 07/06/2005 13:50

Site: 2277 Seventh Street, Oakland

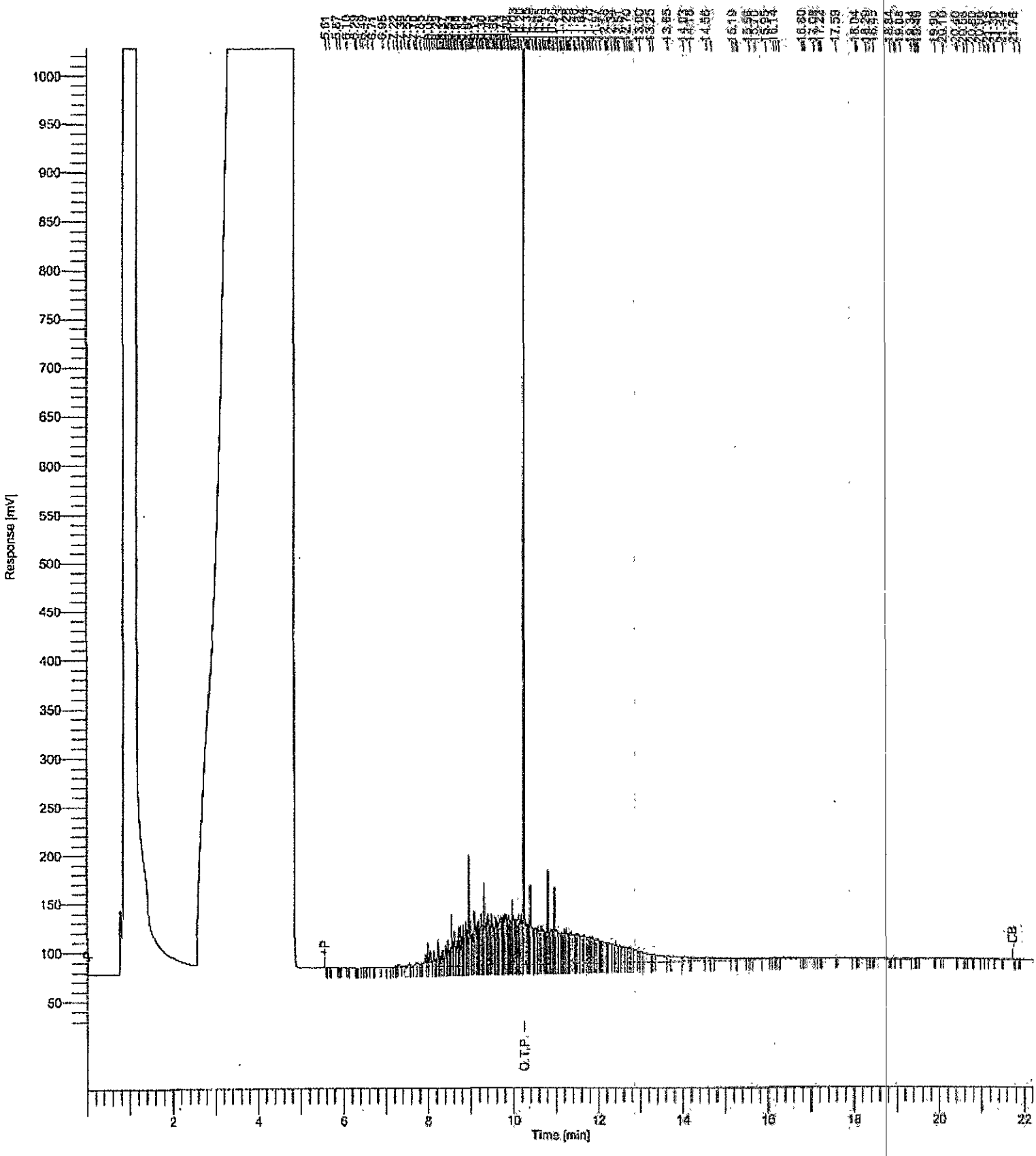
Prep(s): 3511
Sample ID: **MW-8A**
Sampled: 07/06/2005 10:40
Matrix: Water

Test(s): 8015M
Lab ID: 2005-07-0091 - 5
Extracted: 7/13/2005 17:53
QC Batch#: 2005/07/13-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Motor Oil	ND	500	ug/L	1.00	07/14/2005 15:07	
DRO (C10-C28)	350	50	ug/L	1.00	07/14/2005 15:07	
Surrogate(s)						
o-Terphenyl	104.8	74-193	%	1.00	07/14/2005 15:07	

Chromatogram

Sample Name : 070091-005sg Sample #: 013
FileName : E:\Diesel4\200507\raw\70714014.raw
Date : 7/15/2005 12:39:52 PM
Method : 7lv63005 Time of Injection: 7/14/2005 3:07:47 PM
Start Time : 0.00 min End Time : 22.20 min Low Point : 27.92 mV High Point : 1027.92 mV
Plot Offset: 27.92 mV Plot Scale: 1000.0 mV



Total Extractable Petroleum Hydrocarbons (TEPH) by 8015m (Silical Gel Clean-up)

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00-152.28
Port of Oakland

Received: 07/06/2005 13:50

Site: 2277 Seventh Street, Oakland

Batch QC Report

Prep(s): 3511 Test(s): 8015M

Method Blank **Water** **QC Batch # 2005/07/13-04.10**

MB: 2005/07/13-04.10-001 Date Extracted: 07/13/2005 17:53

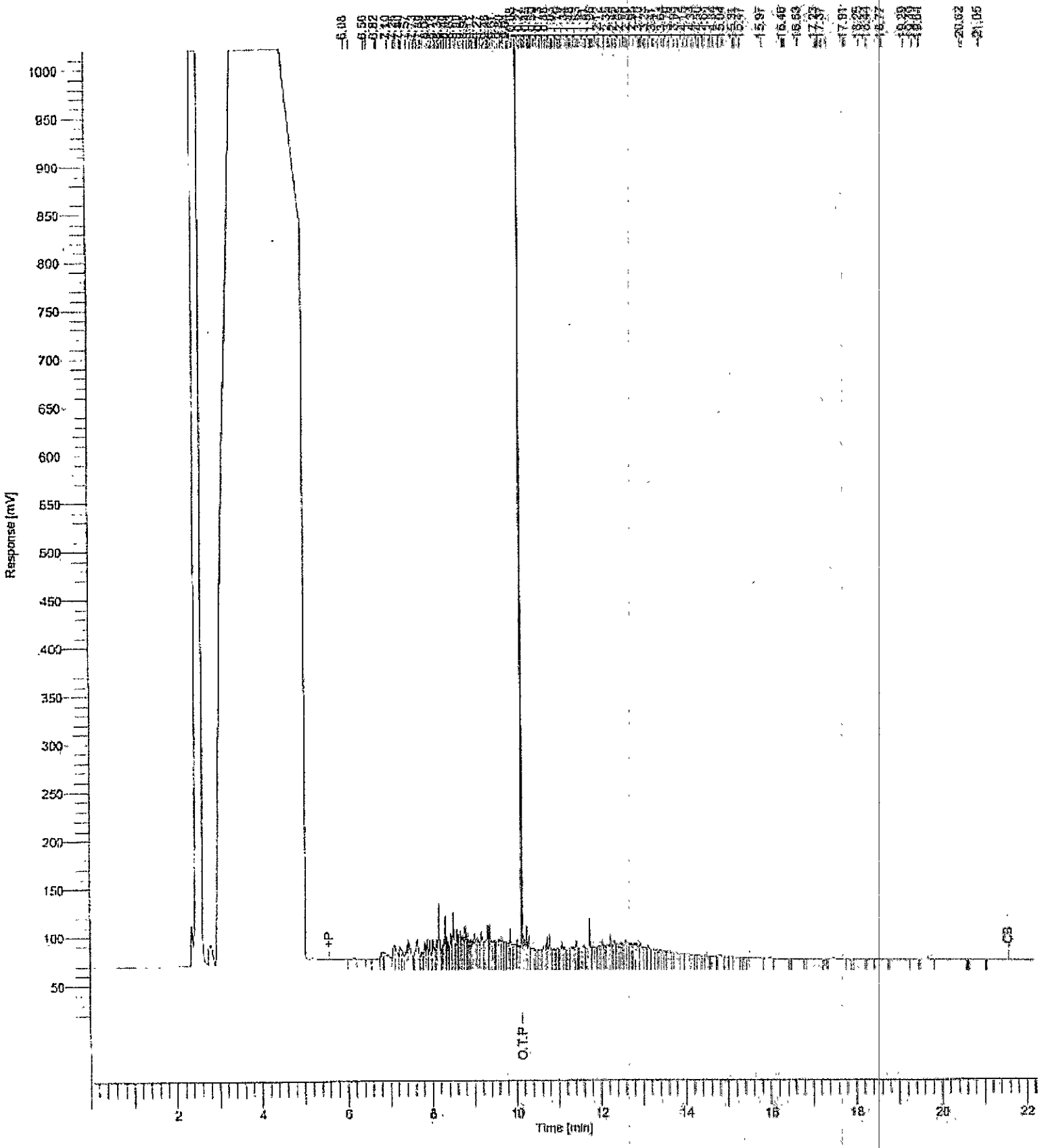
Compound	Conc.	RL	Unit	Analyzed	Flag
DRO (C10-C28)	ND	50	ug/L	07/14/2005 12:25	
Motor Oil	ND	500	ug/L	07/14/2005 12:25	
Surrogates(s)					
o-Terphenyl	101.5	60-130	%	07/14/2005 12:25	

Chromatogram

Sample Name : 070091-002sg
FileName : E:\Diesel4\200507\3W\80719028.raw
Date : 7/20/2005 3:02:40 PM
Method : 7lph071805
Start Time : 0.00 min
Plot Offset 19.83 mV

Sample #: 126
Page 1 of 1

Time of Injection: 7/19/2005 9:37:46 PM
End Time : 22.20 min
Low Point : 19.83 mV
High Point : 1019.83 mV
Plot Scale 1000.0 mV



Total Extractable Petroleum Hydrocarbons (TEPH) by 8015m (Silical Gel Clean-up)

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00-152.28
Port of Oakland

Received: 07/06/2005 13:50

Site: 2277 Seventh Street, Oakland

Batch QC Report

Prep(s): 3511

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2005/07/13-04.10**

LCS 2005/07/13-04.10-002 Extracted: 07/13/2005 Analyzed: 07/14/2005 12:25

LCSD 2005/07/13-04.10-003 Extracted: 07/13/2005 Analyzed: 07/14/2005 12:52

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
DRO (C10-C28)	552	616	680	81.2	90.6	10.9	60-150	25		
Surrogates(s)										
o-Terphenyl	1.16	1.26	1.25	93.2	100.4		60-130	0		

SEVERN TRENT STL

Submission: 2005-07-0091

Total Extractable Petroleum Hydrocarbons (TEPH) by 8015m (Silical Gel Clean-up)

Innovative Technical Solutions, Inc
Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00-152.28
Port of Oakland

Received: 07/06/2005 13:50

Site: 2277 Seventh Street, Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-4	07/06/2005 11:15	Water	2

Total Extractable Petroleum Hydrocarbons (TEPH) by 8015m (Silical Gel Clean-up)

Innovative Technical Solutions, Inc

Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00-152.28
Port of Oakland

Received: 07/06/2005 13:50

Site: 2277 Seventh Street, Oakland

Prep(s):	3511	Test(s):	8015M
Sample ID:	**MW-4**	Lab ID:	2005-07-0091 - 2
Sampled:	07/06/2005 11:15	Extracted:	7/18/2005 13:18
Matrix:	Water	QC Batch#:	2005/07/18-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Motor Oil	ND	500	ug/L	1.00	07/19/2005 21:37	
DRO (C10-C28)	190	50	ug/L	1.00	07/19/2005 21:37	
Surrogate(s)						
o-Terphenyl	106.1	74-193	%	1.00	07/19/2005 21:37	

Total Extractable Petroleum Hydrocarbons (TEPH) by 8015m (Silical Gel Clean-up)

Innovative Technical Solutions, Inc
Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00-152.28
Port of Oakland

Received: 07/06/2005 13:50

Site: 2277 Seventh Street, Oakland

Batch QC Report

Prep(s): 3511 Test(s): 8015M

Method Blank DRO **Water** **QC Batch # 2005/07/18-05.10**

MB: 2005/07/18-05.10-004 Date Extracted: 07/18/2005 13:18

Compound	Conc.	RL	Unit	Analyzed	Flag
Motor Oil	ND	500	ug/L	07/19/2005 21:10	
DRO (C10-C28)	ND	50	ug/L	07/19/2005 21:10	
Surrogates(s)					
o-Terphenyl	106.8	74-193	%	07/19/2005 21:10	

Total Extractable Petroleum Hydrocarbons (TEPH) by 8015m (Silical Gel Clean-up)

Innovative Technical Solutions, Inc
Attn.: Rachel Hess

2730 Shadelands Drive
Walnut Creek, CA 94598
Phone: (925) 256-8898 Fax: (925) 256-8998

Project: 00-152.28
Port of Oakland

Received: 07/06/2005 13:50

Site: 2277 Seventh Street, Oakland

Batch QC Report

Prep(s): 3511

Test(s): 8015M

Laboratory Control Spike DRO **Water** **QC Batch # 2005/07/18-05.10**

LCS 2005/07/18-05.10-005 Extracted: 07/18/2005 Analyzed: 07/19/2005 22:32
LCSD 2005/07/18-05.10-006 Extracted: 07/18/2005 Analyzed: 07/19/2005 22:59

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
DRO (C10-C28)	598	582	680	87.9	85.6	2.7	60-150	25		
Surrogates(s)										
o-Terphenyl	1.32	1.27	1.25	105.2	101.7		74-193	0		

2005-07-009

117115

Innovative Technical Solutions, Inc.
~~2855 Mitchell Drive, Suite 111~~ 2730 Shadelands Drive, Suite 100
Walnut Creek, California 94598
(925) 256-8898 – (925) 256-8998 (fax)

Chain-Of-Custody

Project Name and Number: Port of Oakland / 00-152.28 Laboratory Name: STL
Project Manager: Rachel Hess Address: 1220 Quarry Ln. Contact Name: Surinder Sidhu
Site Location: 2277 Seventh Street, Oakland Pleasanton, Ca Phone: 925 484 1919
Date: 07/06/2005 Page: 1 of 1

Sample I.D.	Sample Depth	Date	Time	No. of Containers	Sample Matrix	Analysis: TPHd by 8015B	Analysis: TPHmo by 8015B	Preservative:	Container Type:	Special Instructions/Comments
										Silica Gel Clean up for TPHd, mo
MW-2	15'	07/06/05	1230	1	H2O	X	X			
MW-4	15'		1115			X	X			
MW-5	15'		1145			X	X			
MW-5D	15'		1150			X	X			
MW-8A	15'		1040			X	X			

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

Sampler: Roggelio Leong
Courier/Airbill No.:

Relinquished By/Affiliation:	Date:	Time:	Received By/Affiliation:	Date:	Time:
ITSS	7/6/05	1350	STL SF	7/6/05	1350

Original – Laboratory Yellow – Field/Office

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0507064 **ClientID: ITSI**

Report to:		Bill to:	Requested TAT: 5 days
Rachel Hess	TEL:	Arvin Acharya	
ITSI	FAX:	ITSI	
2730 Shadelands Drive Suite 100	ProjectNo: #00-152.28; Port of Oakland	2730 Shadelands Drive Suite 100	*Date Received:* 07/06/2005
Walnut Creek, CA 94598	PO:	Walnut Creek, CA 94598	*Date Printed:* 07/06/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0507064-001	MW-5	Water	7/6/05 11:45:00 AM	☐	A														

Test Legend:

1 TPH(DMO)WSG_W	2	3	4	5
6	7	8	9	10
11	12	13	14	15

Prepared by: Melissa Valles

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

0507064

Innovative Technical Solutions, Inc. (ITSI)
~~2855 Mitchell Drive, Suite 111~~ 2730 Shadelands Drive ste 100
Walnut Creek, California 94598
(925) 256-8898 – (925) 256-8998 (fax)

Chain-Of-Custody

Project Name and Number: Port of Oakland / 00-152.28
Project Manager: Rachel Hess
Site Location: 2277 Seventh Street, Oakland Ca

Laboratory Name: McCampbell Analytical Inc.
Address: 110 Second Ave Suite D#7 CA Pacheco 94553
Contact Name: Angela Rydelius
Phone: 925 798-1620

Date: 07/06/2005
Page: 1 of 1

Sample I.D.	Sample Depth	Date	Time	No. of Containers	Sample Matrix	Analysis: TPHd by 8015B	TPHmo by 8015B	Special Instructions/Comments
Preservative:						—	—	
Container Type:						1L	1L	Silica Gel cleanup for TPHd, mo
MW-5	15'	07/06/05	1145	1	H2O	X	X	

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB
PRESERVATION | VOAS | O&G | METALS | OTHER

Sampled By: Rogerio Leong
Signature: [signature]
Special Instructions: Direct bill Port of Oakland Contact Jeff Rubin @ (510) 627 1134
Send Results to: (w/fax #) Rachel Hess / Rogerio Leong @ (925) 256-8998
Turnaround Time: Standard

Sampler: Rogerio Leong
Courier/Airbill No.:

Relinquished By/Affiliation:	Date:	Time:	Received By/Affiliation:	Date:	Time:
Rogerio Leong / ITSI	7/6/05	14:45	Mal Vall / MAI	7/06	14:45

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

ITSI 2730 Shadelands Drive Suite 100 Walnut Creek, CA 94598	Client Project ID: #00-152.28; Port of Oakland	Date Sampled: 07/06/05
		Date Received: 07/06/05
	Client Contact: Rachel Hess	Date Extracted: 07/06/05
	Client P.O.:	Date Analyzed: 07/08/05

Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0507064

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0507064-001A	MW-5	W	77,b	ND	1	109

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

#) cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; &) low or no surrogate due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel (asphalt); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0507064

EPA Method: SW8015C	Extraction: SW3510C				BatchID: 17004			Spiked Sample ID: N/A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	103	101	2.41	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	103	100	2.60	N/A	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17004 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507064-001A	7/06/05 11:45 AM	7/06/05	7/08/05 1:11 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fail outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

McCampbell Analytical, Inc.

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INVOICE for ANALYTICAL SERVICES

Project Name: #00-152.28; Port of Oakland
PO Number: N/A
Date Sampled: 07/06/05
Date Received: 07/06/05

Invoice N°: 0507064

INV DATE: *July 11, 2005*
Print DATE: *July 11, 2005*

Report To: Rachel Hess
ITSI
2730 Shadelands Drive Suite 100
Walnut Creek, CA 94598

Invoice To: Arvin Acharya
ITSI
2730 Shadelands Drive Suite 100
Walnut Creek, CA 94598

Description	TAT	Matrix	Qty	Mult	Unit Price	Test Total
Tests:						
TPH(d/mo) with Silica Gel Clean-Up	5 days	Water	1	1	$55.60	$55.60
					SubTotal:	$55.60

Invoice Total: $55.60

If paid by **08/12/05** Prompt Pay Invoice Total = $50.04

*** ALL FAXED INVOICES ARE FOR YOUR INFORMATION ONLY - PLEASE PAY OFF ORIGINAL**

Please include the invoice number with your check and remit to Accounts Receivable at the letter head address. MAI also accepts credit card (Visa/Master Card/Discover/American Express) payment. Please call Account Receivable for details on this service.

MAI's EDF charge does not include the EDF charge for subcontracted analyses. The minimum EDF charge per workorder is $25.00. For invoice total greater than $5000.00, EDF will be 2% of the total invoice. The EDF charge for subcontracted analyses will be identical to Subcontractor's fee.

Terms are net 30 days from the invoice date. After this period 1.5% interest per month will be charged. Overdue accounts are responsible for all legal and collection fees. If you have any questions about billing, please contact Accounts Receivable at McCampbell Analytical.