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NCBC GULFPORT
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SECOND SEMI ANNUAL STATUS REPORT (TENTH AND ELEVENTH QUARTERS) FOR
BIOSLURPING IMPLEMENTATION AT SITE 6 NCBC GULFPORT MS
10/22/2004
BATTELLE

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18.03.06.0012

Battelle

The Business of Innovation

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October 22, 2004

Naval Facilities Engineering Command
Southern Division
2155 Eagle Drive
P.O. Box 190010
North Charleston, SC 29419-9010

Attention: Mr. Art Conrad

Dear Mr. Conrad:

**CONTRACT NO. N47408-01-D-8207, TASK ORDER 003
SECOND SEMI-ANNUAL STATUS REPORT (TENTH AND ELEVENTH QUARTERS) FOR
BIOSLURPER IMPLEMENTATION AT
NAVAL CONSTRUCTION BATTALION CENTER (NCBC) GULFPORT, MS**

Tenth and Eleventh Quarters Status Report

1.0 INTRODUCTION

Battelle was contracted to install and operate a full-scale bioslurper system to remediate Site 6, a former fire-fighting training area, located at Naval Construction Battalion Center (NCBC) Gulfport, MS. Startup of the system was performed November 1, 2001. A description of the bioslurper system and the first nine quarters of operation are summarized in previous quarterly reports. This Semi-Annual Status Report describes the activities performed and results between February 1, 2004 and September 24, 2004. An analysis of the data and appropriate conclusions and recommendations are provided.

2.0 ACTIVITIES PERFORMED

The bioslurper system was temporarily shut down during part of this reporting period due to minimal recovery of light, nonaqueous phase liquid (LNAPL). It operated from June 8 to September 24, 2004. The operation, monitoring, and maintenance (OM&M) contractor performed routine operation and maintenance (O&M) and collected performance data throughout the operating period. A discussion of activities is presented below.

2.1 Operation and Monitoring

- Operated system and measured system operating parameters from June 8 to September 24, 2004. These include various temperatures, pressures, and flowrates. Data sheets are included in Attachment 1.



- Collected off-gas samples from the stack of the liquid ring pump (LRP) on June 8, July 8, August 3, 2004. Each sample was collected in a Summa™ canister and sent to Air Toxics, Inc., for total petroleum hydrocarbon (TPH) analysis using method TO-3. Analytical results are included in Attachment 2.
- Collected water samples from the effluent of the oil/water separator (OWS) on June 8, July 8, August 3, and September 1, 2004. Samples were analyzed for diesel range organics (DRO). Analytical results are included in Attachment 3.
- Collected water samples twice each month from the effluent of the air stripper for analysis of pH (EPA Method 150.1) and BTEX (EPA Method 602). Samples were collected on June 8, June 16, July 8, July 16, August 3, August 17, September 1, and September 14, 2004. A stripper pH confirmation sample was collected to corroborate the result obtained from the June 16 analytical report. The confirmation sample results indicated a pH in the required range of the Water Discharge Permit Compliance.
- Rotated extraction wells and measured oil thickness and groundwater elevations inside the 23 extraction wells and 8 monitoring wells. Up to 10 wells were extracted from simultaneously. The volume of LNAPL that accumulated in the tank was quantified during each site visit.

2.2 Maintenance

- On May 5, 2004, the polyvinyl chloride (PVC) piping between the progressive cavity pump (PCP) to the oil water separator (OWS), and from the OWS to the discharge pump (DP) was replaced. On June 8, 2004, the piping from the sump to the OWS was replaced. The replacement of the PVC pipe was required because it had become fatigued from severe weathering.
- Changed the progressive cavity pump oil and cleaned the particulate filter on July 12, 2004.
- The system was made ready for Hurricane Charley. The OWS was covered and the off-gas stack guy wires were readjusted. All loose materials and equipment were secured and/or stored.

2.3 Reporting

- Prepared the *1st Semi Annual Status Report for Bioslurper Implementation at Naval Construction Battalion Center (NCBC) Gulfport, MS* (Battelle, 2004a). This letter report, which was submitted to the Navy on March 12, 2004, documents the eighth and ninth quarters of full-scale operation.

3.0 RESULTS

The primary objective of the bioslurper system is to remove LNAPL to the maximum extent practicable in accordance with Mississippi guidelines. The progress toward meeting this objective was tracked by monitoring the mass of contaminants removed from the subsurface, the LNAPL remaining in site wells, and O&M costs. In addition, system operation was closely monitored to ensure that the system was operating according to design and in compliance with the permit requirements. The results are discussed in this section.

3.1 Contaminant Removal

Hydrocarbon contamination is removed in the form of LNAPL, emulsified/dissolved oil in the aqueous discharge stream, and in the vapor phase in the off-gas. The mass removed in each stream is summarized in Table 1. The cumulative total is presented graphically in Figure 1.

The volume of LNAPL recovered was determined by periodically measuring the change in thickness inside the 500-gallon storage tank. Measurements were made using a graduated stick coated with water paste (Kolor Kut or equivalent). The stick was slowly lowered into the tank until it touched the bottom. The portion of the stick exposed to water changes color. The length of the colored portion is measured to determine the thickness of the water layer that has formed at the bottom of the tank. A calibration factor of 1 inch:14.1 gallons liquid was used to convert the thickness to a volume. A specific gravity of 0.87 was used to convert the volume of LNAPL into a mass.

Table 1. Hydrocarbon Removal

Process Stream	Hydrocarbons Removed (lb)		
	Present (February 1 – September 24)	8 th and 9 th Quarter	Cumulative
LNAPL ^(a)	1,410 (194 gallon)	1,214 (167 gallons)	16,843 (2,317 gallons)
Dissolved/Emulsified Hydrocarbons ^(b)	914	660	4,529
Off-Gas ^(b)	87	69	605
Total:	2,411	1,943	21,977

a) A specific gravity of 0.87 was used to estimate the mass of LNAPL recovered.

b) Estimated value based on analytical results received at the time the quarterly status report was prepared.

The mass of TPH dissolved and emulsified in the aqueous stream was calculated using the TPH concentration data (based on the DRO concentration measured in the aqueous effluent from the OWS) and process water volume measured using the water totalizer. TPH concentrations measured in the aqueous effluent from the OWS are shown in Figure 2. Water totalizer readings are provided in Attachment 1. The mass recovered in a given time interval (i.e., month) was calculated by averaging the OWS effluent concentrations at the beginning and end of the time interval and multiplying this average concentration by the volume of fluid processed during the data collection period.

The mass of TPH recovered in the vapor phase was calculated using the TPH concentration measured in the off-gas and the average flowrate for the period in which the sample was collected. TPH concentrations measured in the off-gas from the LRP stack are shown in Figure 3. The off-gas flowrates are provided in Attachment 1. The mass recovered in a given time interval (i.e., month) was calculated by averaging the effluent concentrations at the beginning and end of the time interval and multiplying this average concentration by the volume of off-gas discharged during the data collection period.

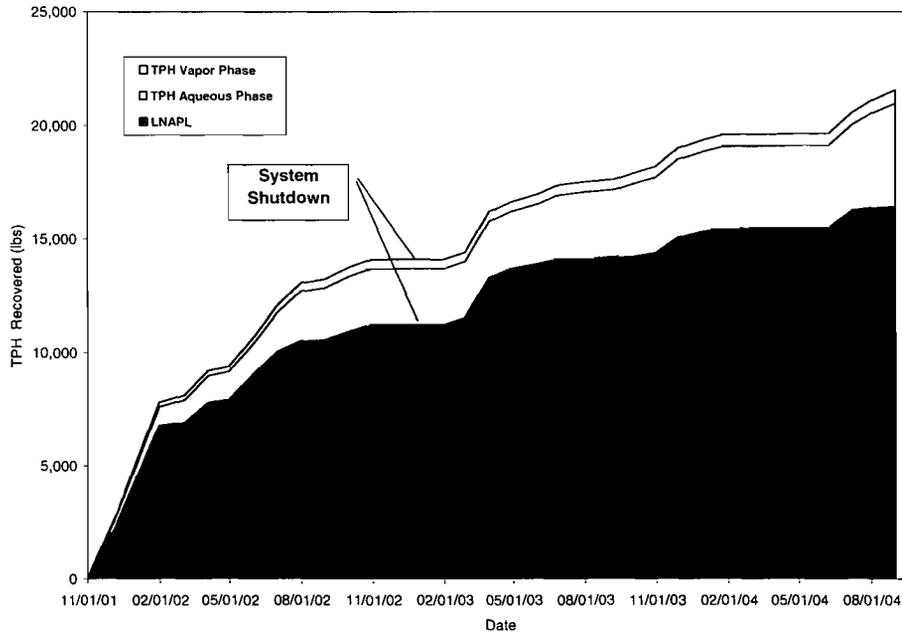


Figure 1. Cumulative Mass of Hydrocarbons Removed

Figure 1 shows an increase in LNAPL recovery during the month of June 2004. The increase in LNAPL recovery can be attributed to restarting the remedial system after six months of inactivity. The average thickness of LNAPL was above average during this month of operation. The dissolved/emulsified phase represents approximately 65 percent of the total mass removed this quarter. TPH concentrations in the process water and the off-gas stream remain below initial concentrations (Figures 2 and 3, respectively).

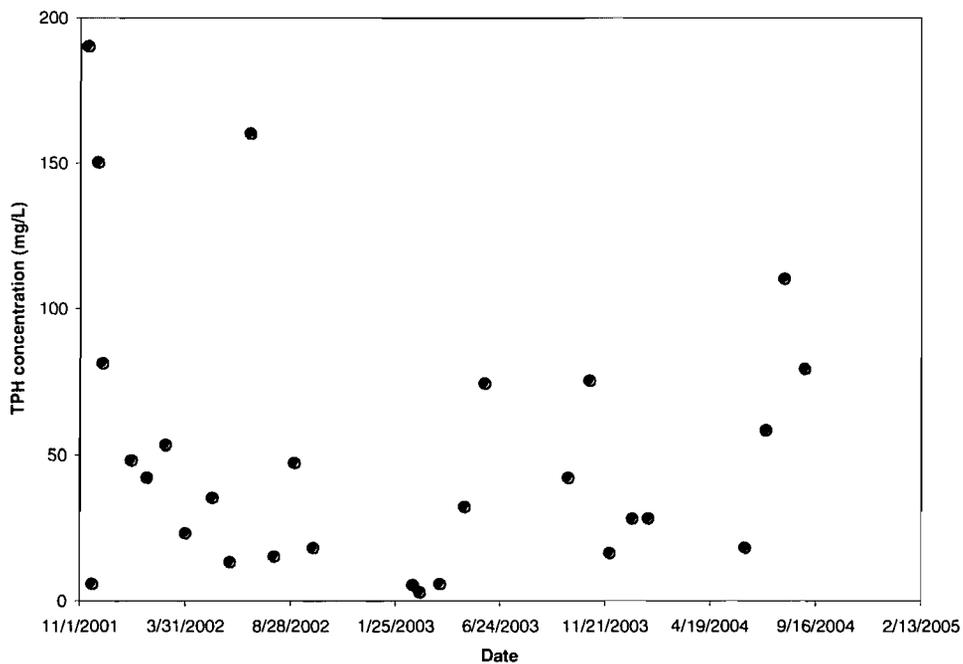


Figure 2. TPH Concentrations in Process Water (OWS Effluent)

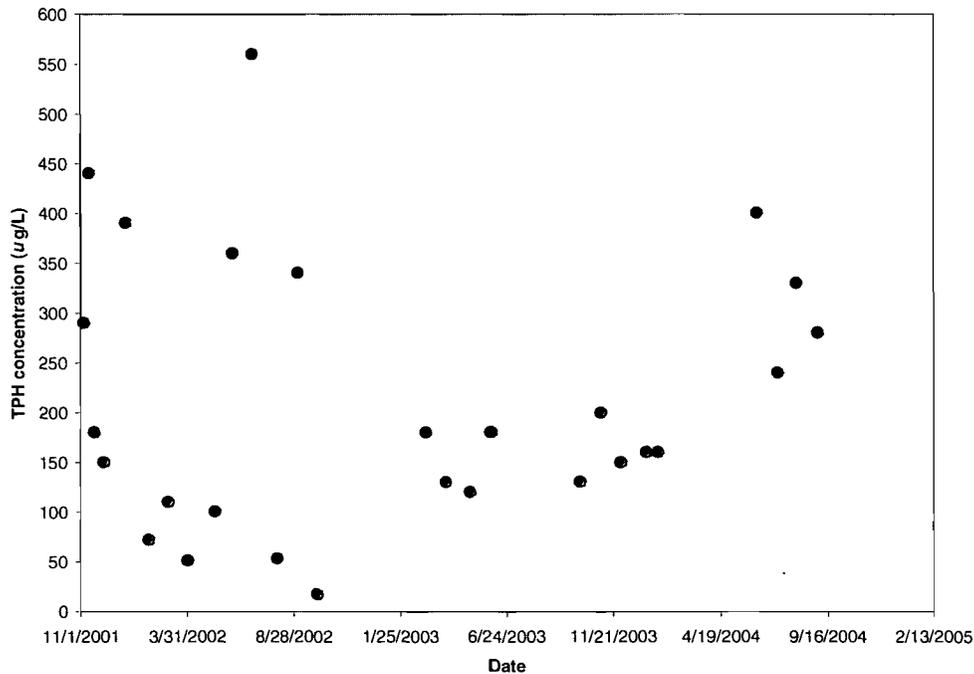


Figure 3. TPH Concentrations in Off-Gas

3.2 Light, Nonaqueous Phase Liquid Thickness

The depth to LNAPL and to groundwater was measured in each well prior to rotating a group of extraction wells and during quarterly monitoring events. The data is used to calculate the thickness of LNAPL in each well. The plots for individual wells are included as Attachment 4. The average LNAPL thickness and average water table elevation was calculated for each set of data. The results are plotted in Figure 4. As can be observed from Figure 4, during the tenth and eleventh quarters of operation, the groundwater table elevation was the lowest on August 3 and August 31, 2004 and highest on June 7 and July 6, 2004. The average LNAPL thickness had been increasing during the first half of 2004, while the system was not operating, but rapidly decreased during the summer months after operation of the system was restarted.

The LNAPL thickness and groundwater table elevations measured on June 8, 2004, just prior to restarting the bioslurper system January 30, were plotted using Surfer™ (Figure 5). A significant increase in LNAPL is observed in the site wells as compared to the thickness observed after system shutdown in January. At that time, all wells contained less than 0.05 feet of LNAPL (Battelle 2004). This increase is a result of the decreased water table elevation allowing previously trapped LNAPL to enter the site wells. The LNAPL thickness in site wells is seen to gradually decrease during the three months the system was operated during this reporting period as shown in Figures 6, 7, and 8.

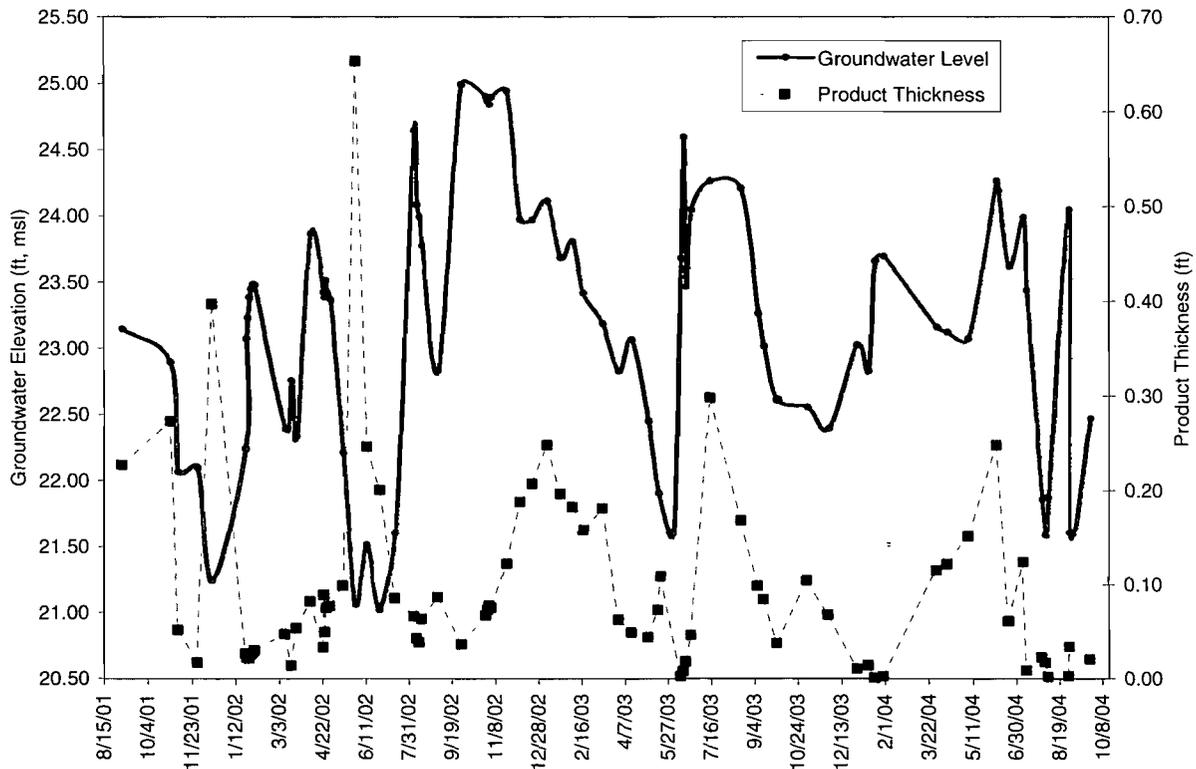


Figure 4. Average Water Elevation Measurements and LNAPL Thickness

3.3 Operating Cost

The cost to operate the bioslurper system is an important consideration in determining the point at which it is no longer practical to use the system for free product recovery. The average monthly O&M cost to recover LNAPL is shown in Figure 9. These costs include on-site O&M labor, off-site technical support, analytical costs, document preparation, management, travel and per diem. The capital cost to design and install the system is not included. In addition, electrical and waste disposal costs are not included.

The monthly average operating cost, about \$120 per gallon of recovered LNAPL, after the bioslurper system was restarted (June 8 through September 24) was in-line with what was observed during previous periods of operation. A spike was observed during the month of August resulting from some required system repairs.

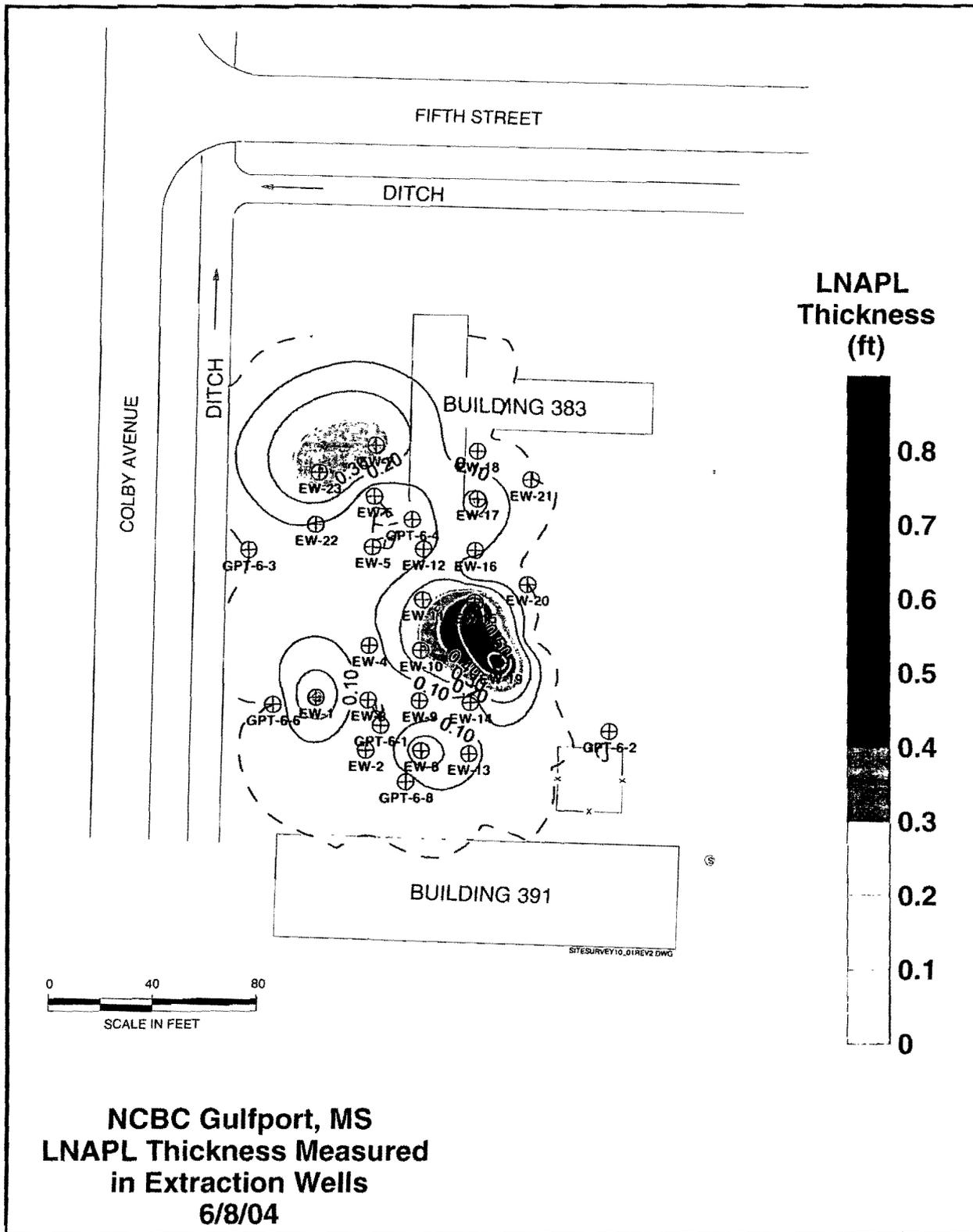


Figure 5. LNAPL Plume (June 8, 2004)

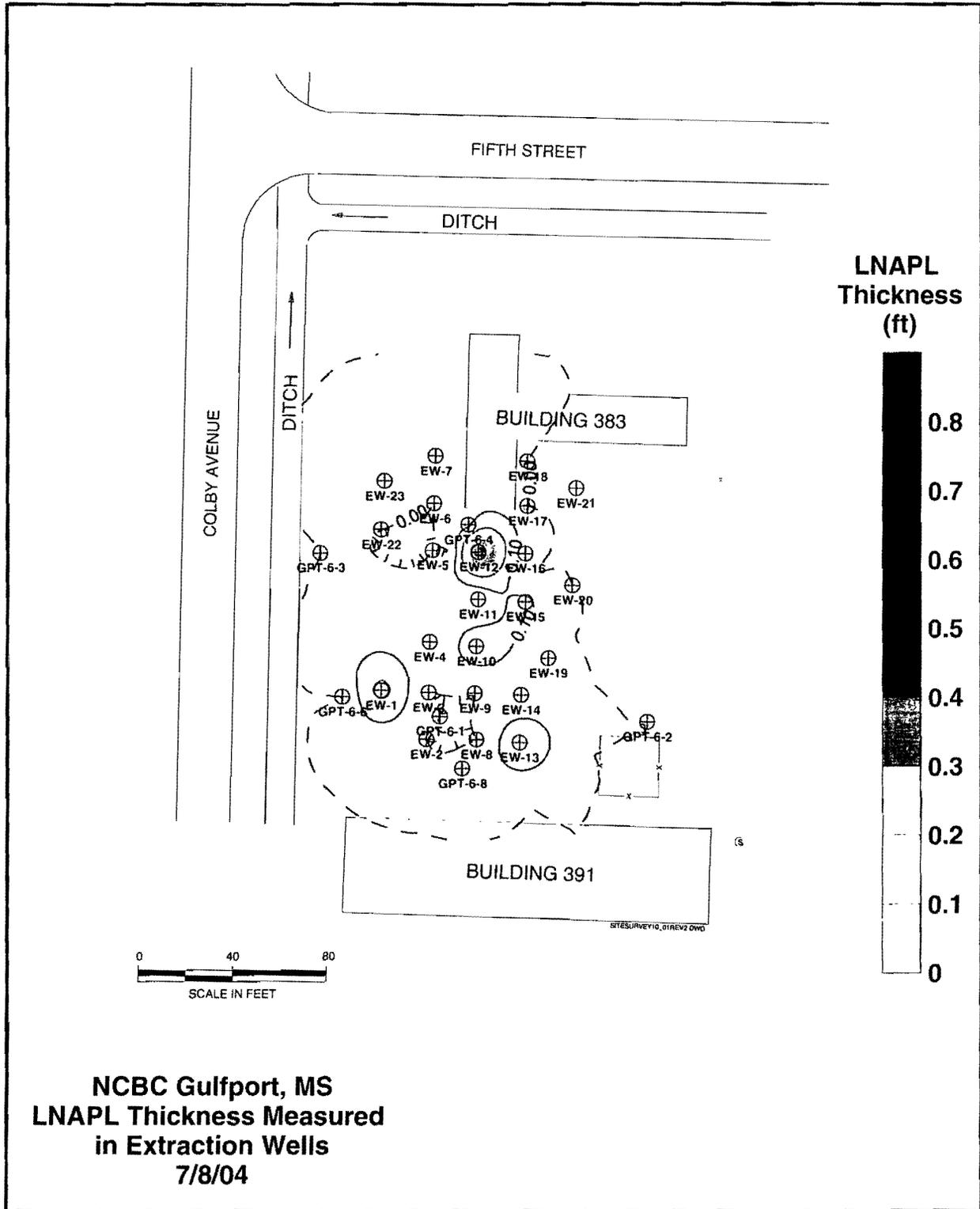


Figure 6. LNAPL Plume (July 8, 2004)

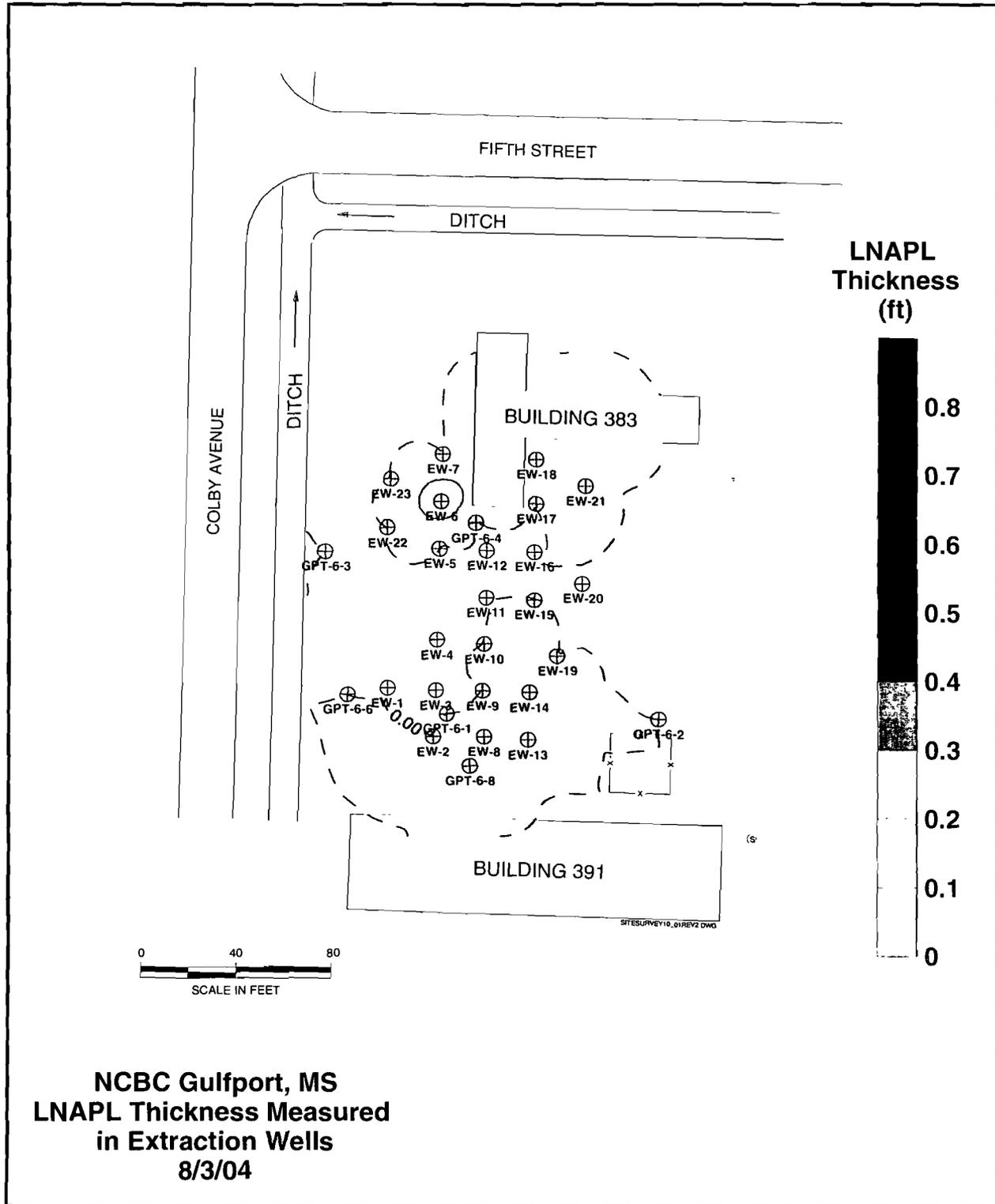


Figure 7. LNAPL Plume (August 03, 2004)

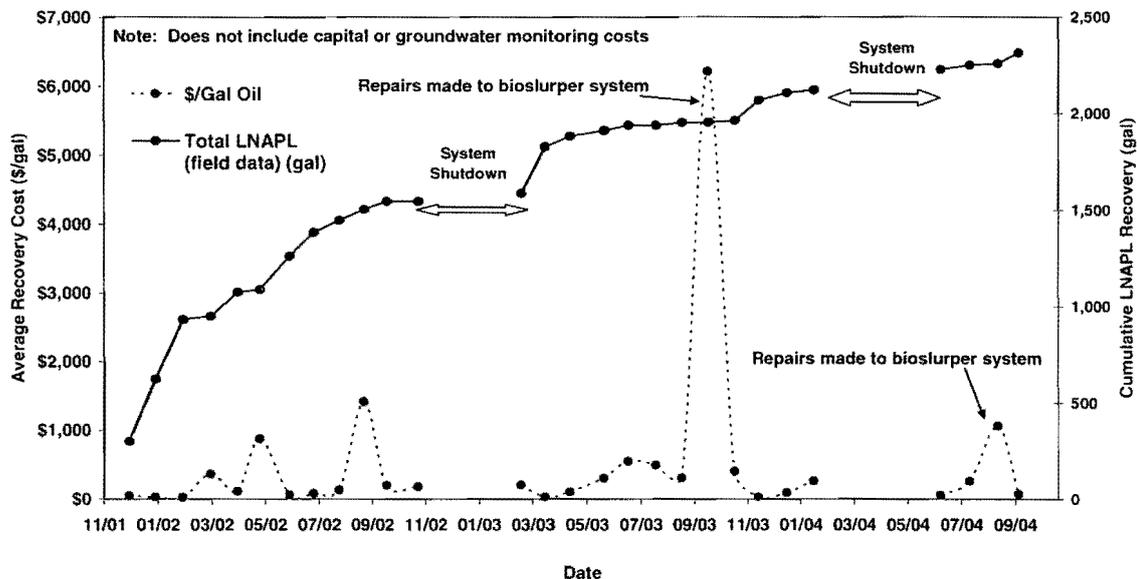


Figure 9. Average Recovery Cost (\$/gal) and Cumulative LNAPL Recovery (gal)

3.4 Percent Operating Time

An hour meter on the LRP was used to track operating time. Percent operating time was calculated on a monthly basis by dividing the number of hours recorded on the LRP timer by the number of possible hours during the same period. The time the system was shut down each quarter to monitor LNAPL thickness and groundwater elevations and the time the system was shut down as a precaution during a hurricane was subtracted from the total number of possible hours in order to more accurately reflect downtime stemming from routine O&M activities. Results are plotted in Figure 10. As shown, the operating time for the months of June, July, August and September 2004 was 98%, 93%, 80% and 76%, respectively. The reasons for shutdown and applicable corrective actions are presented in Table 2.

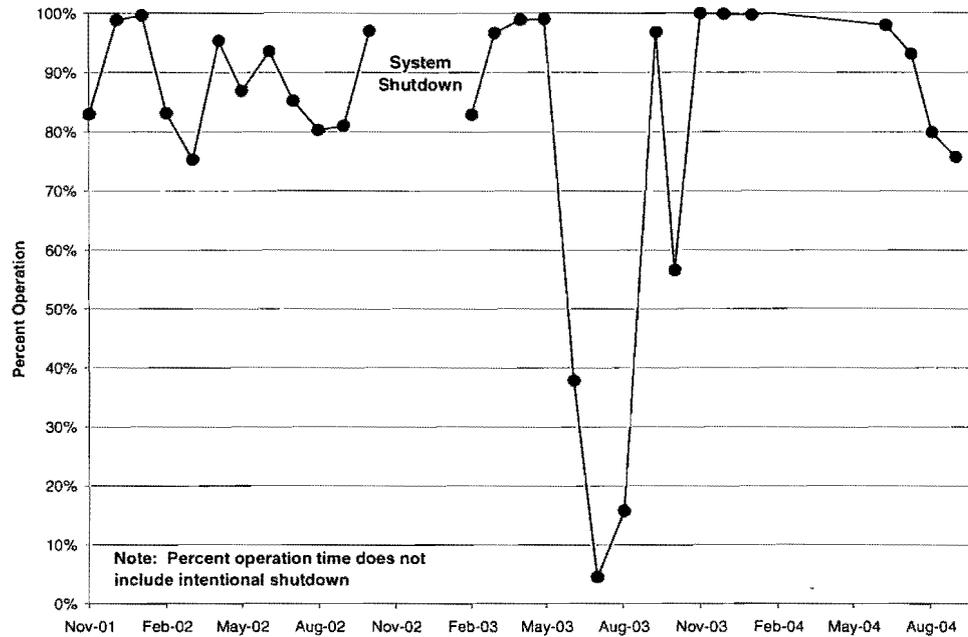


Figure 10. Percent Operation Time

Table 2. System Shutdown Log

Date	Reason for Shutdown	Corrective Action	Approximate Downtime (hrs)
6/11/04	Power failure	Restarted system	14
6/22/04	Maintenance	Restarted system	1.5
6/29/04	Power failure and heavy rains	Restarted system	213
7/19/04	High level in oil tank	Drained water from oil tank	28
7/25/04	Power failure	Restarted system	13
8/12/04	Electrical short/burned fuse	Fixed wiring/replaced fuse	120
9/7/04	Flooded compound area	Replaced sump pump	4.5
9/10/04	Cracked coupling after PCP	Replaced coupling	20.5
9/14/04	Hurricane Ivan	Restarted system	146

3.5 Water Discharge Permit Compliance

NCBC Gulfport received approval to discharge the treated bioslurper effluent water to the Gulfport POTW on October 22, 2001. Issued by the Mississippi Department of Environmental Quality (MDEQ), Permit No. MSP091208 grants permission to discharge wastewater provided that certain requirements are met. These limitations include:

- A discharge limit of 0.036 million gallons per day (mgd) (equivalent to a continuous 25 gpm flowrate over 24 hours, or 36,000 gpd)
- A pH range between 5.0 and 9.0 standard units
- Benzene concentration limit of 0.05 mg/L
- Total BTEX concentration limit of 1.0 mg/L.

The volumetric flow of aqueous effluent from the bioslurper process was measured using a flow totalizing meter (Niagara Model No. N150-IRN-BR-1E, nutating disc-type meter). The time interval was determined using readings from the LRP timer. Resulting flowrates were calculated and are plotted in Figure 11. Flowrates vary significantly depending on the number and combination of extraction wells as well as changes in the groundwater table elevation resulting from seasonal and/or weather changes. However, in all instances, the process water flowrate remained below 36,000 gallons/day.

In order to ensure compliance for contaminants of concern, grab samples were collected twice monthly from the treated effluent and sent to a State of Mississippi certified laboratory (Severn-Trent Laboratories). Samples were analyzed for pH by EPA Method 150.1 and for BTEX by EPA Method 602. Results are presented in Figure 12. The dashed lines indicate the maximum allowable discharge concentrations for BTEX components. As can be seen, the concentrations of contaminants of concern consistently remain below these values.

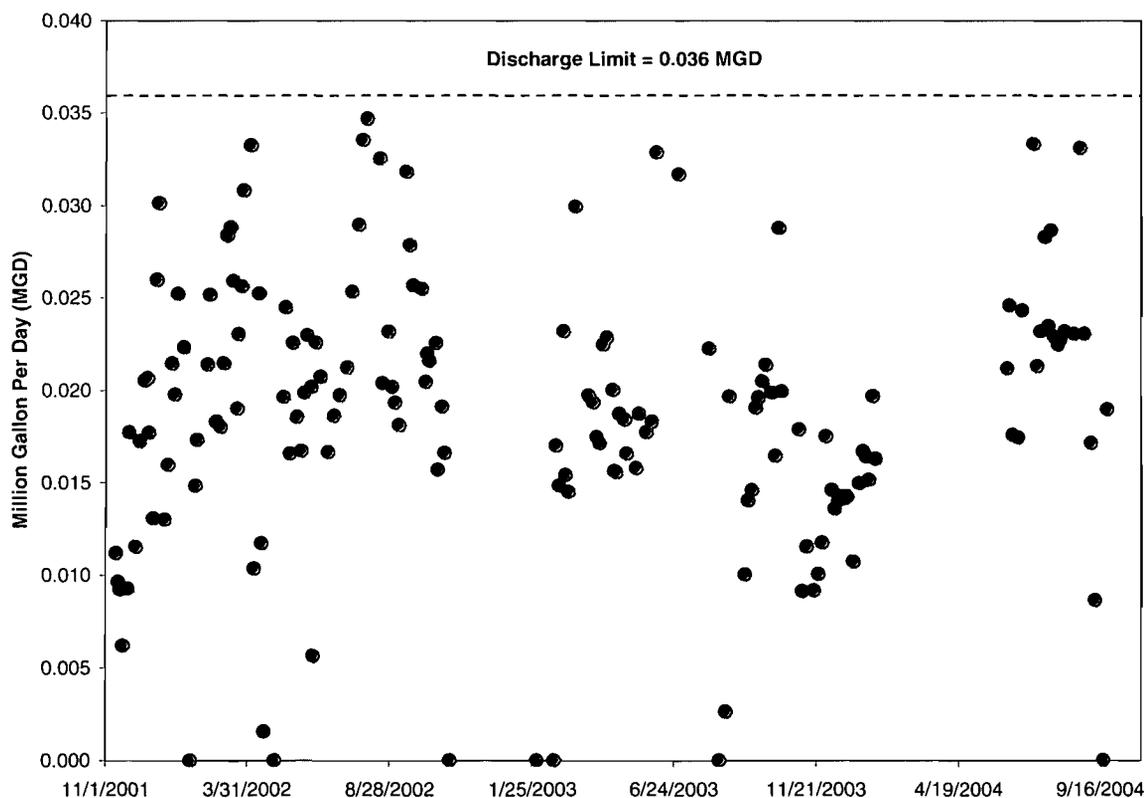


Figure 11. Average Daily Flowrates Discharged to the POTW

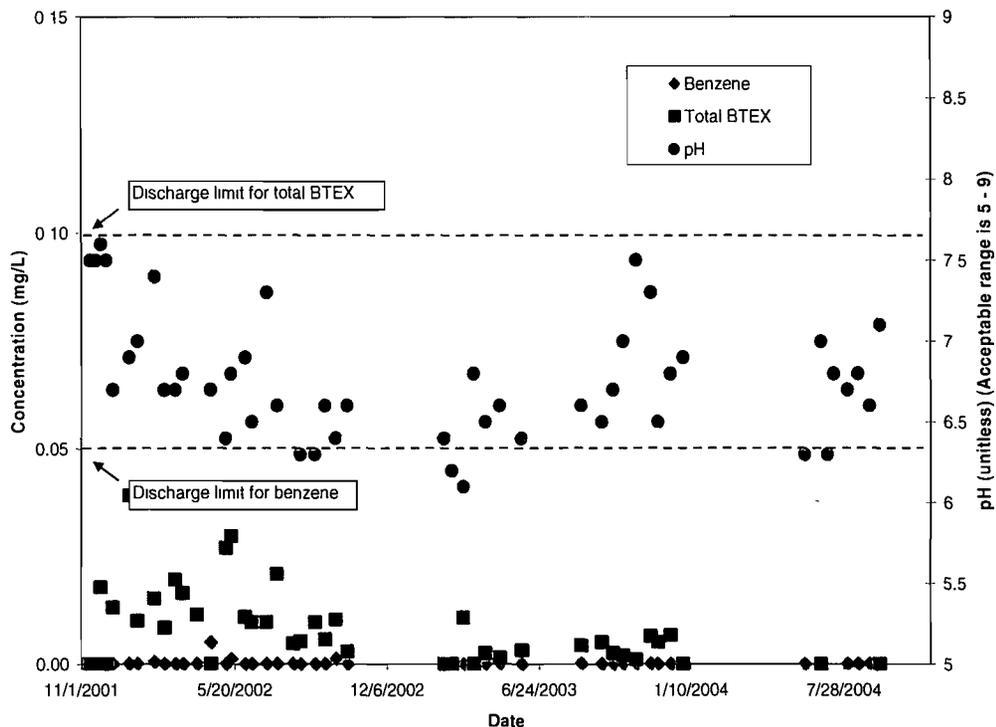


Figure 12. Benzene, Total BTEX, and pH for Samples Collected Prior to Discharge to the POTW

4.0 CONCLUSIONS AND RECOMMENDATIONS

After the system was shut down on January 24, 2004, the operator initially visited the site weekly to collect groundwater levels and LNAPL thickness data. The monitoring frequency was reduced to monthly after the first month of shutdown. The system was restarted on June 8, 2004 since the LNAPL thickness had been observed to increase significantly in the extraction wells. About 183 gallons of LNAPL have been recovered since restarting the system. The majority of this, 106 gallons, was recovered during the first month of operation.

A recommendation to shut down the system temporarily will be made to the Navy only if the product recovery continues to decrease and/or LNAPL thicknesses are minimal. Data interpretation showed elevated product recovery during groundwater table rising periods. An effort will be made to anticipate the rainy season and optimize the bioslurping system for this period.

5.0 EXIT STRATEGY DEVELOPMENT

In October, 2003 the Navy and Battelle met with the MDEQ at Site 6 to discuss the planned field investigation to delineate the dissolved-phase volatile organic compound plume and to solicit input into the exit strategy development. Based on the verbal comments received at the meeting, Battelle modified the planned field activities slightly to include additional cone penetrometer test (CPT) locations to gather

more information on the site geology. Also, aqueous samples were collected at relatively deeper depths at every direct push groundwater sampling location. These changes from the work plan for the plume delineation investigation were discussed in a phone conference held between Battelle and the Navy on February 19, 2004. A brief written summary of the changes was submitted to the Navy via email on February 23. As requested by the Navy, the MDEQ provided written comments on the work plan in a letter dated February 23, 2004, which confirmed the recommendations made during the October 2003 site visit.

Battelle commenced the field investigation in March 2004. The three main objectives of the field investigation were the following:

- Identify the contaminants of concern in the source area by collecting groundwater samples from the site monitoring wells that are located within the free-phase boundary.
- Determine whether the dissolved-phase plume extends beyond the present monitoring well network.
- Collect more information on the geology of the surficial aquifer and underlying silty-clay unit.

The field activities were performed as described in the work plan (Battelle, 2003) and in the memorandum provided to the Navy point of contact (communication with Art Conrad via email on February 23, 2004). The results of the field investigation are presented in the field investigation report (Battelle 2004b).

Based on the results of the field investigation, a recommendation was made to install five additional monitoring wells at the site: one well adjacent to GPT-6-PZ4, screened from 20 to 30 feet bgs, a cluster of two wells screened 5 to 15 and 20 to 30 feet bgs at the leading edge of the plume, and another cluster of two wells also screened 5 to 15 and 20 to 30 feet bgs installed adjacent to the first cone penetrometer location, referred to as CPT-1. The installation of these wells was performed the week of September 22nd.

A second groundwater monitoring event is scheduled for the week of October 18, 2004. Sampling will be performed in accordance with the plume delineation work plan (Battelle, 2003) and the plume delineation investigation report (Battelle, 2004b).

6.0 FUTURE ACTIVITIES

The following activities will be performed during the next quarter:

- Continue monitoring oil/water levels.
- Continue field investigation in accordance with the *Work Plan for the Delineation of the Dissolved-Phase Plume at Naval Construction Battalion Center (NCBC) Gulfport, MS* (Battelle, 2003). The next sampling event is being performed the week of October 18.
- Consult with the MDEQ to develop target remediation goals for LNAPL and for groundwater contamination concentrations.

7.0 REFERENCES

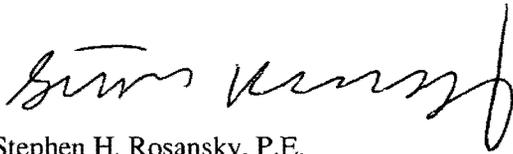
Battelle. 2003. *Work Plan for the Delineation of the Dissolved-Phase Plume at Naval Construction Battalion Center (NCBC) Gulfport, MS*. Prepared for Naval Facilities Engineering Command. Contract No: N47408-01-D-8207. July.

Battelle. 2004a. *1st Semi Annual Status Report for Bioslurper Implementation at Naval Construction Battalion Center (NCBC) Gulfport, MS*. Letter report. Prepared for Naval Facilities Engineering Command. Contract No: N47408-01-D-8207. March.

Battelle. 2004b. *Dissolved Phase Plume Delineation Investigation for Site 6 at Naval Construction Battalion Center (NCBC) Gulfport, MS*. Letter report. Prepared for Naval Facilities Engineering Command. Contract No: N47408-01-D-8207. June.

Please contact me at (614) 424-7289 or rosansky@battelle.org, or Ms. Lydia Cumming at (614) 424-7778 or cummingl@battelle.org with any questions.

Sincerely,



Stephen H. Rosansky, P.E.
Senior Environmental Engineer
Environmental Restoration Department

CC:kl

cc: Mr. Mike Maughon, NAVFAC Southern Division (1 copy)
Mr. Gordon Crane, NCBC Gulfport (3 copies)
Mr. Josh Fortenberry, NFESC (1 copy) (electronic copy only)
Mr. Dan Wadill (1 copy)

ATTACHMENT 1

Process Parameters, Gulfport, Site 6, MS

Date	6/8/2004	6/10/2004	6/12/2004	6/16/2004	6/22/2004	6/26/2004	7/8/2004	7/12/2004	7/16/2004	7/20/2004	7/24/2004	7/26/2004
Time	12:00	7:30	8:30	11:00	9:15	10:15	8:55	8:45	10:35	11:10	11:05	7:55
LRP Timer	12063.1	12063.1	12141.4	12240.2	12380.8	12476.9	12550.9	12646.7	12743.4	12813	12908	12938
LRP Vacuum (in Hg)	28	27	28	27	27	26	26	26	26	27	28	27
ALS Vacuum (in Hg)	22	20	22	21	22	21	19	19	19	19	21	19
Seal Water Temperature (°F)	108.7	108.5	102.5	90.2	104.2	101.8	116	101		109.1	103.6	101.2
Seal Stack Temperature (°F)	116.8	118.8	112.8	134	110.6	112.6	126.4	114.4		116.7	115	108
Seal Water Level (ok, +, -)	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok
LRP Oriface Plate ("H2O)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.25	0.25	0.25	0.25
Off-Gas Flowrate (SCFM)	26	26	26	26	26	26	26	26	58	58	58	58
PCP Pressure (psi)	1.6	1.6	1.6	0.75	1.5	1.7	1.5	1.5	1.5	1.5	1.5	1.5
PCP Cycles (cycles/hour)	9.7	9.9	10.1	11	10	10	9.2	9	10.2	11	10	6.5
PCP Flow Control Setting	1.7	1.7	1.7	1.5	1.5	1.7	1.3	1.3	1.3	1.3	1.1	1.3
Stack Gas TPH (ppm)	210	210	185	100	2300	400	810	120	205	190	200	145
Stack Gas O2 (%)	18	18	18.5	20	18		18.5	18	19.5	17	19	19
Stack Gas CO2 (%)	1.5	1.75	1.75	1	3.5		3.5	2	2	2.5	2.5	2
Water Totalizer (gallons)	9414650	9414650	9494840	9567440	9671320	9,768,630	9,871,380	9,956,500	10,054,530	10,136,600	10,229,500	10,265,280
Average Water Flowrate (gpm)		14.7	17.06	12.2	12.1	16.87		14.8	16.1	19.65	16.3	19.9
Discharge pump flowrate (gpm)	19	19	19	16	30	15	20	20	21	22	22	12
Cooling water feed rate (ok, +, -)												
No. of active extraction wells	5	5	6	6	5	5	5	7	7	7	7	7
(Oil tank) DTP (in):	25	25	24.25	24	21	18.25	17.5	17.5	17	17	17	16.5
DTW (in):	36	36	36	36	36	36	36	36	36	36	36	36
Volume (gallons):	155.1	155.1	165.675	169.2	211.5	250.275	260.85	260.85	267	267	267.9	274.95

Notes:

NR = Not recorded

NA = Not applicable

Calculate volume of fuel in tank = [(Height of tank (36.0 in) - DTP (in)) - (Height of tank (36.0 in)-DTW(in))] X 14.1(gal/in)

System was shutdown for extended periods of time between August 22 and September 8

Process Parameters, Gulfport, Site 6, MS (continued)

Date	7/30/2004	8/3/2004	8/6/2004	8/10/2004	8/20/2004	8/26/2004	8/31/2004	9/7/2004	9/11/2004	9/20/2004	9/24/2004
Time	9:50	8:55	14:00	11:30	10:55	11:15	10:58	13:25	14:00	12:45	12:15
LRP Timer	13036.5	13131.9	13208.5	13301.2	13408.2	13528.5	13670	13834	13972.2	13978.9	13075.6
LRP Vacuum (in Hg)	28	27	27	29	26	25	26	27	27	27	27
Seal Water Temperature (°F)	19	18	18	20	18	19	19	18	18	18	18
Seal Stack Temperature (°F)	102.5	107.4	114	108.7	105	110.8	109.8	112.7	106.8	105.7	107
Seal Water Level (ok, +, -)	111	113.6	119.3	113.6	110.4	114.8	114.2	118	111	115	112.9
LRP Oriface Plate ("H2O)	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok
Off-Gas Flowrate (SCFM)	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.1
ALS Vacuum (in Hg)	58	58	58	58	58	58	58	58	58	58	36
PCP Pressure (psi)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
PCP Cycles (cycles/hour)	6.3	6.1	6.2	6.1	6.1	7.3	7.1	6.9	6.1	6.1	5.8
PCP Flow Control Setting	1.3	1.2	1.2	1.2	1.2	1	1	1	0.75	1	1.4
Stack Gas TPH (ppm)	200	175	180	380	380	110	500	100	100	160	100
Stack Gas O2 (%)		20.5	20.5	18.5	18.5	20	16	18.5	18.5	16.5	20
Stack Gas CO2 (%)		1.75	2.2	3.2	3.2	1.5	6	2	2.3	3.5	1.9
Water Totalizer (gallons)	10,359,100	10,447,980	10,520,500	10,610,500	10,610,500	10,798,520	10,910,310	1027670	11077380	1120380	1196740
Average Water Flowrate (gpm)	15.9	15.6	15.8	16.1		26	13.2	11.9	6	Down	13.16
Discharge pump flowrate (gpm)	12	12	12	12	12	18	17	16	10	10	16
Cooling water feed rate (ok, +, -)						adjusted to 51 amps		adjusted to 51 amps		adjusted to 51 amps	
No. of active extraction wells	7	7	7	8	8	10	5	5	5	5	5
(Oil tank) DTP (in):	16.5	16.5	16.5	16.5	16.25	16.25	16	15	14	12	12
DTW (in):	36	36	36	36	36	36	36	36	36	36	36
Volume (gallons):	274	274	274	274	278	278	282	296	310.2	338.4	338.4

Notes:

NR = Not recorded

NA = Not applicable

Calculate volume of fuel in tank = [{Height of tank (36.0 in) - DTP (in)} - {Height of tank (36.0 in)-DTW(in)}] X 14.1(gal/in)

System was shutdown for extended periods of time between October 22 and October 31.

ATTACHMENT 2



AIR TOXICS LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

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- Results; and
- Chain of Custody (copy).

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Hours 8:00 A.M to 6:00 P.M. Pacific

E-mail to: samplereceiving@airtoxics.com

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0406188

Work Order Summary

CLIENT: Mr. Mike Valder
Severn-Trent
6712 Benjamin Rd., Suite #100
Tampa, FL 33634

BILL TO: Mr. Mike Valder
Severn-Trent
6712 Benjamin Rd., Suite #100
Tampa, FL 33634

PHONE: 813-885-7427

FAX: 813-885-7049

DATE RECEIVED: 6/10/04

DATE COMPLETED: 6/22/04

P.O. # 167842

PROJECT # 0486003 Site 6 Gulfport, MS

CONTACT: DeDe Dodge

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>
01A	LRP STACK	Modified TO-3	1.5 "Hg
02A	Lab Blank	Modified TO-3	NA
03A	LCS	Modified TO-3	NA
03B	LCS	Modified TO-3	NA

CERTIFIED BY: _____

Sandra J. Freeman

Laboratory Director

DATE: 06/22/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-3
Severn-Trent
Workorder# 0406188

One 1 Liter Summa Canister sample was received on June 10, 2004. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with photo ionization and flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline and correspond to the range of hydrocarbons from C5 to C10. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-3</i>	<i>ATL Modifications</i>
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch <= 20 samples
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation $DL = A + 3.3S$, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

The chain of custody information for sample LRP STACK did not match the entry on the sample tag. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the information on the chain of custody was used to process and report the sample.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the detection limit.
- M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: LRP STACK

ID#: 0406188-01A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	6061709	Date of Collection:	6/8/04
Dil. Factor:	42.6	Date of Analysis:	6/17/04 01:52 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.043	0.14	0.13	0.42
Toluene	0.043	0.16	0.18	0.71
Ethyl Benzene	0.043	0.19	0.14	0.61
Total Xylenes	0.043	0.19	0.74	3.3
TPH (C5+ Hydrocarbons) ref. to Gasoline	1.1	4.4	98	400
TPH (Gasoline Range)	1.1	4.4	32	130

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	88	75-150
Fluorobenzene (PID)	106	75-125

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SAMPLE NAME: Lab Blank

ID#: 0406188-02A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	6061704	Date of Collection:	NA
Dil. Factor:	1:00	Date of Analysis:	6/17/04 09:21 AM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uGL)
Benzene	0.0010	0.0032	Not Detected	Not Detected
Toluene	0.0010	0.0038	Not Detected	Not Detected
Ethyl Benzene	0.0010	0.0044	Not Detected	Not Detected
Total Xylenes	0.0010	0.0044	Not Detected	Not Detected
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025	0.10	Not Detected	Not Detected
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	84	75-150
Fluorobenzene (PID)	100	75-125

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406188-03A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	6061717b	Date of Collection:	NA
Dil. Factor:	100	Date of Analysis:	6/17/04 08:25 PM

Compound	%Recovery
Benzene	96
Toluene	84
Ethyl Benzene	82
Total Xylenes	86

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (PID)	102	75-125

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0406188-03B

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	6061718	Date of Collection:	NA
Dil. Factor:	1:00	Date of Analysis:	6/17/04 09:10 PM

Compound	%Recovery	
TPH (C5+ Hydrocarbons) ref. to Gasoline	106	
TPH (Gasoline Range)	116	
Container Type: NA - Not Applicable		
Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	104	75-150

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922.

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX: (916) 985-1020

CHAIN-OF-CUSTODY RECORD

Page ___ of ___

Contact Person <u>Lydia Cummings</u> Company <u>BATELLE Mem Int</u> Address <u>505 KING AVE</u> City <u>Columbus</u> State <u>OH</u> Zip <u>43201</u> Phone <u>614-424-7719</u> FAX _____ Collected By: Signature <u>[Signature]</u>	Project info: P.O. # <u>1167842</u> Project # <u>0496003</u> Project Name <u>SITE 6</u> <u>WILSON, MS</u>	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush _____ Specify <u>1/2</u> <u>hr 6:15am</u>
--	---	--

Lab I.D.	Field Sample I.D.	Date & Time	Analyses Requested	Canister Pressure / Vacuum		
				Initial	Final	Receipt
<u>01A</u>	<u>LRP STACK</u>	<u>6-8-04</u>	<u>TO3 - BTEX/TPH</u>	<u>29"</u>	<u>0"</u>	<u>1.5" Hg</u>
<u>(4)</u>						

Relinquished By: (Signature) <u>[Signature]</u> Date/Time <u>6-9-04 / 8:10A</u>	Received By: (Signature) <u>[Signature]</u> Date/Time <u>6/10/04</u>
Relinquished By: (Signature) _____ Date/Time _____	Received By: (Signature) _____ Date/Time _____
Relinquished By: (Signature) _____ Date/Time _____	Received By: (Signature) _____ Date/Time _____

Notes: 1000

Lab Use Only	Shipper Name <u>FedEx</u>	Air Bill # <u>844956814382</u>	Opened By: <u>[Signature]</u>	Temp (°C) <u>—</u>	Condition <u>Good</u>	Custody Seals Intact? <u>(None)</u>	Work Order # <u>0408188</u>
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Air Toxics Ltd. Introduces the Electronic Sample Receipt Confirmation

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing the sample login confirmation by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This sample receipt confirmation includes the following:

- Cover Page noting any sample receiving discrepancies;
- Sample Receipt Summary;
- Chain of custody (copy);
- Compound Listing; and
- Unreturned Equipment.

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E-mail to: samplereceiving@airtoxics.com



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Air Toxics Ltd. Sample Receipt Confirmation Cover Page

Thank you for selecting Air Toxics Ltd. We have received your samples and have found discrepancies. In order to expedite analysis and reporting, please review the attached information for accuracy. Fax/E-mail corrections to **DeDe Dodge at 916-985-1020/samplereceiving@airtoxics.com** ATL will proceed with the analysis as specified on the Chain of Custody and Sample Receipt Summary page.

The following discrepancies have been observed:

Sample identification for sample LRP STACK was not provided on the sample tag. The information on the chain of custody was used to process and report the sample.

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Hours 8:00 A.M to 6:00 P.M. Pacific

E-mail to:samplereceiving@airtoxics.com



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SAMPLE RECEIPT SUMMARY

WORKORDER 0407206

Client

Mr. Mike Valder
Severn-Trent
6712 Benjamin Rd., Suite #100
Tampa, FL 33634

Phone

813-885-7427

Fax

813-885-7049

Date Promised: 07/22/04

Date Completed:

Date Received: 7/9/04

PO#: 167842

Project#: 0486003 Site 6-Gulfport, MS

Total \$: \$ 150.63

Logged By: CA

Sales Rep: AK

<u>Fraction</u>	<u>Sample #</u>	<u>Analysis</u>	<u>Collected</u>	<u>Receipt Vac./Pres.</u>	<u>Amount\$</u>
01A	LRP STACK	Modified TO-3	07/08/04	1.0 "Hg	\$115.00
Misc. Charges 1 Liter Summa Canister (1) @ \$10.00 each.					\$10.00
Shipping Charges (6/28/04)					\$25.63

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: Naval Construction Battalion Center/3605

BILL TO: Mr. Mike Valder
Severn-Trent
6712 Benjamin Rd., Suite #100
Tampa, FL 33634

Analysis Code: TO-3/12

Reporting Method: Modified TO-3 (Sp)-BTEX, TPHg (Gas Range + C5+)

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(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



Sample Transportation Notice

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FOLSOM, CA 95630-4719
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Page ___ of ___

CHAIN-OF-CUSTODY RECORD

Contact Person Lydia Cummings
Company Battelle Mem. Sys Email _____
Address 505 Kim Drive City Columbus State OH Zip 43201
Phone 614-427-7778 Fax _____
Collected by: (signature) [Signature]

Project Info:	Turn Around Time:	Lab Use Only
	<input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush <small>specify</small>	Pressurized by: <u>YS</u> Date: <u>7-11-04</u> Pressurization Gas: <input checked="" type="checkbox"/> He
P.O. # <u>162842</u>		
Project # <u>0406003</u>		
Project Name <u>Site 6 - HLEDOU.RS</u>		

Lab I.D.	Field Sample I.D. (Location)	Date	Time	Analyses Requested	Canister Pressure/Vacuum			
					Initial	Final	Receipt	Final (red)
<u>01A</u>	<u>CRP STACK</u>	<u>7-8-04</u>	<u>9:50</u>	<u>SO₂ BTEX/TPH</u>			<u>1.0 kg</u>	<u>15</u>
<u>(2)</u>								

Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>7-8-04 9:55</u>	Received by: (signature) <u>[Signature]</u> Date/Time _____	Notes:
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time <u>7/9/04 940</u>	
Relinquished by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	<u>Fedex</u>	<u>542103904819</u>	<u>—</u>	<u>good</u>	Yes No <u>None</u>	<u>0407206</u>

Compound Listing

Modified TO-3 (Sp)-BTEX, TPHg (Gas Range + C5+)

CAS Number	Compound	Detection Limit ppmv
9999-9999-005	TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025
462-06-602	Fluorobenzene (FID)	
462-06-601	Fluorobenzene (PID)	
9999-9999-208	TPH (Gasoline Range)	0.025
71-43-2	Benzene	0.0010
108-88-3	Toluene	0.0010
100-41-4	Ethyl Benzene	0.0010
9999-9999-015	Total Xylenes	0.0010



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Unreturned Media/Equipment

The following media/equipment are outstanding:

Shipped on: Oct 7 2003 8:51AM

<u>Equipment Type</u>	<u>Physical ID</u>	<u>Outstanding Qty</u>	<u>Amount</u>
Filter		1	\$45.00
Gauge-Vacuum		1	\$25.00

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This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0408065

Work Order Summary

CLIENT: Mr. Mike Valder
Severn-Trent
6712 Benjamin Rd., Suite #100
Tampa, FL 33634

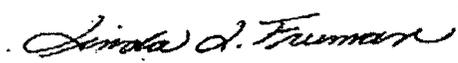
BILL TO: Mr. Mike Valder
Severn-Trent
6712 Benjamin Rd., Suite #100
Tampa, FL 33634

PHONE: 813-885-7427
FAX: 813-885-7049
DATE RECEIVED: 8/4/04
DATE COMPLETED: 8/13/04

P.O. # 167842
PROJECT # 0486003 SITE 6, GULFPORT MS
CONTACT: DeDe Dodge

<u>FRACTION#</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC/PRES.</u>
01A	LRP STACK	Modified TO-3	2.0 "Hg
01AA	LRP STACK Duplicate	Modified TO-3	2.0 "Hg
02A	Lab Blank	Modified TO-3	NA
03A	LCS	Modified TO-3	NA
03B	LCS	Modified TO-3	NA

CERTIFIED BY:



Laboratory Director

DATE: 08/14/04

Certification numbers: AR DEQ - 03-084-0, CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/04, Expiration date: 06/30/05
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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**LABORATORY NARRATIVE
Modified TO-3
Severn-Trent
Workorder# 0408065**

One 1 Liter Summa Canister sample was received on August 04, 2004. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with photo ionization and flame ionization detection. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system. The TPH (Gasoline Range) results are calculated using the response factor of Gasoline and correspond to the range of hydrocarbons from C5 to C10. A molecular weight of 100 is used to convert the TPH (Gasoline Range) ppmv result to ug/L. See the data sheets for the reporting limits for each compound.

Method modifications taken to run these samples include:

<i>Requirement</i>	<i>TO-3</i>	<i>ATL Modifications</i>
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch <= 20 samples
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation $DL = A + 3.3S$, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

The Chain of Custody was not relinquished properly. The discrepancy was noted in the Sample Receipt Confirmation email/fax.

Sample identification for sample LRP STACK was not provided on the sample tag. The discrepancy was noted in the Sample Receipt Confirmation email/fax and the information on the Chain of Custody was used to process and report the sample.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

- B - Compound present in laboratory blank greater than reporting limit.
- J - Estimated value.
- E - Exceeds instrument calibration range.
- S - Saturated peak.
- Q - Exceeds quality control limits.
- U - Compound analyzed for but not detected above the detection limit.
- M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

- a-File was requantified
- b-File was quantified by a second column and detector
- r1-File was requantified for the purpose of reissue

AIR TOXICS LTD.

SAMPLE NAME: LRP STACK

ID#: 0408065-01A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name	6081113	Date of Collection	8/3/04
Dilution Factor	123	Date of Analysis	8/11/04 07:51 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.012	0.040	0.19 M	0.63 M
Toluene	0.012	0.047	0.32	1.2
Ethyl Benzene	0.012	0.054	0.13	0.59
Total Xylenes	0.012	0.054	0.87	3.8
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.31	1.3	79	330
TPH (Gasoline Range)	0.31	1.3	37	150

M = Reported value may be biased due to apparent matrix interferences.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	92	75-150
Fluorobenzene (PID)	115	75-125

AIR TOXICS LTD.

SAMPLE NAME: LRP STACK Duplicate

ID#: 0408065-01AA

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	6081111	Date of Collection:	8/3/04
Dil. Factor:	617	Date of Analysis:	8/11/04 06:15 PM

Compound	Rpt. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.062	0.20	0.19 M	0.61 M
Toluene	0.062	0.24	0.33	1.3
Ethyl Benzene	0.062	0.27	0.14	0.61
Total Xylenes	0.062	0.27	0.81	3.6
TPH (C5+ Hydrocarbons) ref. to Gasoline	1.5	6.4	83	350
TPH (Gasoline Range)	1.5	6.4	37	160

M = Reported value may be biased due to apparent matrix interferences.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	88	75-150
Fluorobenzene (PID)	110	75-125

AIR TOXICS LTD.

SAMPLE NAME: Lab Blank

ID#: 0408065-02A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	6081103	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/11/04 07:44 AM

Compound	Rot. Limit (ppmv)	Rpt. Limit (uG/L)	Amount (ppmv)	Amount (uG/L)
Benzene	0.0010	0.0032	Not Detected	Not Detected
Toluene	0.0010	0.0038	Not Detected	Not Detected
Ethyl Benzene	0.0010	0.0044	Not Detected	Not Detected
Total Xylenes	0.0010	0.0044	Not Detected	Not Detected
TPH (C5+ Hydrocarbons) ref. to Gasoline	0.025	0.10	Not Detected	Not Detected
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	85	75-150
Fluorobenzene (PID)	108	75-125

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0408065-03A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	6081114b	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	8/11/04 08:37 PM

Compound	%Recovery
Benzene	104
Toluene	91
Ethyl Benzene	93
Total Xylenes	102

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (PID)	110	75-125

AIR TOXICS LTD.

SAMPLE NAME: LCS

ID#: 0408065-03B

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name	6081115	Date of Collection	NA
Dil. Factor	1.00	Date of Analysis	8/11/04 09:11 PM

Compound	%Recovery
TPH (C5+ Hydrocarbons) ref. to Gasoline	102
TPH (Gasoline Range)	114

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	111	75-150

ATTACHMENT 3

Analytical Report

For: Ms. Lydia Cumming
Battelle
505 King Avenue
Columbus, OH 43201
CC:

Order Number: B422858
SDG Number:
Client Project ID:
Project: 0486003
Report Date: 06/22/2004
Sampled By: Client
Sample Received Date: 06/10/2004
Requisition Number:
Purchase Order:



Michael F. Valder, Project Manager
mvalder@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Sample Summary

Order: B422858
Date Received: 06/10/2004

Client: Battelle
Project: 0486003

Client Sample ID	Lab Sample ID	Matrix	Date Sampled
DRO-ONS SEP	B422858*1	Liquid	06/08/2004 13:30
PH-STRIPPER	B422858*2	Liquid	06/08/2004 13:30
BTEX STRIPPER	B422858*3	Liquid	06/08/2004 13:30

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
22858-1	DRO-OWS SEP	Liquid	06/10/04	06/08/04 13:30	

Parameter	Units	Lab Sample IDs
		22858-1

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	mg/l	18
Surrogate - o-Terphenyl *	mg/l	*F33
Dilution Factor		50
Prep Date		06/14/04
Prep Time		17:00
Analysis Date		06/16/04
Analysis Time		19:43
Batch ID		06148B

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
22858-2	PH-STRIPPER	Liquid	06/10/04	06/08/04 13:30	

Parameter	Units	Lab Sample IDs
		22858-2

pH (150.1)

pH	units	6.3
Dilution Factor		1
Analysis Date		06/10/04
Analysis Time		10:00
Batch ID		0610A

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
22858-3	BTEX STRIPPER	Liquid	06/10/04	06/08/04 13:30	

Parameter	Units	Lab Sample IDs
		22858-3

Purgeable Aromatics (602)

Benzene	ug/l	0.25U*F65
Ethylbenzene	ug/l	0.35U
Toluene	ug/l	3.4
Xylenes	ug/l	7.5
Total Volatile Organic Aromatics	ug/l	10.9
Surrogate -		
a,a,a-Trifluorotoluene *	ug/l	18
Surrogate - Expected Value *	ug/l	20
Surrogate - % Recovery *	%	90 %
Surrogate - Control Limit *	%	70-130 %
Dilution Factor		2.5
Analysis Date		06/22/04
Analysis Time		12:27
Batch ID		0617D

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
22858-4	Method Blank	Liquid	06/10/04		
22858-5	Lab Control Standard Result	Liquid	06/10/04		
22858-6	Lab Control Standard Duplicate Result	Liquid	06/10/04		
22858-7	Spike Amount Added, LCS/LCSD	Liquid	06/10/04		
22858-8	Lab Control Standard % Recovery	Liquid	06/10/04		

Parameter	Units	Lab Sample IDs				
		22858-4	22858-5	22858-6	22858-7	22858-8

Purgeable Aromatics (602)

Benzene	ug/l	0.10U	9.9	10	10	99 %
Ethylbenzene	ug/l	0.14U				
Toluene	ug/l	0.13U	8.0	9.7	10	80 %
Xylenes	ug/l	0.27U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Surrogate - a,a,a-Trifluorotoluene *	ug/l	18	18	19		
Surrogate - Expected Value *	ug/l	20	20	20		
Surrogate - % Recovery *	%	90 %	90 %	95 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor		1	1	1		1
Analysis Date		06/22/04	06/17/04	06/17/04		06/17/04
Analysis Time		11:49	13:13	20:46		13:13
Batch ID		0617D	0617D	0617D	0617D	0617D

pH (150.1)

pH	units	6.1	6.01	6.01	6.0	98 %
Dilution Factor		1	1	1		
Analysis Date		06/10/04	06/10/04	06/10/04		
Analysis Time		10:00	10:00	10:00		
Batch ID		0610A	0610A	0610A	0610A	0610A

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
22858-4	Method Blank	Liquid	06/10/04		
22858-5	Lab Control Standard Result	Liquid	06/10/04		
22858-6	Lab Control Standard Duplicate Result	Liquid	06/10/04		
22858-7	Spike Amount Added, LCS/LCSD	Liquid	06/10/04		
22858-8	Lab Control Standard % Recovery	Liquid	06/10/04		

Parameter	Units	Lab Sample IDs				
		22858-4	22858-5	22858-6	22858-7	22858-8

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	ug/l	0.0290	0.63	0.64	1.0	63 %
Surrogate - o-Terphenyl *	%	74 %	78 %	78 %		
Dilution Factor		1	1	1		
Prep Date		06/14/04	06/14/04	06/14/04		
Prep Time		17:00	17:00	17:00		
Analysis Date		06/16/04	06/16/04	06/16/04		
Analysis Time		18:33	18:39	18:46		
Batch ID		0614BB	0614BB	0614BB	0614BB	0614BB

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
22858-9	Lab Control Standard Duplicate % Recovery	Liquid	06/10/04		
22858-10	LCS Accuracy Control Limit (%R)	Liquid	06/10/04		
22858-11	Precision (%RPD) of LCS/LCSD	Liquid	06/10/04		
22858-12	LCS Precision Control Limit (Advisory) %RPD	Liquid	06/10/04		
22858-13	Spike Sample ID	Liquid	06/10/04		

Parameter	Units	Lab Sample IDs				
		22858-9	22858-10	22858-11	22858-12	22858-13

Purgeable Aromatics (602)

Benzene	%	100 %	39-150 %	1.0 %	<31 %	22999-1
Toluene	%	97 %	46-148 %	19 %	<25 %	22999-1
Surrogate - Control Limit *	%		70-130 %			
Dilution Factor		1				
Analysis Date		06/17/04				
Analysis Time		20:46				
Batch ID		0617D		0617D		0617D

pH (150.1)

pH	%	98 %	63-158 %	0 %	<40 %	
Batch ID		0610A		0610A		

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	%	64 %	40-140 %	1.6 %	<40 %	*F82
Surrogate - o-Terphenyl *	%		38-156 %			
Batch ID		06148B		06148B		06148B

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
22858-14	Sample Result	Liquid	06/10/04		
22858-15	Matrix Spike Result	Liquid	06/10/04		
22858-16	Matrix Spike Duplicate Result	Liquid	06/10/04		
22858-17	Spike Amount Added, MS	Liquid	06/10/04		
22858-18	Matrix Spike % Recovery	Liquid	06/10/04		

Parameter	Units	Lab Sample IDs				
		22858-14	22858-15	22858-16	22858-17	22858-18

Purgeable Aromatics (602)

Benzene	ug/l	0.10U	9.4	8.1	10	94 %
Ethylbenzene	ug/l	0.14U				
Toluene	ug/l	0.13U	10	9.5	10	100 %
Xylenes	ug/l	0.27U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Surrogate - 1,2,4-Trifluorotoluene *	ug/l	19	17	17		
Surrogate - Expected Value *	ug/l	20	20	20		
Surrogate - % Recovery *	%	95 %	85 %	85 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor			1	1		1
Analysis Date			06/18/04	06/18/04		06/18/04
Analysis Time			09:31	10:15		09:31
Batch ID		0617D	0617D	0617D	0617D	0617D

pH (150.1)

pH --- --- ---

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	mg/l	*F82	*F82	*F82	*F82	*F82
Batch ID		06148B	06148B	06148B	06148B	06148B

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
22858-19	Matrix Spike Duplicate % Recovery	Liquid	06/10/04		
22858-20	MS Accuracy Advisory Limit (%R)	Liquid	06/10/04		
22858-21	Precision (%RPD) MS/MSD	Liquid	06/10/04		
22858-22	MS Precision Advisory Limit (%RPD)	Liquid	06/10/04		
22858-23	Practical Quantitation Limit (PQL)	Liquid	06/10/04		

Parameter	Units	Lab Sample IDs				
		22858-19	22858-20	22858-21	22858-22	22858-23

Purgeable Aromatics (602)

Benzene	%	81 %	39-150 %	15 %	<31 %	1.0
Toluene	%	95 %	46-148 %	5.1 %	<25 %	1.0
Surrogate - Control Limit *	%		70-130 %			
Ethylbenzene	ug/l					1.0
Xylenes	ug/l					1.0
Total Volatile Organic Aromatics	ug/l					1.0
Dilution Factor		1				
Analysis Date		06/18/04				
Analysis Time		10:15				
Batch ID		0617D		0617D		

pH (150.1)

pH		---		---		
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Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	%	*F82	40-140 %	*F82	<40 %	0.30
Surrogate - o-Terphenyl *	%		38-156 %			
Batch ID		0614BB		0614BB		

Order Number: B422858

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

The estimated uncertainty associated with these reported results is available upon request.

Method : 40 CFR Part 136, EPA SW-846
DOH Certification: E84282.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F65 = Elevated detection limits were reported due to sample matrix interference which required sample or extract dilution.

*F82 = Insufficient sample volume was available to perform a batch-specific matrix spike. However, an LCS analyzed with the sample batch met control criteria.

Remit To: SEVERN TRENT LABORATORIES, INC. P.O. Box 7777 W4305 Philadelphia, PA 19175-4305
STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Tel:813-885-7427 Fax:813-885-7049

INVOICE

Federal ID# 23-2919996

Accounts Payable
Battelle
505 King Avenue
Columbus, OH 43201

Invoice CC:

DATE 06/22/04	TERMS Net 60 Days	CLIENT PO #	CLIENT PROJECT #	PROJECT 0486003
------------------	----------------------	-------------	------------------	--------------------

INVOICE # 66017350	CONTRACT #	CODE MV*101418	
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LOG # B422858	CREDIT / DEBIT	ORIGINATING LOG #	SDG #	REQUISITION #
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QUANTITY	MATRIX	METHOD	DESCRIPTION	UNIT PRICE	EXTENDED AMOUNT
1	Liquid	8100	Diesel Range Organics (8100M)	100.00	100.00
1	Liquid	150.1	pH	4.00	4.00
1	Liquid	602	Purgeable Aromatics	50.00	50.00
1		****	Oth. Charge: Special Charges (for a de	150.00	150.00
Total for this page					\$304.00
INVOICE NOTES: \$150.00 Charge for air sample to Air Toxics.					
INVOICE TOTAL					\$304.00

REPORTED TO Ms. Lydia Cumming	OFFICE Battelle	OFFICE PHONE (614) 424-7778
----------------------------------	--------------------	--------------------------------

For proper credit, please show INVOICE NUMBER on your remittance.
After 30 days, service charges of 1.5% per 30 days will be applied to unpaid balance.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

STL Tampa
6712 Benjamin Road, Suite 100
Tampa, FL 33634

Website: www.stl-inc.com
Phone: (813) 885-7427
Fax: (813) 885-7049

**SEVERN
TRENT**

STL

42 2858

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO. 0486003	PROJECT LOCATION (STATE) MS	MATRIX TYPE	REQUIRED ANALYSIS										PAGE	OF								
SAMPLER'S SIGNATURE <i>[Signature]</i>	P.O. NUMBER 167842	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT...)	A	HCL	BTEX	DID	-	-	-	-	-	-	-	-	-	-	-	-	-	STANDARD REPORT DELIVERY	<input type="checkbox"/>	
CLIENT (SITE) PM Lydia Cummings	CLIENT PHONE 1-64-421-7778	CLIENT FAX 164 421 3667																			DATE DUE	_____	
CLIENT NAME DARTELLE MEM INST	CLIENT E-MAIL																				EXPEDITED REPORT DELIVERY (SURCHARGE)	<input type="checkbox"/>	
CLIENT ADDRESS 525 KING AVE, Columbus OH																					DATE DUE	_____	
COMPANY CONTRACTING THIS WORK (if applicable) Southern Petroleum Svc, Inc.																						NUMBER OF COOLERS SUBMITTED PER SHIPMENT:	

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT...)	NUMBER OF CONTAINERS SUBMITTED										REMARKS					
DATE	TIME							1	2	3	4	5	6	7	8	9	10		11	12			
6-8-04	1:30P	PH - STRIPPER	G	✓				1															
6-8-04	1:30P	BTEX - STRIPPER	G	✓					3														
6-8-04	1:30P	DID - O/W SEP	G	✓						2													

NOTE: AIR SAMPLE FORWARDED TO AIR TANKS THIS DATE

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE 5-27-04	TIME 1400	RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE 6-9-04	TIME 8:10 AM	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE	TIME	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE 6-10-04	TIME 0840	RECEIVED BY: (SIGNATURE)	DATE	TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>[Signature]</i>	DATE 6-10-04	TIME 0935	CUSTODY INTACT YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	CUSTODY SEAL NO. N/S	STL TAMPA LOG NO. B422858	LABORATORY REMARKS
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Analytical Report

For: Ms. Lydia Cumming
Battelle
505 King Avenue
Columbus, OH 43201
CC:

Order Number: B423000
SDG Number:
Client Project ID:
Project: 0486003
Report Date: 06/28/2004
Sampled By: Client
Sample Received Date: 06/17/2004
Requisition Number:
Purchase Order: 167842



Michael F. Valder, Project Manager
mvalder@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Sample Summary

Order: B423000
Date Received: 06/17/2004

Client: Battelle
Project: 0486003

Client Sample ID	Lab Sample ID	Matrix	Date Sampled
PH-STRIPPER	B423000*1	Liquid	06/16/2004 11:45
BTEX-STRIPPER	B423000*2	Liquid	06/16/2004 11:45
Trip Blank	B423000*3	Liquid	06/16/2004

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23000-1	PH-STRIPPER	Liquid	06/17/04	06/16/04 11:45	

Parameter	Units	Lab Sample IDs
		23000-1

pH (150.1)		
pH	units	2.3
Dilution Factor		1
Analysis Date		06/17/04
Analysis Time		11:00
Batch ID		0617A

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23000-2	BTEX-STRIPPER	Liquid	06/17/04	06/16/04 11:45	

Parameter	Units	Lab Sample IDs
		23000-2

Purgeable Aromatics (602)

Benzene	ug/l	1.2
Ethylbenzene	ug/l	0.54I
Toluene	ug/l	0.87I
Xylenes	ug/l	2.7
Total Volatile Organic		
Aromatics	ug/l	5.31
Methyl Tert Butyl Ether (MTBE)	ug/l	0.59U
Surrogate - % Recovery *	%	85 %
Surrogate - Control Limit *	%	70-130 %
Dilution Factor		1
Analysis Date		06/27/04
Analysis Time		19:17
Batch ID		0625C

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23000-3	Trip Blank	Liquid	06/17/04	06/16/04	

Parameter	Units	Lab Sample IDs
		23000-3

Purgeable Aromatics (602)

Benzene	ug/l	0.10U
Ethylbenzene	ug/l	0.14U
Toluene	ug/l	0.13U
Xylenes	ug/l	0.27U
Total Volatile Organic		
Aromatics	ug/l	1.0U
Methyl Tert Butyl Ether (MTBE)	ug/l	0.59U
Surrogate - % Recovery *	%	85 %
Surrogate - Control Limit *	%	70-130 %
Dilution Factor		1
Analysis Date		06/28/04
Analysis Time		12:28
Batch ID		0625C

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23000-4	Method Blank	Liquid	06/17/04		
23000-5	Lab Control Standard Result	Liquid	06/17/04		
23000-6	Lab Control Standard Duplicate Result	Liquid	06/17/04		
23000-7	Spike Amount Added, LCS/LCSD	Liquid	06/17/04		
23000-8	Lab Control Standard % Recovery	Liquid	06/17/04		

Parameter	Units	Lab Sample IDs				
		23000-4	23000-5	23000-6	23000-7	23000-8

Purgeable Aromatics (602)						
Benzene	ug/l	0.10U	10	9.6	10	100 %
Ethylbenzene	ug/l	0.14U				
Toluene	ug/l	0.13U	9.9	9.3	10	99 %
Xylenes	ug/l	0.27U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Methyl Tert Butyl Ether (MTBE)	ug/l	0.59U				
Surrogate - % Recovery *	%	80 %	85 %	80 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor		1	1	1		1
Analysis Date		06/27/04	06/25/04	06/25/04		06/25/04
Analysis Time		17:54	22:01	22:42		22:01
Batch ID		0625C	0625C	0625C	0625C	0625C

pH (150.1)						
pH	units	6.1	6.02	6.02	6.0	95 %
Dilution Factor		1	1	1		
Analysis Date		06/17/04	06/17/04	06/17/04		
Analysis Time		11:00	11:00	11:00		
Batch ID		0617A	0617A	0617A	0617A	0617A

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23000-9	Lab Control Standard Duplicate % Recovery	Liquid	06/17/04		
23000-10	LCS Accuracy Control Limit (%R)	Liquid	06/17/04		
23000-11	Precision (%RPD) of LCS/LCSD	Liquid	06/17/04		
23000-12	LCS Precision Control Limit (Advisory) %RPD	Liquid	06/17/04		
23000-13	Spike Sample ID	Liquid	06/17/04		

Parameter	Units	Lab Sample IDs				
		23000-9	23000-10	23000-11	23000-12	23000-13

Purgeable Aromatics (602)

Benzene	%	96 %	39-150 %	4.1 %	<31 %	23052-3
Toluene	%	93 %	46-148 %	6.2 %	<25 %	23052-3
Surrogate - Control Limit *	%		70-130 %			
Dilution Factor		1				
Analysis Date		06/25/04				
Analysis Time		22:42				
Batch ID		0625C		0625C		0625C

pH (150.1)

pH	%	95 %	63-158 %	0 %	<40 %	
Batch ID		0617A		0617A		

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23000-14	Sample Result	Liquid	06/17/04		
23000-15	Matrix Spike Result	Liquid	06/17/04		
23000-16	Matrix Spike Duplicate Result	Liquid	06/17/04		
23000-17	Spike Amount Added, MS	Liquid	06/17/04		
23000-18	Matrix Spike % Recovery	Liquid	06/17/04		

Parameter	Units	Lab Sample IDs				
		23000-14	23000-15	23000-16	23000-17	23000-18

Purgeable Aromatics (602)

Benzene	ug/l	0.10U	9.4	9.8	10	94 %
Ethylbenzene	ug/l	0.14U				
Toluene	ug/l	0.13U	9.0	9.4	10	90 %
Xylenes	ug/l	0.27U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Methyl Tert Butyl Ether (MTBE)	ug/l	0.59U				
Surrogate - % Recovery *	%	80 %	80 %	85 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor			1	1		1
Analysis Date			06/28/04	06/28/04		06/28/04
Analysis Time			01:27	02:09		01:27
Batch ID		0625C	0625C	0625C	0625C	0625C

pH (150.1)

pH		---	---	---		---
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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23000-19	Matrix Spike Duplicate % Recovery	Liquid	06/17/04		
23000-20	MS Accuracy Advisory Limit (%R)	Liquid	06/17/04		
23000-21	Precision (%RPD) MS/MSD	Liquid	06/17/04		
23000-22	MS Precision Advisory Limit (%RPD)	Liquid	06/17/04		
23000-23	Practical Quantitation Limit (PQL)	Liquid	06/17/04		

Parameter	Units	Lab Sample IDs				
		23000-19	23000-20	23000-21	23000-22	23000-23
Purgeable Aromatics (602)						
Benzene	%	98 %	39-150 %	4.2 %	<31 %	1.0
Toluene	%	94 %	46-148 %	4.3 %	<25 %	1.0
Surrogate - Control Limit *	%		70-130 %			
Ethylbenzene	ug/l					1.0
Xylenes	ug/l					1.0
Total Volatile Organic						
Aromatics	ug/l					1.0
Methyl Tert Butyl Ether (MTBE)	ug/l					10
Dilution Factor		1				
Analysis Date		06/28/04				
Analysis Time		02:09				
Batch ID		0625C		0625C		
pH (150.1)						
pH		---		---		

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Order Number: B423000

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

The estimated uncertainty associated with these reported results is available upon request.

Methods: 40 CFR Part 136, EPA SW-846, FDEP
DOH Certification: E84282.

I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U = Indicates that the compound was analyzed for but not detected.

Remit To: SEVERN TRENT LABORATORIES, INC. P.O. Box 7777 W4305 Philadelphia, PA 19175-4305
STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Tel:813-885-7427 Fax:813-885-7049

INVOICE					
Accounts Payable Battelle 505 King Avenue Columbus, OH 43201				Federal ID# 23-2919996	
Invoice CC:					
DATE 06/28/04	TERMS Net 60 Days	CLIENT PO # 167842	CLIENT PROJECT #	PROJECT 0486003	
INVOICE # 66017458	CONTRACT #	CODE MV#101418			
LOG # B423000	CREDIT / DEBIT	ORIGINATING LOG #	SDG #	REQUISITION #	
QUANTITY	MATRIX	METHOD	DESCRIPTION	UNIT PRICE	EXTENDED AMOUNT
1 1	Liquid Liquid	150.1 602	pH Purgeable Aromatics	4.00 50.00	4.00 50.00
Total for this page					\$54.00
INVOICE TOTAL					\$54.00
REPORTED TO Ms. Lydia Cumming		OFFICE Battelle		OFFICE PHONE (614) 424-7778	
For proper credit, please show INVOICE NUMBER on your remittance. After 30 days, service charges of 1.5% per 30 days will be applied to unpaid balance.					

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

STL Tampa
6712 Benjamin Road, Suite 100
Tampa, FL 33634

Website: www.stl-inc.com
Phone: (813) 885-7427
Fax: (813) 885-7049

Alternate Laboratory Name/Location

Phone:
Fax:

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TRENT**

STL

42 3000

3

PROJECT REFERENCE	PROJECT NO. 0486003	PROJECT LOCATION (STATE) MS.	MATRIX TYPE	REQUIRED ANALYSIS										PAGE	OF			
SAMPLER'S SIGNATURE <i>Larry Skar</i>	P.O. NUMBER 167842	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	PH	BTX	HU											STANDARD REPORT DELIVERY <input type="radio"/>	
CLIENT (SITE) PM <i>Ludia Cummings</i>	CLIENT PHONE 1-614-424-7778	CLIENT FAX 614-424-3667															DATE DUE _____	
CLIENT NAME <i>BATTELLE MEM EAST</i>	CLIENT E-MAIL																EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="radio"/>	
CLIENT ADDRESS <i>525 King Avenue Columbus, OH 43201</i>	COMPANY CONTRACTING THIS WORK (if applicable) <i>SPS, INC.</i>																DATE DUE _____	
				NUMBER OF CONTAINERS SUBMITTED										NUMBER OF COOLERS SUBMITTED PER SHIPMENT:				

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED										REMARKS
DATE	TIME																	
6-16-04	11:45 A	PH-STRIPPER	6	✓				1										
6-16-04	11:45 A	BTX-STRIPPER	6	✓				3										
(CF)																		

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE 5-27-04	TIME 1400	RELINQUISHED BY: (SIGNATURE) <i>Larry Skar</i>	DATE 6-16-04	TIME 12:45 P	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE	TIME	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE 6-17-04	TIME 0840	RECEIVED BY: (SIGNATURE)	DATE	TIME

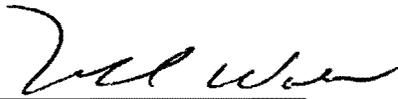
RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>[Signature]</i>	DATE 6-17-04	TIME 0910	CUSTODY INTACT YES <input checked="" type="radio"/> NO <input type="radio"/>	CUSTODY SEAL NO. 115	STL TAMPA LOG NO. 13423000	LABORATORY REMARKS
--	-----------------	--------------	--	-------------------------	-------------------------------	--------------------

Analytical Report

For: Ms. Lydia Cumming
Battelle
505 King Avenue
Columbus, OH 43201

CC:

Order Number: B423271
SDG Number:
Client Project ID:
Project: 0486003
Report Date: 07/13/2004
Sampled By: Client
Sample Received Date: 07/01/2004
Requisition Number:
Purchase Order: 167842



Michael F. Valder, Project Manager
mvalder@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Sample Summary

Order: B423271
Date Received: 07/01/2004

Client: Battelle
Project: 0486003

Client Sample ID
PH

Lab Sample ID
B423271*1

Matrix
Liquid

Date Sampled
06/29/2004 13:30

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23271-1	PH	Liquid	07/01/04	06/29/04 13:30	

Parameter	Units	Lab Sample IDs
		23271-1

pH (150.1)

pH	units	7.0
Dilution Factor		1
Analysis Date		07/01/04
Analysis Time		10:00
Batch ID		0701A

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23271-2	Method Blank	Liquid	07/01/04		
23271-3	Lab Control Standard Result	Liquid	07/01/04		
23271-4	Lab Control Standard Duplicate Result	Liquid	07/01/04		
23271-5	Spike Amount Added, LCS/LCSD	Liquid	07/01/04		
23271-6	Lab Control Standard % Recovery	Liquid	07/01/04		

Parameter	Units	Lab Sample IDs				
		23271-2	23271-3	23271-4	23271-5	23271-6
pH (150.1)						
pH	units	6.4	5.97	5.97	6.00	107 %
Dilution Factor		1	1	1		
Analysis Date		07/01/04	07/01/04	07/01/04		
Analysis Time		10:00	10:00	10:00		
Batch ID		0701A	0701A	0701A	0701A	

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23271-7	Lab Control Standard Duplicate % Recovery	Liquid	07/01/04		
23271-8	LCS Accuracy Control Limit (%R)	Liquid	07/01/04		
23271-9	Precision (%RPD) of LCS/LCSD	Liquid	07/01/04		
23271-10	LCS Precision Control Limit (Advisory) %RPD	Liquid	07/01/04		
23271-11	Spike Sample ID	Liquid	07/01/04		

Parameter	Units	Lab Sample IDs				
		23271-7	23271-8	23271-9	23271-10	23271-11
pH (150.1)						
pH	%	107 %	63-158 %	0 %	<40 %	
Batch ID				0701A		

STL Tampa

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23271-12	Sample Result	Liquid	07/01/04		
23271-13	Matrix Spike Result	Liquid	07/01/04		
23271-14	Matrix Spike Duplicate Result	Liquid	07/01/04		
23271-15	Spike Amount Added, MS	Liquid	07/01/04		
23271-16	Matrix Spike % Recovery	Liquid	07/01/04		

Parameter	Units	Lab Sample IDs				
		23271-12	23271-13	23271-14	23271-15	23271-16
pH (150.1)						
pH	units	---	---	---	---	---

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23271-17	Matrix Spike Duplicate % Recovery	Liquid	07/01/04		
23271-18	MS Accuracy Advisory Limit (%R)	Liquid	07/01/04		
23271-19	Precision (%RPD) MS/MSD	Liquid	07/01/04		
23271-20	MS Precision Advisory Limit (%RPD)	Liquid	07/01/04		
23271-21	Practical Quantitation Limit (PQL)	Liquid	07/01/04		

Parameter	Units	Lab Sample IDs				
		23271-17	23271-18	23271-19	23271-20	23271-21
pH (150.1)						
pH	units	---		---		

Order Number: B423271

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

The estimated uncertainty associated with these reported results is available upon request.

Methods: 40 CFR Part 136, EPA SW-846, FDEP
DOH Certification: E84282.

I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U = Indicates that the compound was analyzed for but not detected.

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Remit To: SEVERN TRENT LABORATORIES, INC. P.O. Box 7777 W4305 Philadelphia, PA 19175-4305
STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Tel:813-885-7427 Fax:813-885-7049

INVOICE

Federal ID# 23-2919996

Accounts Payable
Battelle
505 King Avenue
Columbus, OH 43201

Invoice CC:

DATE	TERMS	CLIENT PO #	CLIENT PROJECT #	PROJECT	
07/13/04	Net 60 Days	167842		0486003	
INVOICE #	CONTRACT #	CODE			
66017746		MV*101418			
LOG #	CREDIT / DEBIT	ORIGINATING LOG #	SDG #	REQUISITION #	
B423271					
QUANTITY	MATRIX	METHOD	DESCRIPTION	UNIT PRICE	EXTENDED AMOUNT
1	Liquid	150.1	pH	4.00	4.00
			Total for this page		\$4.00
			INVOICE TOTAL		\$4.00
REPORTED TO	OFFICE	OFFICE PHONE			
Ms. Lydia Cumming	Battelle	(614) 424-7778			

For proper credit, please show INVOICE NUMBER on your remittance.
After 30 days, service charges of 1.5% per 30 days will be applied to unpaid balance.

Analytical Report

For: Ms. Lydia Cumming
Battelle
505 King Avenue
Columbus, OH 43201
CC:

Order Number: B423421
SDG Number:
Client Project ID:
Project: 0486003
Report Date: 07/22/2004
Sampled By: Client
Sample Received Date: 07/09/2004
Requisition Number:
Purchase Order:



Michael F. Valder, Project Manager
mvalder@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Sample Summary

Order: B423421
Date Received: 07/09/2004

Client: Battelle
Project: 0486003

Client Sample ID	Lab Sample ID	Matrix	Date Sampled
DRO-SEPARATOR	B423421*1	Liquid	07/08/2004 09:55
PH-STRIPPER	B423421*2	Liquid	07/08/2004 09:55
BTEX STRIPPER	B423421*3	Liquid	07/08/2004 09:55

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23421-1	DRO-SEPARATOR	Liquid	07/09/04	07/08/04 09:55	

Parameter	Units	Lab Sample IDs
		23421-1

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	mg/l	58
Surrogate - o-Terphenyl *	mg/l	*F33
Dilution Factor		100
Prep Date		07/15/04
Prep Time		17:15
Analysis Date		07/21/04
Analysis Time		22:23
Batch ID		0715AA

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23421-2	PH-STRIPPER	Liquid	07/09/04	07/08/04 09:55	

Parameter	Units	Lab Sample IDs
		23421-2

pH (150.1)		
pH	units	6.3
Dilution Factor		1
Analysis Date		07/09/04
Analysis Time		12:45
Batch ID		0709A

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23421-3	BTEX STRIPPER	Liquid	07/09/04	07/08/04 09:55	

Parameter	Units	Lab Sample IDs
		23421-3

Purgeable Aromatics (602)

Benzene	ug/l	0.37I
Ethylbenzene	ug/l	0.38I
Toluene	ug/l	2.1
Xylenes	ug/l	2.2
Total Volatile Organic Aromatics	ug/l	5.05
Surrogate - a,a,a-Trifluorotoluene *	ug/l	16
Surrogate - Expected Value *	ug/l	20
Surrogate - % Recovery *	%	80 %
Surrogate - Control Limit *	%	70-130 %
Dilution Factor		1
Analysis Date		07/13/04
Analysis Time		16:57
Batch ID		0713C

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23421-4	Method Blank	Liquid	07/09/04		
23421-5	Lab Control Standard Result	Liquid	07/09/04		
23421-6	Lab Control Standard Duplicate Result	Liquid	07/09/04		
23421-7	Spike Amount Added, LCS/LCSD	Liquid	07/09/04		
23421-8	Lab Control Standard % Recovery	Liquid	07/09/04		

Parameter	Units	Lab Sample IDs				
		23421-4	23421-5	23421-6	23421-7	23421-8

Purgeable Aromatics (602)

Benzene	ug/l	0.10U	9.8	10	10	98 %
Ethylbenzene	ug/l	0.14U				
Toluene	ug/l	0.13U	9.5	10	10	95 %
Xylenes	ug/l	0.27U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Surrogate -						
1,2,4-Trifluorotoluene *	ug/l	17	19	19		
Surrogate - Expected Value *	ug/l	20	20	20		
Surrogate - % Recovery *	%	85 %	95 %	95 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor		1	1	1		1
Analysis Date		07/13/04	07/13/04	07/13/04		07/13/04
Analysis Time		11:23	08:38	09:19		08:38
Batch ID		0713C	0713C	0713C	0713C	0713C

pH (150.1)

pH	units	6.9	5.97	5.95	6.0	107 %
Dilution Factor		1	1	1		
Analysis Date		07/09/04	07/09/04	07/09/04		
Analysis Time		12:45	12:45	12:45		
Batch ID		0709A	0709A	0709A	0709A	0709A

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23421-4	Method Blank	Liquid	07/09/04		
23421-5	Lab Control Standard Result	Liquid	07/09/04		
23421-6	Lab Control Standard Duplicate Result	Liquid	07/09/04		
23421-7	Spike Amount Added, LCS/LCSD	Liquid	07/09/04		
23421-8	Lab Control Standard % Recovery	Liquid	07/09/04		

Parameter	Units	Lab Sample IDs				
		23421-4	23421-5	23421-6	23421-7	23421-8
Diesel Range Organics (8100M) (8100)						
Hydrocarbons as DRO	mg/l	0.029U	0.69	0.59	1.0	69 %
Surrogate - o-Terphenyl *	%	120 %	70 %	68 %		
Dilution Factor		1	1	1		
Prep Date		07/15/04	07/15/04	07/15/04		
Prep Time		17:15	17:15	17:15		
Analysis Date		07/21/04	07/21/04	07/21/04		
Analysis Time		21:31	21:38	21:44		
Batch ID		0715AA	0715AA	0715AA	0715AA	0715AA

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23421-9	Lab Control Standard Duplicate % Recovery	Liquid	07/09/04		
23421-10	LCS Accuracy Control Limit (%R)	Liquid	07/09/04		
23421-11	Precision (%RPD) of LCS/LCSD	Liquid	07/09/04		
23421-12	LCS Precision Control Limit (Advisory) %RPD	Liquid	07/09/04		
23421-13	Spike Sample ID	Liquid	07/09/04		

Parameter	Units	Lab Sample IDs				
		23421-9	23421-10	23421-11	23421-12	23421-13

Purgeable Aromatics (602)

Benzene	%	100 %	39-150 %	2.0 %	<31 %	23406-1
Toluene	%	100 %	46-148 %	5.1 %	<25 %	23406-1
Surrogate - Control Limit *	%		70-130 %			
Dilution Factor		1				
Analysis Date		07/13/04				
Analysis Time		09:19				
Batch ID		0713C		0713C		0713C

pH (150.1)

pH	%	112 %	63-158 %	0.33 %	<40 %	
Batch ID		0709A		0709A		0709A

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	%	59 %	40-140 %	16 %	<40 %	*F82
Surrogate - o-Terphenyl *	%		38-156 %			
Batch ID		0715AA		0715AA		0715AA

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23421-14	Sample Result	Liquid	07/09/04		
23421-15	Matrix Spike Result	Liquid	07/09/04		
23421-16	Matrix Spike Duplicate Result	Liquid	07/09/04		
23421-17	Spike Amount Added, MS	Liquid	07/09/04		
23421-18	Matrix Spike % Recovery	Liquid	07/09/04		

Parameter	Units	Lab Sample IDs				
		23421-14	23421-15	23421-16	23421-17	23421-18

Purgeable Aromatics (602)

Benzene	ug/l	0.10U	9.5	9.9	10	95 %
Ethylbenzene	ug/l	0.14U				
Toluene	ug/l	0.13U	9.3	9.3	10	93 %
Xylenes	ug/l	0.27U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Surrogate - a,a,a-Trifluorotoluene *	ug/l	18	18	18		
Surrogate - Expected Value *	ug/l	20	20	20		
Surrogate - % Recovery *	%	90 %	90 %	90 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor			1	1		1
Analysis Date			07/14/04	07/14/04		07/14/04
Analysis Time			13:55	14:37		13:55
Batch ID		0713C	0713C	0713C	0713C	0713C

pH (150.1)

pH	---	---	---	---	---	---
----	-----	-----	-----	-----	-----	-----

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	mg/l	*F82	*F82	*F82	*F82	*F82
Batch ID		0715AA	0715AA	0715AA	0715AA	0715AA

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23421-19	Matrix Spike Duplicate % Recovery	Liquid	07/09/04		
23421-20	MS Accuracy Advisory Limit (%R)	Liquid	07/09/04		
23421-21	Precision (%RPD) MS/MSD	Liquid	07/09/04		
23421-22	MS Precision Advisory Limit (%RPD)	Liquid	07/09/04		
23421-23	Practical Quantitation Limit (PQL)	Liquid	07/09/04		

Parameter	Units	Lab Sample IDs				
		23421-19	23421-20	23421-21	23421-22	23421-23

Purgeable Aromatics (602)

Benzene	%	99 %	39-150 %	4.1 %	<31 %	1.0
Toluene	%	93 %	46-148 %	0 %	<25 %	1.0
Surrogate - Control Limit *	%		70-130 %			
Ethylbenzene	ug/l					1.0
Xylenes	ug/l					1.0
Total Volatile Organic Aromatics	ug/l					1.0
Dilution Factor		1				
Analysis Date		07/14/04				
Analysis Time		14:37				
Batch ID		0713C		0713C		

pH (150.1)

pH --- ---

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	%	*F82	40-140 %	*F82	<40 %	0.30
Surrogate - o-Terphenyl *	%		38-156 %			
Batch ID		0715AA		0715AA		

Order Number: B423421

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

The estimated uncertainty associated with these reported results is available upon request.

Method : 40 CFR Part 136, EPA SW-846
DOH Certification: E84282.

I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U = Indicates that the compound was analyzed for but not detected.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F82 = Insufficient sample volume was available to perform a batch-specific matrix spike. However, an LCS analyzed with the sample batch met control criteria.

SEVERN

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STL

Remit To: SEVERN TRENT LABORATORIES, INC. P.O. Box 7777 W4305 Philadelphia, PA 19175-4305
 STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Tel:813-885-7427 Fax:813-885-7049

INVOICE

Federal ID# 23-2919996

Accounts Payable
 Battelle
 505 King Avenue
 Columbus, OH 43201

Invoice CC:

DATE 07/22/04	TERMS Net 60 Days	CLIENT PO #	CLIENT PROJECT #	PROJECT 0486003	
INVOICE # 66017927	CONTRACT #	CODE MV*101418			
LOG # B423421	CREDIT / DEBIT	ORIGINATING LOG #	SDG #	REQUISITION #	
QUANTITY	MATRIX	METHOD	DESCRIPTION	UNIT PRICE	EXTENDED AMOUNT
1	Liquid	8100	Diesel Range Organics (8100M)	100.00	100.00
1	Liquid	150.1	pH	4.00	4.00
1	Liquid	602	Purgeable Aromatics	50.00	50.00
1		****	Oth. Charge: Special Charges (for a de	150.00	150.00
Total for this page					\$304.00
<p>INVOICE NOTES: \$150.00 Charge for air sample to Air Toxics.</p>					
INVOICE TOTAL					\$304.00
REPORTED TO Ms. Lydia Cumming		OFFICE Battelle	OFFICE PHONE (614) 424-7778		
<p>For proper credit, please show INVOICE NUMBER on your remittance. After 30 days, service charges of 1.5% per 30 days will be applied to unpaid balance.</p>					

Analytical Report

For: Ms. Lydia Cumming
Battelle
505 King Avenue
Columbus, OH 43201

CC:

Order Number: B423590
SDG Number:
Client Project ID:
Project: 0486003
Report Date: 07/29/2004
Sampled By: Client
Sample Received Date: 07/20/2004
Requisition Number:
Purchase Order: 167842



Michael F. Valder, Project Manager
mvalder@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Sample Summary

Order: B423590
Date Received: 07/20/2004

Client: Battelle
Project: 0486003

Client Sample ID	Lab Sample ID	Matrix	Date Sampled
PH-STRIPPER	B423590*1	Liquid	07/16/2004 10:50
BTEX-STRIPPER	B423590*2	Liquid	07/16/2004 10:50
Trip Blank	B423590*3	Liquid	07/16/2004

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23590-1	PH-STRIPPER	Liquid	07/20/04	07/16/04 10:50	

Parameter	Units	Lab Sample IDs
pH (150.1)		23590-1
pH	units	6.8
Dilution Factor		1
Analysis Date		07/20/04
Analysis Time		16:00
Batch ID		0720A

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23590-2	BTEX-STRIPPER	Liquid	07/20/04	07/16/04 10:50	

Parameter	Units	Lab Sample IDs
		23590-2

Purgeable Aromatics (602)

Benzene	ug/l	0.25I
Ethylbenzene	ug/l	0.14U
Toluene	ug/l	0.62I
Xylenes	ug/l	1.6
Total Volatile Organic		
Aromatics	ug/l	2.47
Methyl Tert Butyl Ether (MTBE)	ug/l	0.59U
Surrogate - % Recovery *	%	85 %
Surrogate - Control Limit *	%	70-130 %
Dilution Factor		1
Analysis Date		07/24/04
Analysis Time		20:50
Batch ID		0723C

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23590-3	Trip Blank	Liquid	07/20/04	07/16/04	

Parameter	Units	Lab Sample IDs
		23590-3

Purgeable Aromatics (602)

Benzene	ug/l	0.10U
Ethylbenzene	ug/l	0.14U
Toluene	ug/l	0.13U
Xylenes	ug/l	0.27U
Total Volatile Organic Aromatics	ug/l	1.0U
Methyl Tert Butyl Ether (MTBE)	ug/l	0.59U
Surrogate - % Recovery *	%	90 %
Surrogate - Control Limit *	%	70-130 %
Dilution Factor		1
Analysis Date		07/24/04
Analysis Time		00:22
Batch ID		0723C

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23590-4	Method Blank	Liquid	07/20/04		
23590-5	Lab Control Standard Result	Liquid	07/20/04		
23590-6	Lab Control Standard Duplicate Result	Liquid	07/20/04		
23590-7	Spike Amount Added, LCS/LCSD	Liquid	07/20/04		
23590-8	Lab Control Standard % Recovery	Liquid	07/20/04		

Parameter	Units	Lab Sample IDs				
		23590-4	23590-5	23590-6	23590-7	23590-8

Purgeable Aromatics (602)

Benzene	ug/l	0.10U	9.9	9.2	10	99 %
Ethylbenzene	ug/l	0.14U				
Toluene	ug/l	0.13U	10	9.3	10	100 %
Xylenes	ug/l	0.27U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Methyl Tert Butyl Ether (MTBE)	ug/l	0.59U				
Surrogate - % Recovery *	%	95 %	90 %	90 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor		1	1	1		1
Analysis Date		07/23/04	07/23/04	07/24/04		07/23/04
Analysis Time		10:36	19:38	15:23		19:38
Batch ID		0723C	0723C	0723C	0723C	0723C

pH (150.1)

pH	units	6.6	5.99	5.99	6.00	102 %
Dilution Factor		1	1	1		
Analysis Date		07/20/04	07/20/04	07/20/04		
Analysis Time		16:00	16:00	16:00		
Batch ID		0720A	0720A	0720A	0720A	

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23590-9	Lab Control Standard Duplicate % Recovery	Liquid	07/20/04		
23590-10	LCS Accuracy Control Limit (%R)	Liquid	07/20/04		
23590-11	Precision (%RPD) of LCS/LCSD	Liquid	07/20/04		
23590-12	LCS Precision Control Limit (Advisory) %RPD	Liquid	07/20/04		
23590-13	Spike Sample ID	Liquid	07/20/04		

Parameter	Units	Lab Sample IDs				
		23590-9	23590-10	23590-11	23590-12	23590-13

Purgeable Aromatics (602)

Benzene	%	92 %	39-150 %	7.3 %	<31 %	23552-1
Toluene	%	93 %	46-148 %	7.3 %	<25 %	23552-1
Surrogate - Control Limit *	%		70-130 %			
Dilution Factor		1				
Analysis Date		07/24/04				
Analysis Time		15:23				
Batch ID		0723C		0723C		0723C

pH (150.1)

pH	%	102 %	63-158 %	0 %	<40 %	---
Batch ID				0720A		

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23590-14	Sample Result	Liquid	07/20/04		
23590-15	Matrix Spike Result	Liquid	07/20/04		
23590-16	Matrix Spike Duplicate Result	Liquid	07/20/04		
23590-17	Spike Amount Added, MS	Liquid	07/20/04		
23590-18	Matrix Spike % Recovery	Liquid	07/20/04		

Parameter	Units	Lab Sample IDs				
		23590-14	23590-15	23590-16	23590-17	23590-18

Purgeable Aromatics (602)

Benzene	ug/l	0.10U	9.2	9.3	10	92 %
Ethylbenzene	ug/l	0.14U				
Toluene	ug/l	0.13U	9.3	9.6	10	93 %
Xylenes	ug/l	0.27U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Methyl Tert Butyl Ether (MTBE)	ug/l	0.59U				
Surrogate - % Recovery *	%	100 %	90 %	95 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor			1	1		1
Analysis Date			07/24/04	07/24/04		07/24/04
Analysis Time			21:31	22:12		21:31
Batch ID		0723C	0723C	0723C	0723C	0723C

pH (150.1)

pH	units	---	---	---	---	---
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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23590-19	Matrix Spike Duplicate % Recovery	Liquid	07/20/04		
23590-20	MS Accuracy Advisory Limit (%R)	Liquid	07/20/04		
23590-21	Precision (%RPD) MS/MSD	Liquid	07/20/04		
23590-22	MS Precision Advisory Limit (%RPD)	Liquid	07/20/04		
23590-23	Practical Quantitation Limit (PQL)	Liquid	07/20/04		

Parameter	Units	Lab Sample IDs				
		23590-19	23590-20	23590-21	23590-22	23590-23

Purgeable Aromatics (602)						
Benzene	%	93 %	39-150 %	1.1 %	<31 %	1.0
Toluene	%	96 %	46-148 %	3.2 %	<25 %	1.0
Surrogate - Control Limit *	%		70-130 %			
Ethylbenzene	ug/l					1.0
Xylenes	ug/l					1.0
Total Volatile Organic						
Aromatics	ug/l					1.0
Methyl Tert Butyl Ether (MTBE)	ug/l					10
Dilution Factor		1				
Analysis Date		07/24/04				
Analysis Time		22:12				
Batch ID		0723C		0723C		
pH (150.1)						
pH	units	---		---		

Order Number: B423590

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

The estimated uncertainty associated with these reported results is available upon request.

Methods: 40 CFR Part 136, EPA SW-846, FDEP
DOH Certification: E84282.

I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U = Indicates that the compound was analyzed for but not detected.

SEVERN **STL**
TRENT

Remit To: SEVERN TRENT LABORATORIES, INC. P.O. Box 7777 W4305 Philadelphia, PA 19175-4305
 STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Tel:813-885-7427 Fax:813-885-7049

INVOICE

Federal ID# 23-2919996

Accounts Payable
 Battelle
 505 King Avenue
 Columbus, OH 43201

Invoice CC:

DATE 07/29/04	TERMS Net 60 Days	CLIENT PO # 167842	CLIENT PROJECT #	PROJECT 0486003
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INVOICE # 66018073	CONTRACT #	CODE MV#101418	
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LOG # B423590	CREDIT / DEBIT	ORIGINATING LOG #	SDG #	REQUISITION #
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QUANTITY	MATRIX	METHOD	DESCRIPTION	UNIT PRICE	EXTENDED AMOUNT
1	Liquid	150.1	pH	4.00	4.00
1	Liquid	602	Purgeable Aromatics	50.00	50.00
			Total for this page		\$54.00
INVOICE TOTAL					\$54.00

REPORTED TO Ms. Lydia Cumming	OFFICE Battelle	OFFICE PHONE (614) 424-7778
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For proper credit, please show INVOICE NUMBER on your remittance.
 After 30 days, service charges of 1.5% per 30 days will be applied to unpaid balance.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

STL Tampa
6712 Benjamin Road, Suite 100
Tampa, FL 33634
Website: www.stl-inc.com
Phone: (813) 885-7427
Fax: (813) 885-7049

Alternate Laboratory Name/Location
Phone:
Fax:

**SEVERN
TRENT**

STL

PROJECT REFERENCE	PROJECT NO. <i>04B6003</i>	PROJECT LOCATION (STATE) <i>MS</i>	MATRIX TYPE	REQUIRED ANALYSIS						PAGE	OF	
SAMPLER'S SIGNATURE <i>[Signature]</i>	P.O. NUMBER <i>167042</i>	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	1	ALL	BTEX					STANDARD REPORT DELIVERY <input type="radio"/>	
CLIENT (SITE) PM <i>Battelle MS, INST</i>	CLIENT PHONE	CLIENT FAX									DATE DUE _____	
CLIENT NAME	CLIENT E-MAIL										EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="radio"/>	DATE DUE _____
CLIENT ADDRESS <i>505 King Avenue, Columbus, OH 43201</i>	COMPANY CONTRACTING THIS WORK (if applicable) <i>Sovereign Petroleum Sys, Inc.</i>										NUMBER OF COOLERS SUBMITTED PER SHIPMENT:	

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED						REMARKS
DATE	TIME							1	2	3	4	5	6	
<i>7-16-04</i>	<i>10:50A</i>	<i>Ph. Stripper</i>	<i>6</i>	<i>✓</i>				<i>1</i>						
<i>7-16-04</i>	<i>10:50A</i>	<i>BTEX-Stripper</i>	<i>6</i>	<i>✓</i>				<i>3</i>						
<i>(F)</i>														

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE <i>6-25-04</i>	TIME <i>1000</i>	RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE <i>7-19-04</i>	TIME <i>8:50A</i>	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE	TIME	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE <i>7-20-04</i>	TIME <i>0840</i>	RECEIVED BY: (SIGNATURE)	DATE	TIME

RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>[Signature]</i>	DATE <i>7-20-04</i>	TIME <i>1050</i>	CUSTODY INTACT YES <input checked="" type="radio"/> NO <input type="radio"/>	CUSTODY SEAL NO. <i>MS</i>	STL TAMPA LOG NO. <i>B423590</i>	LABORATORY REMARKS
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Analytical Report

For: Ms. Lydia Cumming
Battelle
505 King Avenue
Columbus, OH 43201

CC:

Order Number: B423882
SDG Number:
Client Project ID:
Project: 0486003
Report Date: 08/17/2004
Sampled By: Client
Sample Received Date: 08/04/2004
Requisition Number:
Purchase Order:



Michael F. Valder, Project Manager
mvalder@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Sample Summary

Order: B423882
Date Received: 08/04/2004

Client: Battelle
Project: 0486003

Client Sample ID	Lab Sample ID	Matrix	Date Sampled
DRO-SEPARATOR	B423882*1	Liquid	08/03/2004 10:00
PH-STRIPPER	B423882*2	Liquid	08/03/2004 10:00
BTEX STRIPPER	B423882*3	Liquid	08/03/2004 10:00

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23882-1	DRO-SEPARATOR	Liquid	08/04/04	08/03/04 10:00	

Parameter	Units	Lab Sample IDs
		23882-1

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	mg/l	110
Surrogate - o-Terphenyl *	mg/l	*F33
Dilution Factor		100
Prep Date		08/09/04
Prep Time		17:00
Analysis Date		08/12/04
Analysis Time		19:01
Batch ID		080988

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23882-2	PH-STRIPPER	Liquid	08/04/04	08/03/04 10:00	

Parameter	Units	Lab Sample IDs
		23882-2

pH (150.1)

pH	units	6.7
Dilution Factor		1
Analysis Date		08/04/04
Analysis Time		12:00
Batch ID		0804A

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23882-3	BTEX STRIPPER	Liquid	08/04/04	08/03/04 10:00	

Parameter	Units	Lab Sample IDs
		23882-3

Purgeable Aromatics (602)

Benzene	ug/l	0.10U
Ethylbenzene	ug/l	0.14U
Toluene	ug/l	1.4
Xylenes	ug/l	2.4
Total Volatile Organic Aromatics	ug/l	3.8
Surrogate - % Recovery *	%	85 %
Dilution Factor		1
Analysis Date		08/10/04
Analysis Time		15:13
Batch ID		0809C

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23882-4	Method Blank	Liquid	08/04/04		
23882-5	Lab Control Standard Result	Liquid	08/04/04		
23882-6	Lab Control Standard Duplicate Result	Liquid	08/04/04		
23882-7	Spike Amount Added, LCS/LCSD	Liquid	08/04/04		
23882-8	Lab Control Standard % Recovery	Liquid	08/04/04		

Parameter	Units	Lab Sample IDs				
		23882-4	23882-5	23882-6	23882-7	23882-8

Purgeable Aromatics (602)

Benzene	ug/l	0.10U	9.6	9.8	10	96 %
Ethylbenzene	ug/l	0.14U				
Toluene	ug/l	0.13U	9.7	9.7	10	97 %
Xylenes	ug/l	0.27U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Surrogate - % Recovery *	%	90 %	95 %	95 %		
Dilution Factor		1	1	1		1
Analysis Date		08/10/04	08/09/04	08/09/04		08/09/04
Analysis Time		10:18	09:14	19:44		09:14
Batch ID		0809C	0809C	0809C	0809C	0809C

pH (150.1)

pH	units	6.0	5.93	5.93	6.00	117 %
Dilution Factor		1	1	1		
Analysis Date		08/04/04	08/04/04	08/04/04		
Analysis Time		12:00	12:00	12:00		
Batch ID		0804A	0804A	0804A	0804A	

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	mg/l	0.029U	0.61	0.48	1.0	61 %
Surrogate - o-Terphenyl *	%	104 %	70 %	64 %		
Dilution Factor		1	1	1		
Prep Date		08/09/04	08/09/04	08/09/04		
Prep Time		17:00	17:00	17:00		
Analysis Date		08/12/04	08/12/04	08/12/04		
Analysis Time		16:15	16:22	16:29		
Batch ID		0809BB	0809BB	0809BB	0809BB	0809BB

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23882-9	Lab Control Standard Duplicate % Recovery	Liquid	08/04/04		
23882-10	LCS Accuracy Control Limit (%R)	Liquid	08/04/04		
23882-11	Precision (%RPD) of LCS/LCSD	Liquid	08/04/04		
23882-12	LCS Precision Control Limit (Advisory) %RPD	Liquid	08/04/04		
23882-13	Spike Sample ID	Liquid	08/04/04		

Parameter	Units	Lab Sample IDs				
		23882-9	23882-10	23882-11	23882-12	23882-13

Purgeable Aromatics (602)

Benzene	%	98 %	39-150 %	2.1 %	<31 %	23886-4
Toluene	%	97 %	46-148 %	0 %	<25 %	23886-4
Surrogate - % Recovery *	%		70-130 %			
Dilution Factor		1				
Analysis Date		08/09/04				
Analysis Time		19:44				
Batch ID		0809C		0809C		0809C

pH (150.1)

pH	%	117 %	63-158 %	0 %	<40 %	
Batch ID				0804A		

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	%	48 %	40-140 %	24 %	<40 %	*F82
Surrogate - o-Terphenyl *	%		38-156 %			
Batch ID		0809BB		0809BB		0809BB

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23882-14	Sample Result	Liquid	08/04/04		
23882-15	Matrix Spike Result	Liquid	08/04/04		
23882-16	Matrix Spike Duplicate Result	Liquid	08/04/04		
23882-17	Spike Amount Added, MS	Liquid	08/04/04		
23882-18	Matrix Spike % Recovery	Liquid	08/04/04		

Parameter	Units	Lab Sample IDs				
		23882-14	23882-15	23882-16	23882-17	23882-18
Purgeable Aromatics (602)						
Benzene	ug/l	0.10U	9.0	8.8	10	90 %
Ethylbenzene	ug/l	0.14U				
Toluene	ug/l	0.13U	9.4	9.0	10	94 %
Xylenes	ug/l	0.27U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Surrogate - % Recovery *	%	90 %	85 %	85 %		
Dilution Factor			1	1		1
Analysis Date			08/10/04	08/10/04		08/10/04
Analysis Time			15:55	16:38		15:55
Batch ID		0809C	0809C	0809C	0809C	0809C
pH (150.1)						
pH	units	---	---	---	---	---
Diesel Range Organics (8100M) (8100)						
Hydrocarbons as DRO	mg/l	*F82	*F82	*F82	*F82	*F82
Batch ID		0809BB	0809BB	0809BB	0809BB	0809BB

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
23882-19	Matrix Spike Duplicate % Recovery	Liquid	08/04/04		
23882-20	MS Accuracy Advisory Limit (%R)	Liquid	08/04/04		
23882-21	Precision (%RPD) MS/MSD	Liquid	08/04/04		
23882-22	MS Precision Advisory Limit (%RPD)	Liquid	08/04/04		
23882-23	Practical Quantitation Limit (PQL)	Liquid	08/04/04		

Parameter	Units	Lab Sample IDs				
		23882-19	23882-20	23882-21	23882-22	23882-23

Purgeable Aromatics (602)

Benzene	%	88 %	39-150 %	2.2 %	<31 %	1.0
Toluene	%	90 %	46-148 %	4.3 %	<25 %	1.0
Surrogate - % Recovery *	%		70-130 %			
Ethylbenzene	ug/l					1.0
Xylenes	ug/l					1.0
Total Volatile Organic Aromatics	ug/l					1.0
Dilution Factor		1				
Analysis Date		08/10/04				
Analysis Time		16:38				
Batch ID		0809C		0809C		

pH (150.1)

pH	units	---		---		
----	-------	-----	--	-----	--	--

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	%	*F82	40-140 %	*F82	<40 %	0.30
Surrogate - o-Terphenyl *	%		38-156 %			
Batch ID		0809BB		0809BB		

Order Number: B423882

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

The estimated uncertainty associated with these reported results is available upon request.

Method : 40 CFR Part 136, EPA SW-846
DOH Certification: E84282.

I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U = Indicates that the compound was analyzed for but not detected.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F82 = Insufficient sample volume was available to perform a batch-specific matrix spike. However, an LCS analyzed with the sample batch met control criteria.

Analytical Report

For: Ms. Lydia Cumming
Battelle
505 King Avenue
Columbus, OH 43201

CC:

Order Number: B424161
SDG Number:
Client Project ID:
Project: 0486003
Report Date: 08/31/2004
Sampled By: Client
Sample Received Date: 08/19/2004
Requisition Number:
Purchase Order: 167842



Michael F. Valder, Project Manager
mvalder@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Sample Summary

Order: B424161
Date Received: 08/19/2004

Client: Battelle
Project: 0486003

Client Sample ID
PH-STRIPPER
BTEX-STRIPPER
Trip Blank

Lab Sample ID
B424161*1
B424161*2
B424161*3

Matrix
Liquid
Liquid
Liquid

Date Sampled
08/17/2004 12:50
08/17/2004 12:50
08/17/2004

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24161-1	PH-STRIPPER	Liquid	08/19/04	08/17/04 12:50	

Parameter	Units	Lab Sample IDs
		24161-1

pH (150.1)

pH	units	6.8
Dilution Factor		1
Analysis Date		08/19/04
Analysis Time		15:00
Batch ID		0819A

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24161-2	BTEX-STRIPPER	Liquid	08/19/04	08/17/04 12:50	

Parameter	Units	Lab Sample IDs
		24161-2

Purgeable Aromatics (602)

Benzene	ug/l	0.42U
Ethylbenzene	ug/l	0.27U
Toluene	ug/l	0.42I
Xylenes	ug/l	0.88I
Total Volatile Organic		
Aromatics	ug/l	1.3I
Methyl Tert Butyl Ether (MTBE)	ug/l	2.8U
Surrogate - % Recovery *	%	90 %
Surrogate - Control Limit *	%	70-130 %
Dilution Factor		1
Analysis Date		08/30/04
Analysis Time		15:57
Batch ID		0830C

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24161-3	Trip Blank	Liquid	08/19/04	08/17/04	

Parameter	Units	Lab Sample IDs
		24161-3

Purgeable Aromatics (602)

Benzene	ug/l	0.42U
Ethylbenzene	ug/l	0.27U
Toluene	ug/l	0.19U
Xylenes	ug/l	0.75U
Total Volatile Organic		
Aromatics	ug/l	1.0U
Methyl Tert Butyl Ether (MTBE)	ug/l	2.8U
Surrogate - % Recovery *	%	90 %
Surrogate - Control Limit *	%	70-130 %
Dilution Factor		1
Analysis Date		08/30/04
Analysis Time		15:18
Batch ID		0830C

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24161-4	Method Blank	Liquid	08/19/04		
24161-5	Lab Control Standard Result	Liquid	08/19/04		
24161-6	Lab Control Standard Duplicate Result	Liquid	08/19/04		
24161-7	Spike Amount Added, LCS/LCSD	Liquid	08/19/04		
24161-8	Lab Control Standard % Recovery	Liquid	08/19/04		

Parameter	Units	Lab Sample IDs				
		24161-4	24161-5	24161-6	24161-7	24161-8

Purgeable Aromatics (602)

Benzene	ug/l	0.42U	9.6	9.4	10	96 %
Ethylbenzene	ug/l	0.27U				
Toluene	ug/l	0.19U	9.7	9.5	10	97 %
Xylenes	ug/l	0.75U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Methyl Tert Butyl Ether (MTBE)	ug/l	2.8U				
Surrogate - % Recovery *	%	90 %	100 %	105 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor		1	1	1		1
Analysis Date		08/30/04	08/30/04	08/30/04		08/30/04
Analysis Time		14:01	12:06	12:45		12:06
Batch ID		0830C	0830C	0830C	0830C	0830C

pH (150.1)

pH	units	6.3	6.00	6.00	6.00	100 %
Dilution Factor		1	1	1		
Analysis Date		08/19/04	08/19/04	08/19/04		
Analysis Time		15:00	15:00	15:00		
Batch ID		0819A	0819A	0819A	0819A	

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24161-9	Lab Control Standard Duplicate % Recovery	Liquid	08/19/04		
24161-10	LCS Accuracy Control Limit (%R)	Liquid	08/19/04		
24161-11	Precision (%RPD) of LCS/LCSD	Liquid	08/19/04		
24161-12	LCS Precision Control Limit (Advisory) %RPD	Liquid	08/19/04		
24161-13	Spike Sample ID	Liquid	08/19/04		

Parameter	Units	Lab Sample IDs				
		24161-9	24161-10	24161-11	24161-12	24161-13

Purgeable Aromatics (602)

Benzene	%	94 %	39-150 %	2.1 %	<31 %	24226-7
Toluene	%	95 %	46-148 %	2.1 %	<25 %	24226-7
Surrogate - Control Limit *	%		70-130 %			
Dilution Factor		1				
Analysis Date		08/30/04				
Analysis Time		12:45				
Batch ID		0830C		0830C		0830C

pH (150.1)

pH	%	100 %	63-158 %	0 %	<40 %	
Batch ID				0819A		

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24161-14	Sample Result	Liquid	08/19/04		
24161-15	Matrix Spike Result	Liquid	08/19/04		
24161-16	Matrix Spike Duplicate Result	Liquid	08/19/04		
24161-17	Spike Amount Added, MS	Liquid	08/19/04		
24161-18	Matrix Spike % Recovery	Liquid	08/19/04		

Parameter	Units	Lab Sample IDs				
		24161-14	24161-15	24161-16	24161-17	24161-18
Purgeable Aromatics (602)						
Benzene	ug/l	0.42U	9.3	9.1	10	93 %
Ethylbenzene	ug/l	0.27U				
Toluene	ug/l	0.19U	9.5	9.2	10	95 %
Xylenes	ug/l	0.27U				
Total Volatile Organic Aromatics	ug/l	1.0U				
Methyl Tert Butyl Ether (MTBE)	ug/l	2.8U				
Surrogate - % Recovery *	%	90 %	100 %	100 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor			1	1		1
Analysis Date			08/31/04	08/31/04		08/31/04
Analysis Time			09:35	10:13		09:35
Batch ID		0830C	0830C	0830C	0830C	0830C
pH (150.1)						
pH	units	---	---	---	---	---

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24161-19	Matrix Spike Duplicate % Recovery	Liquid	08/19/04		
24161-20	MS Accuracy Advisory Limit (%R)	Liquid	08/19/04		
24161-21	Precision (%RPD) MS/MSD	Liquid	08/19/04		
24161-22	MS Precision Advisory Limit (%RPD)	Liquid	08/19/04		
24161-23	Practical Quantitation Limit (PQL)	Liquid	08/19/04		

Parameter	Units	Lab Sample IDs				
		24161-19	24161-20	24161-21	24161-22	24161-23

Purgeable Aromatics (602)

Benzene	%	91 %	39-150 %	2.2 %	<31 %	1.0
Toluene	%	92 %	46-148 %	3.2 %	<25 %	1.0
Surrogate - Control Limit *	%		70-130 %			
Ethylbenzene	ug/l					1.0
Xylenes	ug/l					1.0
Total Volatile Organic						
Aromatics	ug/l					1.0
Methyl Tert Butyl Ether (MTBE)	ug/l					10
Dilution Factor		1				
Analysis Date		08/31/04				
Analysis Time		10:13				
Batch ID		0830C		0830C		

pH (150.1)

pH	units	---		---		
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Order Number: B424161

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

The estimated uncertainty associated with these reported results is available upon request.

Methods: 40 CFR Part 136, EPA SW-846, FDEP

DOH Certification: E84282.

I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U = Indicates that the compound was analyzed for but not detected.

SEVERN
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STL

Remit To: SEVERN TRENT LABORATORIES, INC. P.O. Box 7777 W4305 Philadelphia, PA 19175-4305
STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Tel:813-885-7427 Fax:813-885-7049

INVOICE

Federal ID# 23-2919996

Accounts Payable
Battelle
505 King Avenue
Columbus, OH 43201

Invoice CC:

DATE 08/31/04	TERMS Net 60 Days	CLIENT PO # 167842	CLIENT PROJECT #	PROJECT 0486003
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INVOICE # 66018671	CONTRACT #	CODE MV*101418	
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LOG # B424161	CREDIT / DEBIT	ORIGINATING LOG #	SDG #	REQUISITION #
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QUANTITY	MATRIX	METHOD	DESCRIPTION	UNIT PRICE	EXTENDED AMOUNT
1	Liquid	150.1	pH	4.00	4.00
1	Liquid	602	Purgeable Aromatics	50.00	50.00
			Total for this page		\$54.00
			INVOICE TOTAL		\$54.00

REPORTED TO
Ms. Lydia Cumming

OFFICE
Battelle

OFFICE PHONE
(614) 424-7778

For proper credit, please show INVOICE NUMBER on your remittance.
After 30 days, service charges of 1.5% per 30 days will be applied to unpaid balance.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

**SEVERN
TRENT**

STL

424161

STL Tampa
6712 Benjamin Road, Suite 100
Tampa, FL 33634

Website: www.stl-inc.com
Phone: (813) 885-7427
Fax: (813) 885-7049

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO. 0486003	PROJECT LOCATION (STATE) Ms.	MATRIX TYPE	REQUIRED ANALYSIS										PAGE	OF				
SAMPLER'S SIGNATURE <i>L Hunt</i>	P.O. NUMBER 167842	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	1	PH	HLL	BTEX											STANDARD REPORT DELIVERY	<input type="radio"/>
CLIENT (SITE) PM <i>Lynn Cummings</i>	CLIENT PHONE 604-424-7700	CLIENT FAX																DATE DUE	_____
CLIENT NAME <i>Battelle Mid Inst</i>	CLIENT E-MAIL																	EXPEDITED REPORT DELIVERY (SURCHARGE)	<input type="radio"/>
CLIENT ADDRESS <i>505 KIM AVE Columbus, OH 43201</i>																		DATE DUE	_____
COMPANY CONTRACTING THIS WORK (if applicable) <i>SPS, INC.</i>																		NUMBER OF COOLERS SUBMITTED PER SHIPMENT:	

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED										REMARKS		
DATE	TIME																			
8-17-04	12:50P	Ph-STRIPPER	6	✓				1												
8-17-04	12:50P	BTEX-STRIPPER	6	✓				3												
<i>(4)</i>																				

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE 7-28-04	TIME 1300	RELINQUISHED BY: (SIGNATURE) <i>Barbara Hunt</i>	DATE 8-18-04	TIME 8:20 AM	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE	TIME	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE 8-19-04	TIME 0940	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY								
RECEIVED FOR LABORATORY BY (SIGNATURE) <i>[Signature]</i>	DATE 8-19-04	TIME 0945	CUSTODY INTACT YES <input checked="" type="radio"/> NO <input type="radio"/>	CUSTODY SEAL NO. <i>N/S</i>	STL TAMPA LOG NO. <i>B424161</i>	LABORATORY REMARKS		

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Report

For: Ms. Lydia Cumming
Battelle
505 King Avenue
Columbus, OH 43201

CC:

Order Number: B424469

SDG Number:

Client Project ID:

Project: 0486003

Report Date: 09/13/2004

Sampled By: Client

Sample Received Date: 09/03/2004

Requisition Number:

Purchase Order:



Michael F. Valder, Project Manager
mvalder@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Sample Summary

Order: 8424469
Date Received: 09/03/2004

Client: Battelle
Project: 0486003

Client Sample ID
DRO-0/W SEP

Lab Sample ID
8424469*1

Matrix
Liquid

Date Sampled
09/01/2004 15:00

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24469-1	DRO-O/W SEP	Liquid	09/03/04	09/01/04 15:00	

Parameter	Units	Lab Sample IDs
		24469-1

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	mg/l	79V
Surrogate - o-Terphenyl *	mg/l	*F33
Dilution Factor		100
Prep Date		09/08/04
Prep Time		21:30
Analysis Date		09/11/04
Analysis Time		22:29
Batch ID		0908C

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24469-2	Method Blank	Liquid	09/03/04		
24469-3	Lab Control Standard Result	Liquid	09/03/04		
24469-4	Lab Control Standard Duplicate Result	Liquid	09/03/04		
24469-5	Spike Amount Added, LCS/LCSD	Liquid	09/03/04		
24469-6	Lab Control Standard % Recovery	Liquid	09/03/04		

Parameter	Units	Lab Sample IDs				
		24469-2	24469-3	24469-4	24469-5	24469-6

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	mg/l	0.052I	0.80	0.83	1.0	75 %
Surrogate - o-Terphenyl *	%	104 %	92 %	88 %		
Dilution Factor		1	1	1		
Prep Date		09/08/04	09/08/04	09/08/04		
Prep Time		21:30	21:30	21:30		
Analysis Date		09/11/04	09/11/04	09/11/04		
Analysis Time		17:55	18:16	18:39		
Batch ID		0908C	0908C	0908C	0908C	0908C

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24469-7	Lab Control Standard Duplicate % Recovery	Liquid	09/03/04		
24469-8	LCS Accuracy Control Limit (%R)	Liquid	09/03/04		
24469-9	Precision (%RPD) of LCS/LCSD	Liquid	09/03/04		
24469-10	LCS Precision Control Limit (Advisory) %RPD	Liquid	09/03/04		
24469-11	Spike Sample ID	Liquid	09/03/04		

Parameter	Units	Lab Sample IDs				
		24469-7	24469-8	24469-9	24469-10	24469-11

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	%	78 %	40-140 %	3.7 %	<40 %	*F82
Surrogate - o-Terphenyl *	%		38-156 %			
Batch ID		0908C		0908C		0908C

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24469-12	Sample Result	Liquid	09/03/04		
24469-13	Matrix Spike Result	Liquid	09/03/04		
24469-14	Matrix Spike Duplicate Result	Liquid	09/03/04		
24469-15	Spike Amount Added, MS	Liquid	09/03/04		
24469-16	Matrix Spike % Recovery	Liquid	09/03/04		

Parameter	Units	Lab Sample IDs				
		24469-12	24469-13	24469-14	24469-15	24469-16

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	mg/l	*F82	*F82	*F82	*F82	*F82
Batch ID		0908C	0908C	0908C	0908C	0908C

STL Tampa

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Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24469-17	Matrix Spike Duplicate % Recovery	Liquid	09/03/04		
24469-18	MS Accuracy Advisory Limit (%R)	Liquid	09/03/04		
24469-19	Precision (%RPD) MS/MSD	Liquid	09/03/04		
24469-20	MS Precision Advisory Limit (%RPD)	Liquid	09/03/04		
24469-21	Practical Quantitation Limit (PQL)	Liquid	09/03/04		

Parameter	Units	Lab Sample IDs				
		24469-17	24469-18	24469-19	24469-20	24469-21

Diesel Range Organics (8100M) (8100)

Hydrocarbons as DRO	%	*F82	40-140 %	*F82	<40 %	0.30
Surrogate - o-Terphenyl *	%		38-156 %			
Batch ID		0908C		0908C		

Order Number: B424469

Method : 40 CFR Part 136, EPA SW-846, FDEP
DOH Certification: EB4282.

I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U = Indicates that the compound was analyzed for but not detected.

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL project manager who signed this test report.

The estimated uncertainty associated with these reported results is available upon request.

V = Indicates that the analyte was detected in both the sample and the associated method blank.

*F33 = Control limits are established only for surrogate concentration levels specified by EPA methods. Because the sample was diluted prior to analysis, surrogate recoveries are not reported.

*F82 = Insufficient sample volume was available to perform a batch-specific matrix spike. However, an LCS analyzed with the sample batch met control criteria.

Remit To: SEVERN TRENT LABORATORIES, INC. P.O. Box 7777 W4305 Philadelphia, PA 19175-4305
 STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Tel:813-885-7427 Fax:813-885-7049

INVOICE

Federal ID# 23-2919996

Accounts Payable
 Battelle
 505 King Avenue
 Columbus, OH 43201

Invoice CC:

DATE 09/13/04	TERMS Net 60 Days	CLIENT PO #	CLIENT PROJECT #	PROJECT 0486003
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INVOICE # 66018874	CONTRACT #	CODE MV*101418	
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LOG # B424469	CREDIT / DEBIT	ORIGINATING LOG #	SDG #	REQUISITION #
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QUANTITY	MATRIX	METHOD	DESCRIPTION	UNIT PRICE	EXTENDED AMOUNT
1	Liquid	8100	Diesel Range Organics (8100M)	100.00	100.00
			Total for this page		\$100.00
INVOICE TOTAL					\$100.00

REPORTED TO Ms. Lydia Cumming	OFFICE Battelle	OFFICE PHONE (614) 424-7778
----------------------------------	--------------------	--------------------------------

For proper credit, please show INVOICE NUMBER on your remittance.
 After 30 days, service charges of 1.5% per 30 days will be applied to unpaid balance.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

**SEVERN
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STL

B424469

STL Tampa
6712 Benjamin Road, Suite 100
Tampa, FL 33634

Website: www.stl-inc.com
Phone: (813) 885-7427
Fax: (813) 885-7049

Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO. 0486003	PROJECT LOCATION (STATE) MS	MATRIX TYPE	REQUIRED ANALYSIS				PAGE	OF
SAMPLER'S SIGNATURE <i>[Signature]</i>	P.O. NUMBER 167042	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NON-AQUEOUS LIQUID (OIL, SOLVENT, ...)	1	DRD				STANDARD REPORT DELIVERY <input type="radio"/>
CLIENT (SITE) PM Lydia Cummings	CLIENT PHONE	CLIENT FAX							DATE DUE _____
CLIENT NAME Battelle Mem Inst	CLIENT E-MAIL								EXPEDITED REPORT DELIVERY (SURCHARGE) <input type="radio"/>
CLIENT ADDRESS 505 14th Ave, Columbus, OH 43201		DATE DUE _____							
COMPANY CONTRACTING THIS WORK (if applicable)									NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE		SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NON-AQUEOUS LIQUID (OIL, SOLVENT, ...)	NUMBER OF CONTAINERS SUBMITTED				REMARKS
DATE	TIME											
9-1-04	3:00 P	DRD - D/W SEP	✓					2				

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE 8-30-04	TIME 1445	RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE 9-2-04	TIME 11:18 A	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY								
RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>[Signature]</i>	DATE 9-3-04	TIME 1145	CUSTODY INTACT YES <input checked="" type="radio"/> NO <input type="radio"/>	CUSTODY SEAL NO.	STL TAMPA LOG NO. B424469	LABORATORY REMARKS		

Analytical Report

For: Ms. Lydia Cumming
Battelle
505 King Avenue
Columbus, OH 43201

CC:

Order Number: B424634
SDG Number:
Client Project ID:
Project: 0486003
Report Date: 09/24/2004
Sampled By: Client
Sample Received Date: 09/15/2004
Requisition Number:
Purchase Order: 167812



Michael F. Valder, Project Manager
mvalder@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Sample Summary

Order: B424634
Date Received: 09/15/2004

Client: Battelle
Project: 0486003

Client Sample ID	Lab Sample ID	Matrix	Date Sampled
PH-STRIPPER	B424634*1	Liquid	09/14/2004 10:00
BTEX-STRIPPER	B424634*2	Liquid	09/14/2004 10:00

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24634-1	PH-STRIPPER	Liquid	09/15/04	09/14/04 10:00	

Parameter	Units	Lab Sample IDs
		24634-1

pH (150.1)

pH	units	7.1
Dilution Factor		1
Analysis Date		09/15/04
Analysis Time		09:44
Batch ID		0915A

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24634-2	BTEX-STRIPPER	Liquid	09/15/04	09/14/04 10:00	

Parameter	Units	Lab Sample IDs
		24634-2

Purgeable Aromatics (602)

Benzene	ug/l	0.42U
Ethylbenzene	ug/l	0.27U
Toluene	ug/l	0.19U
Xylenes	ug/l	0.75U
Total Volatile Organic		
Aromatics	ug/l	1.0U
Methyl Tert Butyl Ether (MTBE)	ug/l	2.8U
Surrogate - % Recovery *	%	75 %
Surrogate - Control Limit *	%	70-130 %
Dilution Factor		1
Analysis Date		09/16/04
Analysis Time		12:39
Batch ID		0915C

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24634-3	Method Blank	Liquid	09/15/04		
24634-4	Lab Control Standard Result	Liquid	09/15/04		
24634-5	Lab Control Standard Duplicate Result	Liquid	09/15/04		
24634-6	Spike Amount Added, LCS/LCSD	Liquid	09/15/04		
24634-7	Lab Control Standard % Recovery	Liquid	09/15/04		

Parameter	Units	Lab Sample IDs				
		24634-3	24634-4	24634-5	24634-6	24634-7

Purgeable Aromatics (602)

Benzene	ug/l	0.420	8.6	10	10	86 %
Ethylbenzene	ug/l	0.270				
Toluene	ug/l	0.190	8.6	10	10	86 %
Xylenes	ug/l	0.750				
Total Volatile Organic Aromatics	ug/l	1.00				
Methyl Tert Butyl Ether (MTBE)	ug/l	2.80				
Surrogate - % Recovery *	%	80 %	100 %	100 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor		1	1	1		1
Analysis Date		09/16/04	09/15/04	09/15/04		09/15/04
Analysis Time		11:22	10:48	15:56		10:48
Batch ID		0915C	0915C	0915C	0915C	0915C

pH (150.1)

pH	units	6.0	5.98	5.98	6.0	105 %
Dilution Factor		1	1	1		
Analysis Date		09/15/04	09/15/04	09/15/04		
Analysis Time		09:44	09:44	09:44		
Batch ID		0915A	0915A	0915A	0915A	0915A

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24634-8	Lab Control Standard Duplicate % Recovery	Liquid	09/15/04		
24634-9	LCS Accuracy Control Limit (%R)	Liquid	09/15/04		
24634-10	Precision (%RPD) of LCS/LCSD	Liquid	09/15/04		
24634-11	LCS Precision Control Limit (Advisory) %RPD	Liquid	09/15/04		
24634-12	Spike Sample ID	Liquid	09/15/04		

Parameter	Units	Lab Sample IDs				
		24634-8	24634-9	24634-10	24634-11	24634-12

Purgeable Aromatics (602)

Benzene	%	100 %	39-150 %	15 %	<31 %	24548-1
Toluene	%	100 %	46-148 %	15 %	<25 %	24548-1
Surrogate - Control Limit *	%		70-130 %			
Dilution Factor		1				
Analysis Date		09/15/04				
Analysis Time		15:56				
Batch ID		0915C		0915C		0915C

pH (150.1)

pH	%	105 %	63-158 %	0 %	<40 %	
Batch ID		0915A		0915A		

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Date Sampled	SDG#
24634-13	Sample Result	Liquid	09/15/04		
24634-14	Matrix Spike Result	Liquid	09/15/04		
24634-15	Matrix Spike Duplicate Result	Liquid	09/15/04		
24634-16	Spike Amount Added, MS	Liquid	09/15/04		
24634-17	Matrix Spike % Recovery	Liquid	09/15/04		

Parameter	Units	Lab Sample IDs				
		24634-13	24634-14	24634-15	24634-16	24634-17
Purgeable Aromatics (602)						
Benzene	ug/l	0.16U	8.0	7.8	10	80 %
Ethylbenzene	ug/l	0.27U				
Toluene	ug/l	0.19U	8.3	8.0	10	83 %
Xylenes	ug/l	0.75U				
Total Volatile Organic						
Aromatics	ug/l	1.0U				
Methyl Tert Butyl Ether (MTBE)	ug/l	2.8U				
Surrogate - % Recovery *	%	85 %	95 %	90 %		
Surrogate - Control Limit *	%	70-130 %	70-130 %	70-130 %		
Dilution Factor			1	1		1
Analysis Date			09/16/04	09/16/04		09/16/04
Analysis Time			13:17	13:57		13:17
Batch ID		0915C	0915C	0915C	0915C	0915C
pH (150.1)						
pH		---	---	---		---

Analytical Data Report

Lab Sample ID	Description	Matrix	Date Received	Data Sampled	SDG#
24634-18	Matrix Spike Duplicate % Recovery	Liquid	09/15/04		
24634-19	MS Accuracy Advisory Limit (%R)	Liquid	09/15/04		
24634-20	Precision (%RPD) MS/MSD	Liquid	09/15/04		
24634-21	MS Precision Advisory Limit (%RPD)	Liquid	09/15/04		
24634-22	Practical Quantitation Limit (PQL)	Liquid	09/15/04		

Parameter	Units	Lab Sample IDs				
		24634-18	24634-19	24634-20	24634-21	24634-22

Purgeable Aromatics (602)						
Benzene	%	78 %	39-150 %	2.5 %	<31 %	1.0
Toluene	%	80 %	46-148 %	3.6 %	<25 %	1.0
Surrogate - Control Limit *	%		70-130 %			
Ethylbenzene	ug/l					1.0
Xylenes	ug/l					1.0
Total Volatile Organic Aromatics	ug/l					1.0
Methyl Tert Butyl Ether (MTBE)	ug/l					10
Dilution Factor		1				
Analysis Date		09/16/04				
Analysis Time		13:57				
Batch ID		0915C		0915C		
pH (150.1)						
pH		---		---		

STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Order Number: B424634

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

The estimated uncertainty associated with these reported results is available upon request.

Methods: 40 CFR Part 136, EPA SW-846, FDEP
DOH Certification: E84282.

I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U = Indicates that the compound was analyzed for but not detected.

Remit To: SEVERN TRENT LABORATORIES, INC. P.O. Box 7777 W4305 Philadelphia, PA 19175-4305
STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Tel:813-885-7427 Fax:813-885-7049

INVOICE

Accounts Payable
Battelle
505 King Avenue
Columbus, OH 43201

Federal ID# 23-2919996

Invoice CC:

DATE 09/24/04	TERMS Net 60 Days	CLIENT PO # 167812	CLIENT PROJECT #	PROJECT 0486003	
INVOICE # 66019091	CONTRACT #	CODE MV*101418			
LOG # B424634	CREDIT / DEBIT	ORIGINATING LOG #	SDG #	REQUISITION #	
QUANTITY	MATRIX	METHOD	DESCRIPTION	UNIT PRICE	EXTENDED AMOUNT
1	Liquid	150.1	pH	4.00	4.00
1	Liquid	602	Purgeable Aromatics	50.00	50.00
Total for this page					\$54.00
INVOICE TOTAL					\$54.00
REPORTED TO Ms. Lydia Cumming		OFFICE Battelle		OFFICE PHONE (614) 424-7778	

For proper credit, please show INVOICE NUMBER on your remittance.
After 30 days, service charges of 1.5% per 30 days will be applied to unpaid balance.

Serial Number

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

STL Tampa
6712 Benjamin Road, Suite 100
Tampa, FL 33634

Website: www.stl-inc.com
Phone: (813) 885-7427
Fax: (813) 885-7049

SEVERN
TRENT

STL 424634

○ Alternate Laboratory Name/Location

Phone:
Fax:

PROJECT REFERENCE	PROJECT NO. 0426003	PROJECT LOCATION (STATE) MS	MATRIX TYPE	REQUIRED ANALYSIS										PAGE	OF					
SAMPLER'S SIGNATURE <i>[Signature]</i>	P.O. NUMBER 167812	CONTRACT NO.	COMPOSITE (C) OR GRAB (G) INDICATE AQUEOUS (WATER) SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL, SOLVENT,...)	1	PH	BTEX													STANDARD REPORT DELIVERY	<input type="radio"/>
CLIENT SIGNATURE 4219 Cummings	CLIENT PHONE 614-424-7770	CLIENT FAX																	DATE DUE	_____
CLIENT NAME BOTTLE FROM INSE	CLIENT E-MAIL																		EXPEDITED REPORT DELIVERY (SURCHARGE)	<input type="radio"/>
CLIENT ADDRESS 505 King Avenue Columbus, OH 43201	COMPANY CONTRACTING THIS WORK (if applicable) SFS, INC																		DATE DUE	_____

DATE	TIME	SAMPLE IDENTIFICATION	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT,...)	NUMBER OF CONTAINERS SUBMITTED	REMARKS
9-14-04	10:00	Ph-511PR1	G	✓				1	
		BTEX-511PR1	G	✓				3	
<i>[Large diagonal line across the table]</i>									

RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE 7-28-04	TIME 1300	RELINQUISHED BY: (SIGNATURE) <i>[Signature]</i>	DATE 9-14-04	TIME 10:40A	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE	TIME	RECEIVED BY: (SIGNATURE) <i>[Signature]</i>	DATE 9-15-04	TIME 0830	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY									
RECEIVED FOR LABORATORY BY: (SIGNATURE) <i>[Signature]</i>	DATE 9-15-04	TIME 0924	CUSTODY INTACT YES <input checked="" type="radio"/> NO <input type="radio"/>	CUSTODY SEAL NO. 1	STL TAMPA LOG NO. B424634	LABORATORY REMARKS			

Kelley, Mark E

From: Scott Speicher [skspeicher@wideopenwest.com]
Sent: Friday, October 22, 2004 11:05 AM
To: 'Mark Badgeley'; Kelley, Mark E; 'Wayne Mahaffey'
Subject: FW: Boy Scout Aviation Merit Badge Program

From: Gary Holloway [mailto:ghollowa@insight.rr.com]
Sent: Wednesday, October 20, 2004 6:13 PM
To: Gary Holloway
Subject: FW: Boy Scout Aviation Merit Badge Program

From: Greg Mock [mailto:gmock@skcbsa.org]
Sent: Wednesday, October 20, 2004 12:33 PM
To: Gary Holloway
Cc: Dan Kiser
Subject: Re: Boy Scout Aviation Merit Badge Program

Gary could you send this email to Scout Master's only.
 This a great program that our scouts could be a part of.

Thanks

G.Mock

----- Original Message -----

From: Dan Kiser
To: Mock
Cc: Wathen
Sent: Tuesday, October 19, 2004 2:41 PM
Subject: Boy Scout Aviation Merit Badge Program

Greg:

As you are aware, for the past seven years the Youth Aviation Organization (YAO) has been staging semiannual Boy Scout aviation merit badge programs at the Ohio State University Airport. (<http://www.osuairport.org/aviation/youth/default.php>) Each program attracts from 100 to 150 Boy Scouts and other young people and has received great reviews from the Boy Scout adult leadership

Currently we serve nearly all the troops in the Buckeye District. We would like to expand our coverage and start serving troops in your Arrow Head District. Our next program is Saturday, May 7, 2005. Could you arrange for YAO to get the e-mail addresses of the scout masters and other adult leaders in your district? We would like to send those people more detailed information about our program.

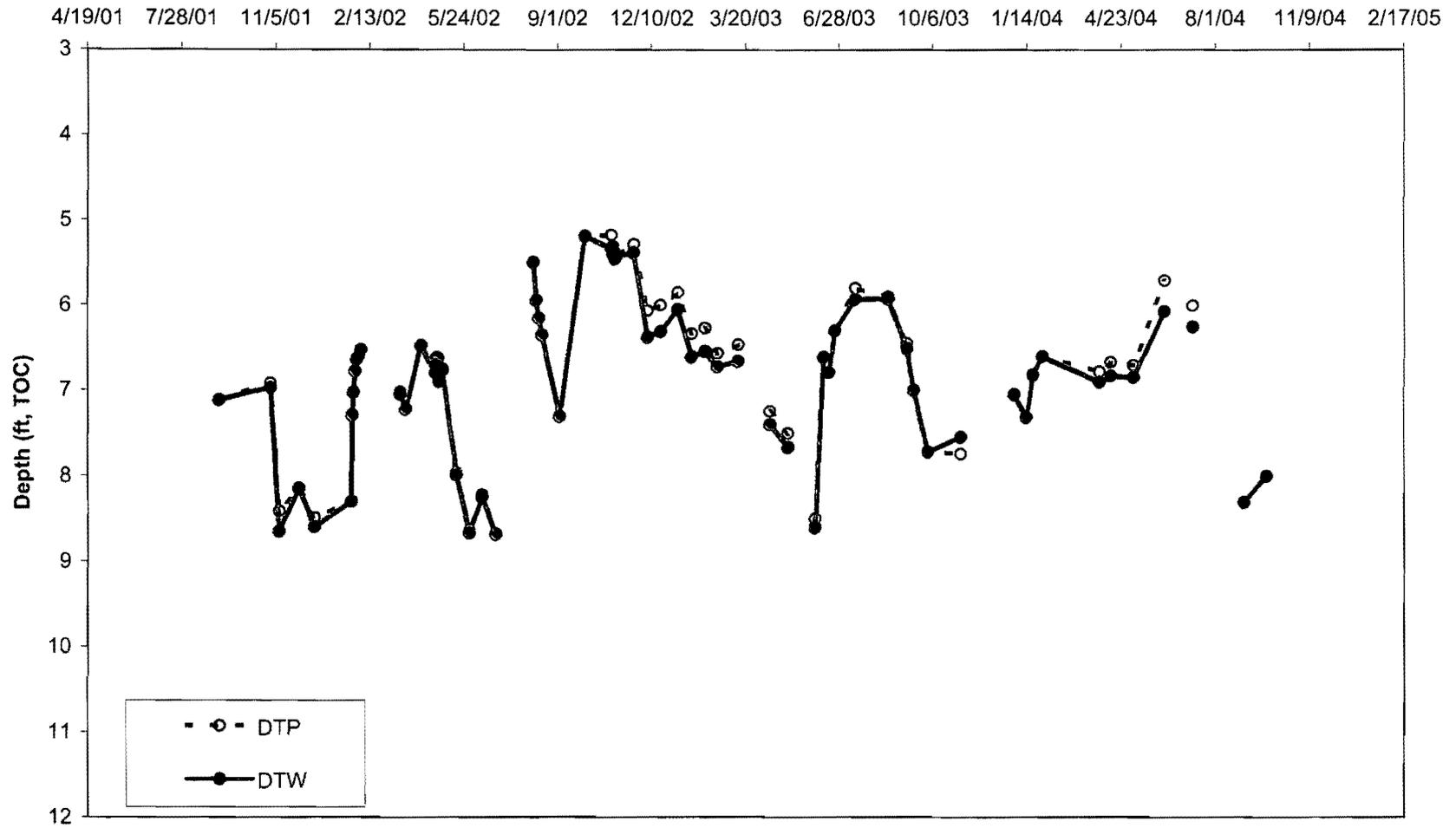
I would be happy to answer any questions that you or anyone else may have about our YAO program.

Dan Kiser
 (H) 614-771-0881
 (C) 614-506-6660

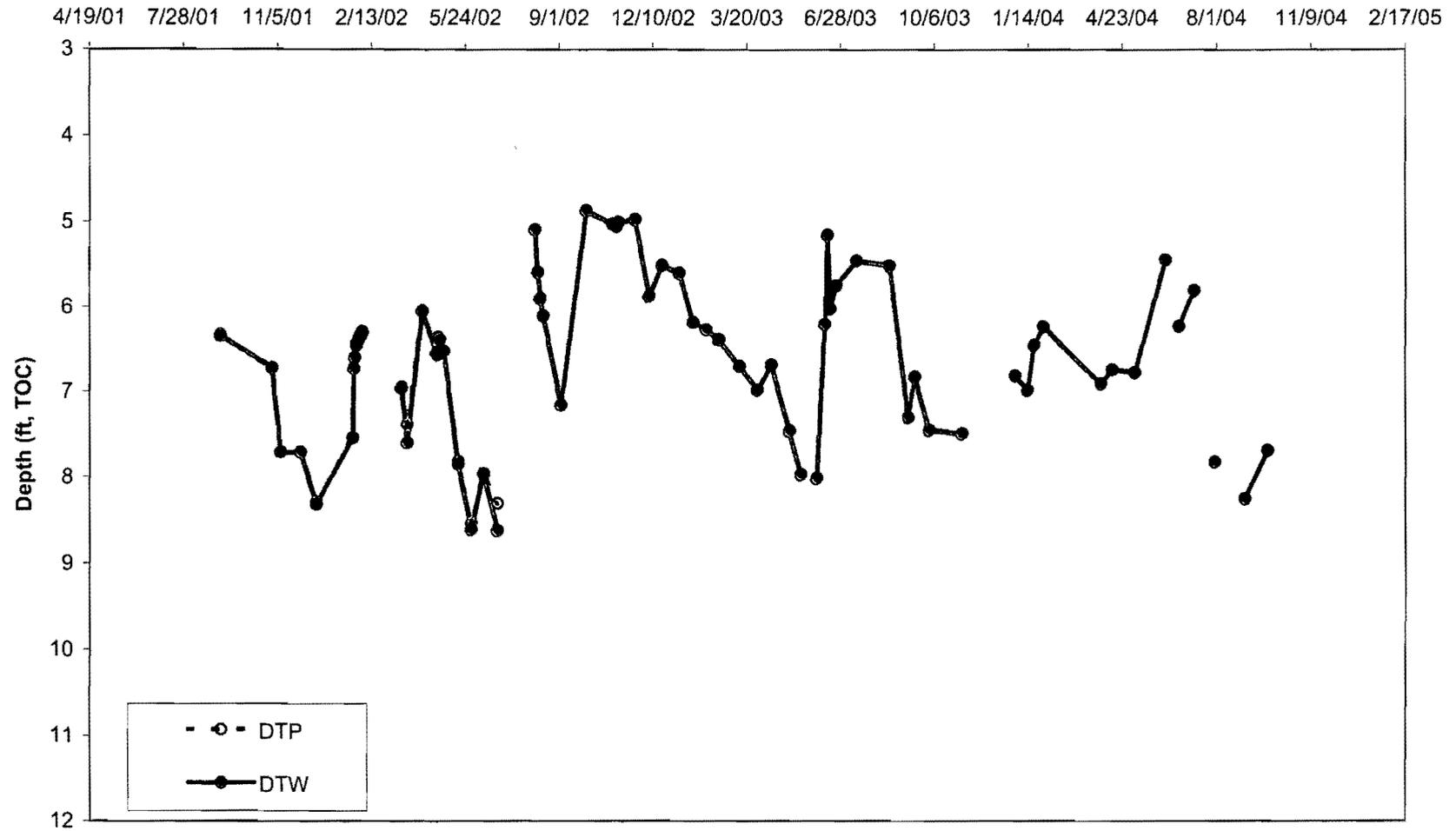
10/22/2004

ATTACHMENT 4

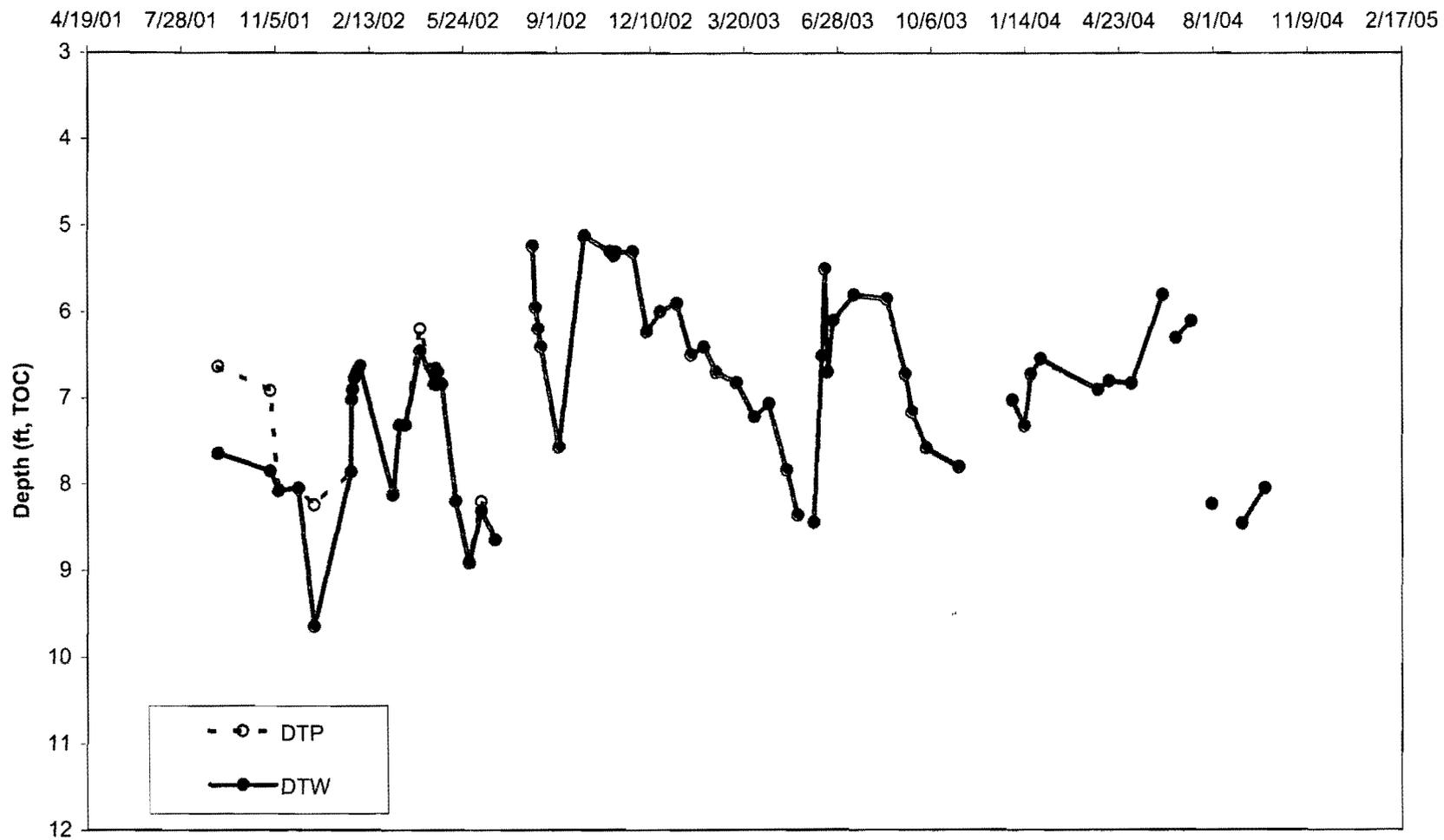
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EW-01



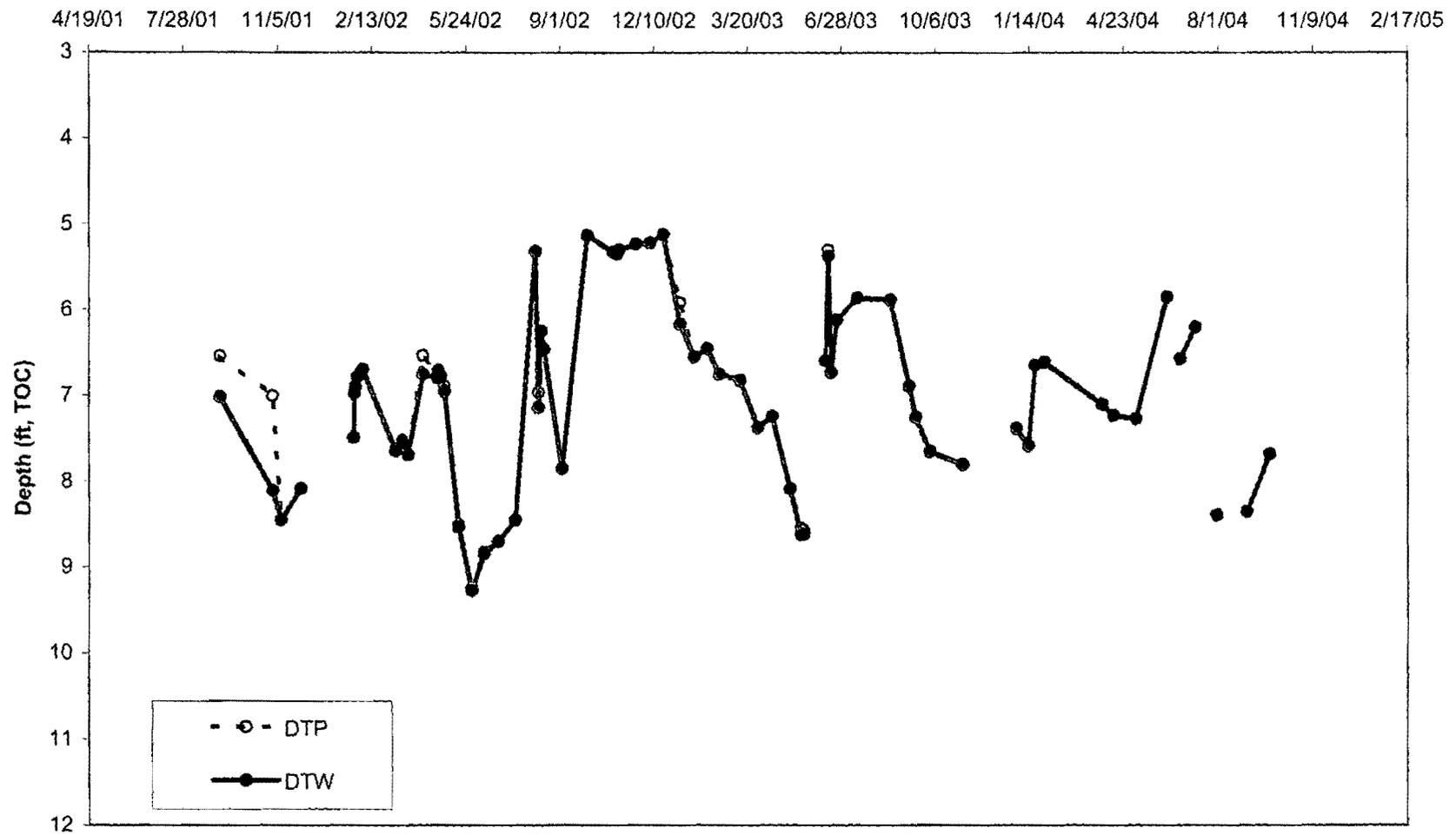
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EW-02



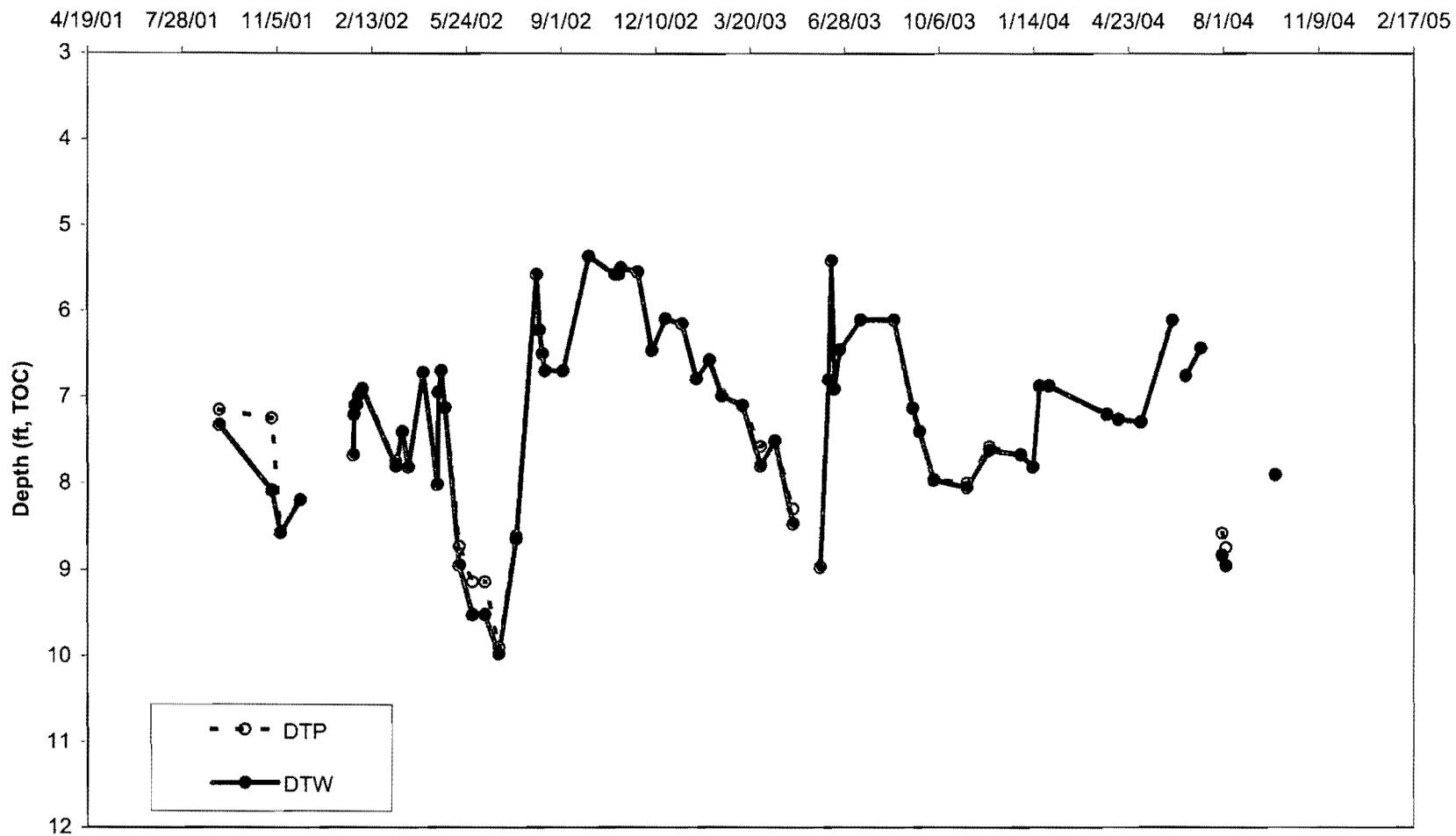
Oil/Water Data, NCBC Gulfport Site 6
EW-03



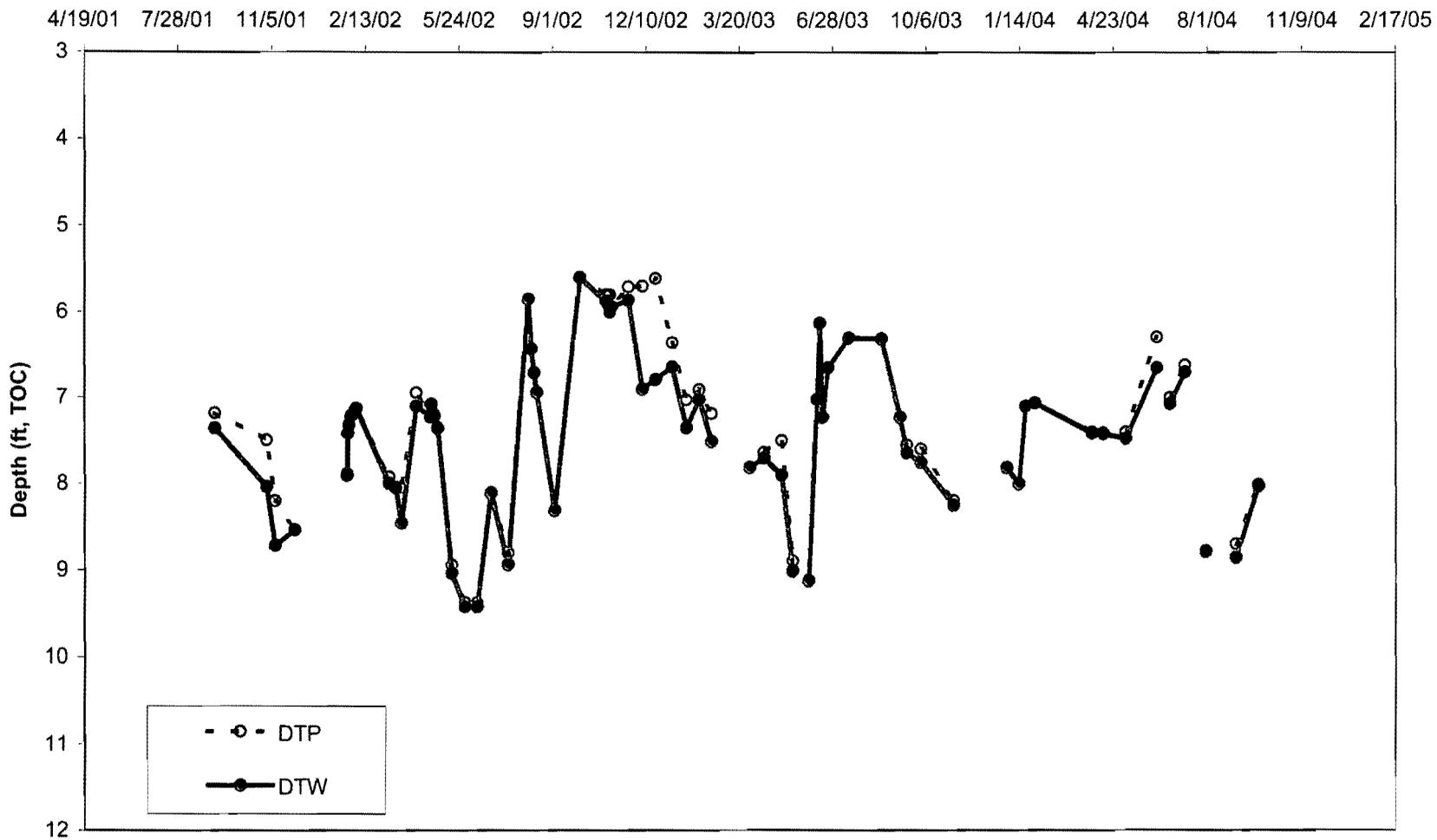
Oil/Water Data, NCBC Gulfport Site 6
EW-05



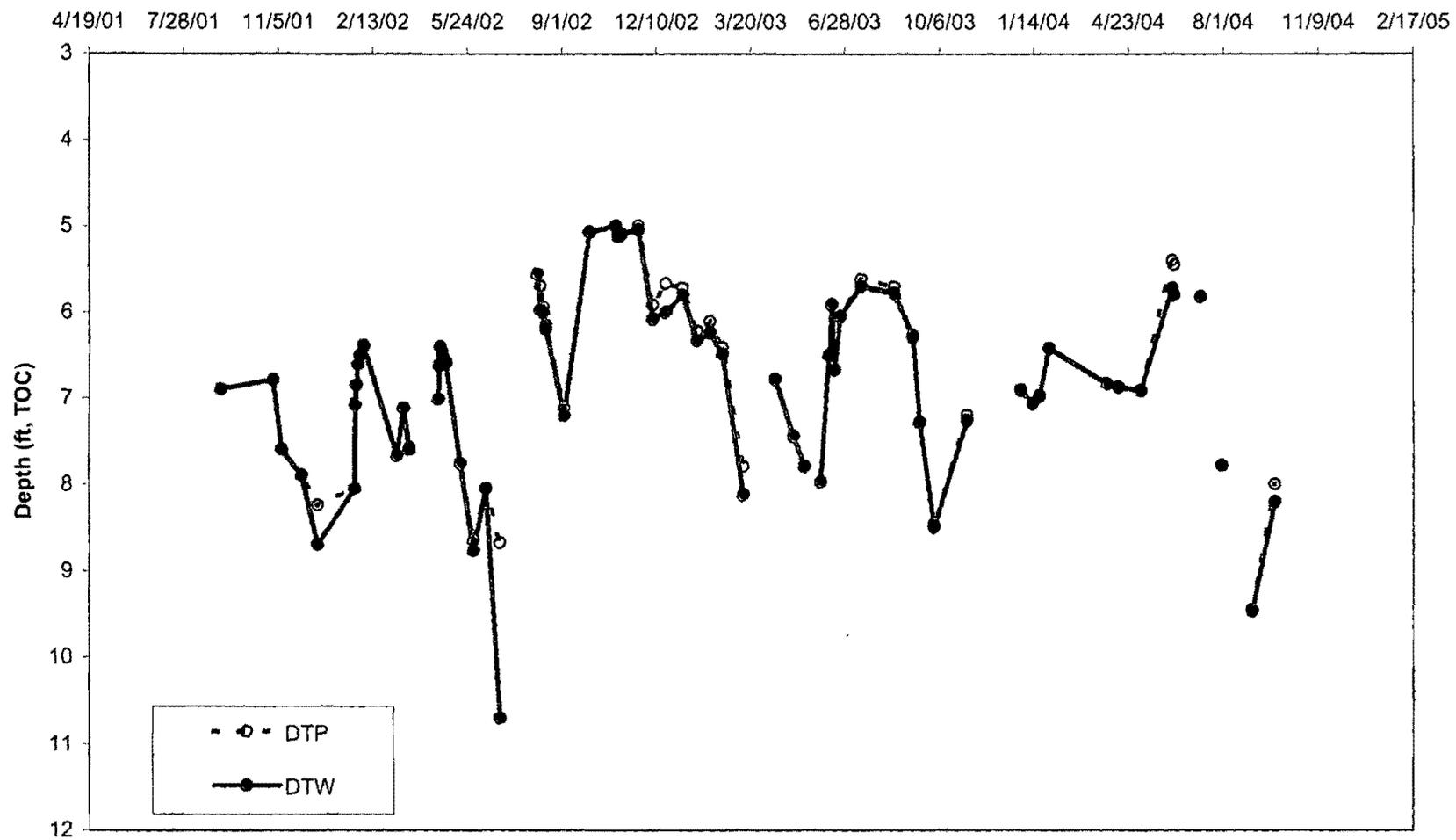
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EW-06



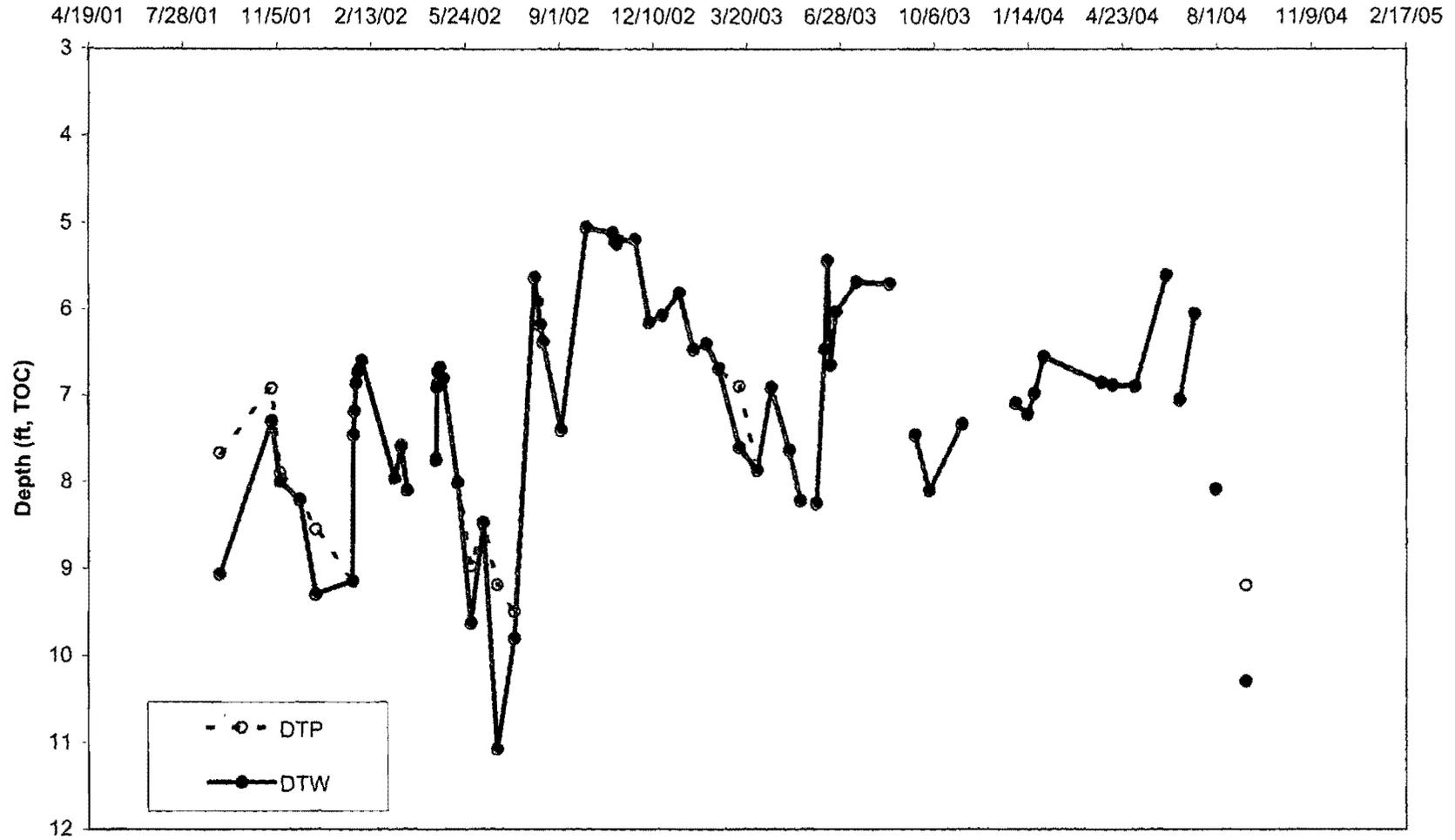
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EW-07



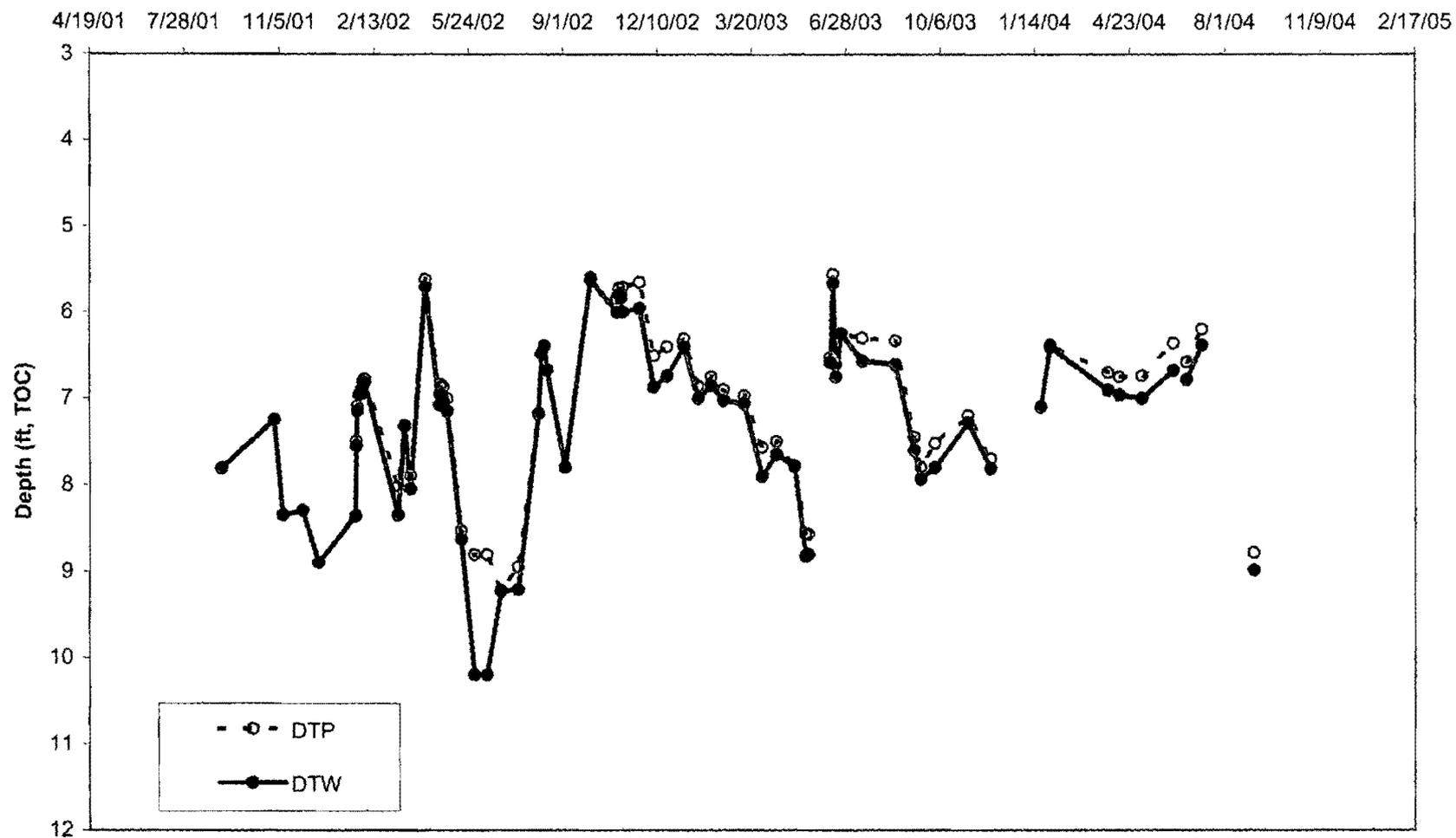
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EW-08



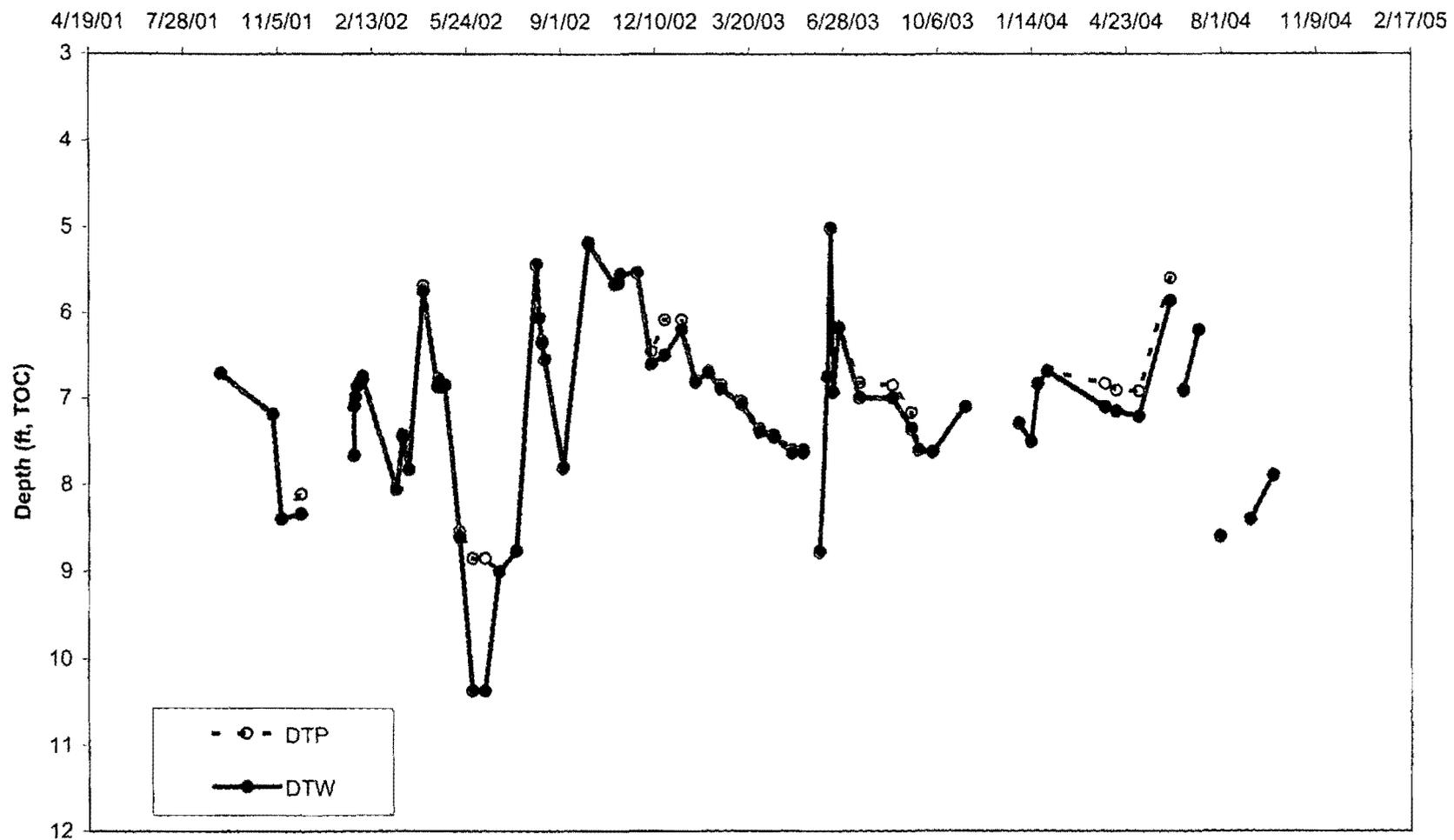
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EW-09



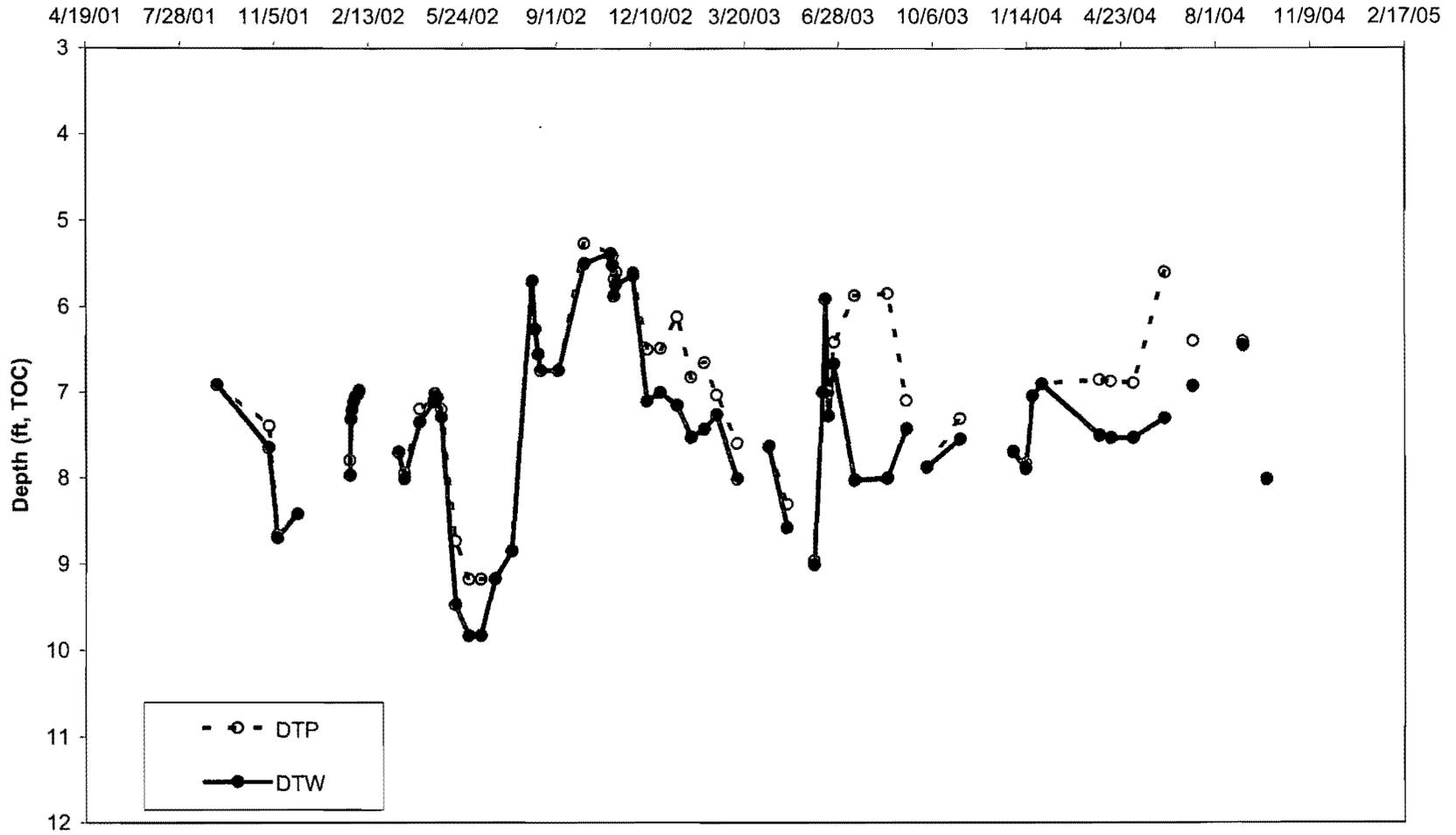
Oil/Water Data, NCBC Gulfport Site 6
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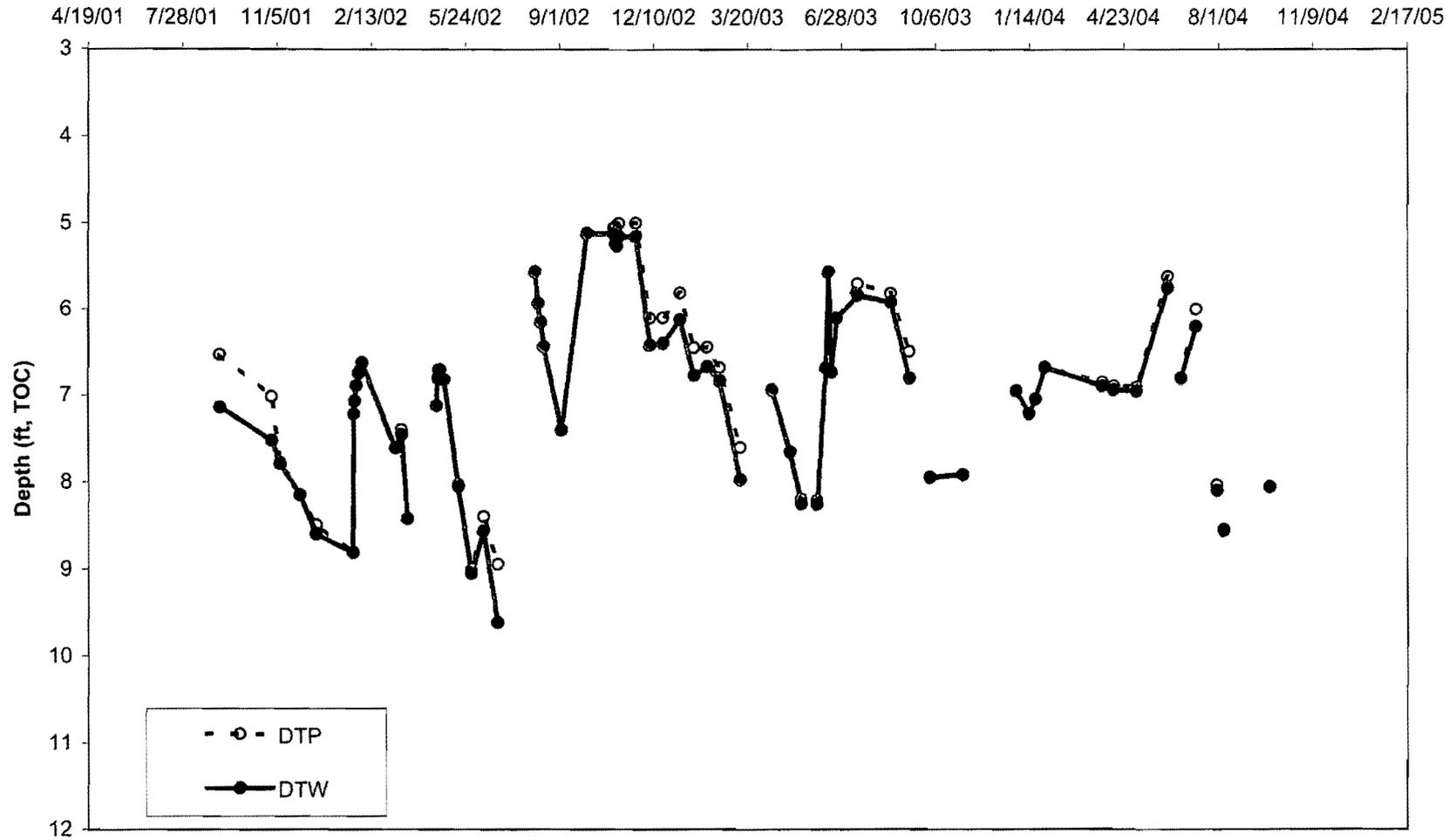
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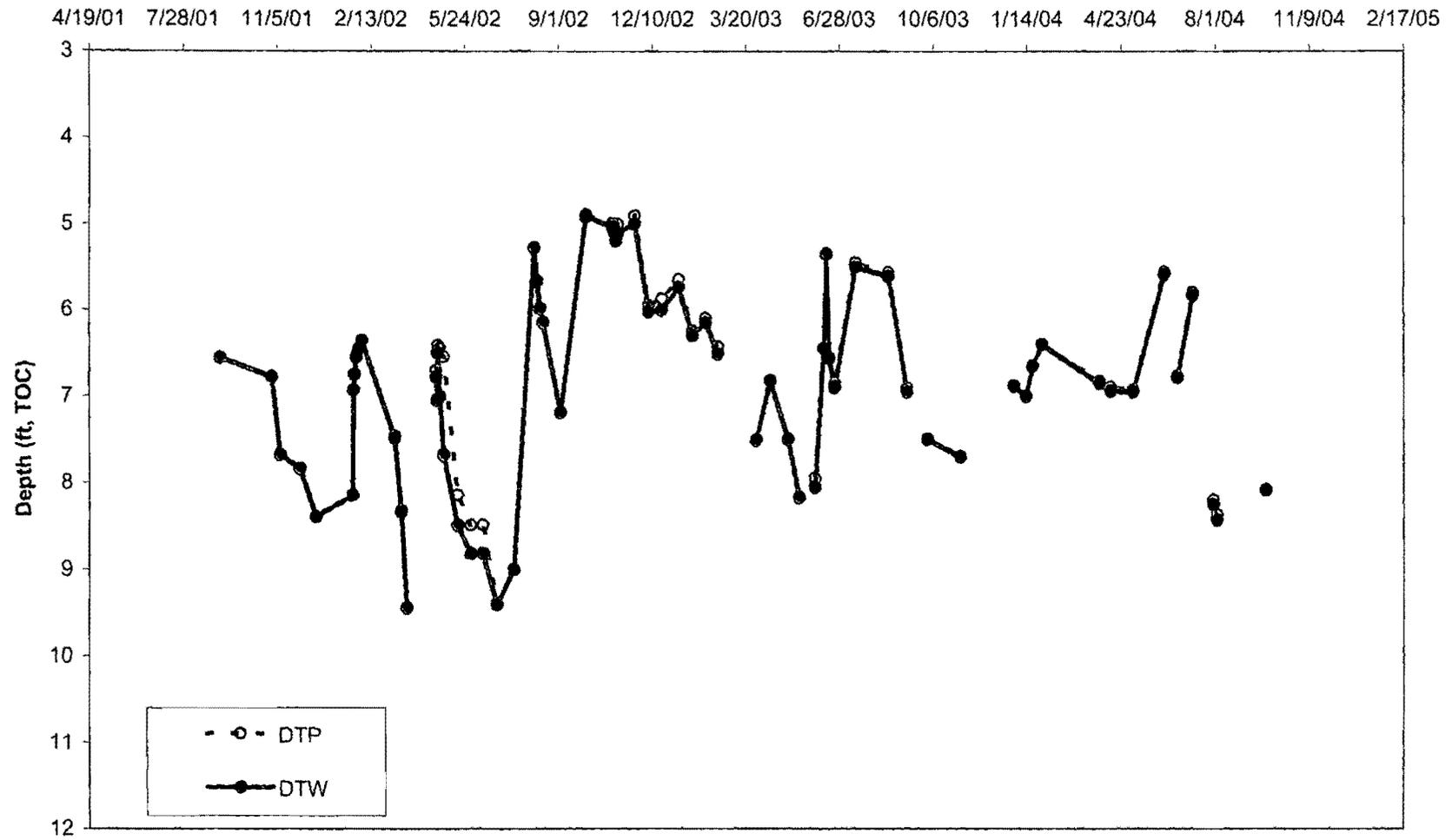
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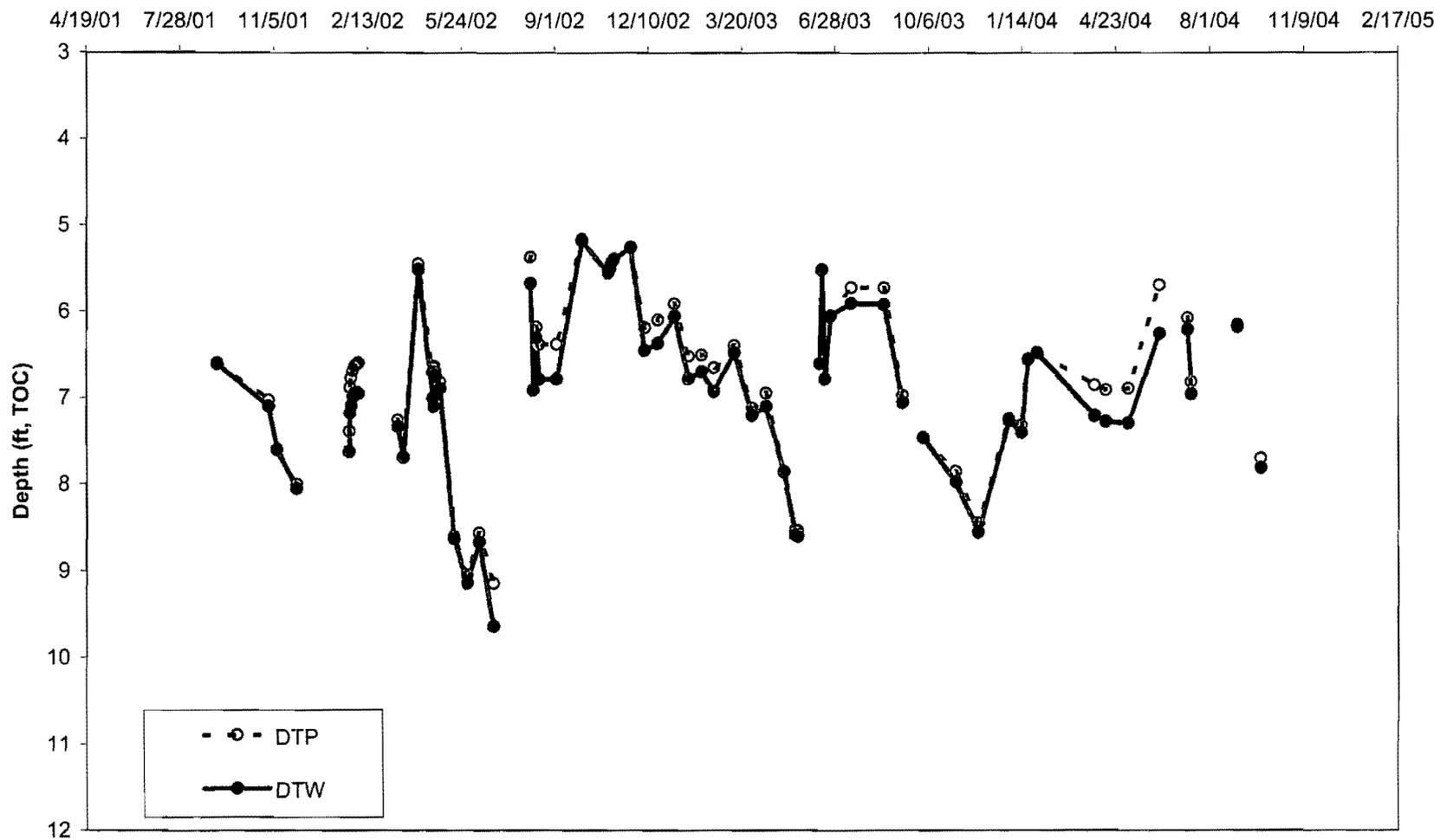
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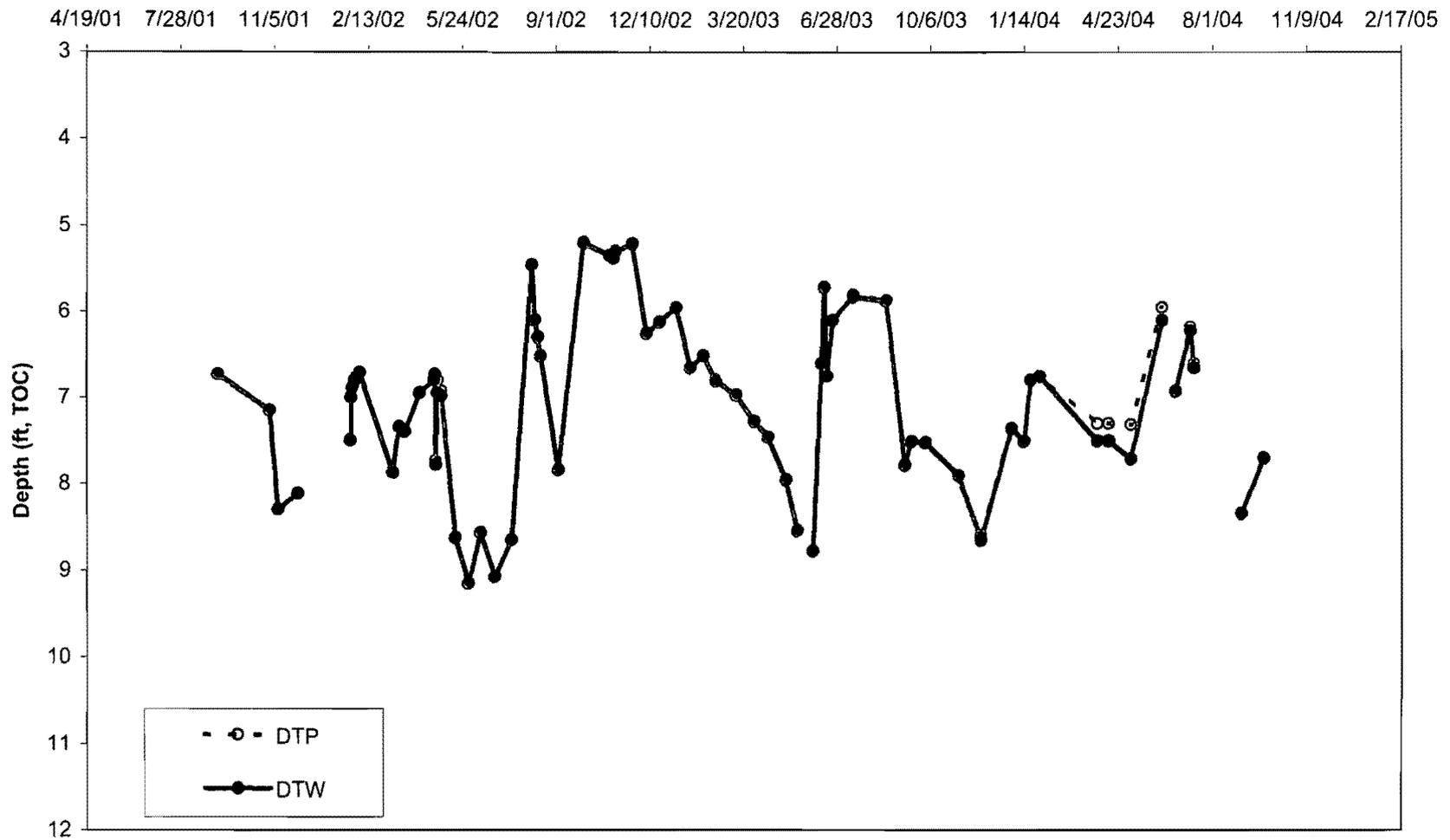
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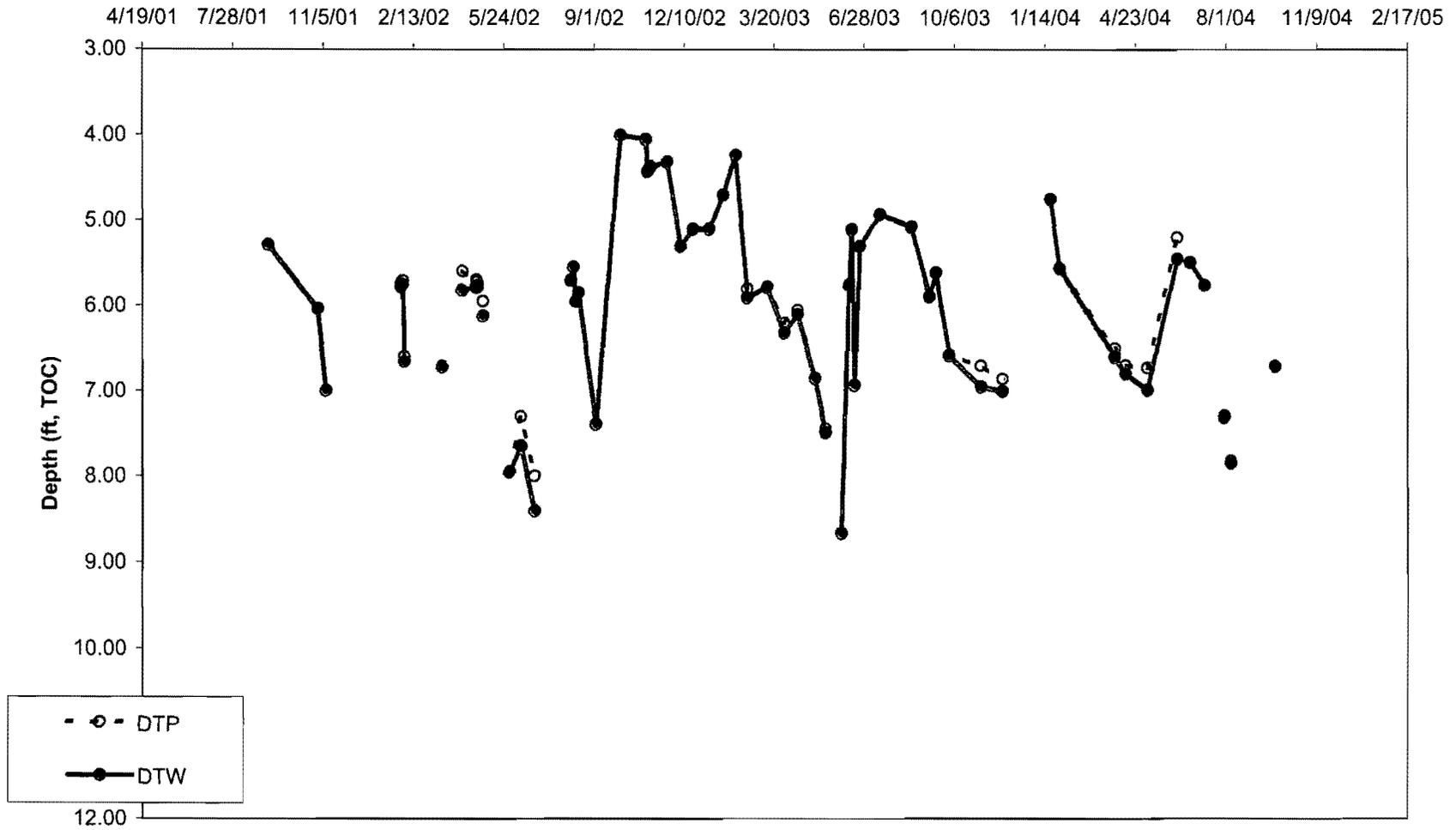
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EW-15



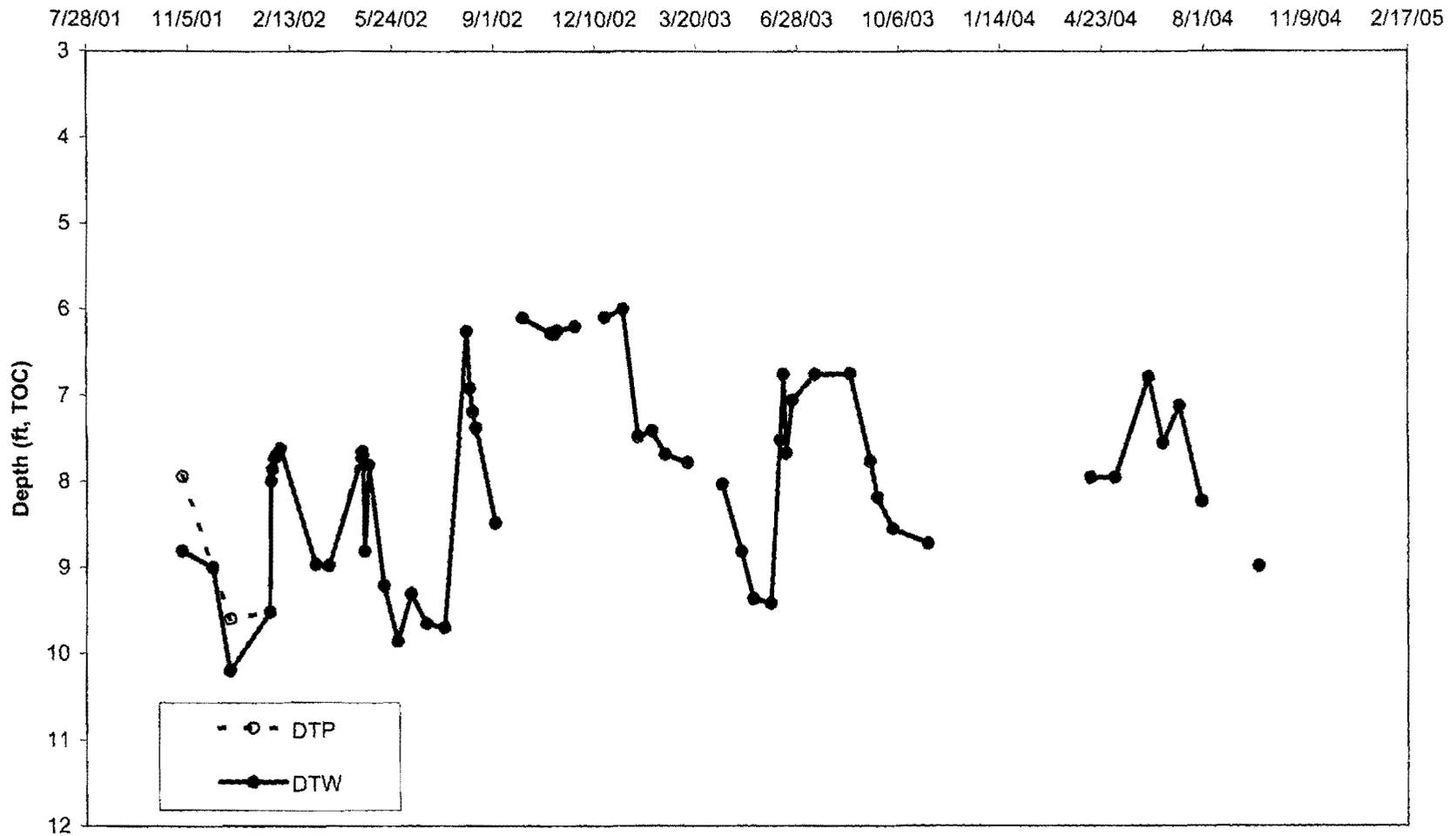
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EW-16



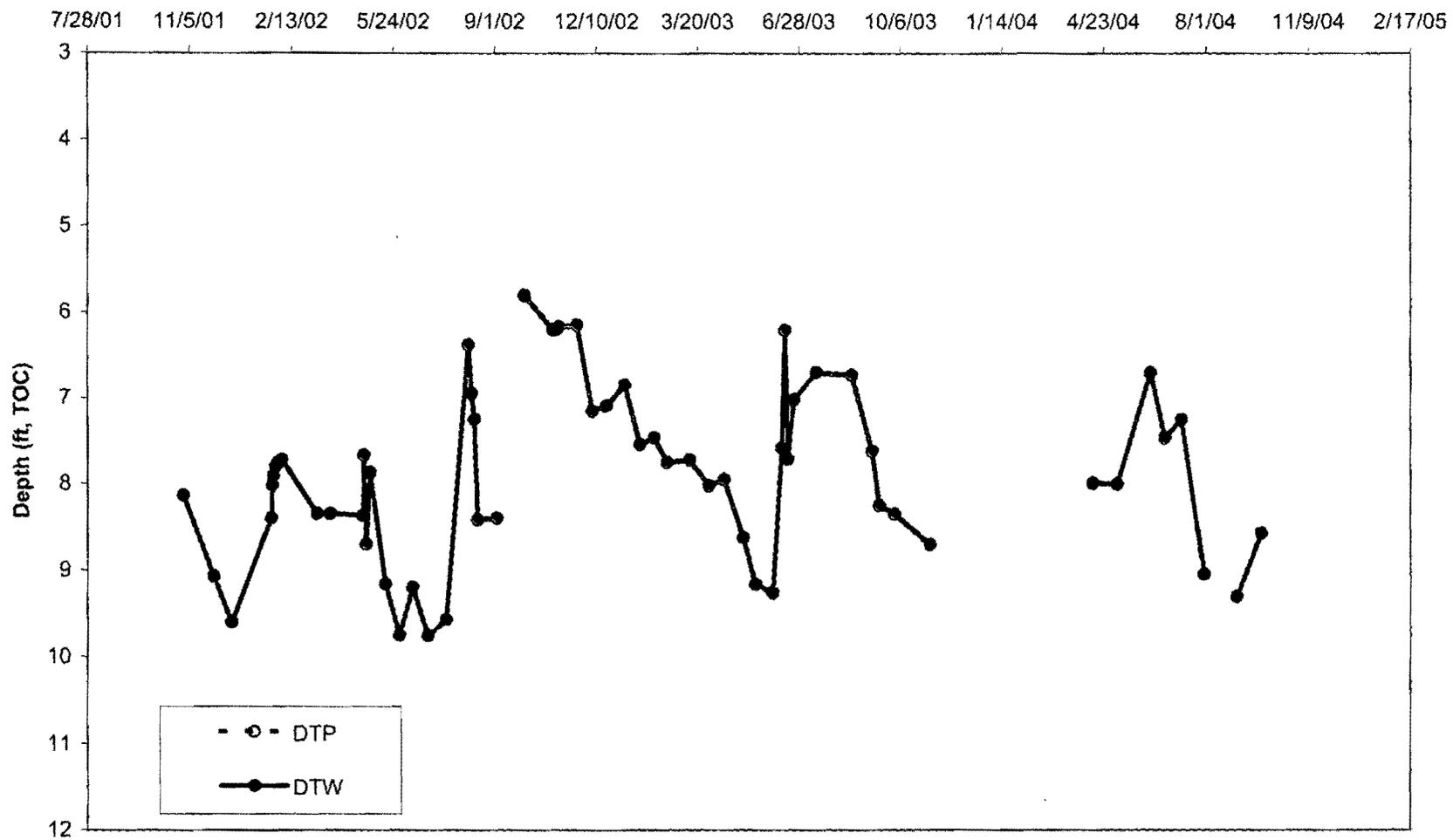
Oil/Water Data, NCBC Gulfport Site 6
EW-17



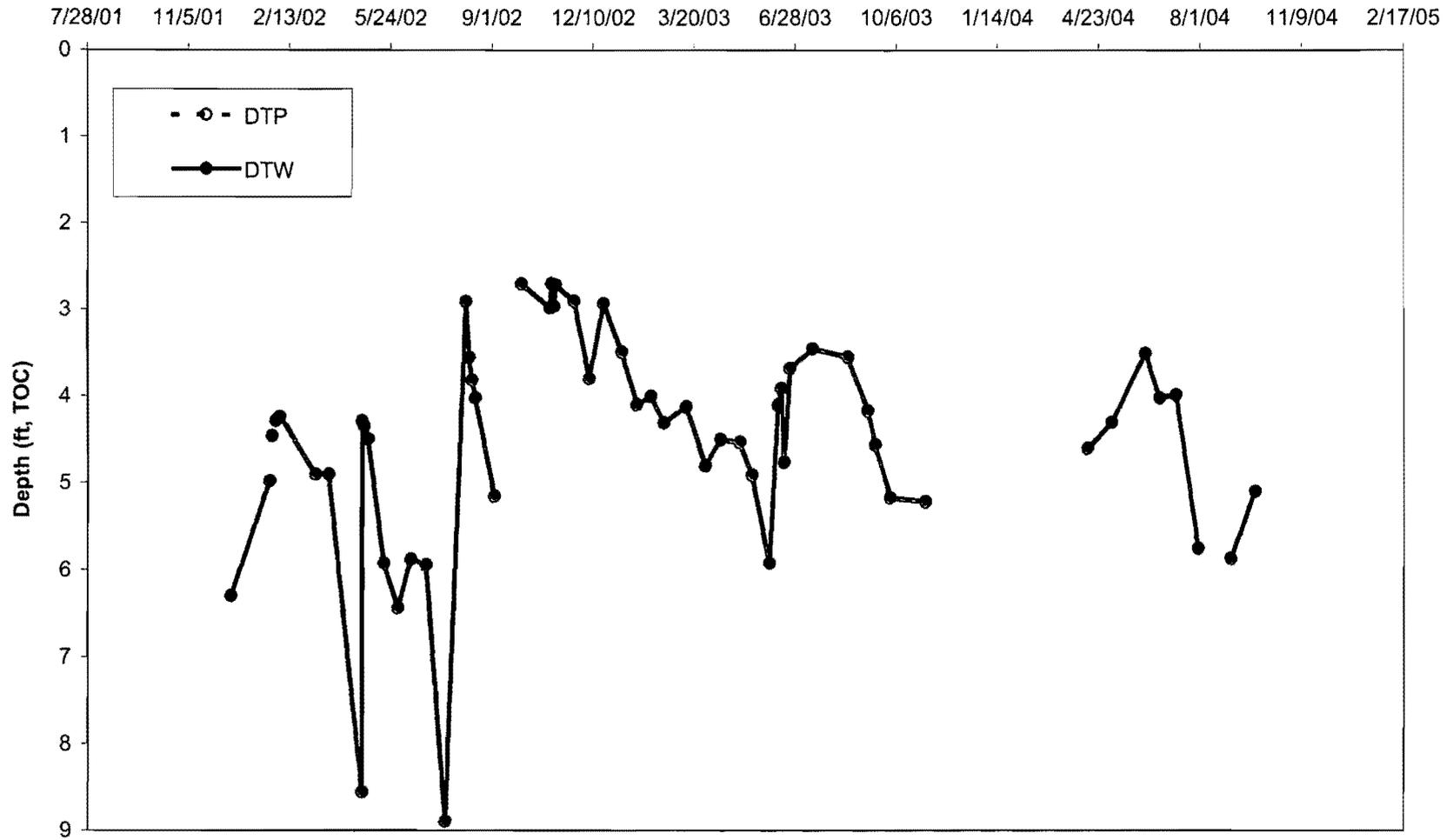
Oil/Water Data, NCBC Gulfport Site 6
GPT-6-1



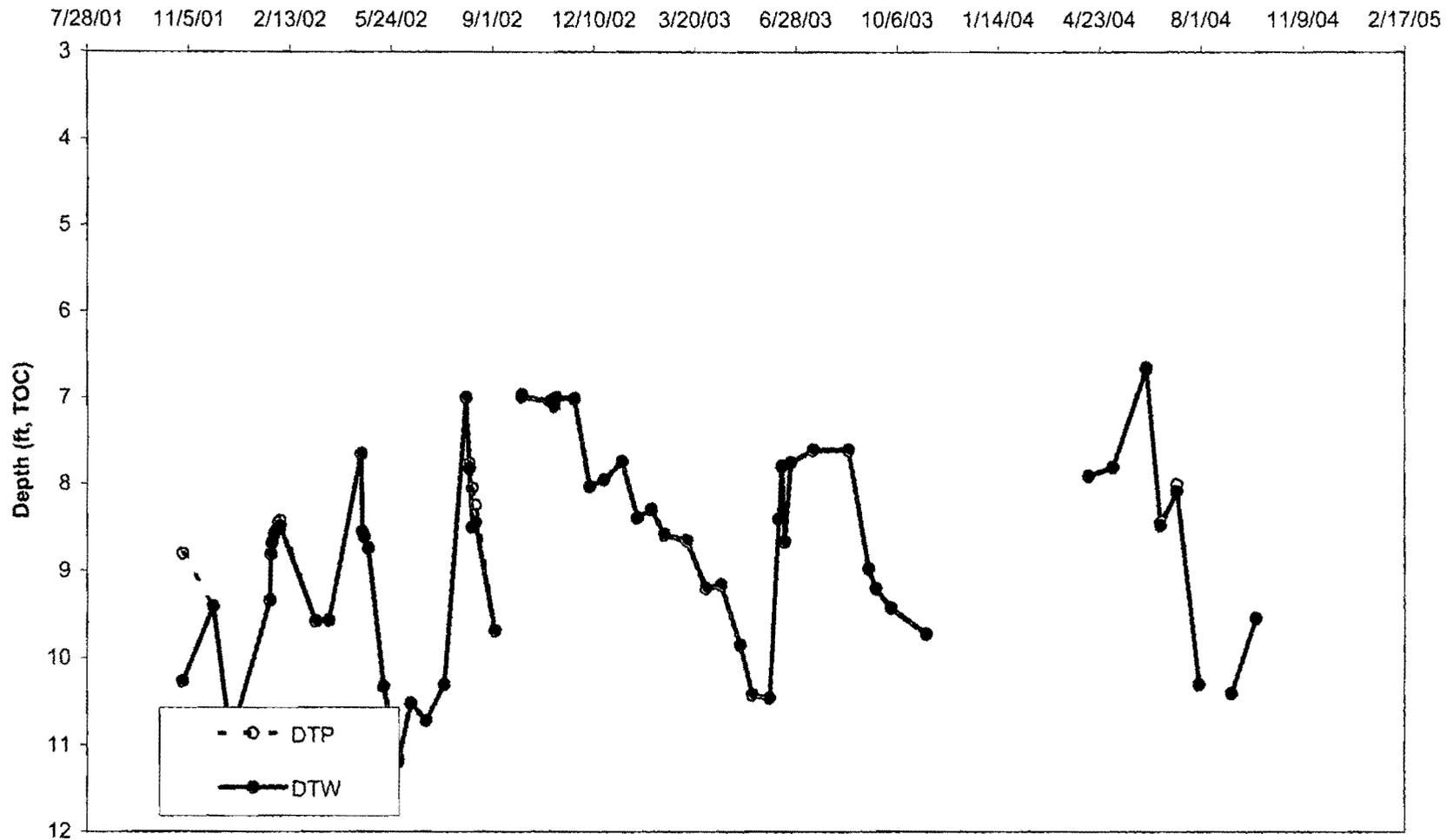
Oil/Water Data, NCBC Gulfport Site 6
GPT-6-2



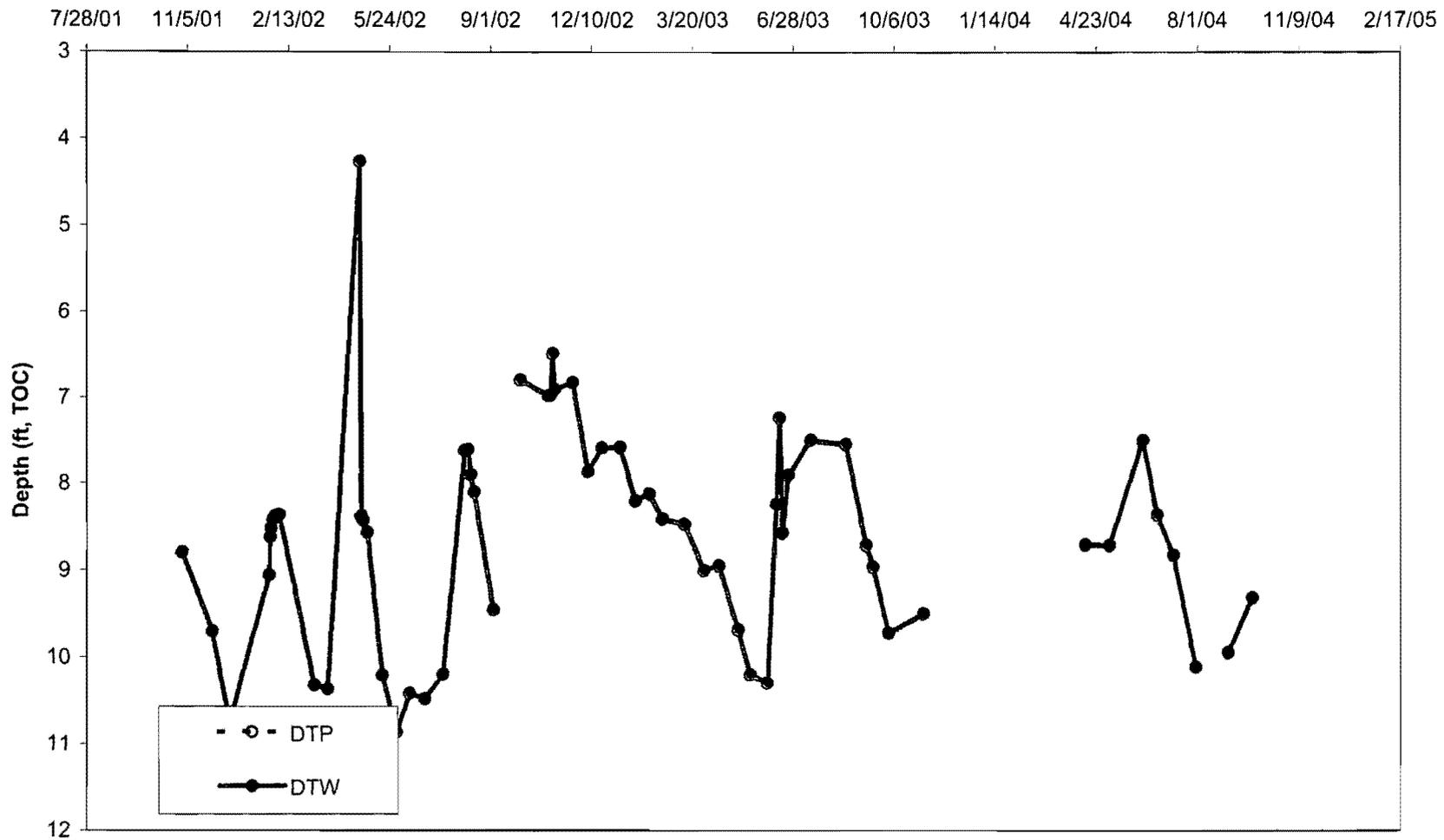
Oil/Water Data, NCBC Gulfport Site 6
GPT-6-3



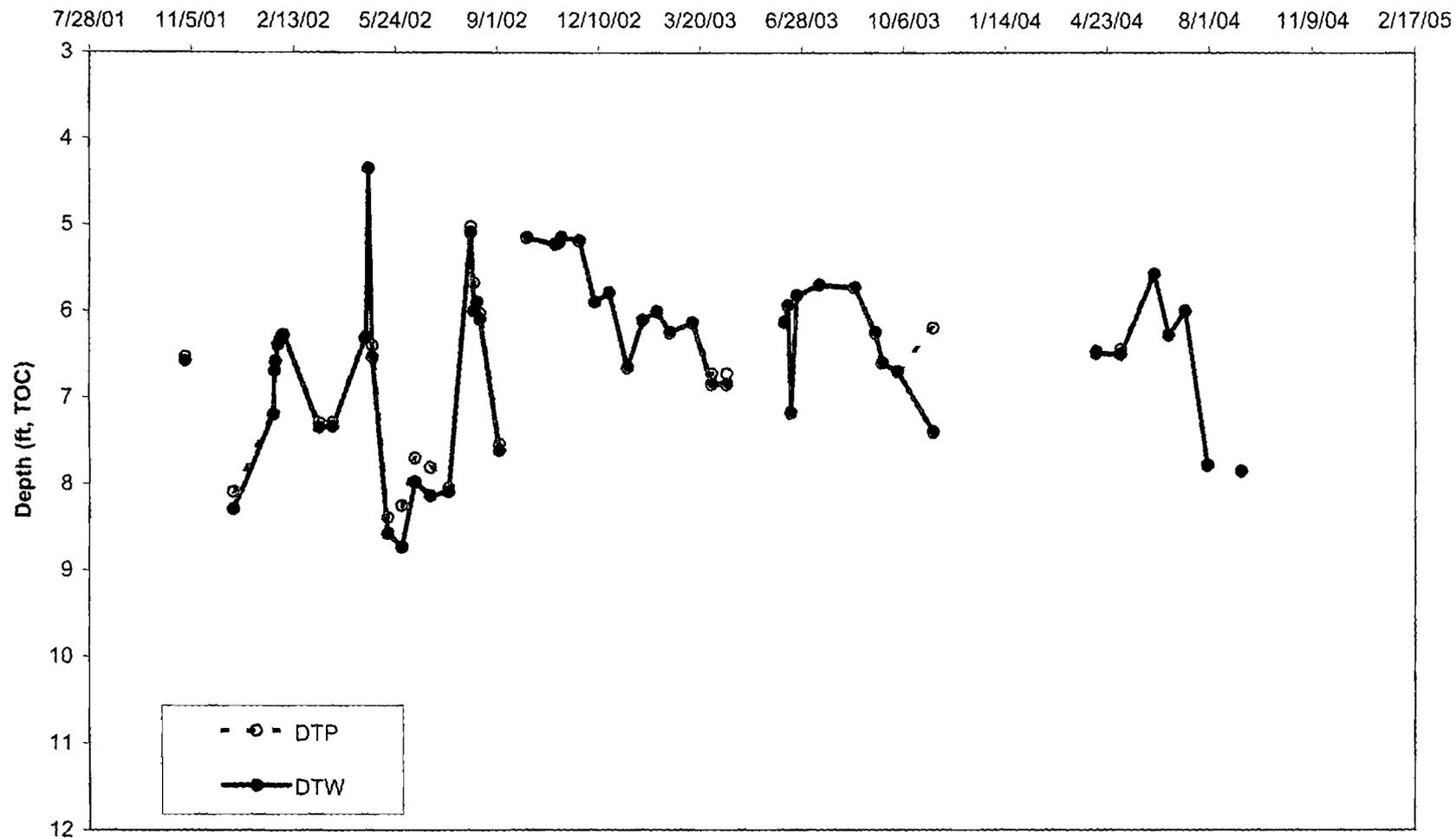
Oil/Water Data, NCBC Gulfport Site 6
GPT-6-4



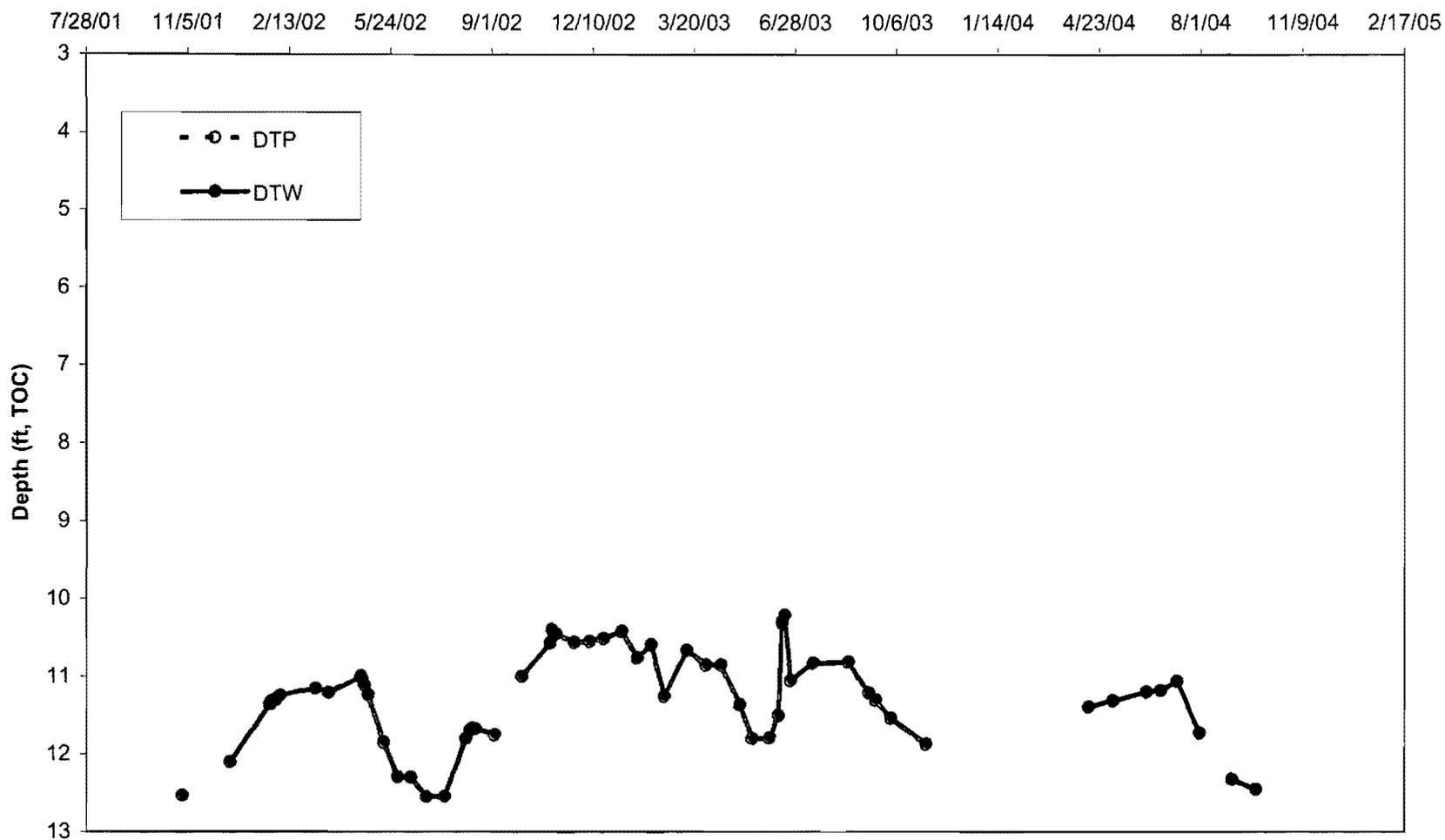
Oil/Water Data, NCBC Gulfport Site 6
GPT-6-5



Oil/Water Data, NCBC Gulfport Site 6
GPT-6-6



Oil/Water Data, NCBC Gulfport Site 6
GPT-6-7 (Deep Well)



Oil/Water Data, NCBC Gulfport Site 6
GPT-6-8

