



September 28, 2007

Mr. Steven Nightingale, P.E.  
Manager, Permit Section  
Bureau of Land  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
Springfield, Illinois 62794

**Subject: West Fenceline P-93 Dissolved Phase Benzene Investigation  
Shell Oil Products US/ConocoPhillips Company  
WRB Refining LLC Wood River Refinery, Roxana, Illinois**

Dear Mr. Nightingale:

#### INTRODUCTION AND OBJECTIVES

Shell Oil Products U.S. (SOPUS) with the cooperation of ConocoPhillips Company (ConocoPhillips) conducted a subsurface investigation at and outside of the WRB Refining LLC Wood River Refinery (WRR) in Roxana, Illinois. WRB, formed January 1, 2007, is a 50/50 joint venture between ConocoPhillips (COP) and EnCana US Refineries LLC. The facility is owned by WRB and operated by COP employees. The subsurface investigation was conducted to gather information in the area of monitoring well P-93. Beginning in 2005, increased benzene concentrations in groundwater have been observed in some of the P-93 monitoring wells (i.e., P-93A and P-93B) located near the west fenceline of the refinery North Property.

URS Corporation (URS), on behalf of SOPUS, performed a subsurface investigation in 2006 to help gather information on the extent of benzene impacts. The subsurface investigation focused on the area between a historical release site and the west fenceline of the WRR. The benzene release occurred on January 30, 1986, from an underground pipeline located just northwest of the Route 111 and Rand Avenue intersection (**Figure 1**). At the time of the release, product at the surface was recovered to the extent possible. Shortly after the release, the line was abandoned in place and relocated aboveground. This report summarizes the results of this investigation.



Mr. Steven Nightingale, P.E.  
Illinois Environmental Protection Agency  
September 28, 2007  
Page 2 of 9

## INVESTIGATION PROCEDURES

The field investigation was performed in accordance with the West Fenceline P-93 Dissolved Phase Work Plan developed for this project. In addition, URS standard operating procedures and SOPUS' and COP's protocols were followed. The field investigation was conducted during multiple mobilizations between March 1<sup>st</sup> and April 12<sup>th</sup>, 2006. A dynamic investigation approach was used, in that various technologies were used to assess the extent of benzene impacts, and the results of prior work focused the efforts of subsequent work. The technologies utilized were groundwater sampling of existing wells, Cone Penetrometer Testing (CPT)/Membrane Interface Probe (MIP), and groundwater profiling,

### Groundwater Sampling

Existing monitoring wells in the area of well P-93A (e.g., P-57, P-58, P-66, P-73, P-75, P-93A and P-93B) were sampled to assess dissolved benzene concentrations in groundwater. Monitoring well locations are shown on **Figure 2**.

Prior to sampling, product levels (if present), water levels and total depths were measured using an electronic interface probe and recorded on groundwater sampling forms and in the site logbook. This information is summarized in **Table 1**. Light non-aqueous phase liquid (LNAPL) was observed in two monitoring wells, P-73 and P-75, at thicknesses of 1.48 and 1.04 feet, respectively. Based on historical gauging information, these wells typically contain NAPL which appears characteristic of refined mixtures and not benzene. A similar LNAPL thickness was noted in monitoring well P-73 at the time of sampling, LNAPL was not observed in monitoring well P-75 at the time of sampling. Based on COP monitoring information, groundwater flow in the area investigated is generally to the east towards pumping centers located at the WRR.

Groundwater samples were collected with a submersible pump (i.e., Super Twister<sup>®</sup>) after a minimum of three well volumes were removed. Field measurements (e.g. pH, conductivity, and temperature) were recorded on groundwater sampling sheets (**Attachment A**) and are also included on **Table 1**. The collected groundwater samples were analyzed for volatile organic compounds (VOCs) via USEPA SW-846 Method 8260B.





Mr. Steven Nightingale, P.E.  
Illinois Environmental Protection Agency  
September 28, 2007  
Page 3 of 9

Each sample container was labeled with a sample identification number, site name, sampler's initials, date and time of sample collection, preservative, and the parameters to be analyzed. Field personnel also recorded the sample description/location, required analysis, date and time of sample collection, type and matrix of samples, number of sample containers, analysis requested/comments, and sampler signature/date/time, with permanent ink on the Chain-of-Custody (COC) form at the time of sampling. COC forms are included in **Attachment B**.

#### Cone Penetrometer Testing/Membrane Interface Probe

Nine CPT/MIP probes, designated (P-93-01 through P-93-02 and P-93-04 through P-93-10), were completed to gain information on the geology of the area and to gather information on the extent of dissolved phase hydrocarbons in groundwater. A probe was not able to be completed at P-93-03 due to poor site conditions. The CPT technology is used to gather information on the geology, while the MIP is used to gather information on petroleum impacts. The probes were completed to depths ranging from approximately 43 to 71 feet (bgs) by Fugro Geosciences, Inc. of Houston, Texas. CPT/MIP locations can be viewed in **Figure 3**. CPT/MIP probes were advanced through sand-filled boreholes which were previously cleared of potential subsurface utilities using an air-knife.

CPT probes were completed by hydraulically pushing a cone, equipped with a pore pressure transducer, through the soil at a consistent rate of 2 cm/sec. The cone has a tip cross sectional area of 15 cm<sup>2</sup> and a friction sleeve area of 200 cm<sup>2</sup>. Measurements were collected for resistance to penetration, sleeve friction and pore pressure once per second during advancement of each boring. These measurements provided soil property data, which were converted to a stratigraphic profile for each boring. The results of the CPT probes are provided in **Table 2** and CPT Logs can be viewed in **Attachment C**.

The MIP probe was advanced at each location through the length of the boring using conventional hydraulic pressure. The probe continuously collected conductivity, speed, and temperature readings as the probe was advanced. At one foot intervals the MIP probe was stopped and heated to 80 to 125 degrees Celsius. In turn, the residual hydrocarbons in the material surrounding the probe were heated, causing them to partition through a permeable membrane on the probe. The VOCs entered a stream of carrier gas and were delivered to three gas chromatograph (GC) detectors at the surface for processing. The three detectors used were a flame-ionization detector (FID), photoionization detector (PID), and electron capture detector





Mr. Steven Nightingale, P.E.  
Illinois Environmental Protection Agency  
September 28, 2007  
Page 4 of 9

(ECD). The FID detector was used preferentially to the PID and ECD as it provides a better response to hydrocarbons. The results of the MIP probes (in Volts) are provided in **Table 2** and MIP Logs are also included in **Attachment C**.

Upon completion, each probe hole was backfilled with high solids bentonite grout via the tremmie method and the surface was returned to its original condition.

### Groundwater Profiling

Groundwater profiling was performed to obtain groundwater samples from various depths at six locations (i.e., P-93-02, P-93-03, P-93-05, P-93-06, P-93-09 and P-93-11). Groundwater profile locations are shown in **Figure 2**. Locations and sample depths for groundwater profiling were selected based on the results of the MIP work. Groundwater profiling was performed by Roberts Environmental Drilling, Inc. of Millstadt, Illinois. Groundwater profiling probes were advanced through sand-filled boreholes which were previously cleared of potential subsurface utilities using an air-knife.

Groundwater profiling was conducted using a four foot long, mill-slotted sampler advanced using direct push techniques (e.g., Geoprobe<sup>®</sup>). As mentioned above, sampling depths were chosen based on the results of the CPT/MIP work. The first sample depth was chosen based on where groundwater was first encountered. This sample depth ranged from 40 to 52 feet bgs. The second sample depth was primarily based on the highest MIP result below the water table, or if the MIP did not extend deep enough into the water table, approximately 15 feet below the top of the water table. The second sample depth ranged from 58 to 66 feet bgs.

Once the sampler was advanced to the predetermined depth, the water level was measured using an electronic interface probe and recorded on a groundwater sampling form. Free-phase LNAPL was not observed during groundwater profiling. Dedicated polyethylene tubing equipped with a ball and check valve system was placed down into the slotted portion of the sampler and set at approximately the middle of the screened interval (2 feet from the bottom of the screen). The tubing was then connected through a Waterra<sup>®</sup> pump to a flow-through cell. Groundwater samples were collected after a minimum of three tubing volumes were removed. Field measurements (e.g., pH, conductivity, and temperature) were measured and recorded on





Mr. Steven Nightingale, P.E.  
Illinois Environmental Protection Agency  
September 28, 2007  
Page 5 of 9

groundwater sampling sheets included in **Attachment A**. The collected groundwater samples were analyzed for VOCs via USEPA SW-846 Method 8260B.

Samples were collected as described in the groundwater sampling section above. COC forms are included in **Attachment B**. A new section of tubing measured to the appropriate length was used at every sampling interval. Upon completion of each groundwater profiling probe, each borehole was filled with grout from the bottom up using the Geoprobe<sup>®</sup> rods as a tremmie pipe, and the surface was returned to its original condition.

#### Quality Assurance/Quality Control Sampling and Data Validation

Quality assurance and quality control (QA/QC) samples were collected in accordance with the work plan. The QA/QC samples and their collection frequencies, with respect to the number of investigative samples collected per environmental matrix, were as follows: equipment blanks – 10%; duplicates – 10% and matrix spike/matrix spike duplicates – 5%. One trip blank was included in each sample cooler. Analytical samples were shipped for overnight delivery to TestAmerica Analytical Testing Corporation in Nashville, Tennessee.

URS performed Level III and Level IV validation of the analytical data for quality and completeness, per the work plan. Data qualifiers were added, as appropriate, and are included on the data tables and with the analytical reports. Laboratory data packages are included in **Attachment D**, along with associated data validation forms.

#### Decontamination and Investigation-Derived Waste

Sampling equipment was decontaminated by washing with Alconox<sup>®</sup> or equivalent detergent wash and a distilled water rinse, prior to the collection of each analytical sample, between boring locations and prior to leaving the site. Field personnel wore disposable, chemical resistant gloves anytime environmental media or equipment were handled, to reduce personal exposure to potential chemical hazards. Clean gloves were also worn for the collection of groundwater samples.

Equipment decontamination fluids and purged groundwater were collected and discharged to the refinery wastewater treatment plant. Expendables and general municipal trash were properly managed by ConocoPhillips.





Mr. Steven Nightingale, P.E.  
Illinois Environmental Protection Agency  
September 28, 2007  
Page 6 of 9

## INVESTIGATION RESULTS

Nine CPT/MIP probes were completed to gain information on the geology of the area and to gather information on the extent of dissolved phase hydrocarbons in groundwater. The results of the CPT work indicated that approximately the upper 10 feet consists of fill, silts and/ or clays. These materials are underlain by sands that extend to bedrock. The results of the MIP investigation were utilized to select sample locations and depths for conducting groundwater profiling.

A total of 19 investigative groundwater samples and 3 duplicate samples were collected and analyzed for VOCs. Benzene results for groundwater samples collected from existing monitoring wells and from the groundwater profile locations are presented in the tables below.

Benzene Results from Monitoring Well Sampling				
Monitoring Well	Sample ID	Sample Date	Result (mg/L)	Qualifiers
P-57	P5703030601	3/3/2006	177	
P-58	P5803020601	3/2/2006	409 (464, duplicate)	
P-66	P6603020601	3/2/2006	<0.0116	U
P-73	P7303020601	3/2/2006	22.4	
P-75	P7503030601	3/3/2006	2.78	
P-93A	P93A03030601	3/3/2006	506	
P-93B	P93B03030601	3/3/2006	370	

U= non detect at indicated reporting limit.





Mr. Steven Nightingale, P.E.  
Illinois Environmental Protection Agency  
September 28, 2007  
Page 7 of 9

Benzene Results from Groundwater Profiling				
Monitoring Well	Sample ID	Sample Date	Result (mg/L)	Qualifiers
P-93-02	P9302GWP43	4/5/2006	1,310	
	P9302GWP59	4/5/2006	264	
P-93-03	P9303GWP40	4/6/2006	348	
	P9303GWP59	4/7/2006	3.65	
P-93-05	P9305GWP45	4/7/2006	1,460	
	P9305GWP58	4/7/2006	52.2	
P-93-06	P9306GWP50	4/7/2006	1,310	
	P9306GWP62.5	4/10/2006	827	
P-93-09	P9309GWP52	4/11/2006	250	
	P9309GWP66	4/11/2006	295 (569, duplicate)	
P-93-11	P9311GWP41	4/5/2006	1,060	
	P9311GWP59	4/6/2006	11.8 (13.1, duplicate)	

Note: The two digit number at the end of the sample ID denotes the sample depth below ground surface, e.g., P9302GWP43 denotes samples from location P93-02 from a depth of 43 feet.

The highest concentrations of benzene in groundwater were detected at groundwater profile locations P-93-02 (1,310 mg/L), P-93-05 (1,460 mg/L), P-93-06 (1,310 mg/L) and P-93-11 (1,060 mg/L). These four locations are located between the release site and the P-93 cluster located on the WRR (**Figure 2**). The highest concentrations of benzene were typically noted from the sample collected at the top of the water table; lower concentrations (1 to 2 orders of magnitude) were noted from the samples collected from approximately 12 to 19 feet below the top of the water table.

Groundwater samples collected from monitoring wells located on the WRR have benzene concentrations that range from 2.78 mg/L (P-75) to 506 mg/L (P-93A). Benzene concentrations for the two wells that contained LNAPL during the investigation were 22.4 mg/L (P-73) and 2.78 mg/L (P-75).





Mr. Steven Nightingale, P.E.  
Illinois Environmental Protection Agency  
September 28, 2007  
Page 8 of 9

## CONCLUSIONS AND RECOMMENDATIONS

The investigation was conducted in accordance with the work plan; implementation of the work plan provided information on the distribution of benzene in groundwater for the area between the release site and the west fenceline of the north property of the WRR.

The results of this investigation indicate the following conclusions:

- The subsurface conditions in the study area consist of approximately 10 feet of fill, overlying silty clay; the fill and silty clay is underlain by sand to the depths explored. Groundwater occurs in the sand unit at depths of approximately 40 to 52 feet bgs. Groundwater gauging information indicates flow towards the refinery's pumping centers.
- Benzene concentrations in groundwater are highest (e.g., 1,000-1,500 mg/L) between the release site and the P-93 well cluster. Benzene concentrations decrease by orders of magnitude with depth below the water table.

We will be pleased to meet with you to discuss the results of this submittal, and will contact you to schedule a meeting.

If you have any questions regarding this report or activities conducted, please do not hesitate to contact Herb Hand with SOPUS at 713.241.1491 ([herb.hand@shell.com](mailto:herb.hand@shell.com)) or Bob Billman at 314.743.4108 ([bob\\_billman@urscorp.com](mailto:bob_billman@urscorp.com)).

Very truly yours,

Thomas J Adams  
Project Manger

Robert Billman  
Senior Project Manager

cc: Herb Hand, Shell Oil Products US  
Kevin Dyer, Shell Oil Products US  
Eric Petersen, ConocoPhillips Wood River Refinery

Attachments





Mr. Steven Nightingale, P.E.  
Illinois Environmental Protection Agency  
September 28, 2007  
Page 9 of 9

List of Tables

Table 1	Groundwater Gauging and Field Parameter Results
Table 2	CPT/MIP Response Summary

List of Figures

Figure 1	Release Site Location
Figure 2	Benzene Results in Groundwater
Figure 3	CPT/MIP Locations and MIP Results

List of Attachments

Attachment A	Groundwater Sampling Data Sheets
Attachment B	Chain of Custody Forms
Attachment C	CPT and MIP Logs
Attachment D	Laboratory Analytical Data





**TABLE 1  
GROUNDWATER GAUGING AND FIELD PARAMETER RESULTS**

Monitoring Well ID	Sample ID	Sample Date	Sample Time	Depth to Product (ft btoc)	Depth to Water (ft btoc)	Total Depth (ft btoc)	pH	Specific Conductivity (mS/cm)	Temperature (F)
P-57	P5703030601	3/3/2006	1550	--	50.58	65.57	6.72	1218	55.76
P-58	P5803020601	3/2/2006	1550	--	48.62	64.77	6.78	3460	59.18
	P5803020602								
P-66	P6603020601	3/2/2006	1040	--	40.41	56.89	6.58	1260	63.50
P-73	P7303020601	3/2/2006	1420	47.90	49.38	68.17	6.71	1170	60.98
P-75	P7503030601	3/3/2006	1030	50.51	51.55	67.92	6.45	1220	61.70
P-93A	P93A03030601	3/3/2006	1430	--	51.50	71.09	6.61	1022	62.60
P-93B	P93B03030601	3/3/2006	1545	--	50.41	76.52	7.09	1161	57.92
P-93C	--	--	--	--	50.44	--	--	--	--
P-93D	--	--	--	--	50.34	--	--	--	--

**NOTES:**

- 1) P-93C and P-93D were not sampled and a total depth measurement could not be taken because dedicated pumps obstructed access.
- 2) The gauging data (depth to product/water) was collected prior to purging and collection of field parameters.
- 3) btoc = below top of casing
- 4) 02 at the end of a sample ID indicates a duplicate sample collected.

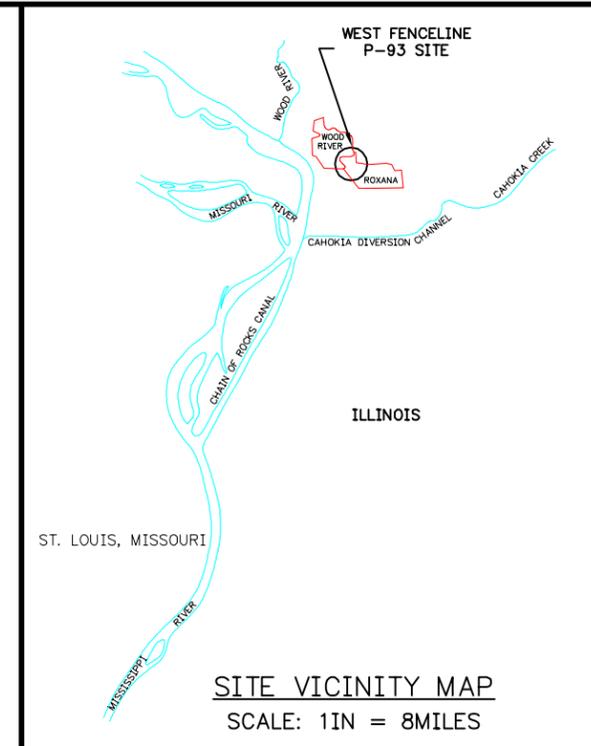
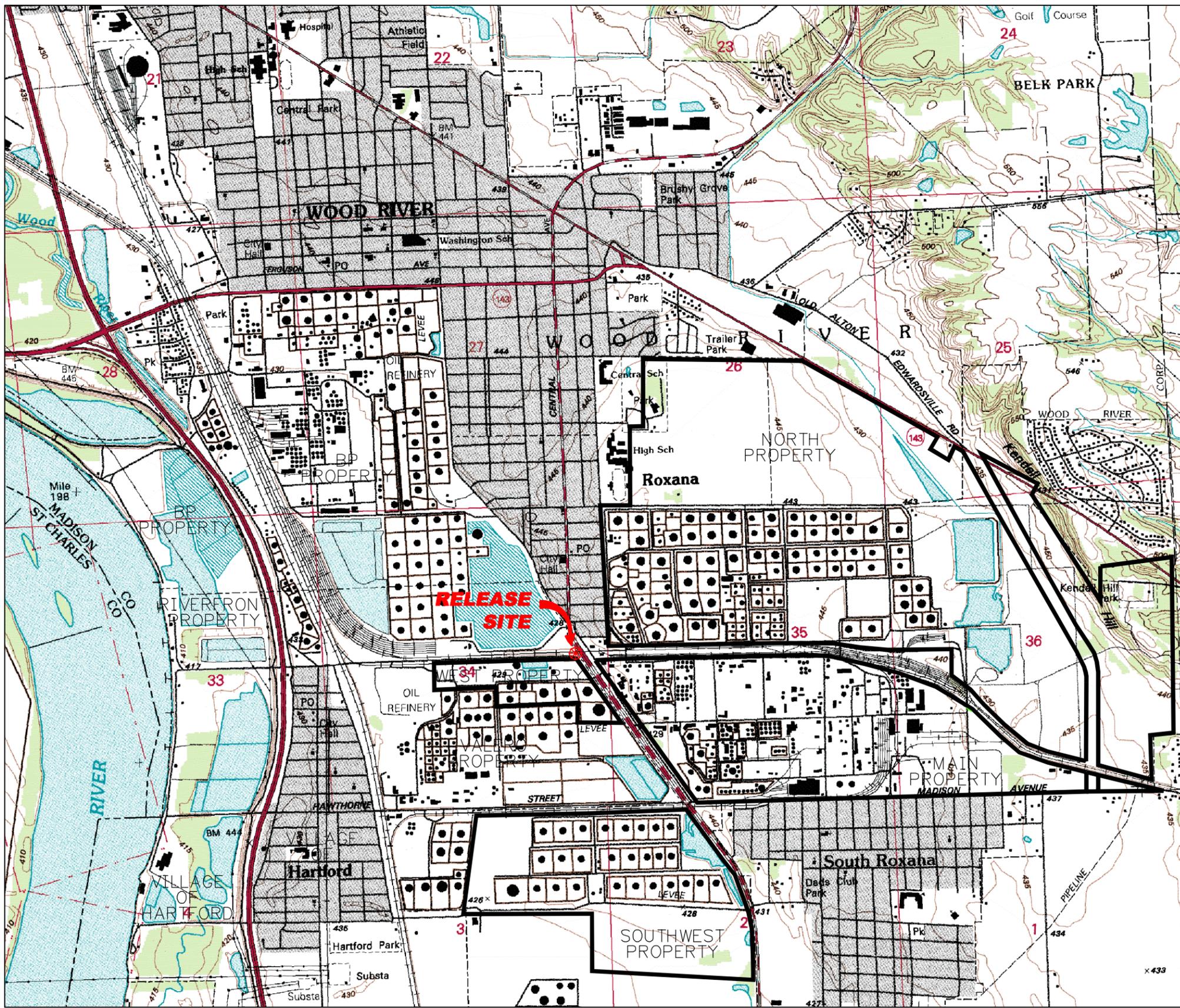
**Table 2  
CPT/MIP Response Summary**

Location	Date Conducted	Stratum Encountered	Top of Stratum (ft bgs)	Bottom of Stratum (ft bgs)	End of Boring (ft bgs)	MIP Response Depth	MIP - Max PID Response (V)	MIP - Max FID Response (V)	MIP - Max ECD Response (V)
P-93-01	3/31/2006	Surface/fill material	0.0	14.5	43.00	37 - 41.5	5.2	1.6	0.04
		Main Sand	14.5						
P-93-02	4/1/2006	Surface/fill material	0.0	19.5	57.00	39.5 - 55.5	9.0	3.8	0.02
		Main Sand	19.5						
P-93-04	4/1/2006	Surface/fill material	0.0	11.0	70.00	53	--	1.6	0.045
		Main Sand	11.0						
P-93-05	4/1/2006	Surface/fill material	0.0	12.5	46.50	43.5 - 45	0.1	0.025	--
		Main Sand	12.5						
P-93-06	4/2/2006	Surface/fill material	0.0	12.0	44.50	39.5 - 43	0.28	0.08	--
		Main Sand	12.0						
P-93-07	3/31/2006	Surface/fill material	0.0	14.0	55.00	7.5 - 20.5	--	0.5	--
		Main Sand	14.0			48.5 - 54	3.6	1.6	0.04
P-93-08	3/30/2006	Surface/fill material	0.0	11.0	54.50	48.5 - 53.5	2.7	0.9	--
		Main Sand	11.0						
P-93-09	3/30/2006	Surface/fill material	0.0	13.5	71.00	31.5 - 33.5	0.06	0.35	0.02
		Main Sand	13.5			50 - 75	3.4	2.0	--
P-93-10	3/31/2006	Surface/fill material	0.0	14.0	46.00	13.5 - 11.75	--	0.9	0.02
		Main Sand	14.0			12.5 - 16	0.1	0.7	0.01
						21 - 27.5	--	0.6	--
						36 - 44	0.15	0.4	0.02

**NOTES:**

- 1) P-93-07 through P-93-10 are located within the ConocoPhillips refinery and were air-knifed to a depth of 10 feet below the ground surface and backfilled with sand prior to CPT/MIP activities being done, therefore, if the break between strata is less than or close to the 10' bgs mark, it will be difficult to see on the CPT printouts. data, however, are unable to go as deep as the ROST activities.
- 2) P-93-03 could not be completed due to poor site conditions.
- 3) -- No Response Observed.
- 4) bgs = below ground surface
- 5) v = volts

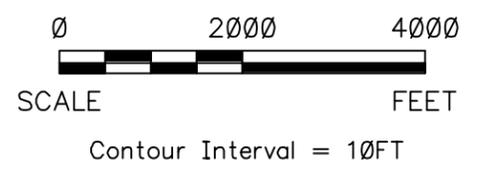




**LEGEND**

-  RELEASE SITE
-  PROPERTY BOUNDARY

BASE MAP REFERENCE:  
Compiled from a portion of Woodriver, IL-MO.  
U.S.G.S 7.5 minute topographic quadrangle  
1955 (Photorevised 1968 & 1974).



SHELL OIL PRODUCTS U.S./CONOCOPHILLIPS COMPANY WEST FENCELINE P-93 DISSOLVED BENZENE INVESTIGATION ROXANA, ILLINOIS		PROJECT NO. 21561665
<b>URS</b>		
DRN. BY: wmp 5/17/07 DSGN. BY: tja CHKD. BY: b3	Release Site Location	FIG. NO. 1

File: P:\ENVIRONMENTAL\21561665 SOPUS-COP WEST FENCELINE\P-93 DISSOLVED BENZENE\DRAWINGS\FIGURE 3 CPT-MIP LOCATIONS AND MIP RESULTS.DWG Last edited: MAY 18, 07 @ 12:04 p.m. by: drew\_brock



SHELL OIL PRODUCTS U.S./CONOCOPHILLIPS COMPANY  
WEST FENCELINE P-93 DISSOLVED BENZENE INVESTIGATION  
ROXANA, ILLINOIS

PROJECT NO.  
21561665

**URS**

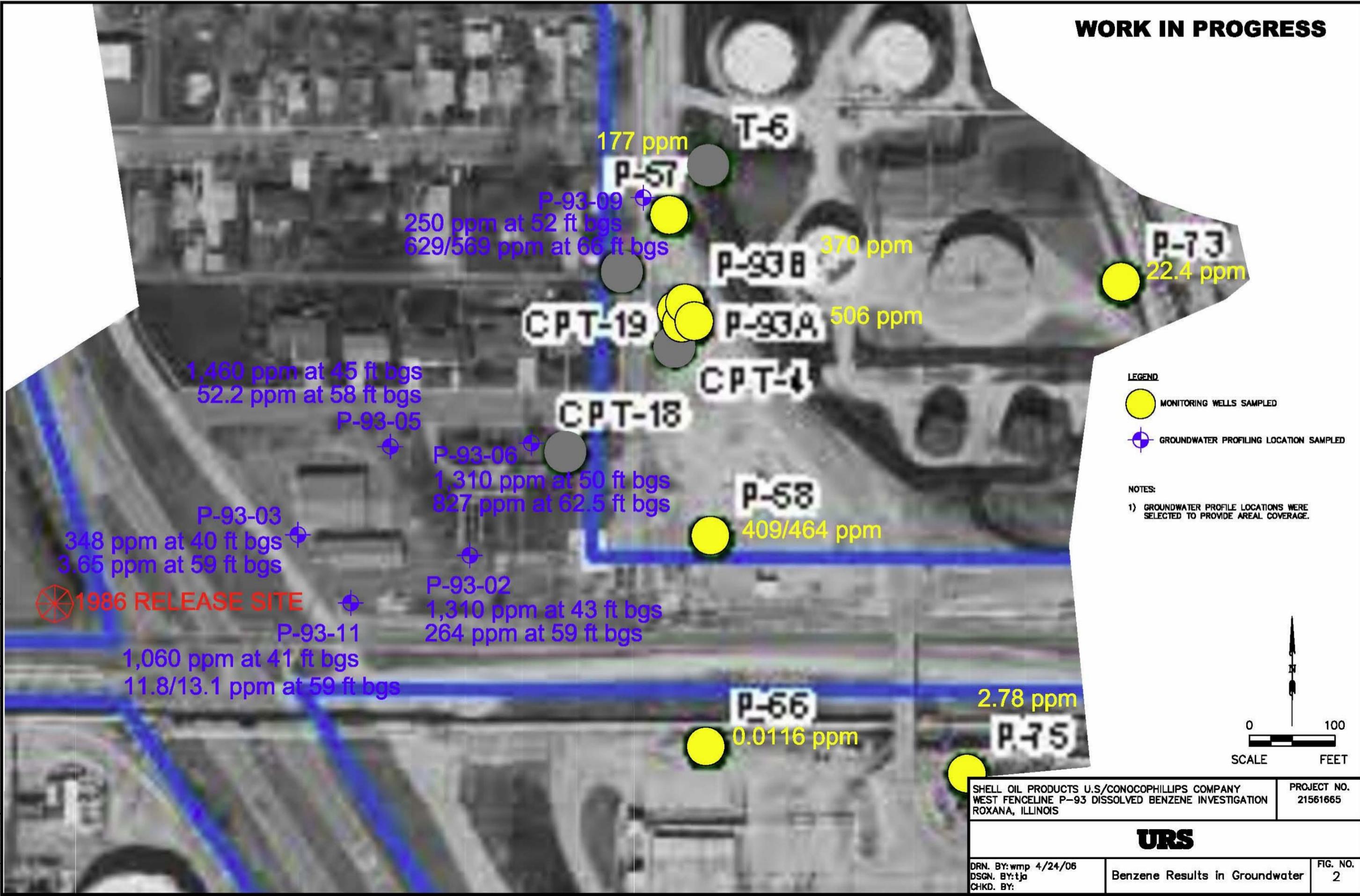
DRN. BY: wmp 4/7/06  
DSGN. BY: tja  
CHKD. BY:

CPT/MIP Locations and  
MIP Results

FIG. NO.  
3

# WORK IN PROGRESS

File: P:\ENVIRONMENTAL\21561665\_SOPUS-COP WEST FENCELINE\P-93 DISSOLVED BENZENE\DRAWINGS\FIGURE 2 BENZENE RESULTS IN GROUNDWATER.DWG Last edited: MAY 18, 07 @ 11:58 a.m. by: drew\_brouk



**1986 RELEASE SITE**

1,460 ppm at 45 ft bgs  
52.2 ppm at 58 ft bgs  
P-93-05

P-93-03  
348 ppm at 40 ft bgs  
3.65 ppm at 59 ft bgs

P-93-11  
1,060 ppm at 41 ft bgs  
11.8/13.1 ppm at 59 ft bgs

P-93-09  
250 ppm at 52 ft bgs  
629/569 ppm at 66 ft bgs

P-93-06  
1,310 ppm at 50 ft bgs  
827 ppm at 62.5 ft bgs

P-93-02  
1,310 ppm at 43 ft bgs  
264 ppm at 59 ft bgs

177 ppm  
P-57

P-58  
409/464 ppm

P-66  
0.0116 ppm

T-6

P-93B 370 ppm  
P-93A 506 ppm

P-73  
22.4 ppm

P-75  
2.78 ppm

CPT-19

CPT-4

CPT-18



## **Monitoring Well Sampling**















## **Groundwater Profile Sampling**



















LOW FLOW GROUNDWATER SAMPLING DATA SHEET

PROJECT NAME: P93 West Fencing PROJECT NUMBER: 21561605, 00002 FIELD PERSONNEL: VRS-M. Corbett, REDI-J. Crank, B. Schilling  
 DATE: 4/11/06 WEATHER: sunny, 75°  
 MONITORING WELL ID: P-93-09

INITIAL DATA

Well Diameter: <1 in Water Column Height (do not include LNAPL or DNAPL): \_\_\_\_\_ ft  
 Total Well Depth (ftoc): 6.8 ft If Depth to Top of Screen is > Depth to Water AND Screen Length is (4 feet, \_\_\_\_\_ ft)  
 Depth to Water (ftoc): 50.23 ft If Depth to Top of Screen is < Depth to Water AND Water Column Height and Screen Length are (4ft, \_\_\_\_\_ ft)  
 Depth to LNAPL/DNAPL (ftoc): \_\_\_\_\_ ft If Depth to Top of Screen is < Depth to Water AND Water Column Height + DNAPL Column Height = \_\_\_\_\_ ft  
 Depth to Top of Screen (ftoc): 6.4 ft If Screen Length and/or water column height is < 4 ft, Place Pump at: Total Well Depth - 2 ft = \_\_\_\_\_ ft  
 Screen Length: \_\_\_\_\_ ft

PURGE DATA

Pump Type: Water

Purge Volume (ml)	Time	Depth to Water (ft)	Color	Odor	pH	Temp (°C)	Cond. (umhos/cm)	Turbidity (NTUs)	DO (mg/l)	ORP (mv)
0	1440									
750	1445		lt. brown	slight	6.65	20.98	0.75	not measured	0.00	-130
1500	1450		"	"	6.79	21.52	0.13	"	0.00	-208
2250	1455		"	"	6.79	21.81	0.13	"	0.00	-231
					6.80	21.40	0.13		0.00	-419

Start Time: 1440  
 Stop Time: 1455

Elapsed Time: 15 min  
 Average Purge Rate (ml/min): 150

Water Quality Meter ID: Horiba U-22  
 Date Calibrated: 4/11/06

SAMPLING DATA

Sample Date: 4/11/06  
 Sample Method: low flow

Sample Time: 1500  
 Sample Flow Rate: 150 mL/min

Analysis: VOCs (8260)  
 Date Calibrated: \_\_\_\_\_

COMMENTS:

Collected samples P9309GWPL66, P9309GWPL66D







**TEST AMERICA**

- 7602 Commerce Drive, Waterbury, VT 5309
- 704 Enterprise Drive, Cedar Falls, IA 50613
- 14900 Trinity Blvd., Suite 106, Fort Worth, TX 76155 Phone 817-571-6800
- 3601 South Dixie Drive, Dayton, OH 45439 Phone 603-572-9839
- 1380 Buach Parkway, Buffalo Grove, IL 60089 Phone 847-808-7766
- 1110 Elkhon Drive, Suite A, Colorado Springs, CO 80907 Phone 719-593-9911
- Other

**NPC0479**  
03/08/06 17:00

37204 PHONE 800-765-0980 FAX# 616-726-3404

**Shell Oil Products US Chain Of Custody Record**

**SOP US Project Manager to be invoiced:**

- ENVIRONMENTAL SERVICES
- TECHNICAL SERVICES
- RMT HOUSTON
- BILL CONSULTANT

NAME OF PM TO BILL: Herb Hand (SOPUS)

NAME OF TS TO BILL:

- SHELL RATES
- STATE REIMBURSEMENT RATES

INCIDENT # (SAB ONE) 9 7 2 1 6 6 4 0

DATE: 3/2/06 PAGE: 1 of 2

Invoice with sampling events for this site, sampled through the following date:

917 ADDRESS (Street and City)

CONSULTANT COMPANY: URS Corporation

ADDRESS: 1001 Highlands Plaza Drive West, Suite 300

CITY: St. Louis, MO 63110

TELEPHONE: (office) 314-429-0100 FAX: (office) 437-429-0482 (cell) 314-498-4480 (cell) 818-254-1812

PROJECT CONTACT (Person): Jeff Adams Thomas.Adams@urscorp.com

TURNAROUND TIME (CALENDAR DAYS):  3 DAYS  5 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND

TEMPERATURE ON RECEIPT C°

**SPECIAL INSTRUCTIONS OR NOTES :**

Level 4 QC Deliverables

900 South Central Avenue, Roxana, IL 62049

PROJECT CONTACT (Person): Herb Hand (SOPUS)

SAMPLER NUMBER (Print): Jeff Adams (URS)

CONSULTANT PROJECT NO.: SOPUS West Enclosure P-83 Project

REQUESTED ANALYSIS if more than one method is listed, circle one

Container PID Readings or Laboratory Notes

SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE				NO. OF CONT.
			HCL	HNO3	H2SO4	OTHER	
3/4/06	1040	GW	X			3	
	1420		Y			3	
	1520		X			3	
	1520		Y			3	
	1105		X			3	
						1	

VOCS Method 8299

TPH-GRO (2015)

TPH-DRO (2015)

ES&D / 2015 Method

APFC0479-01  
2  
3  
4  
5  
6

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		3/3/04	8:00



TEST AME

03/09/06 17:00

7602 Commerce Drive, Houston, TX 77057

HTON, NASHVILLE, TN 37204 PHONE 800-765-0980 FAX# 616-726-3404

Shell Oil Products US Chain Of Custody Record

NPC06653

704 Enterprise Drive, Cedar Falls, IA 50613 Phone 319-277-2401

14500 Trinity Blvd., Suite 106, Fort Worth, TX 76155 Phone 817-571-6800

3601 South Dixie Drive, Dayton, OH 45439 Phone 800-572-9839

1380 Buch Parkway, Buffalo Grove, IL 60089 Phone 847-809-7766

1110 Elkton Drive, Suite A, Colorado Springs, CO 80907 Phone 719-593-9911

Other

CONSULTANT COMPANY:

URS Corporation

1001 Highlands Plaza Drive West, Suite 300

St. Louis, MO 63110

E-MAIL

Jeff Adams Thomas.Adams@urscorp.com

PHONE

(office) 314-439-0100 (cell) 314-409-6400 (fax) 314-439-0482 (toll-free) 815-264-1812

TURNAROUND TIME (CALENDAR DAYS):

STANDARD (10 DAY)  5 DAYS  3 DAYS  24 HOURS

RESULTS NEEDED ON WEEKEND

TEMPERATURE ON RECEIPT C°

SPECIAL INSTRUCTIONS OR NOTES :

Level 4 QC Deliverables

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	TIME	MATRIX	PRESERVATIVE			NO. OF CONT.
					HCL	HNO3	H2SO4	
	P1503030601	3/3/06	10:00	Soil	X			3
	P93A03030601		1430		X			3
	P93B03030601		1545		X			3
	P5703030601		1550		X			3
	P93A030306MS		1415		X			3
	P93A030306MSD		1435		X			3
	03030602TB							1

Relinquished by: (Signature)

*John*

Relinquished by: (Signature)

Received by: (Signature)

*[Signature]*

Received by: (Signature)

Relinquished by: (Signature)

Received by: (Signature)

SOP US Project Manager to be Invoiced:

- ENVIRONMENTAL SERVICES
- TECHNICAL SERVICES
- RMT HOUSTON
- BILL CONSULTANT

NAME OF PM TO BILL: Herb Hand (SOPUS)

NAME OF TS TO BILL:

SHELL RATES  STATE REIMBURSEMENT RATES

INCIDENT # (SEE ONE)

9 7 2 1 8 6 4 0

SAP or CRM # (TS CONTRACT)

Invoice with sampling events for this site, sampled through the following date:

DATE: 3/3/06

PAGE: 1 of 2

BSITE ADDRESS (Street and City):

900 South Central Avenue, Roxans, IL 62048

PROJECT CONTACT (Report to):

Herb Hand (SOPUS)

Jeff Adams (URS)

CONSULTANT PROJECT NO.:

SOPUS-West Encelline P-93 Project

314 (cell)

BAMPLER NAME(S) (Print):

REQUESTED ANALYSIS

If more than one method is listed, circle one

VOCA Method 8260	TPH-GRO (8015)	TPH-DRO (8015)	8260 / 8015 Mixture	Container PID Readings or Laboratory Notes
X				NPC0653-01
X				2
X				3
X				4
X				2
X				2
X				5
				6-3/24/06



INFLUENZA

TEST 04/11/06 17:00

- 7602 Commerce Drive, Watertown, WI 53094 Phone 800-833-7036
- 704 Enterprise Drive, Cedar Falls, IA 50613 Phone 319-277-2401
- 14500 Trinity Blvd., Suite 106, Fort Worth, TX 76155 Phone 817-571-6800
- 3601 South Dixie Drive, Dayton, OH 45439 Phone 800-572-9839
- 1380 Busch Parkway, Buffalo Grove, IL 60089 Phone 847-508-7766
- 1110 Elkton Drive, Suite A, Colorado Springs, CO 80907 Phone 719-593-9911
- Other \_\_\_\_\_

TER CREIGHTON, NASHVILLE, TN 37204 PHONE 800-765-0980 FAX 616-726-3404



# Shell Oil Products US Chain Of Custody Record

Cooler 1 of 1

**SOP US Project Manager to be Invoiced:**

NAME OF PM TO BILL: Herb Hand (SOPUS) DATE: 4-5-06  
 NAME OF TS TO BILL: \_\_\_\_\_ PAGE: 1 of 1

INCIDENT # (S&S ONLY) \_\_\_\_\_

SAP OF CRMT # (TS CRMT) \_\_\_\_\_

SHELL RATES  STATE REIMBURSEMENT RATES

Invoice with sampling events for this site, sampled through the following date: \_\_\_\_\_

PROJECT CONTACT (Report to): **SOPUS West Fenceline P-93**  
 CONSULTANT PROJECT NO.: \_\_\_\_\_

SAMPLER NAME(S) (Print): **Jeff Adams (URS)**  
 Herb Hand (SOPUS) **West Fenceline P-93**

Mike Corbett

URS Corporation  
 1001 Highlands Plaza Drive West, Suite 300  
 St. Louis, MO 63110

TELEPHONE (office) 314-429-0100 FAX (office) 314-429-0462 E-MAIL Thomas\_Adams@urscorp.com  
 (cell) 314-409-8480 (Trailer) 818-284-1812

TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (10 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND

TEMPERATURE ON RECEIPT C° \_\_\_\_\_

**REQUESTED ANALYSIS** If more than one method is listed, circle one

Level 4 QC Deliverables

LAB USE ONLY	Field Sample Identification	SAMPLING		MATRIX	PRESERVATIVE				NO. OF CONT.	Container PID Readings or Laboratory Notes
		DATE	TIME		HCL	HNO3	H2SO4	NONE		
	P9302GWP43	4/5/06	1330	Water	X				3	NP00520-01 2 3 4
	P9302GWP59	4/5/06	1515	Water	X			3		
	P9311GWP41	4/5/06	1720	Water	X			3		
	TB04050601	4/5/06						1		

Temp Blank Included

SPECIAL INSTRUCTIONS OR NOTES : Level 4 QC Deliverables

Relinquished by: (Signature) *Wendy M. Adley* 4/5/06 1745

Received by: (Signature) \_\_\_\_\_

Date: 4/6/06

Time: 8:00

NPD0794

04/17/06 23:59

Shell Oil Products US Chain Of Custody Record

- TEST AMERICA**  2690 FOSTER CREIGHTON, NASHVILLE, TN 37204 PHONE 800-765-0980 FA  
 7602 Commerce Drive, Waterbury, VT 53094 Phone 800-693-7036  
 704 Enterprise Drive, Cedar Falls, IA 50613 Phone 319-277-2401  
 14600 Trinity Blvd., Suite 106, Fort Worth, TX 76155 Phone 817-571-6800  
 3601 South Dixie Drive, Dayton, OH 45439 Phone 800-572-9839  
 1380 Busch Parkway, Buffalo Grove, IL 60089 Phone 847-608-7766  
 1110 Elkton Drive, Suite A, Colorado Springs, CO 80907 Phone 719-593-9911  
 Other

**SOP US Project Manager to be Invoiced:**

NAME OF PIM TO BILL: Herb Hand (SOPUS) DATE: 4/6/06  
 NAME OF TS TO BILL: \_\_\_\_\_ PAGE: 1 of 1

INCIDENT # (SEE ONLY) 9 7 2 1 6 6 3 4

STATE REIMBURSEMENT RATES  SHELL RATES  STATE REIMBURSEMENT RATES

INVOICE WITH SAMPLING EVENTS FOR THIS SITE, SAMPLED THROUGH THE FOLLOWING DATE: \_\_\_\_\_

SITE ADDRESS (Street and City):  
**West Fence Line P-93**  
 SOPUS-~~170~~ 170 East Rand Avenue, Hartford, IL 62048  
 PROJECT CONTACT (Report to): Jeff Adams (URS) CONSULTANT PROJECT NO.:  
 SAMPLER NAME(S) (PIM): Herb Hand (SOPUS) Jeff Adams (URS) SOPUS-~~170~~ 170  
 Michael Corbett

REQUESTED ANALYSIS If more than one method is listed, circle one

VOCs Method 8260	TPH-GRO (8015)	TPH-DRO (8015)	8260 / 8015 Mixture	Level 4 QC Deliverables	PRESERVATIVE			NO. OF CONT.	Container PID Readings or Laboratory Notes
					HCL	HN03	H2SO4		
X				X	X			3	NPD 0794-01
X				X	X			3	-02
X				X				1	-03
X				X				3	-04

SPECIAL INSTRUCTIONS OR NOTES:  
**Level 4 QC Deliverables Temp Blank Included**

FIELD SAMPLE IDENTIFICATION	SAMPLING		MATRIX	PRESERVATIVE			NO. OF CONT.	RECEIVED BY: (SIGNATURE)	DATE	TIME
	DATE	TIME		HCL	HN03	H2SO4				
P9311GWP59	4/6/06	0930	water	X						
P9311GWP59D	4/6/06	0930	water	X						
TB04060602	4/6/06		water	X						
P9303GWP40	4/6/06	1610	water	X						

TEMPERATURE ON RECEIPT C°

RECEIVED BY: (SIGNATURE) *Michael Corbett* DATE: 4/7/06 TIME: 8:00

RECEIVED BY: (SIGNATURE) \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

RECEIVED BY: (SIGNATURE) \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client.

Cooler lot 1

**Shell Oil Products US Chain Of Custody Record**

**TEST AMERICA**  2690 FOSTER CREEKTON, NASHVILLE, TN 37204 PHONE 800-765-0980 FAX# 616-726-3404  
 7602 Commerce Drive, Watertown, WI 53094 Phone 800-833-7036  
 704 Enterprise Drive, Cedar Falls, IA 50613 Phone 319-277-2401  
 14500 Thimble Blvd., Suite 106, Fort Worth, TX 76155 Phone 817-571-6800  
 3601 South Dixie Drive, Dayton, OH 45439 Phone 800-572-9839  
 1380 Busch Parkway, Buffalo Grove, IL 60089 Phone 847-808-7766  
 1110 Elkton Drive, Suite A, Colorado Springs, CO 80907 Phone 719-593-9911  
 Other \_\_\_\_\_

**SOP US Project Manager to be invoiced:**  
 ENVIRONMENTAL SERVICES  
 TECHNICAL SERVICES  
 RMT HOUSTON  
 BILL CONSULTANT

**NAME OF PM TO BILL:** Herb Hand (SOPUS)  
**NAME OF TS TO BILL:** \_\_\_\_\_  
 SHELL RATES  STATE REIMBURSEMENT RATES

**SITE ADDRESS (Street and City):** P93 West Fenceline  
**SOPUS-PROJECT #:** 170 East Rand Avenue; Hartford, IL 62048  
**PROJECT CONTACT (Report to):** (Copy to): Jeff Adams (URS)  
**SAMPLER NAME(S) (Print):** Herb Hand (SOPUS)  
**SAMPLER NAME(S) (Handwritten):** Michael Corbett

**INCIDENT # (SEE ONLY):** \_\_\_\_\_  
**SAP or CRMT # (TS/CRM#):** \_\_\_\_\_

**DATE:** 4/7/06 **PAGE:** 1 of 1

**Invoice with sampling events for this site, sampled through the following date:** \_\_\_\_\_

**CONSULTANT COMPANY:** URS Corporation  
**ADDRESS:** 1001 Highlands Plaza Drive West; Suite 300  
**CITY:** St. Louis, MO 63110  
**TELEPHONE (Office):** 314-428-0100 **FAX:** (Office) 314-429-0482  
**(Cell):** 314-409-6480 **(Toll-free):** 816-254-1512  
**TURNAROUND TIME (CALENDAR DAYS):**  5 DAYS  3 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND

**SPECIAL INSTRUCTIONS OR NOTES:**  
**Level 4 QC Deliverables**  
**Temp Blank Included**

**REQUESTED ANALYSIS** If more than one method is listed, circle one

SOPUS-PROJECT # (SEE ONLY)	FIELD SAMPLE IDENTIFICATION	SAMPLING		PRESERVATIVE			MATRIX	NO. OF CONT.	VOCs Method 8260	TPH-GRO (8015)	TPH-DRO (8015)	Level 4 QC Deliverables	Container PID Readings or Laboratory Notes
		DATE	TIME	HCL	HNO3	H2SO4							
P9303 GWP59		4/7/06	0905	X			water	3	X			X	-1
P9305 GWP45		4/7/06	1100	X			water	3	X			X	-2
P9305 GWP58		4/7/06	1205	X			water	3	X			X	-3
P9305 GWP58 MS		4/7/06	1205	X			water	3	X			X	-4
P9305 GWP58 MSD		4/7/06	1205	X			water	3	X			X	-5
TB04070603		4/7/06					water	1	X			X	-6
P9306 GWP50EB		4/7/06	1510	X			water	3	X			X	-7
P9306 GWP50		4/7/06	1600	X			water	3	X			X	-8
													9/8
													4/8/06

**Received by: (Signature)** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Received by: (Signature)** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Received by: (Signature)** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Received by: (Signature)** *Michael Corbett* **Date:** 4-8-06 **Time:** 0836



NPD1302

04/17/06 23:59

PHONE 800-765-09

PHONE 37204

NASHVILLE, TN

2690 FOSTER CREIGHTON,

WATERSTOWN, VT 53094

PHONE 800-833-7036

PHONE 319-277-2401

PHONE 817-571-6800

PHONE 800-572-9839

PHONE 847-808-7766

PHONE 719-593-9911

**TEST AMERICA**  2690 FOSTER CREIGHTON, NASHVILLE, TN 37204 PHONE 800-765-09



**Shell Oil Products US Chain Of Custody Record**

**SOP US Project Manager to be Invoiced:**

NAME OF PM TO BILL: Herb Hand (SOPUS) DATE: 04/11/06

NAME OF TS TO BILL: SAP or CRNT # (TS CRNT) INVOICE WITH SAMPLING EVENTS FOR THIS SITE, SAMPLED THROUGH THE FOLLOWING DATE:

INCIDENT # (SEE ONLY) 9 7 2 1 6 3 4

ENVIRONMENTAL SERVICES  TECHNICAL SERVICES  RMT HOUSTON  BILL CONSULTANT  STATE REIMBURSEMENT RATES

**SOPUS-Rand Avenue 170 East Rand Avenue; Hartford, IL 62048**

PROJECT CONTACT (Report to): Herb Hand (SOPUS) CONSULTANT PROJECT NO.: SOPUS-Rand Avenue

SAMPLER NAME(S) (Print): Jeff Adams (URS)

**URS Corporation**

1001 Highlands Plaza Drive West; Suite 300

St. Louis, MO 63110

TELEPHONE (Office) 314-429-0100 FAX (Office) 314-429-0482 EMAIL: Thomas\_Adams@urscorp.com

TURNAROUND TIME (CALENDAR DAYS):  5 DAYS  3 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND

**REQUESTED ANALYSIS** if more than one method is listed, circle one

LAB USE ONLY	SAMPLING		MATRIX	PRESERVATIVE			NO. OF CONT.	Level 4 QC Deliverables	Container PID Readings or Laboratory Notes
	DATE	TIME		HCL	HNO3	H2SO4			
	04/11/06	1500	W	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	<input checked="" type="checkbox"/>	NPD 1302-01
	04/11/06	1500	W	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	<input checked="" type="checkbox"/>	-02
	04/11/06	1430	W	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	<input checked="" type="checkbox"/>	-03
	04/11/06		W	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>	-04
	04/10	1315	W	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	<input checked="" type="checkbox"/>	-05

**SPECIAL INSTRUCTIONS OR NOTES:**

**Level 4 QC Deliverables**

Requisitioned by: (Signature) *[Signature]* Received by: (Signature) **FeoEx**

Requisitioned by: (Signature) *[Signature]* Received by: (Signature) *[Signature]*

Date: 04/11/06 Time: 1830

Date: 4/12/06 Time: 8:00





6105 Rookin  
Houston, Texas 77074  
Phone : 713-346-4000  
Fax : 713-346-4002

June 5, 2006  
Report Number: 0305-1830B

URS Corporation  
1001 Highland Plaza Drive West  
Suite 300  
St. Louis, MO 63110

Attn.: Mr. Eric Friedich

**DATA REPORT  
CONE PENETRATION,  
RAPID OPTICAL SCREENING TOOL (ROST™) AND  
MEMBRANE INTERFACE PROBE (MIP)  
TESTING RELATED SERVICES  
CONOCO PHILLIPS REFINERY  
ROXANNA, ILLINOIS  
WORK ORDER NO. 21561665**

Dear Mr. Friedich:

Fugro Geosciences (Fugro) is pleased to present this data report for Cone Penetration (CPT), Rapid Optical Screening Tool (ROST™) and Membrane Interface Probe (MIP) testing at the above-referenced site. These tests provided continuous characterization of stratigraphy, petroleum hydrocarbon distribution and chemical characteristics of soil at the testing locations. A description of the CPT, ROST™ and MIP technologies follows. CPT, ROST™ and MIP logs and electronic data CD are included as attachments.

**Cone Penetration Testing**

CPT was performed simultaneously with each ROST™ sounding and yielded real-time stratigraphic data. CPT is a proven method for rapidly evaluating the physical characteristics of unconsolidated soils. It is based on the resistance to penetration of an electronically-instrumented cone which is continuously advanced into the subsurface. In accordance with ASTM Standard D5778-95, the cone was advanced at a rate of two centimeters per second with the driving force provided by hydraulic rams.

The CPT cone used at this site had an apex angle of 60 degrees with a base area of 15 square centimeters (cm<sup>2</sup>), and friction sleeve with a surface area of 200 cm<sup>2</sup>. The standard geotechnical sensors within the cone measure tip resistance and sleeve friction in tons per square foot (TSF). The combined data from the tip resistance and sleeve friction form the basis of the soil classification (e.g., sand, silt, clay, etc.).

Soil stratigraphy was identified using Campanella and Robertson's Simplified Soil Behavior Chart. Please note that because of the empirical nature of the soil behavior chart, the soil identification should be verified locally.

## ROST™ Testing

Fugro Geosciences' ROST™ Laser-Induced Fluorescence system was used for this investigation to screen soils for petroleum hydrocarbon materials containing aromatic hydrocarbon constituents. The system consists of a tunable laser mounted in the CPT truck that is connected to a down-hole sensor. The down-hole sensor consists of a small diameter sapphire window mounted flush with the side of the cone penetrometer probe.

The laser and associated equipment transmit 50 pulses of light per second to the sensor through a fiber optic cable. The wavelength of the pulsed excitation light is tunable and can be set to wavelengths of 266 nanometers (nm) or to wavelengths between 280 and 300 nm. An excitation wavelength of 290 nm was used for each test during this project.

The laser light passes through the sapphire window and is absorbed by aromatic hydrocarbon molecules in contact with the window, as the probe is advanced. This addition of energy (photons) to the aromatic hydrocarbons causes them to fluoresce. A portion of the fluorescence emitted from any encountered aromatic constituents is returned through the sapphire window and conveyed by a second fiber optic cable to a detection system within the CPT rig. The emission data resulting from the pulsed laser light is averaged into one reading per one second interval (approximately one reading per 2 cm vertical interval) and is recorded continuously. ROST™ may be operated in single or multi-wavelength mode, depending on project objectives. For this project, ROST™ was operated in multi-wavelength mode (MWL).

**Multi-Wavelength Mode (MWL).** In MWL mode, several characteristics of the emitted fluorescence are measured and recorded simultaneously at four (4) specific wavelengths (340, 390, 440, and 490 nm). These four wavelengths represent the spectrum of fluorescence typically produced by aromatic hydrocarbons ranging from light fuels through heavy contaminants such as coal tar and creosote. The recorded data is then presented as a color graph of fluorescence intensity (the combined fluorescence of all four monitored wavelengths) versus depth (FVD).

On the FVD graph, each of the four monitored wavelengths is assigned a color. These colors are combined based on the proportional fluorescence intensity of each of the individual wavelengths. The combined color is then used on the FVD graph. Changes in color on the FVD graph typically represent changes in product type. Similarly, like colors on the FVD graph typically represent the same product, regardless of the total fluorescence intensity. Changes in the total fluorescence intensity typically indicate changes in contaminant concentration, with higher fluorescence intensities representing proportionally higher concentrations when compared to lower fluorescence intensities.

In addition to the FVD graph, depth specific waveforms are presented at four (4) selected depths throughout the sounding. These waveform graphs are presented to the right of the FVD graph on each plot. In the waveform graphs, the fluorescence intensity and duration of fluorescence of each of the monitored wavelengths is represented by an individual peak, starting at 340 nm and increasing in 50 nm wavelengths as you move to the right. The intensity of each wavelength is represented by the height of the peaks, and the duration of fluorescence is represented by the width of each peak. For general interpretation purposes, lighter aromatic hydrocarbon molecules will emit fluorescence at the shorter wavelengths, and heavier, longer chained hydrocarbons will emit fluorescence at the longer wavelengths. The presented waveforms can be compared to waveforms typical of common hydrocarbon products to determine the likely product type that has been encountered. Please note that the waveforms are available at every two centimeter interval throughout the entire sounding. Additional waveforms can be generated at any time during or after testing is complete.



**Reference Solution.** The fluorescence intensity of a reference solution placed on the sapphire window was measured immediately prior to conducting each test. This reference solution measurement serves two purposes. First, as a quality control check, the solution is used to ensure that the performance of the system is within specifications. Second, it allows for normalization of the data from

different test locations for variation in laser power, operating conditions, and monitored emission wavelength. The reference solution used for this project was the standard M1 reference, which is a proprietary PHC containing solution. M1 provides consistent fluorescence response across the portion of the spectrum analyzed by ROST and therefore, allows the fluorescence data collected to be consistently normalized to intensities recorded as a percentage of M1.

### **MIP Testing**

For this investigation, the MIP was combined with CPT to screen soils for VOCs. The MIP system consists of a hydrophobic membrane that is surrounded by a heater block, Teflon tubing, and a series of detectors. By heating the area around the membrane, a pressure gradient is created. This pressure gradient pushes volatilized VOCs through the membrane where they are "swept" to the surface using an inert carrier gas. Once at the surface, the carrier gas and any VOCs that are present are fed directly into a series of detectors. This series of detectors includes

a PID, FID, and ECD. The responses from each of the detectors are then recorded. A brief description of each of the detectors follows.

The Photo Ionized Detector (PID) responds to all aromatics and molecules with carbon double bonds. The PID uses a 10.6eV lamp with a high voltage power supply. Sample laden carrier gas flows into the inlet and through a flow-through cell. When the sample molecules flow into the cell they are bombarded with UV light. Molecules with an ion potential lower than 10.6eV release an ion when struck by the photons. The ions are attracted to a collector electrode, and then sent to the amplifier to produce an analog signal. The PID is nondestructive, so the sample is routed through the PID to subsequent detectors.

The Flame Ionized Detector (FID) responds to any molecule with a carbon-hydrogen bond. In the FID, the carrier gas effluent is mixed with hydrogen then routed through a stainless steel jet. The hydrogen mix supports a diffusion flame at the jet's tip, which ionizes the analyte molecules. Positive and negative ions are produced as each sample component is eluted into the flame. A collector electrode attracts the negative ions to the electrometer amplifier, producing an analog signal for the data system input. Because it uses a hydrogen diffusion flame to ionize compounds for analysis it destroys the sample in the process.

The Electron Capture Detector (ECD) detects electro-negative compounds, especially chlorinated, fluorinated or brominated molecules such as carbon tetrachloride, bromoform, PCBs and pesticides. The ECD detector consists of a sealed stainless steel cylinder containing radioactive nickel-63. When electro-negative components enter the cell, they immediately combine with some of the electrons, reducing the number remaining in the electron cloud. The detector electronics, which maintain a constant current through the electron cloud, are forced to pulse at a faster rate to compensate for the decreased number of free electrons. The pulse rate is converted to an analog output which is connected to the data system.





The collected sensor data is presented on plots for each CPT/MIP test. In addition to the plots, a disk containing the digital output from each of the detectors and from the CPT is provided.

**LIMITATIONS OF ENVIRONMENTAL SUBSURFACE WORK**

Fugro Geosciences' report is based upon our observations made during field work, the information provided to Fugro and the results of the ROST/CPT survey. Given the inherent limitation of environmental subsurface work, Fugro cannot guarantee that the site is free of hazardous or potentially hazardous materials or conditions or that latent or undiscovered conditions will not become evident in the future. Fugro's report was prepared in accordance with our proposal and the General Conditions agreed to between Fugro and Client and no warranties, representations, or certifications are made.

Fugro Geosciences, Inc. appreciates the opportunity to be of service to your organization. Please do not hesitate to contact us if we can be of further assistance. We look forward to working with you in the future.

Sincerely,  
**FUGRO GEOSCIENCES, INC.**

A handwritten signature in black ink, appearing to read "Recep Yilmaz", written over a horizontal line.

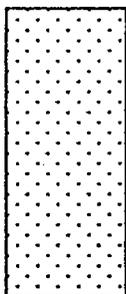
Recep Yilmaz  
President

RY/mdt

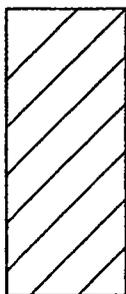
Enclosure: - 1 CD



## KEY TO SOIL BEHAVIOR TYPE



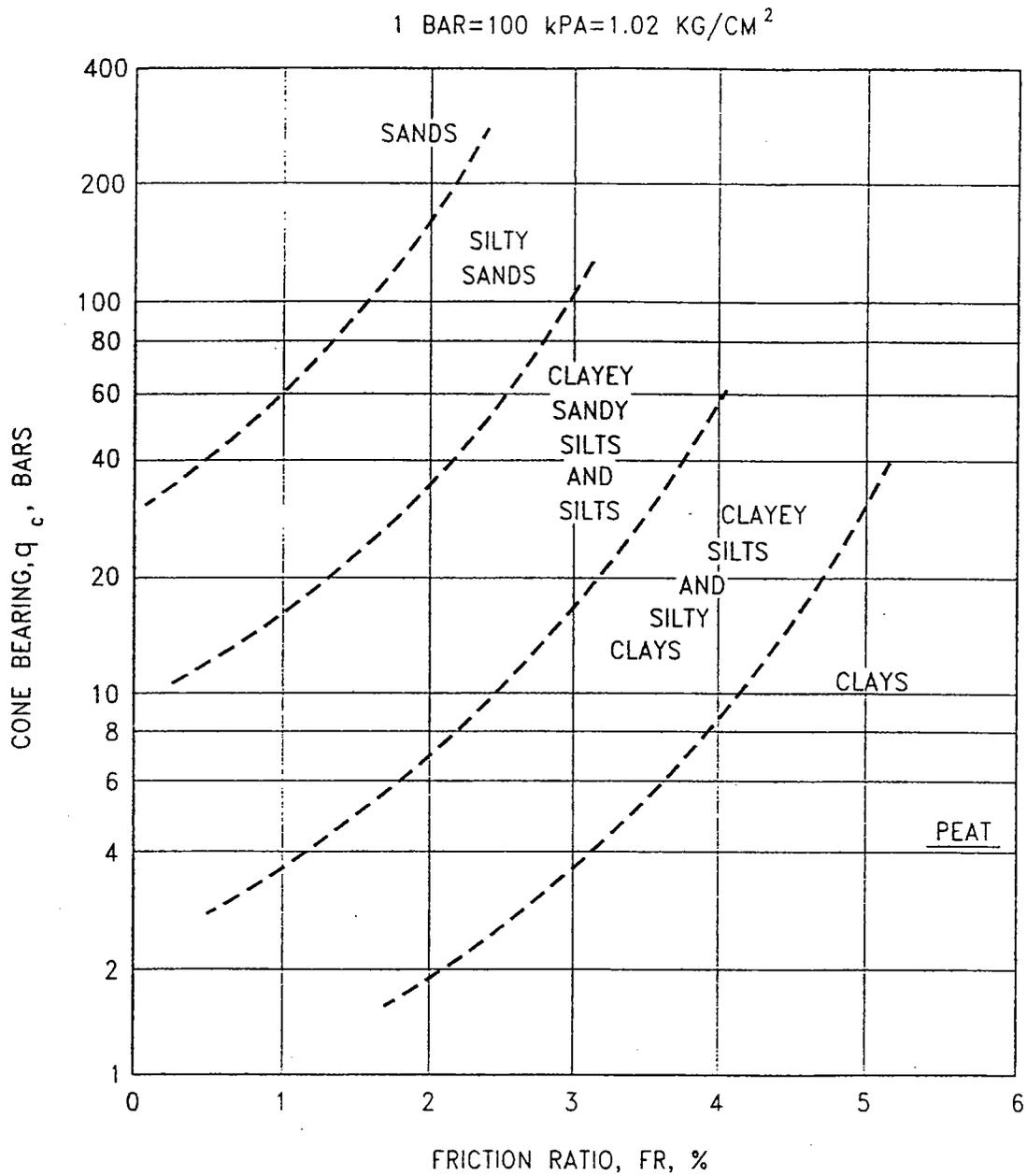
SAND AND SANDY SOIL



CLAY AND CLAYEY SOIL



SILT AND SILTY SOIL



MODIFIED CAMPANELLA AND ROBERTSON SOIL BEHAVIOR CHART (1983)

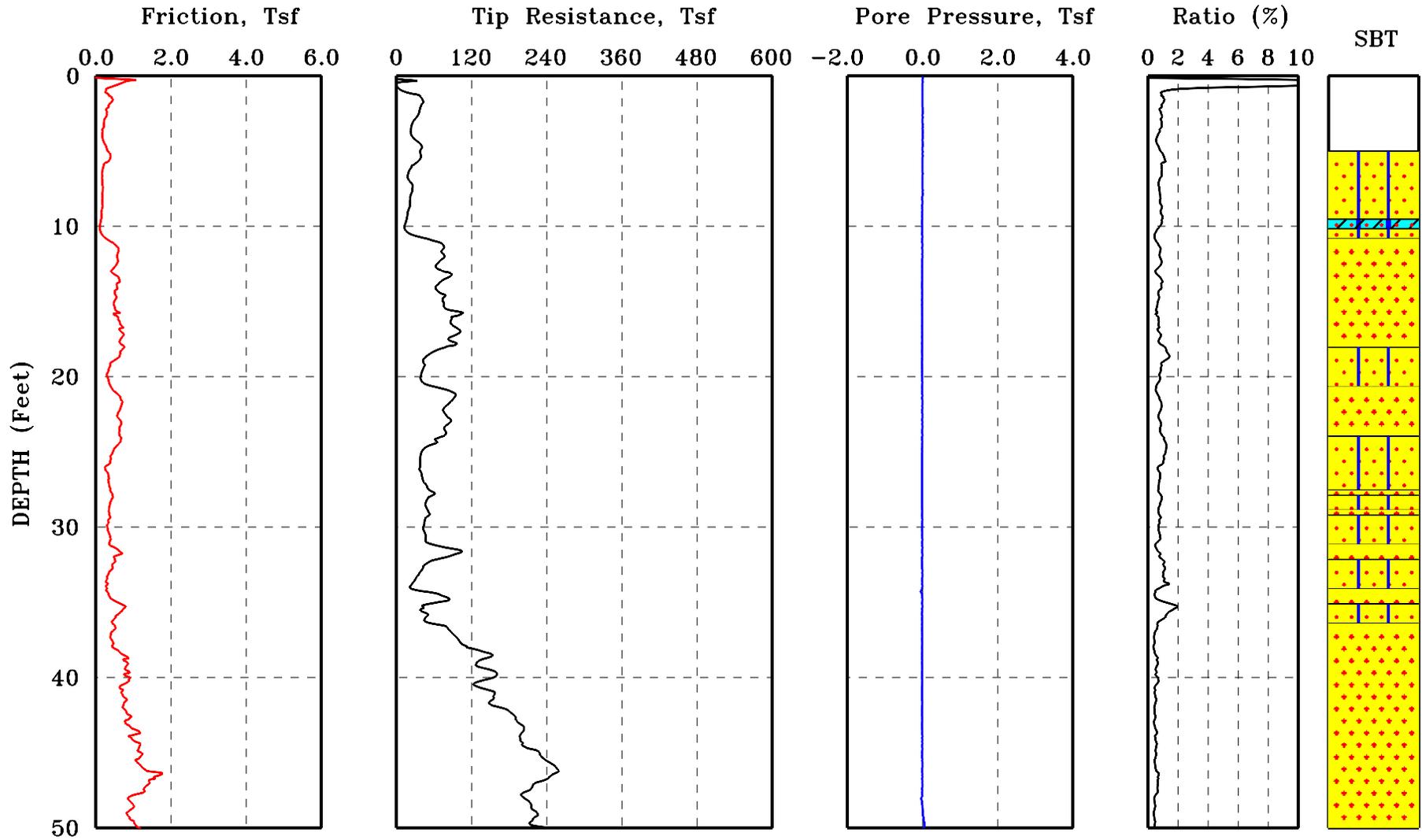
**ROST SECTION**

# CPT LOGS

FUGRO GEOSCIENCES, INC.

CPT No : P-93-08  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

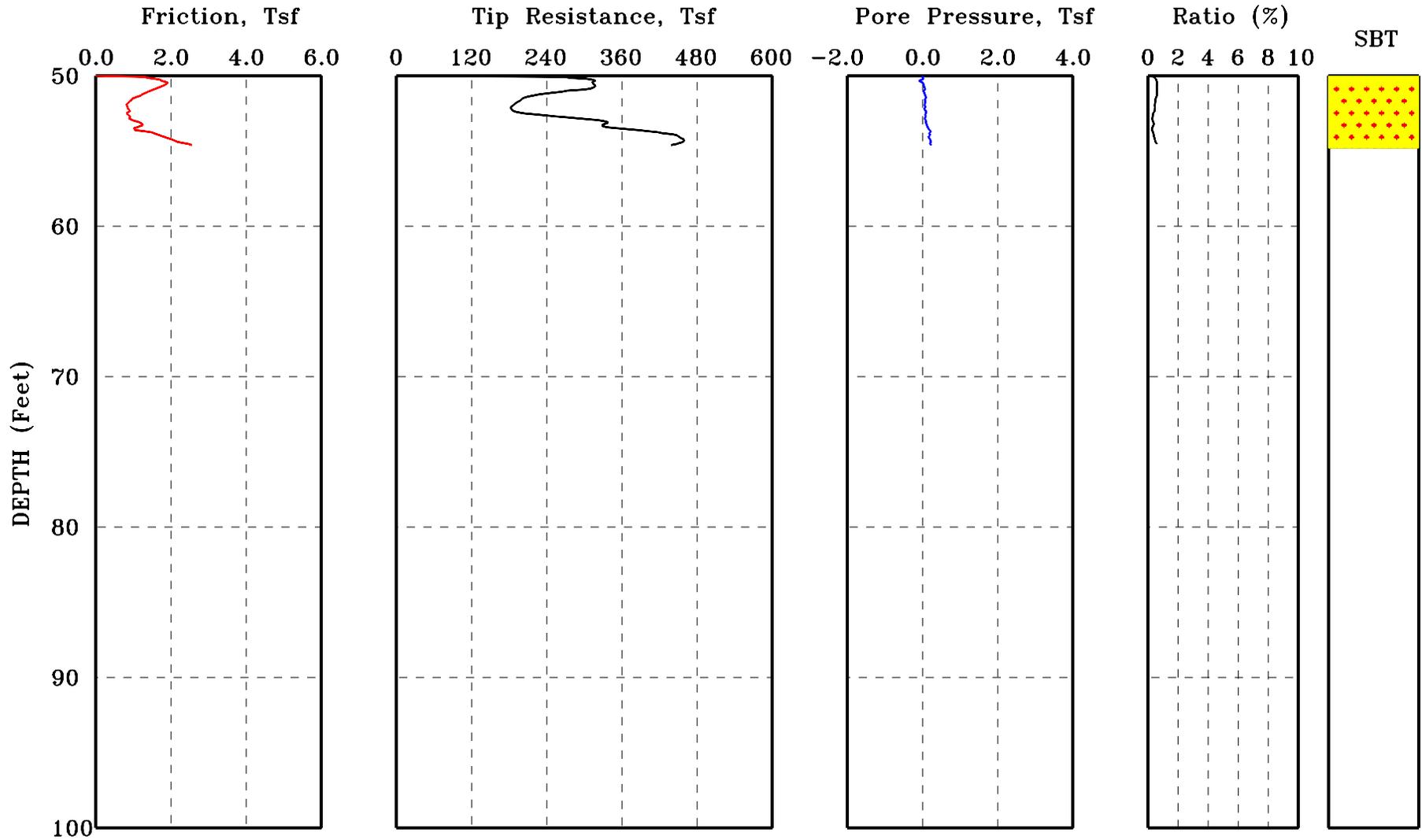
SITE : HARTFORD  
CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 03-30-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-08  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

SITE : HARTFORD  
CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 03-30-2006

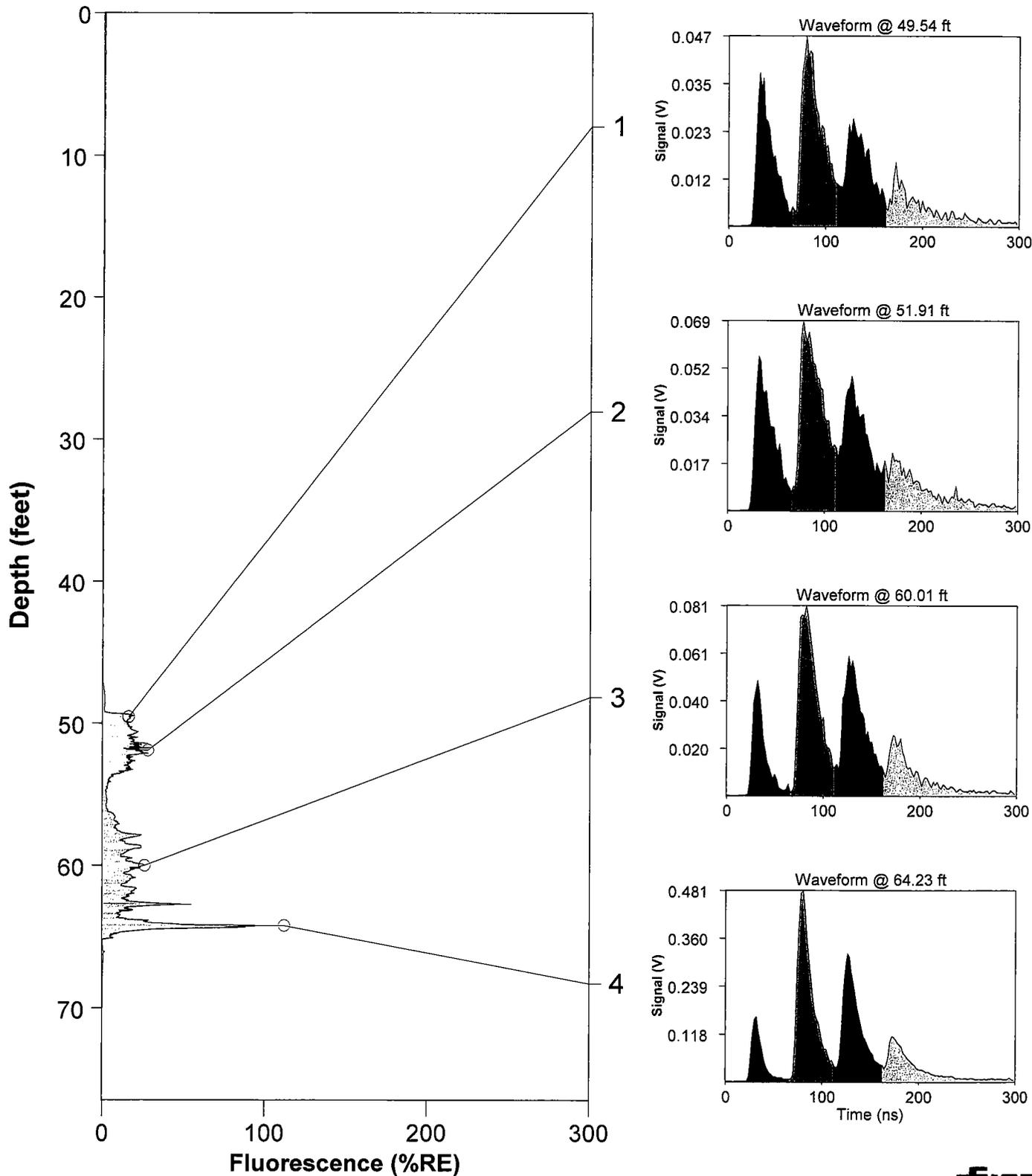


**ROST™  
LOGS**

# ROST Fluorescence Response Data

Site: CONOCO PHILLIPS HARTFORD,IL. Client: URS Date/Time: 3/28/2006 @ 5:44:16 AM ROST Unit: 5	Operator: GLENN Fugro Job #: 0305-1830 Max fluorescence: 112.11% @ 64.23 ft Final depth BGS: 70.02 ft
--	--

## P-93-08

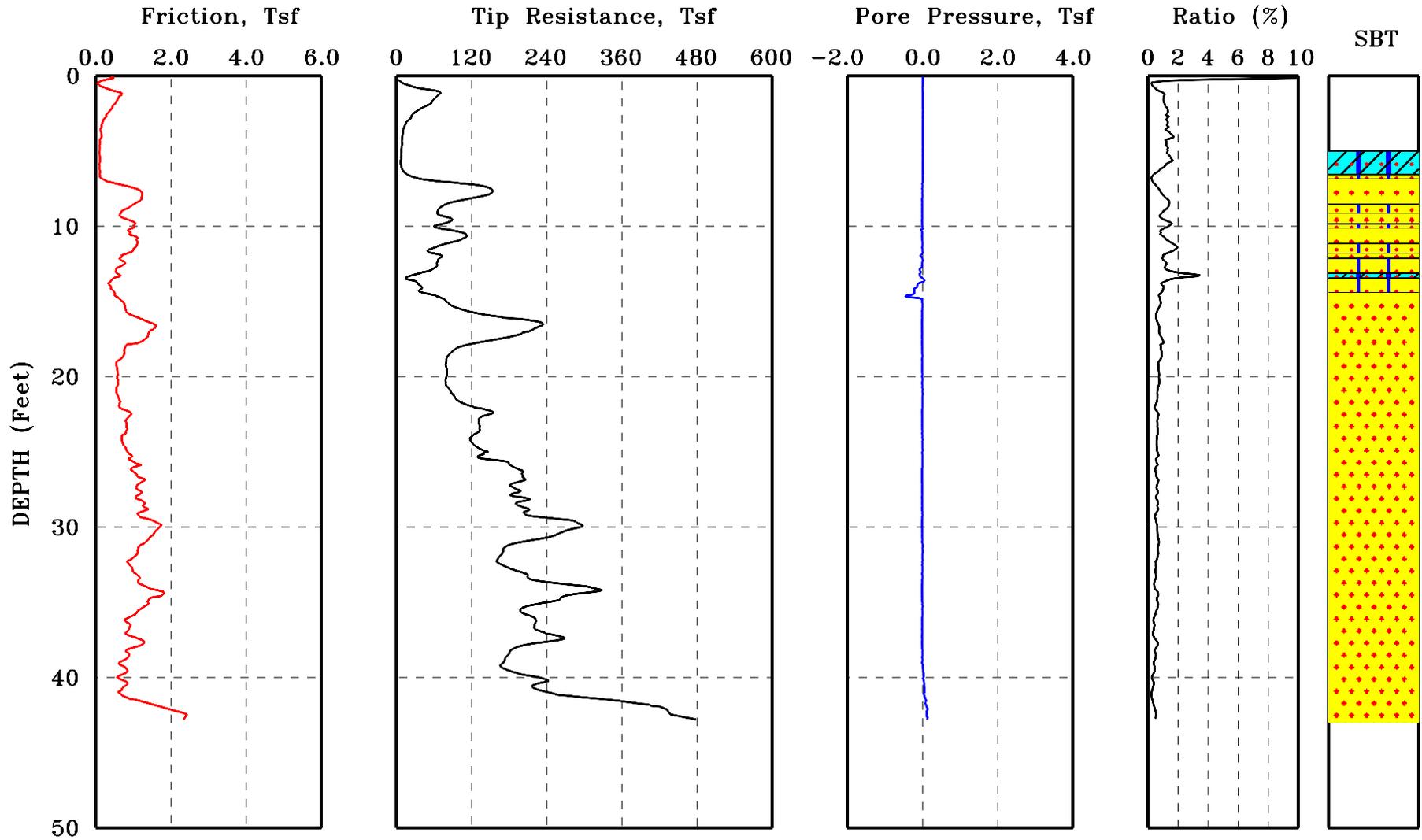


**CPT/MIP LOGS**

FUGRO GEOSCIENCES, INC.

CPT No : P-93-01  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

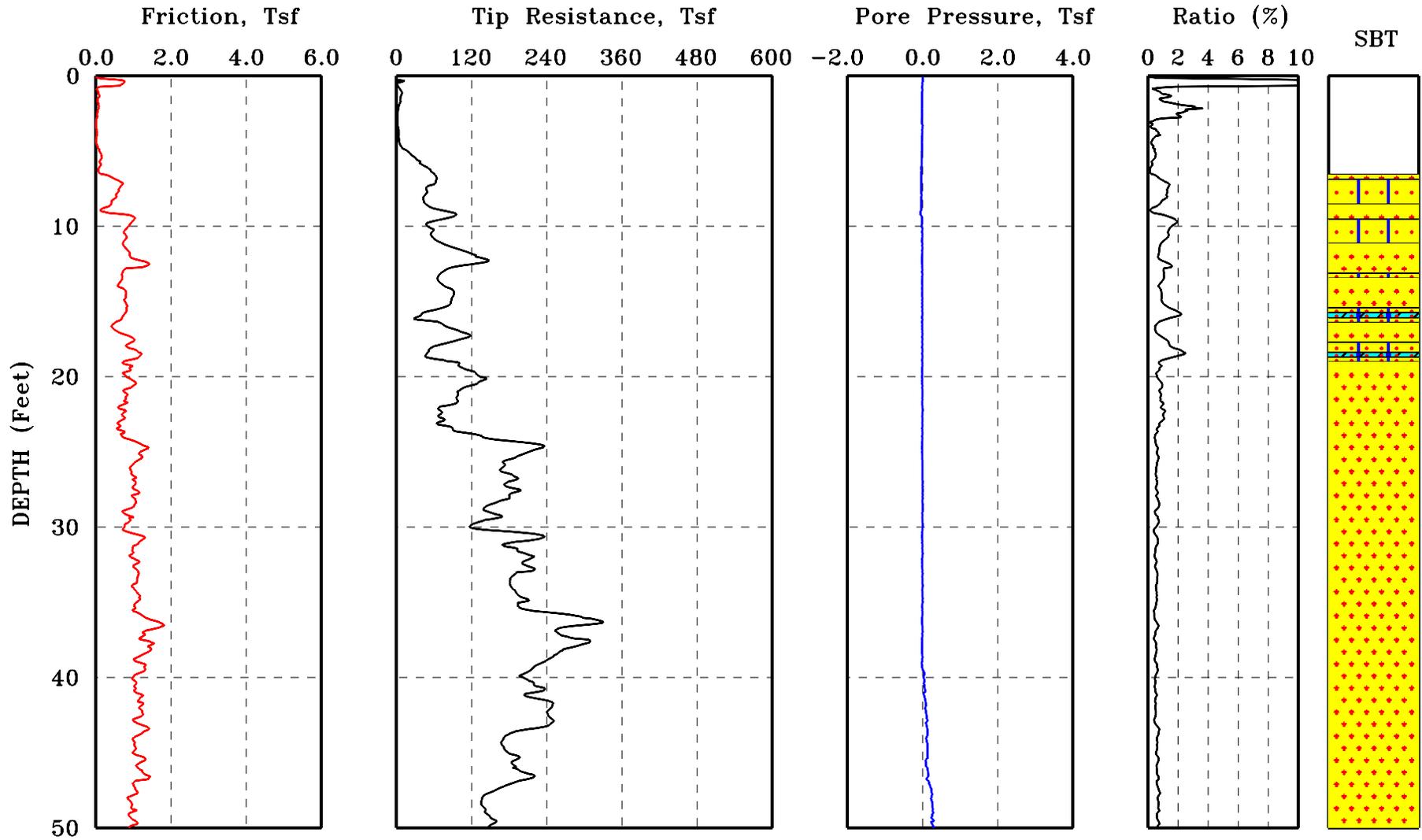
SITE : HARTFORD  
CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 03-31-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-02  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

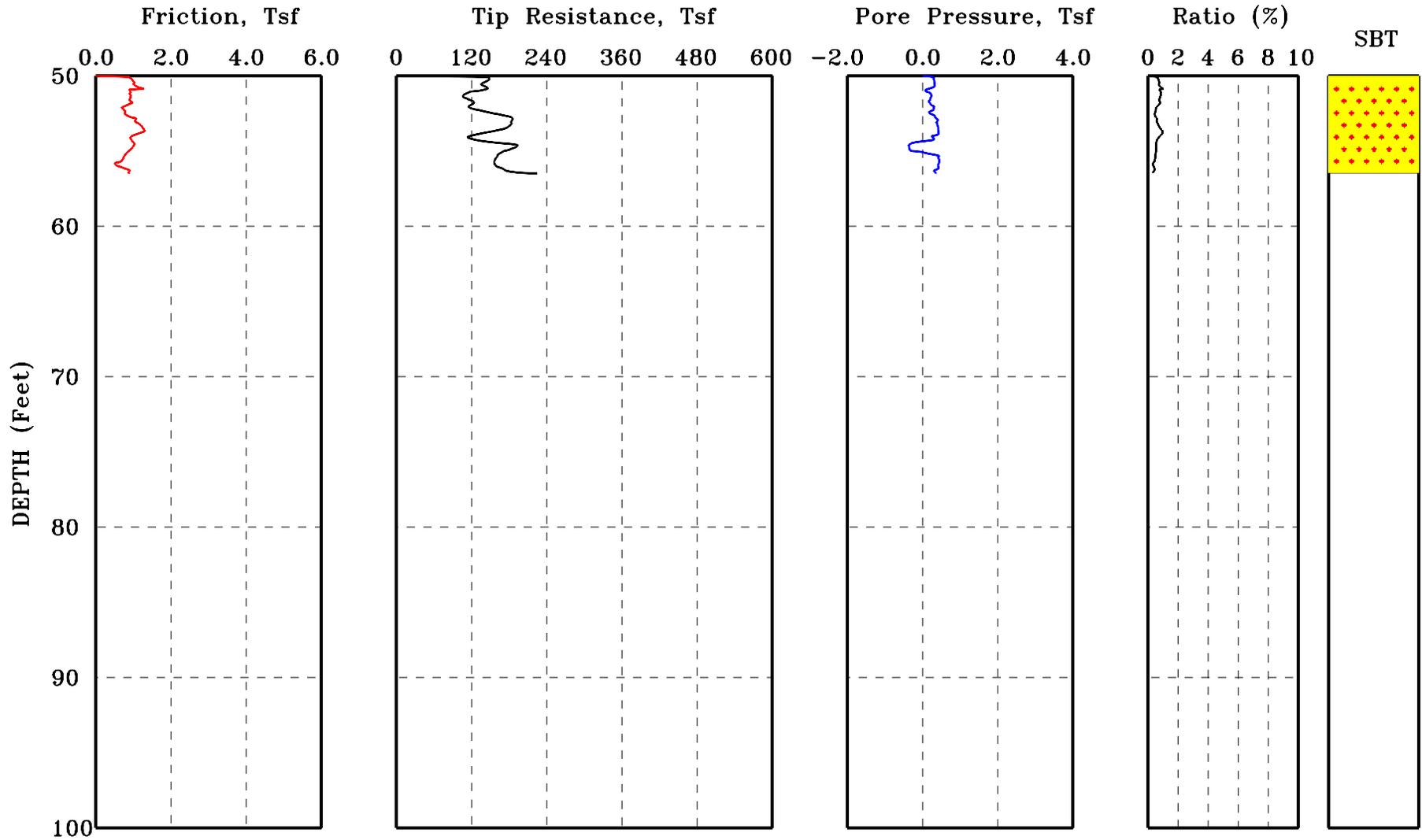
SITE : HARTFORD  
CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 04-01-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-02  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

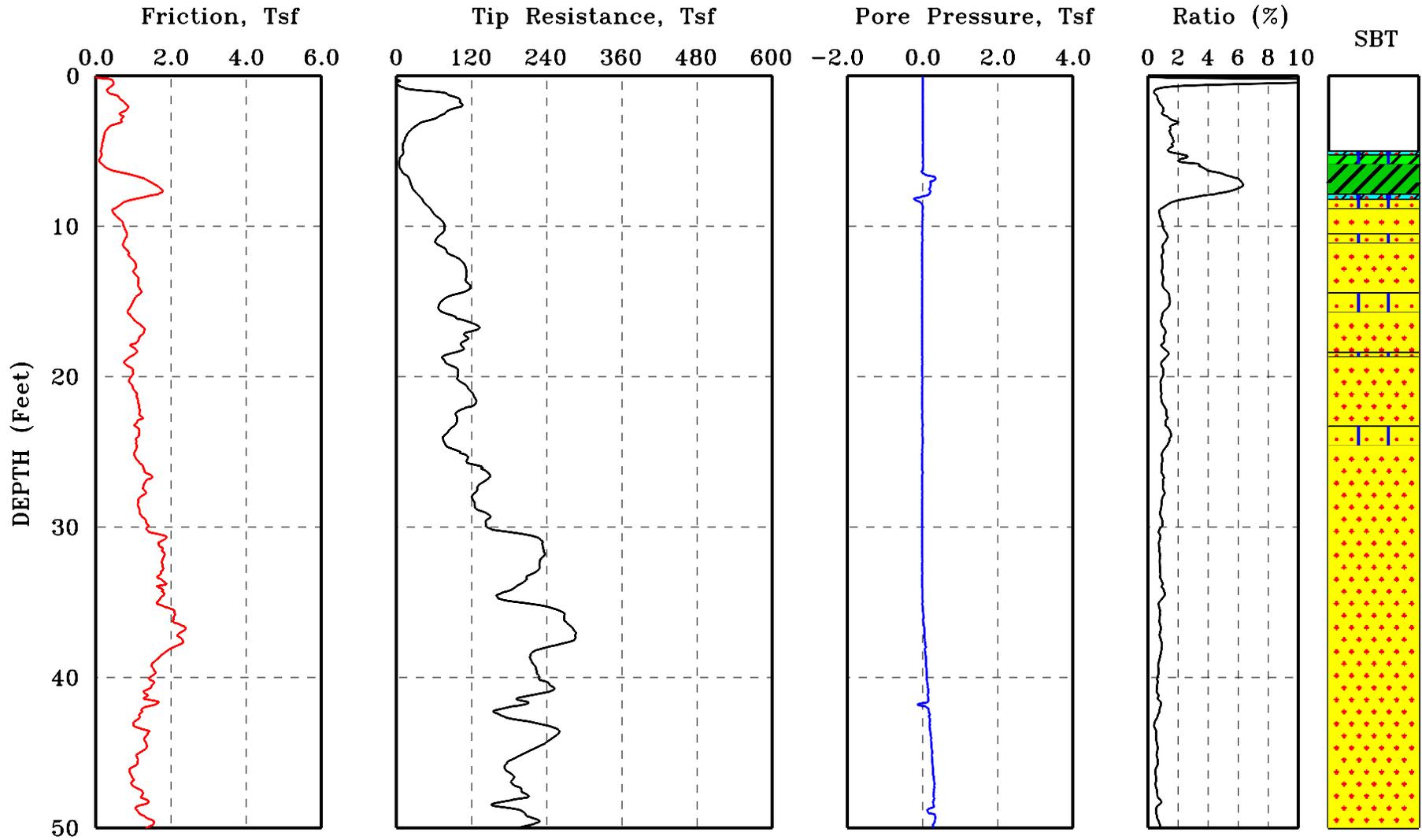
SITE : HARTFORD  
CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 04-01-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-04  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

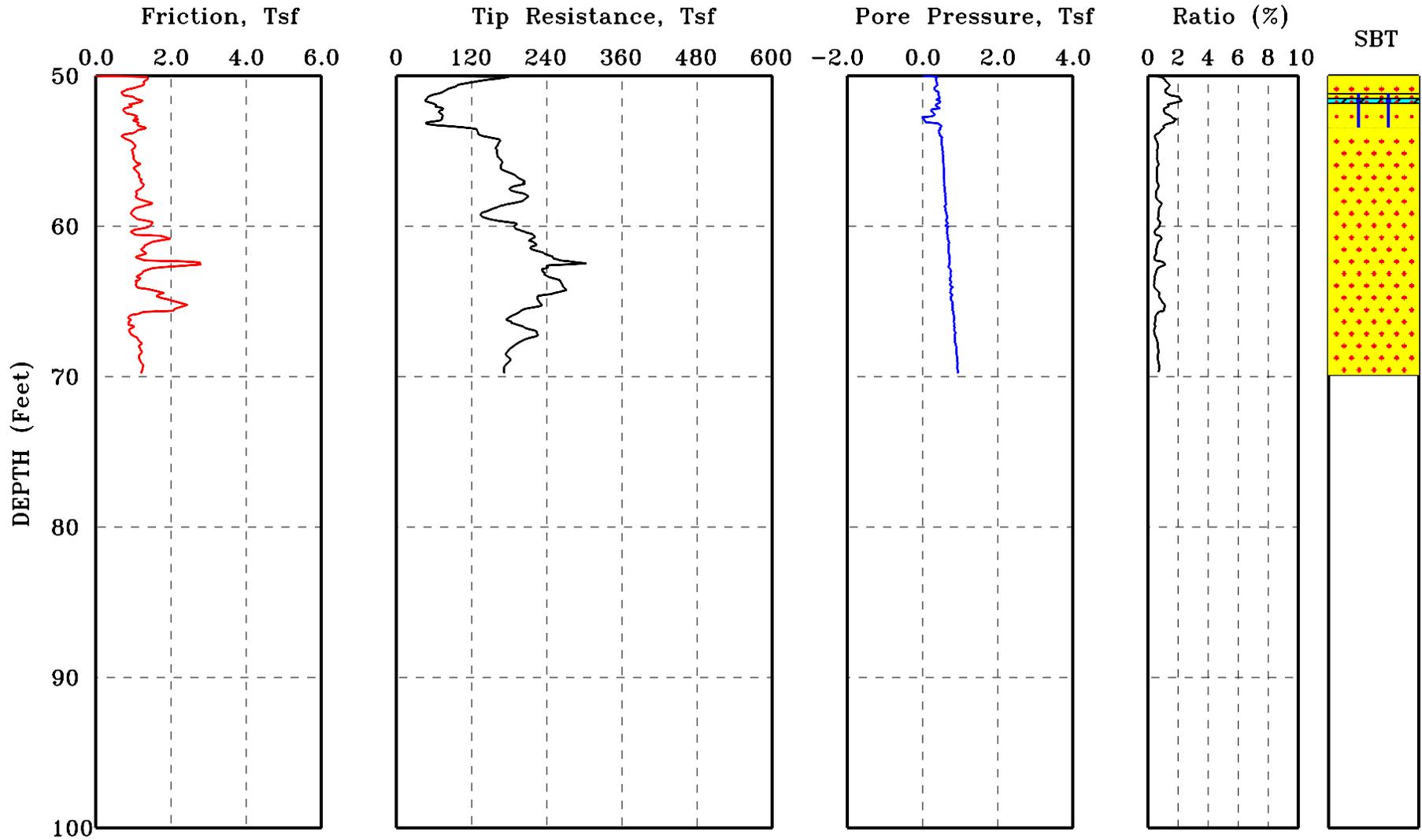
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OPERATOR : GJ  
DATE : 04-01-2006



FUGRO GEOSCIENCES, INC.

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JOB No : 0305-1830  
CONE No : F7.5CKEW1303

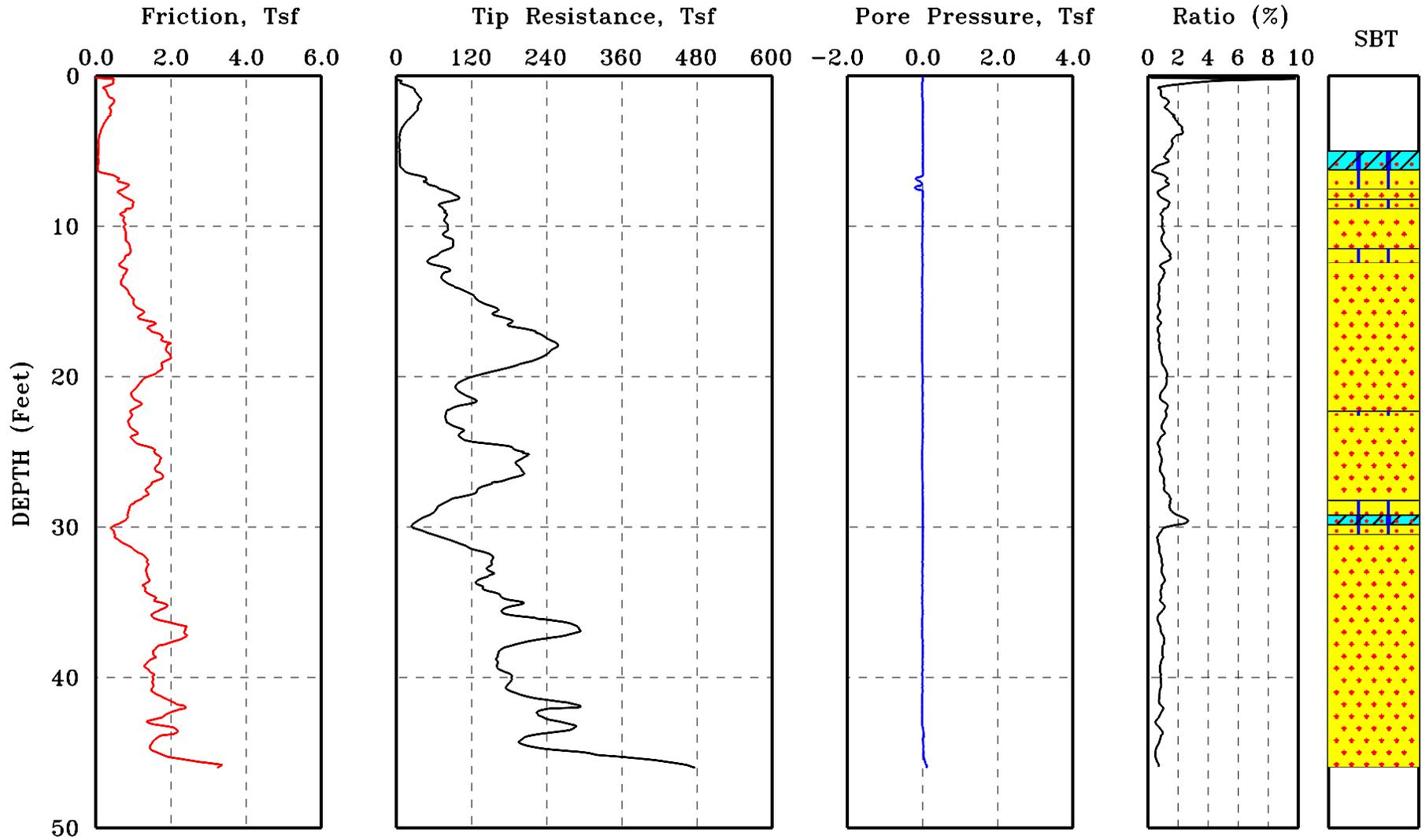
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CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 04-01-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-05  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

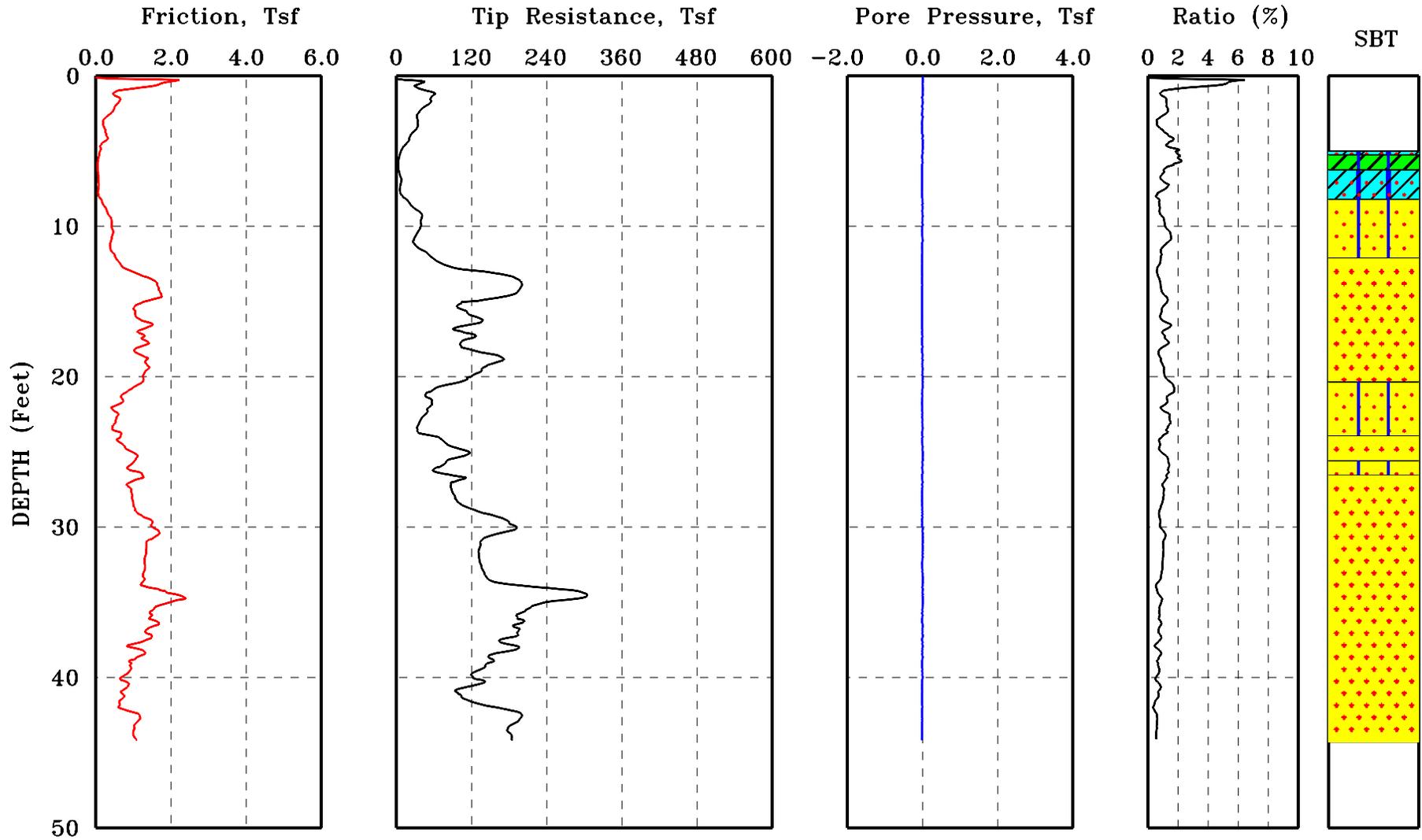
SITE : HARTFORD  
CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 04-01-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-06  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

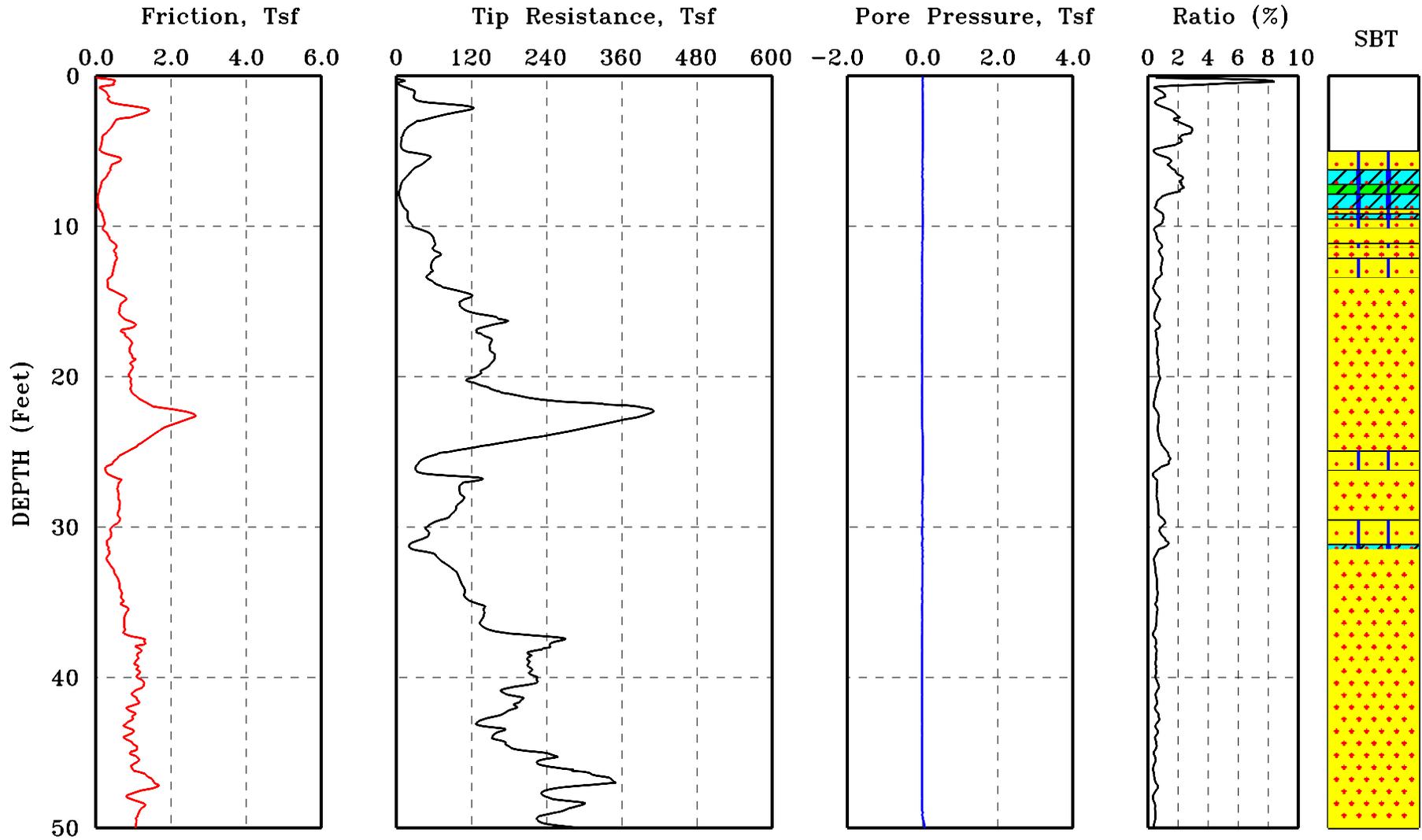
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CLIENT : URS CORP  
OPERATOR : JB  
DATE : 04-02-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-07  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

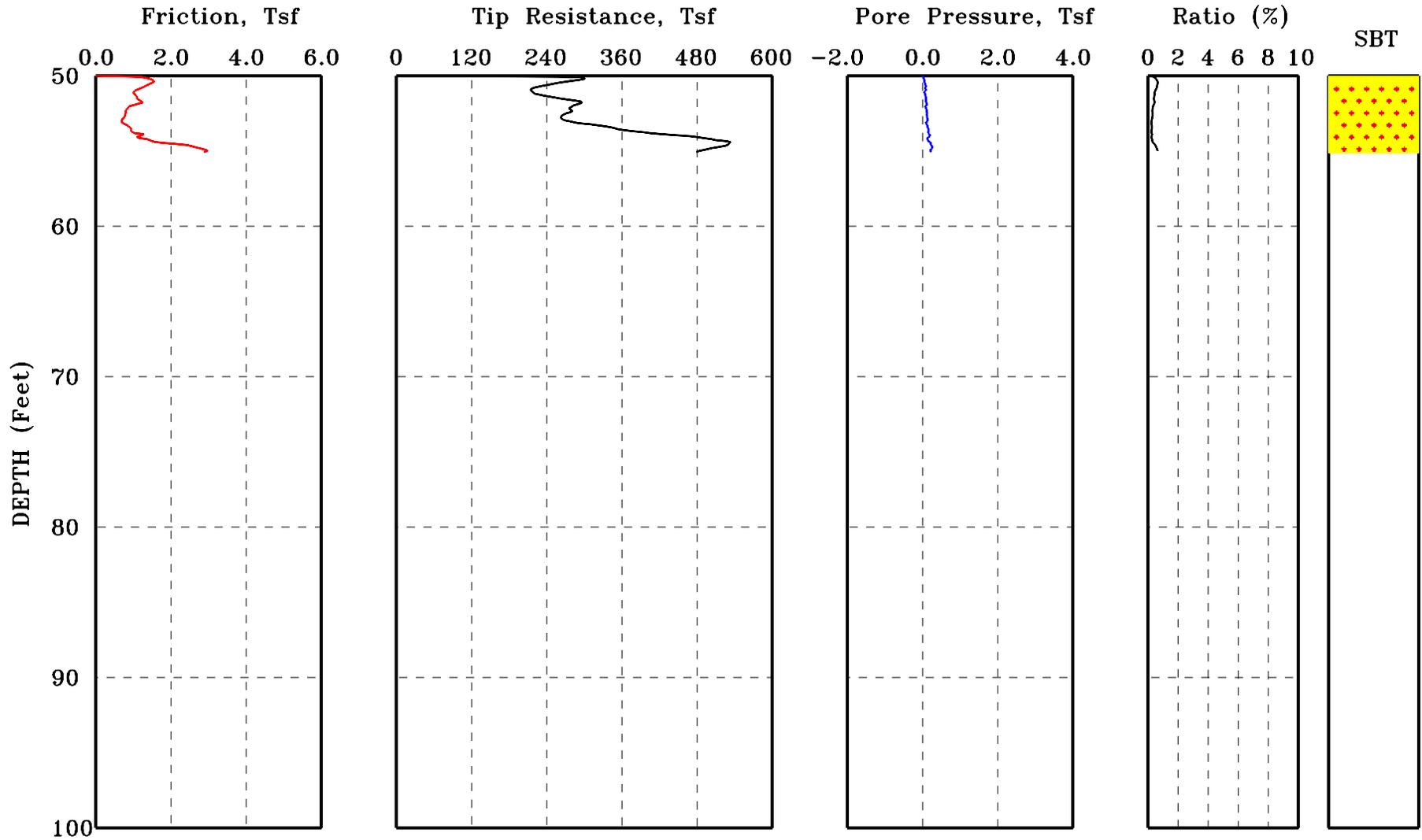
SITE : HARTFORD  
CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 03-31-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-07  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

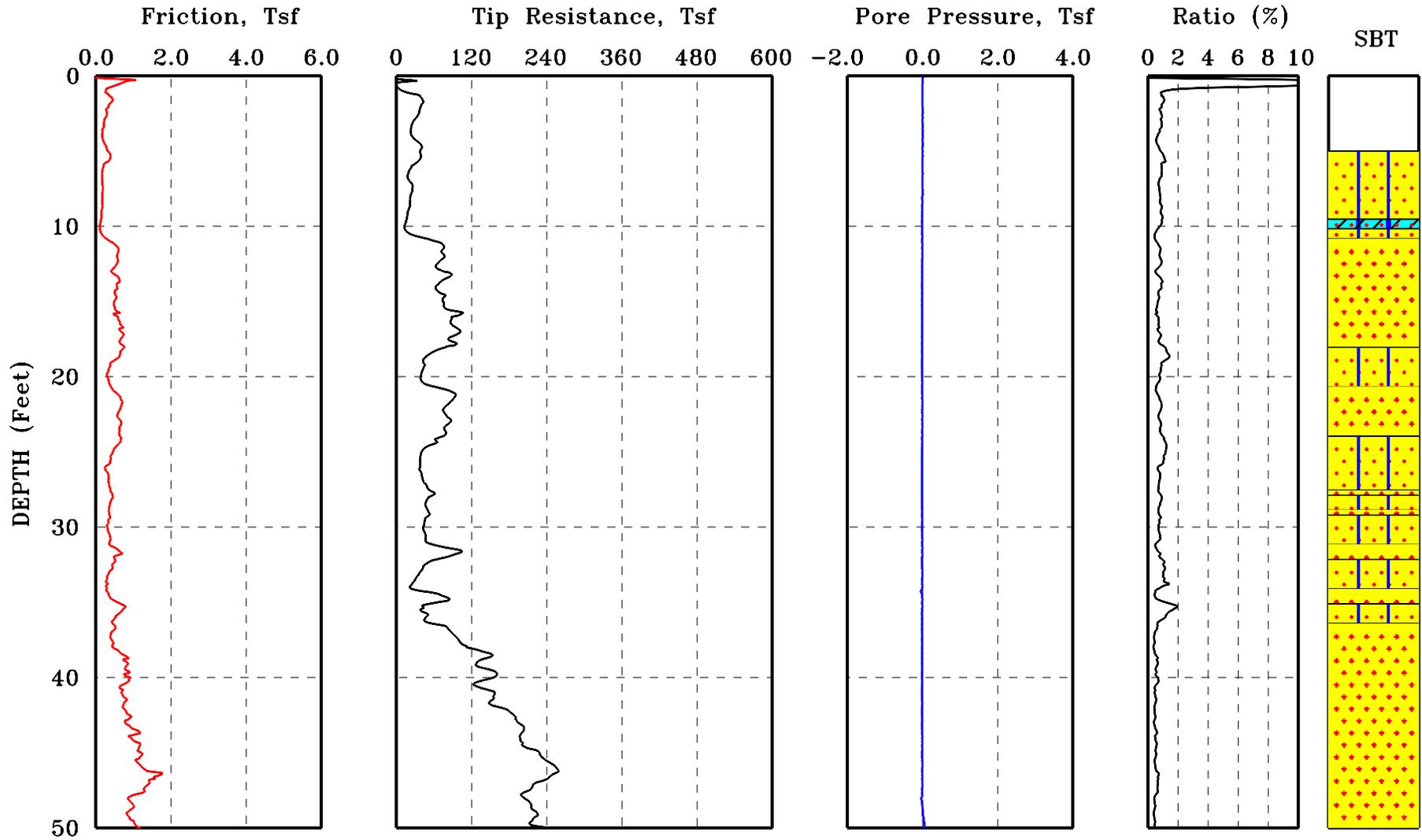
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OPERATOR : GJ  
DATE : 03-31-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-08  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

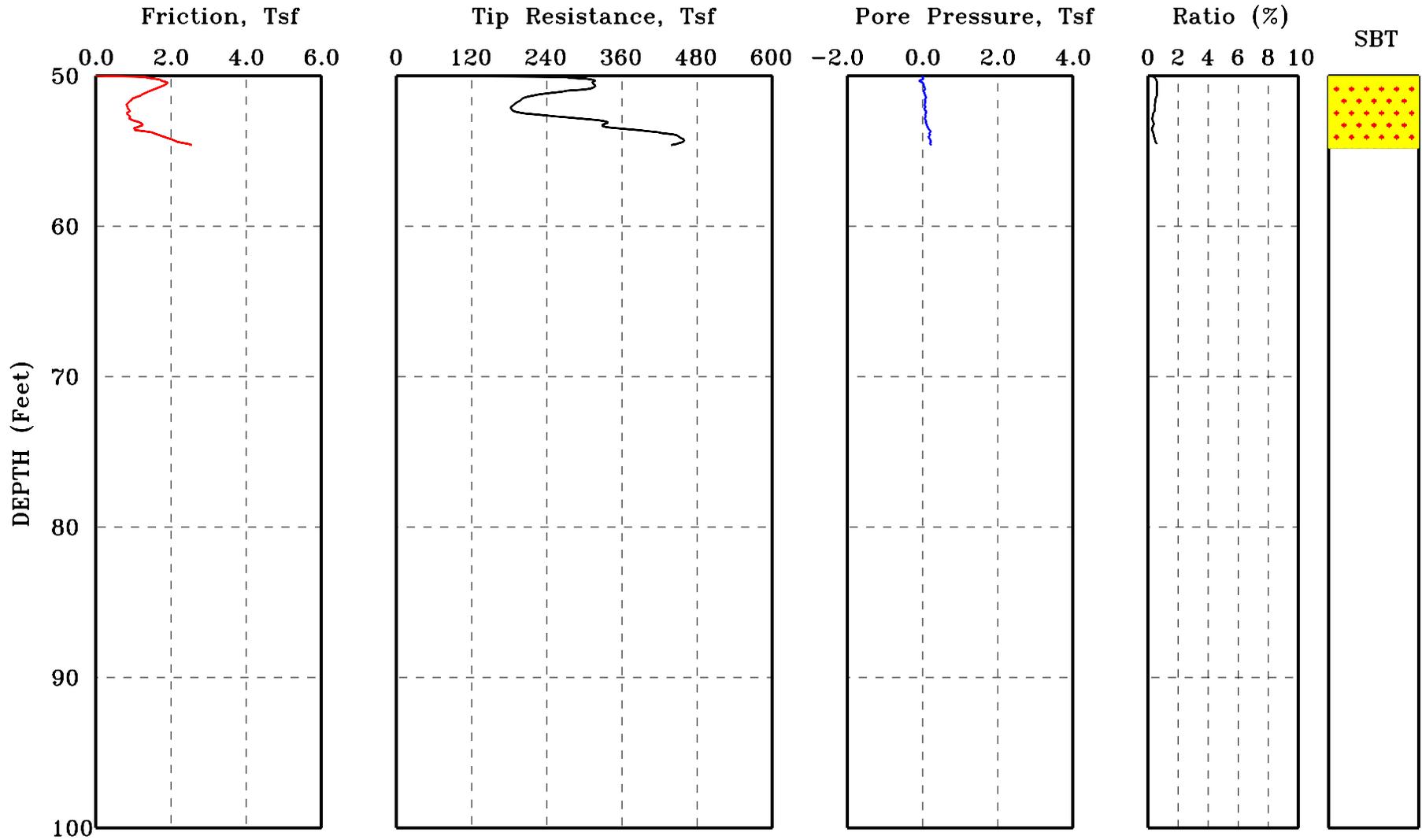
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CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 03-30-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-08  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

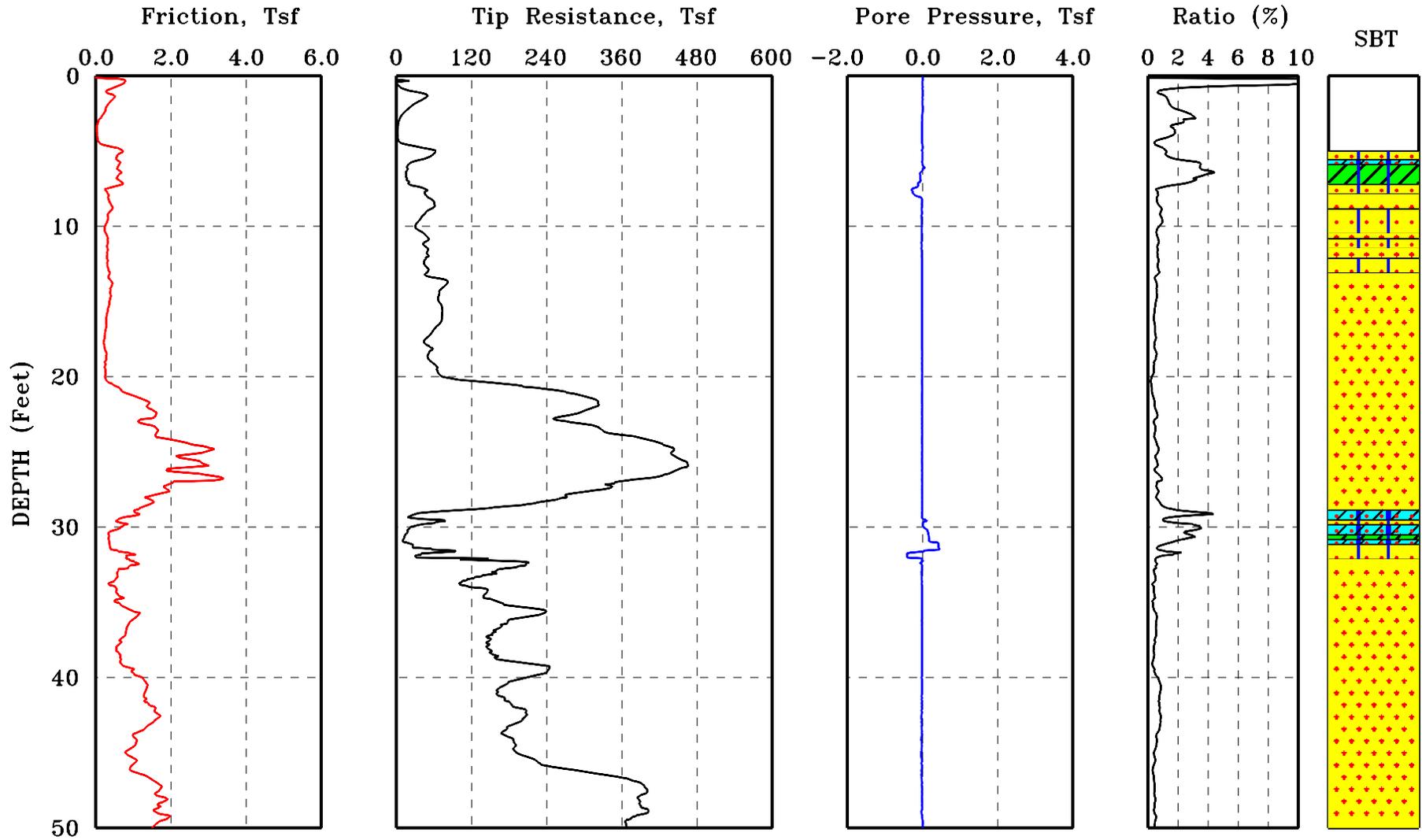
SITE : HARTFORD  
CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 03-30-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-09  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

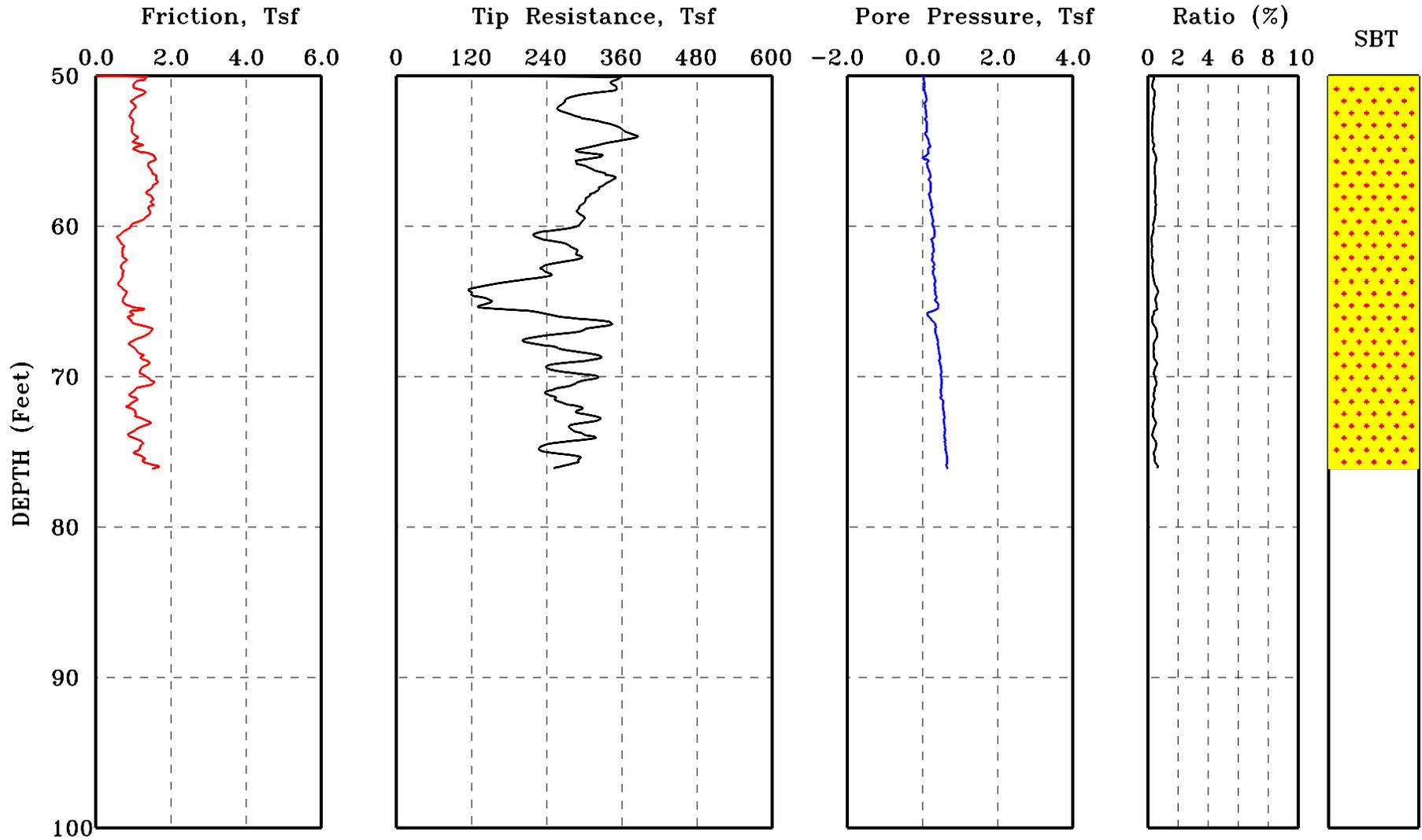
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CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 03-30-2006



FUGRO GEOSCIENCES, INC.

CPT No : P-93-09  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

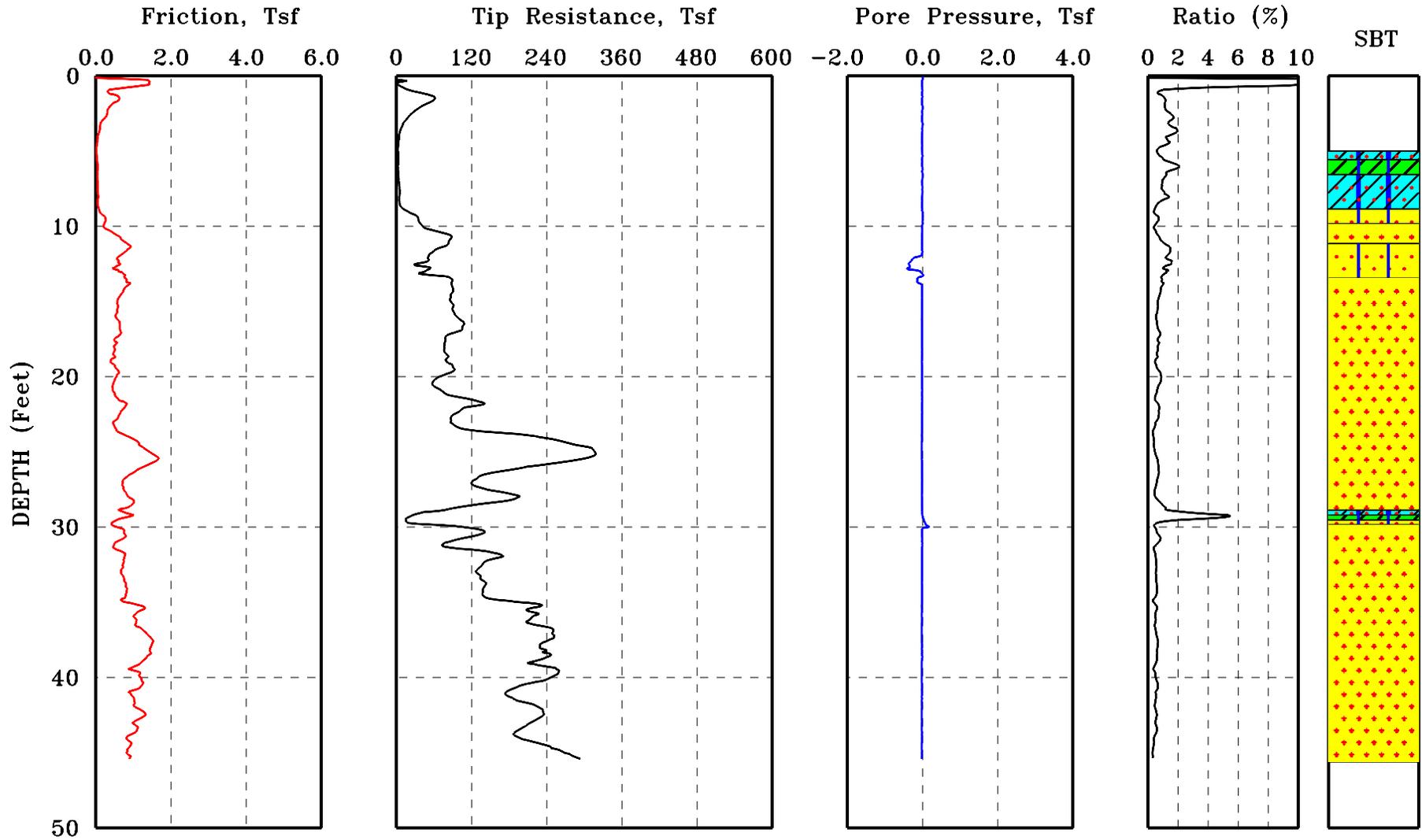
SITE : HARTFORD  
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OPERATOR : GJ  
DATE : 03-30-2006



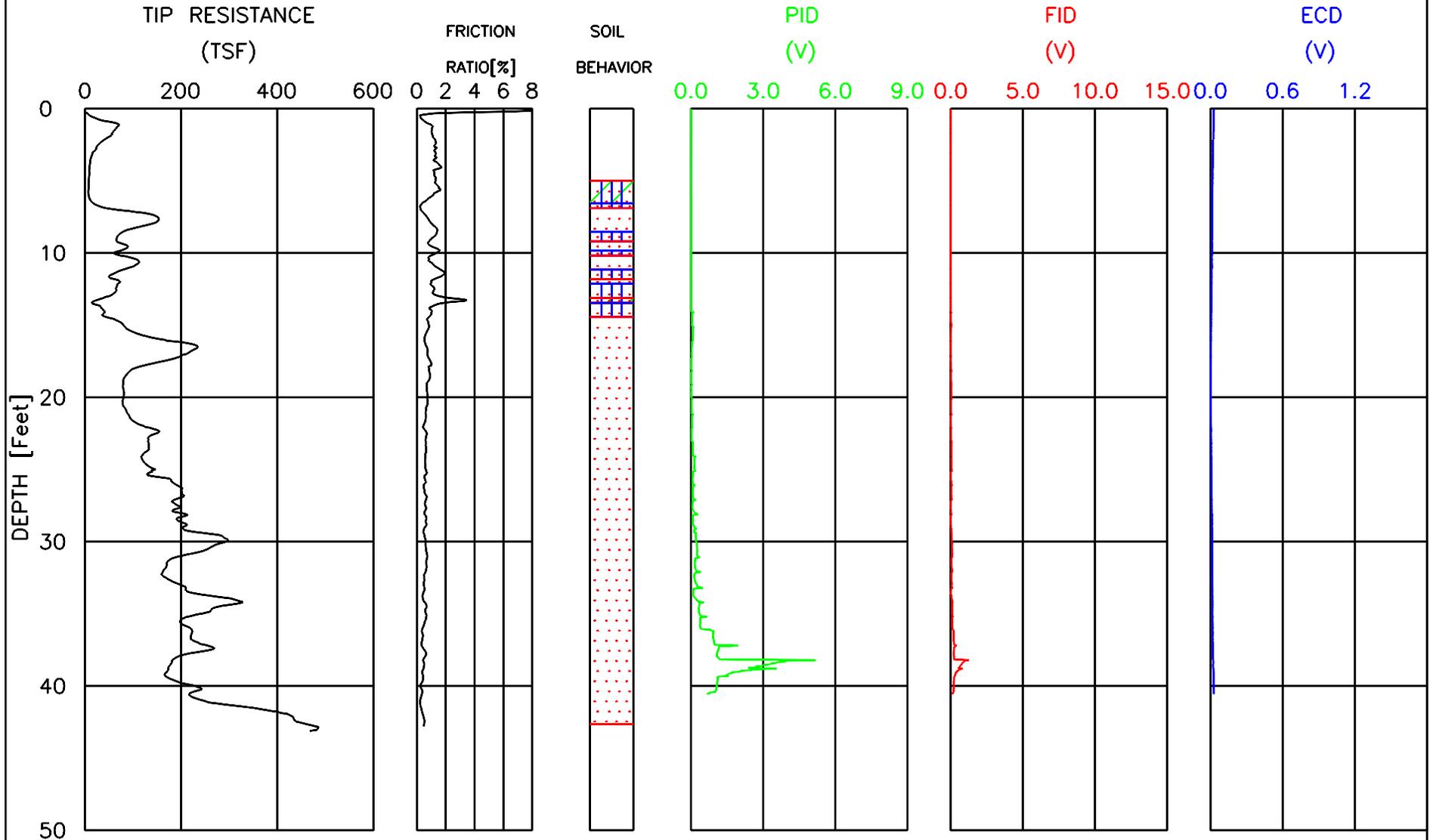
FUGRO GEOSCIENCES, INC.

CPT No : P-93-10  
JOB No : 0305-1830  
CONE No : F7.5CKEW1303

SITE : HARTFORD  
CLIENT : URS CORP  
OPERATOR : GJ  
DATE : 03-31-2006



# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

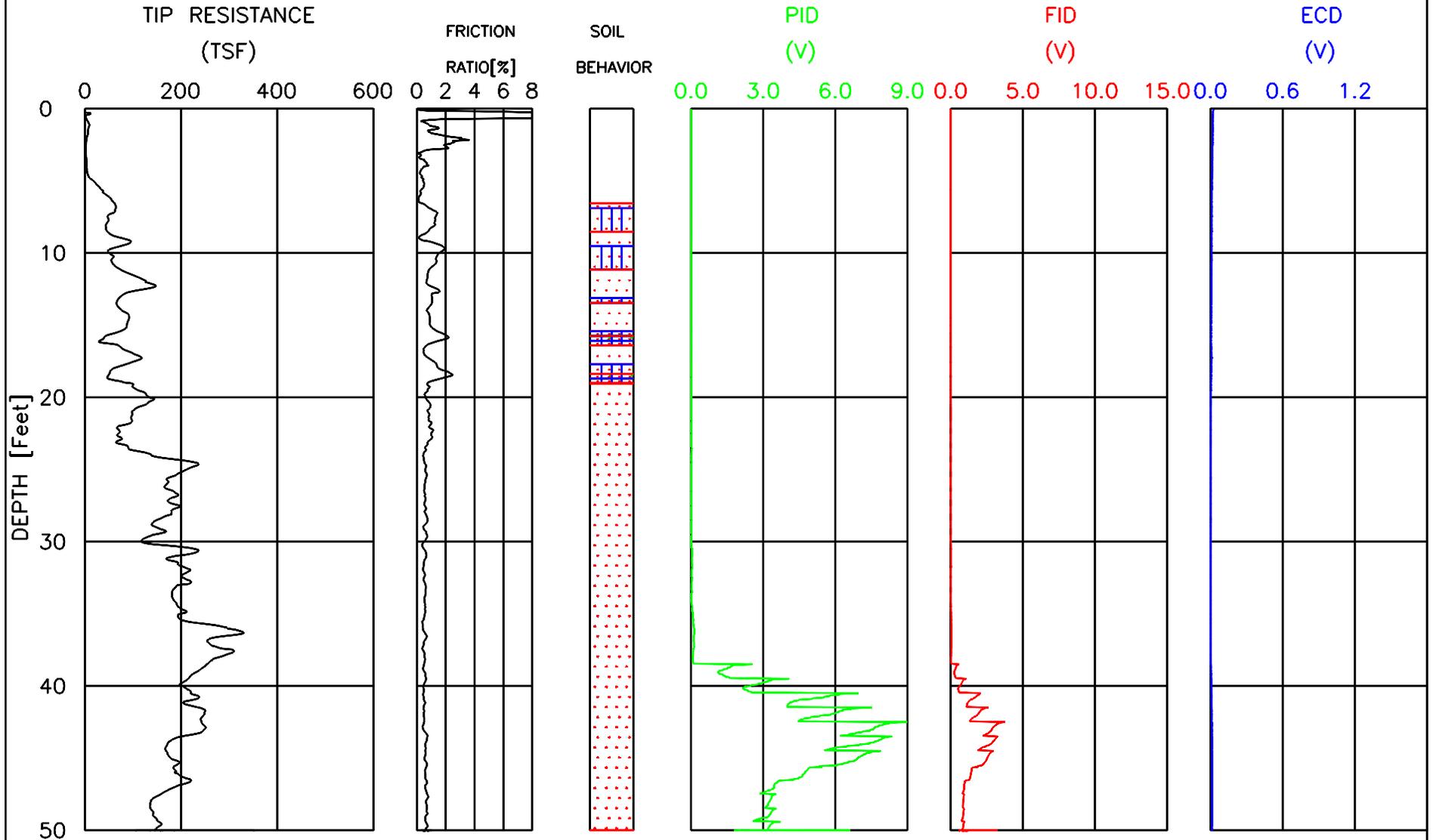
CPT NUMBER: P-93-01

CONE NUMBER: F7.5CKEW1303

DATE: 03-31-2006

PLATE: 1 OF 1

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

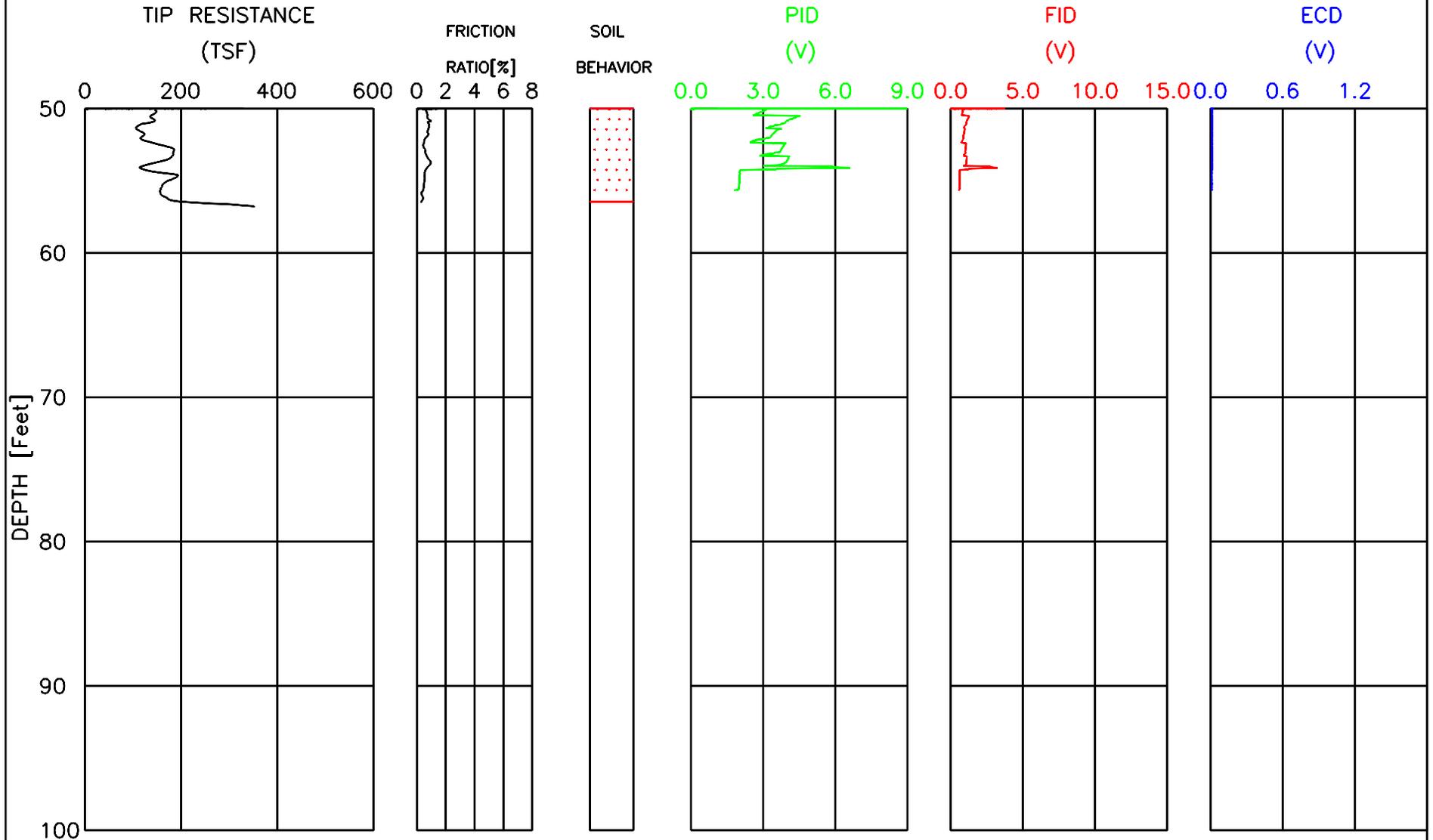
CPT NUMBER: P-93-02

CONE NUMBER: F7.5CKEW1303

DATE: 04-01-2006

PLATE: 1 OF 2

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

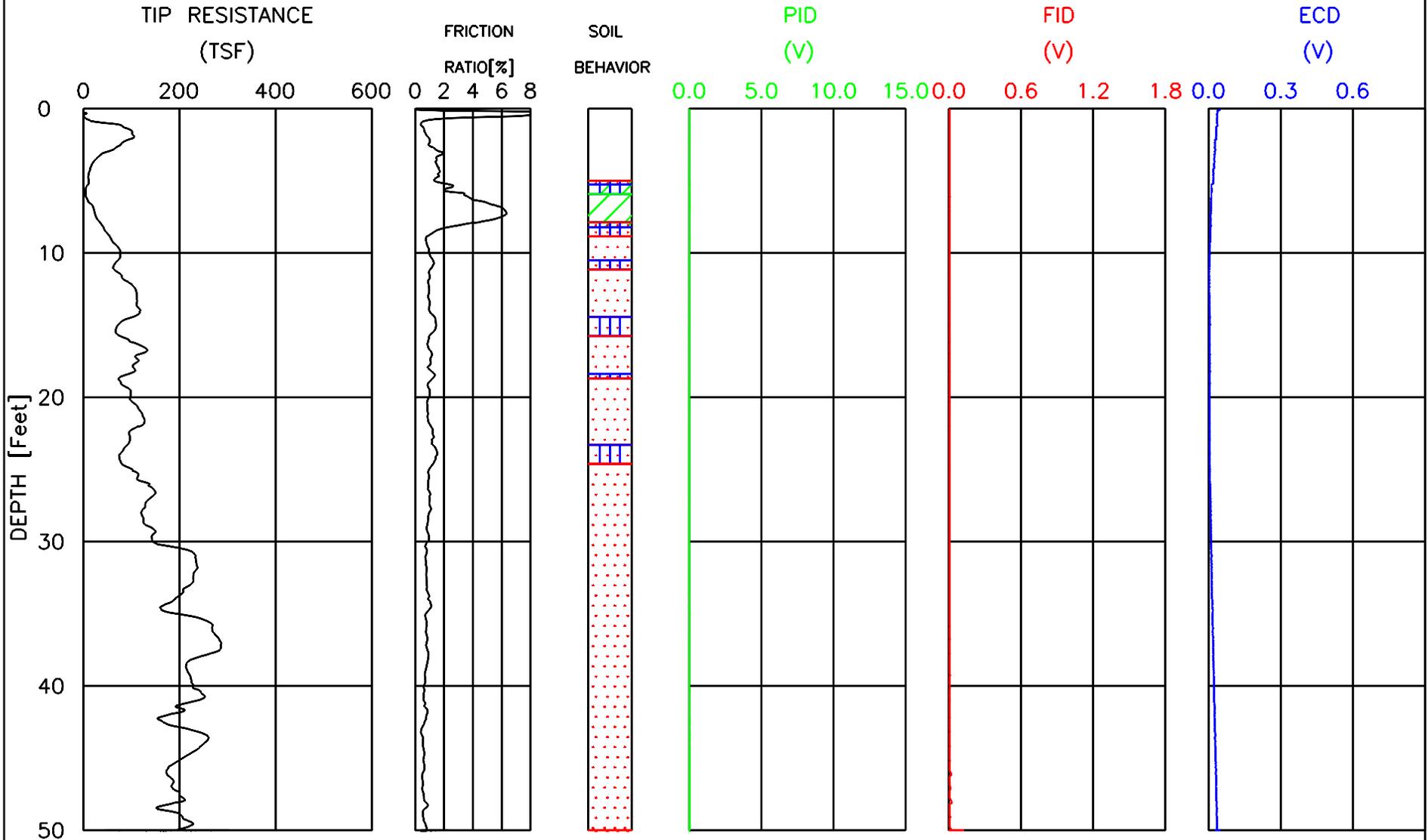
CPT NUMBER: P-93-02

CONE NUMBER: F7.5CKEW1303

DATE: 04-01-2006

PLATE: 2 OF 2

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

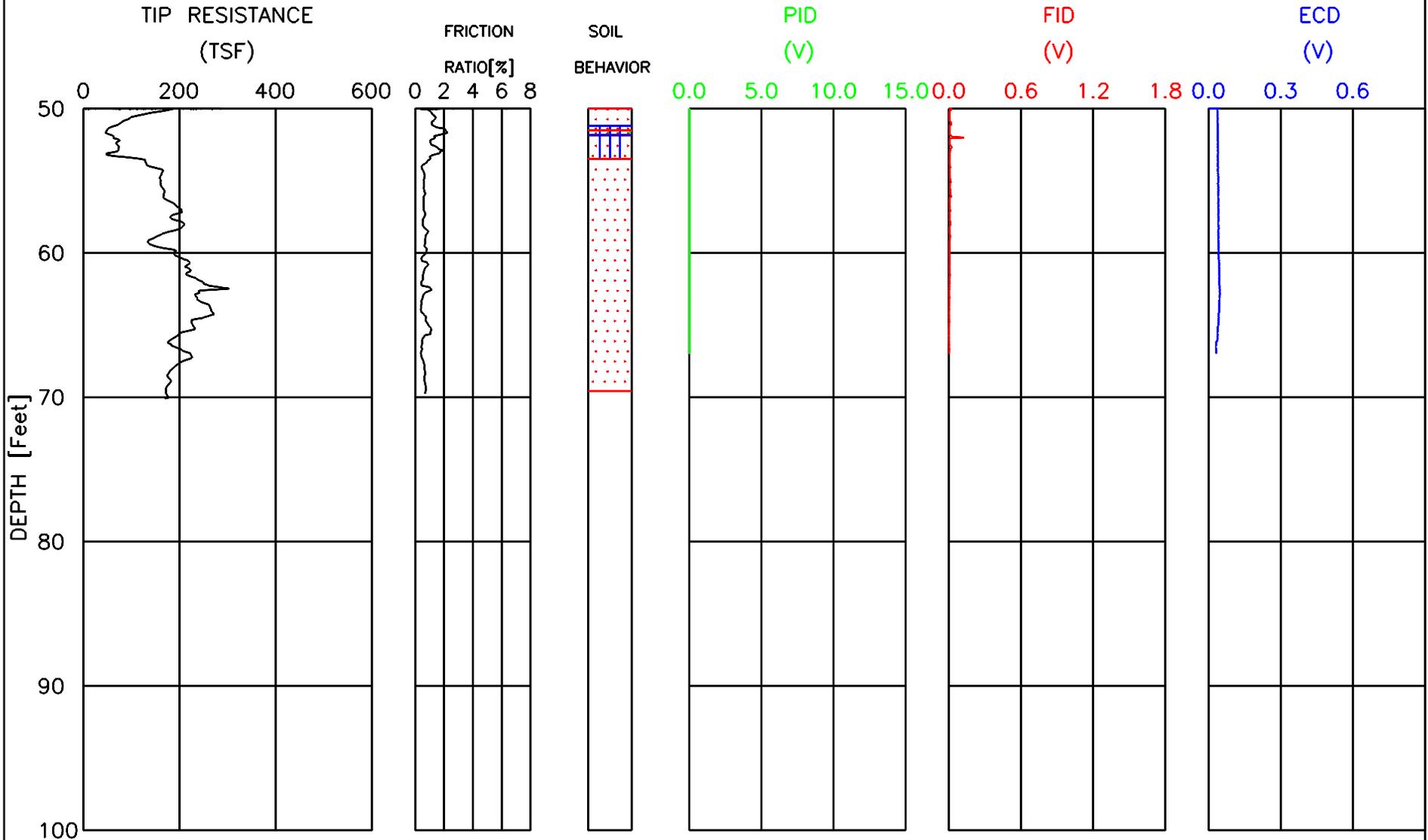
CPT NUMBER: P-93-04

CONE NUMBER: F7.5CKEW1303

DATE: 04-01-2006

PLATE: 1 OF 2

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

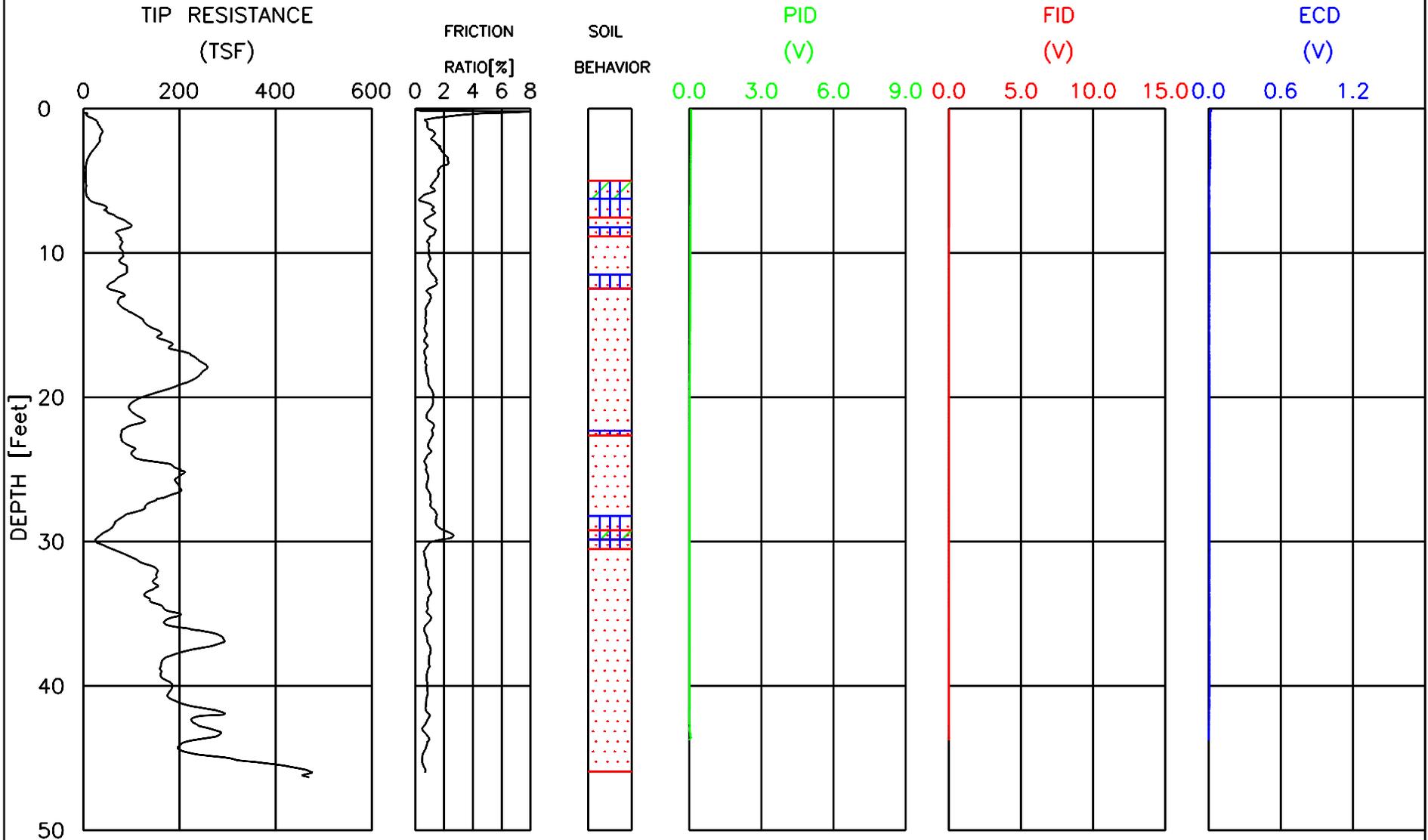
CPT NUMBER: P-93-04

CONE NUMBER: F7.5CKEW1303

DATE: 04-01-2006

PLATE: 2 OF 2

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

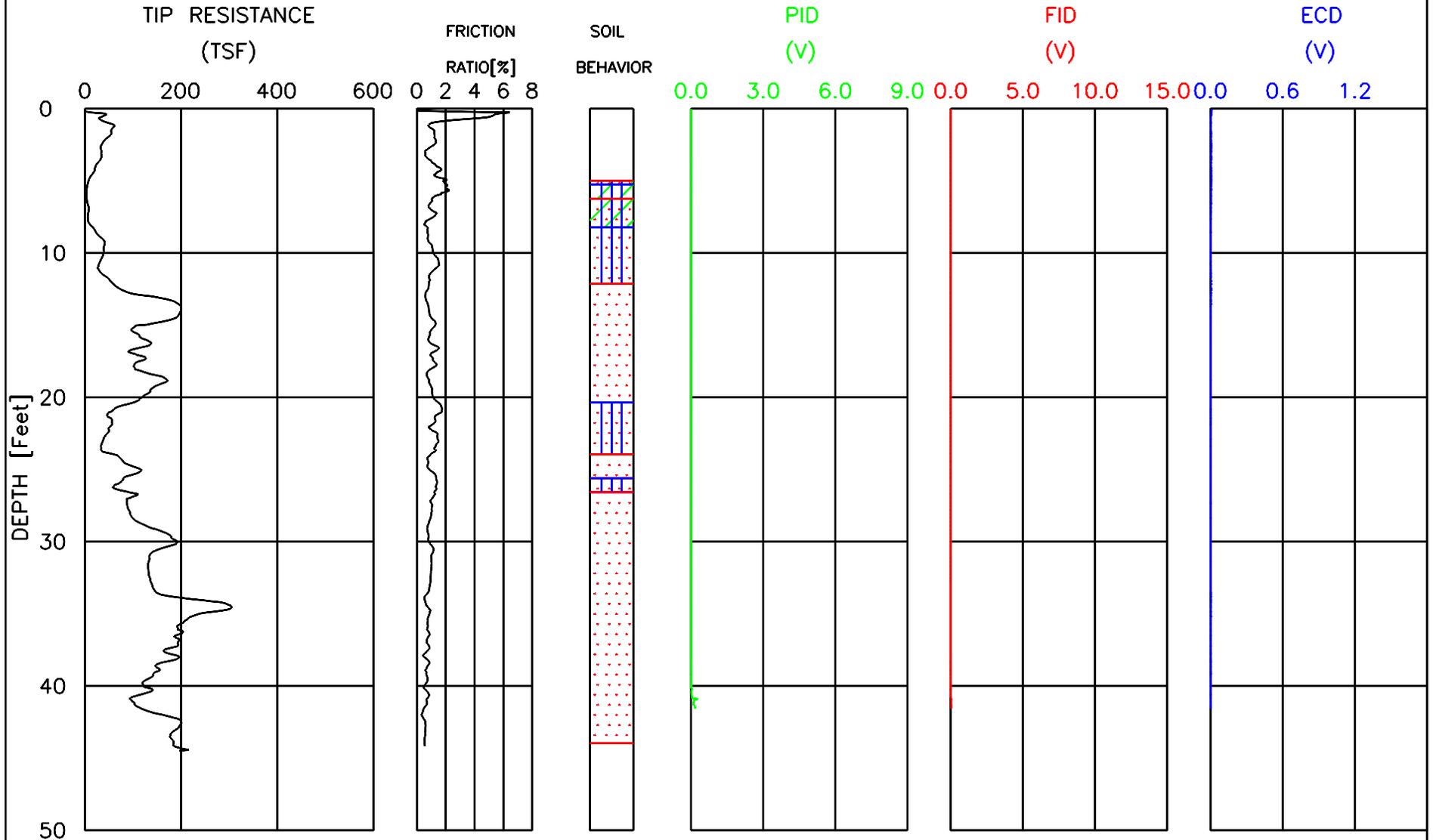
CPT NUMBER: P-93-05

CONE NUMBER: F7.5CKEW1303

DATE: 04-01-2006

PLATE: 1 OF 1

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

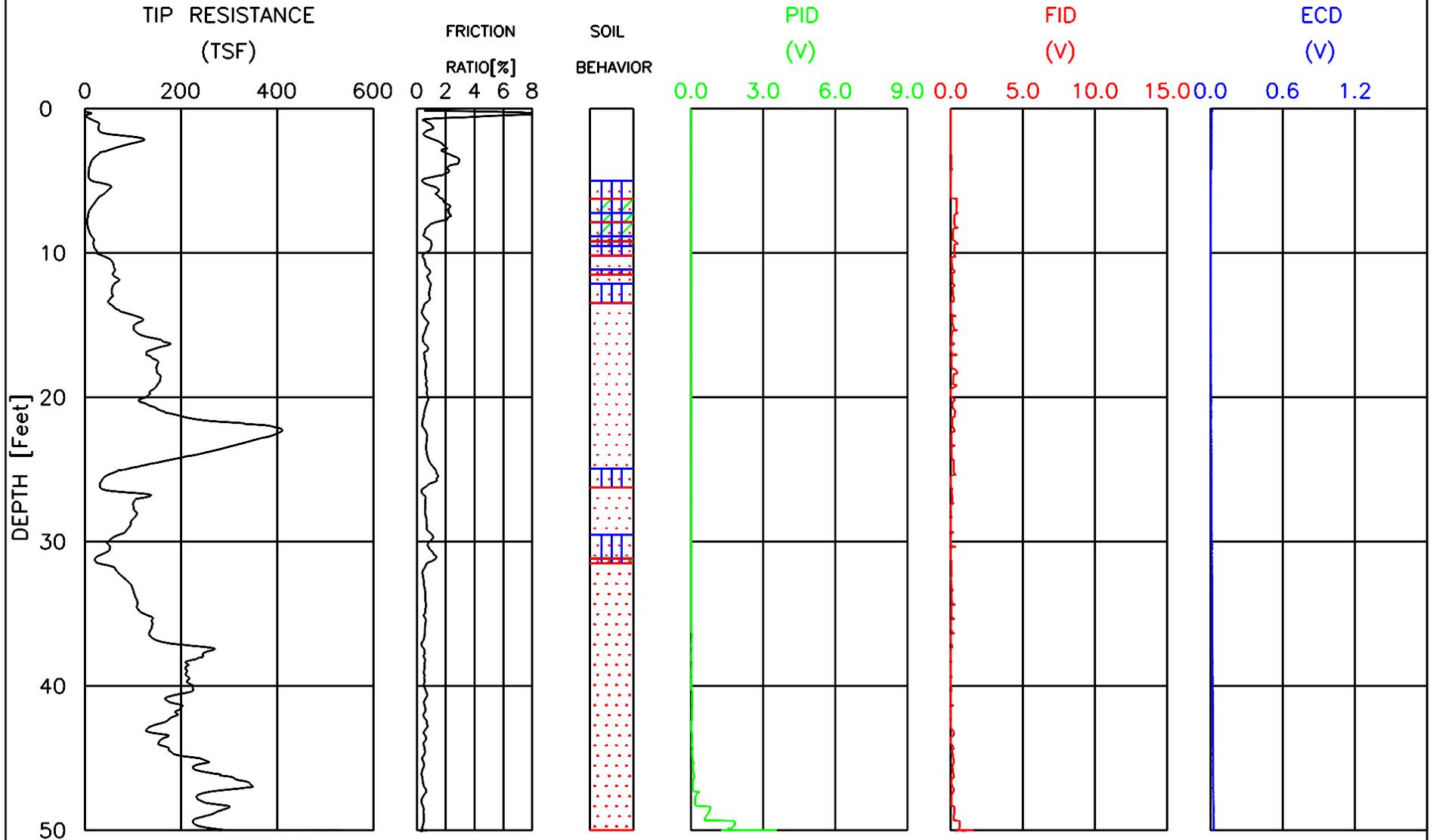
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CONE NUMBER: F7.5CKEW1303

DATE: 04-02-2006

PLATE: 1 OF 1

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

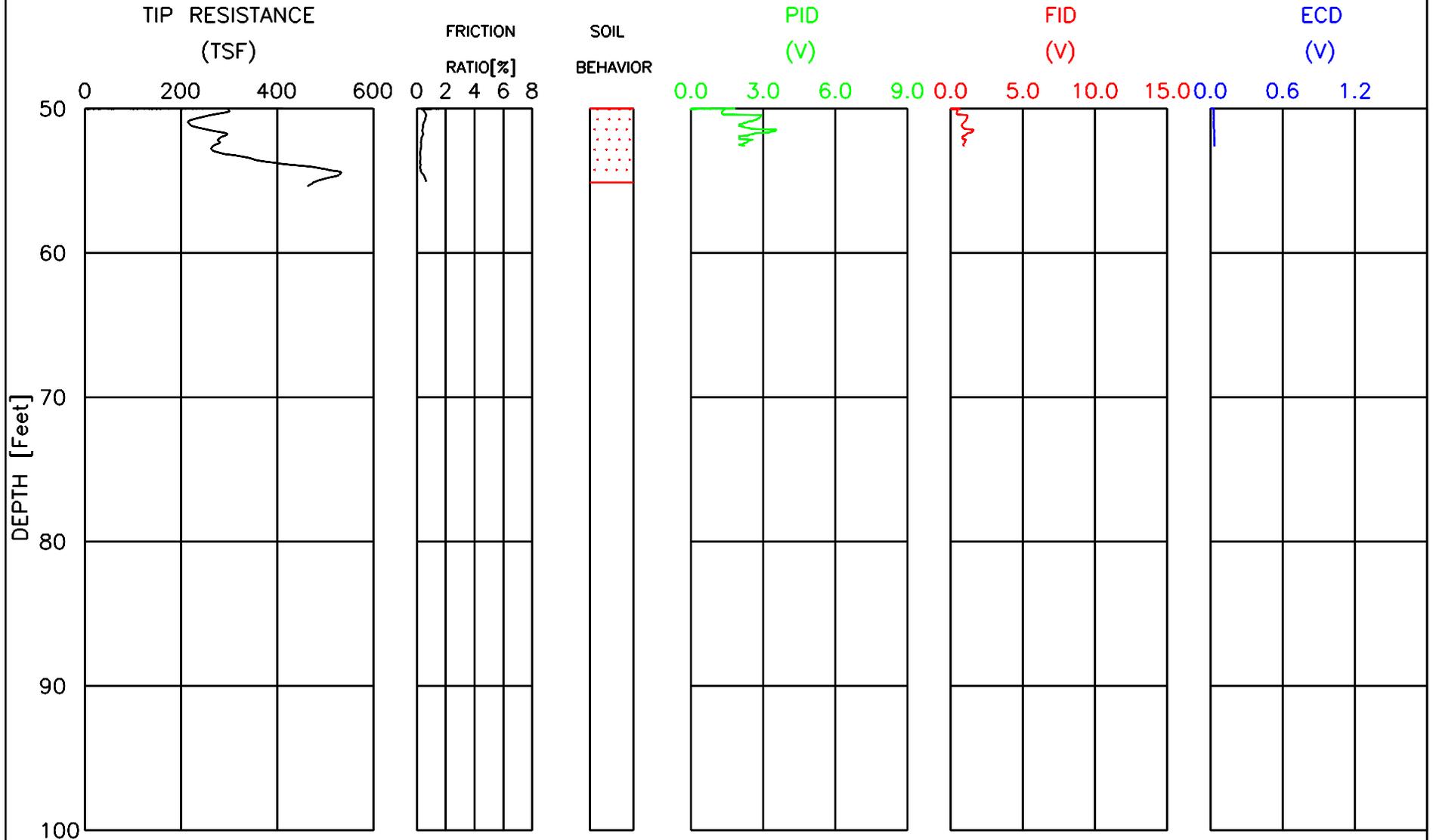
CPT NUMBER: P-93-07

CONE NUMBER: F7.5CKEW1303

DATE: 03-31-2006

PLATE: 1 OF 2

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

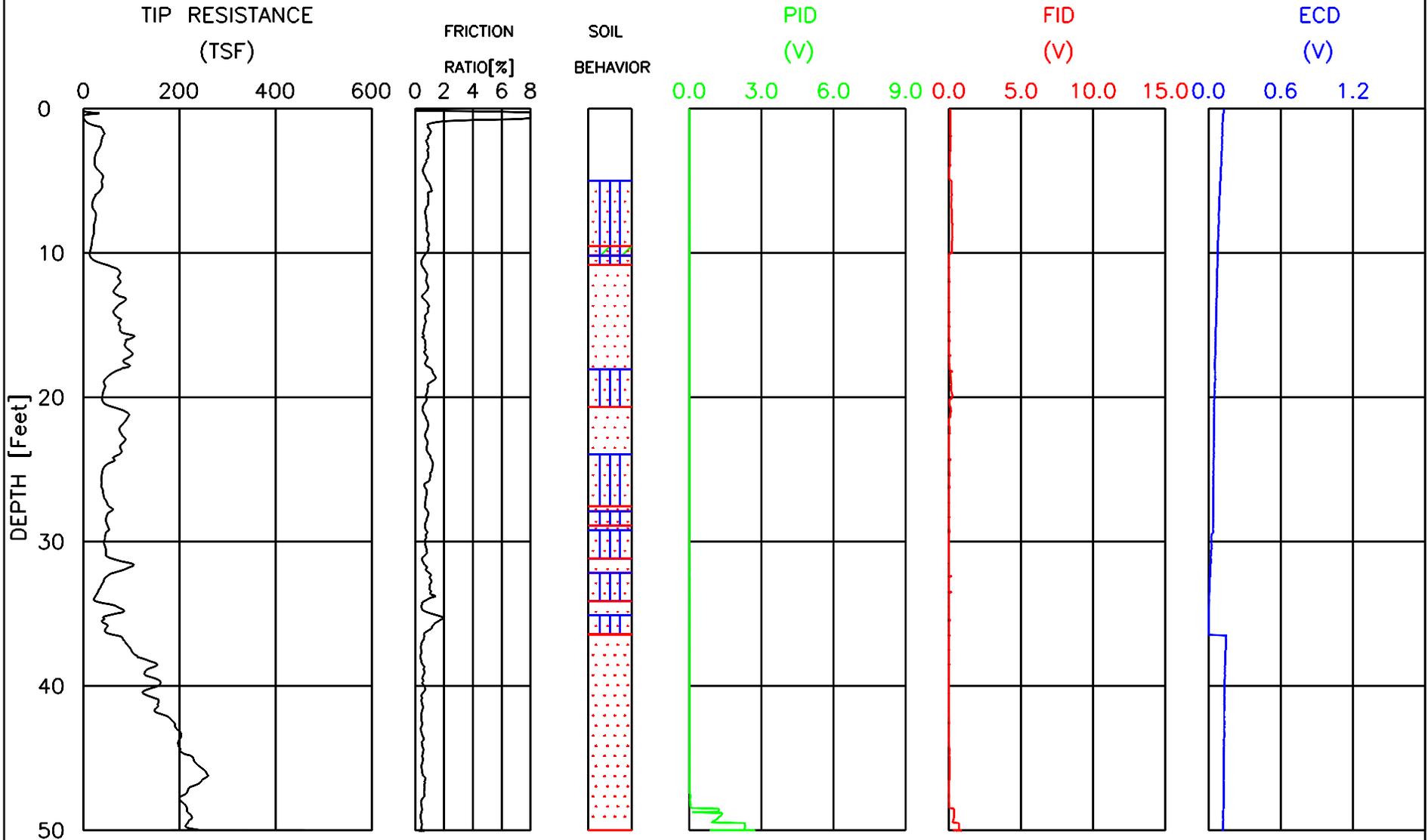
CPT NUMBER: P-93-07

CONE NUMBER: F7.5CKEW1303

DATE: 03-31-2006

PLATE: 2 OF 2

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

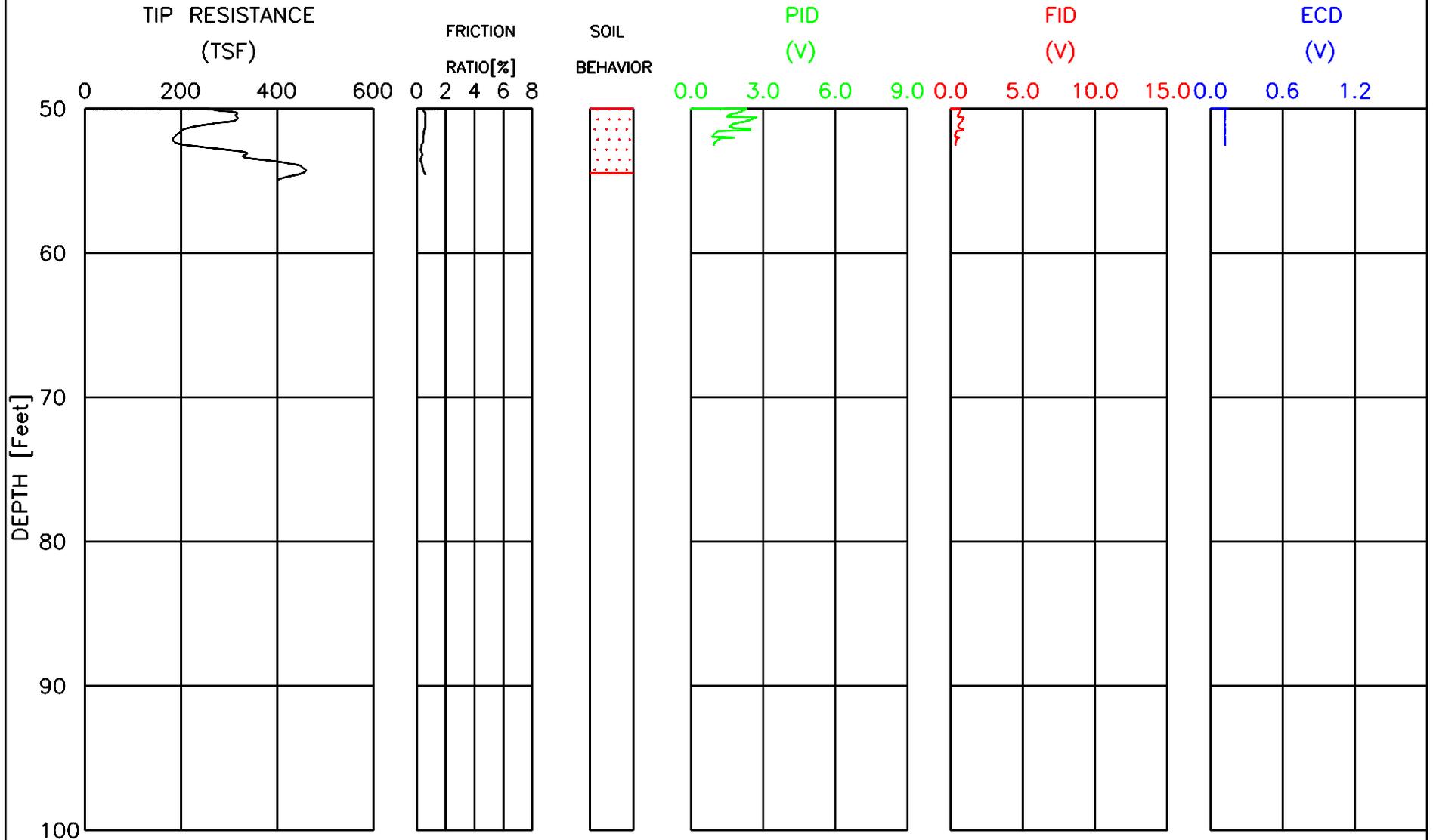
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CONE NUMBER: F7.5CKEW1303

DATE: 03-30-2006

PLATE: 1 OF 2

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

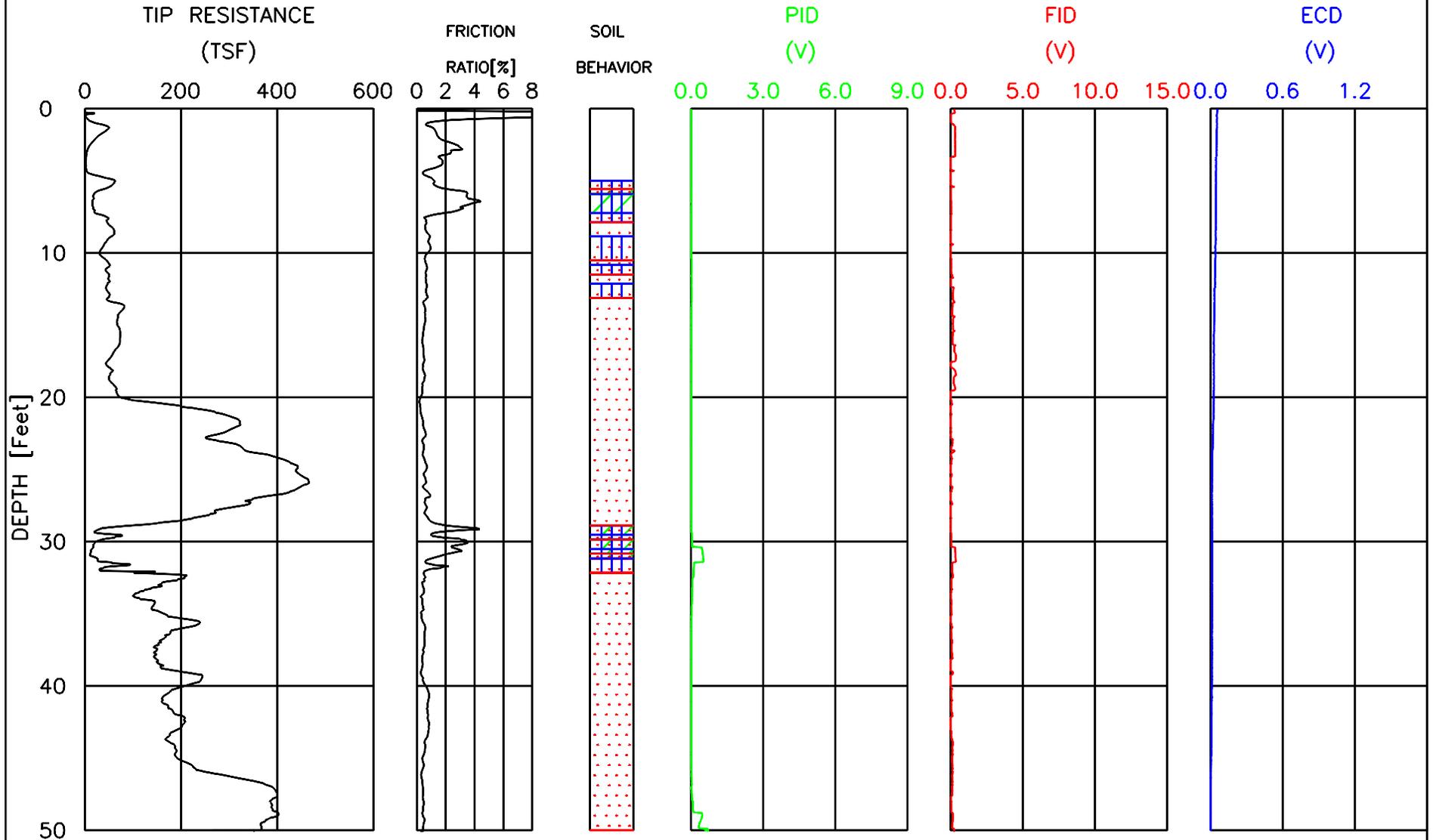
CPT NUMBER: P-93-08

CONE NUMBER: F7.5CKEW1303

DATE: 03-30-2006

PLATE: 2 OF 2

# CPT/MIP TEST RESULTS

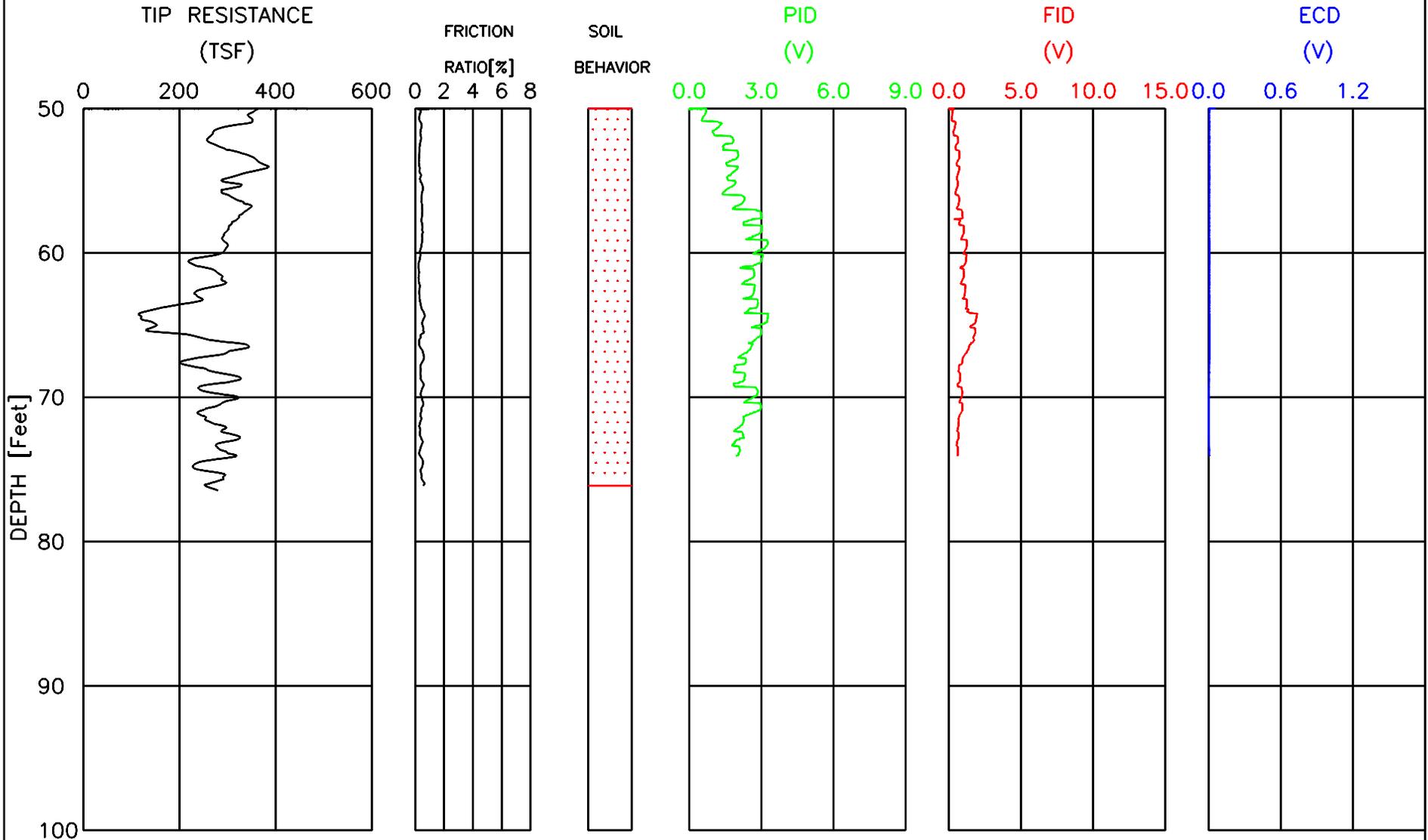


JOB NUMBER: 0305-1830  
 ELEVATION: 0.00

CPT NUMBER: P-93-09  
 CONE NUMBER: F7.5CKEW1303

DATE: 03-30-2006  
 PLATE: 1 OF 2

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

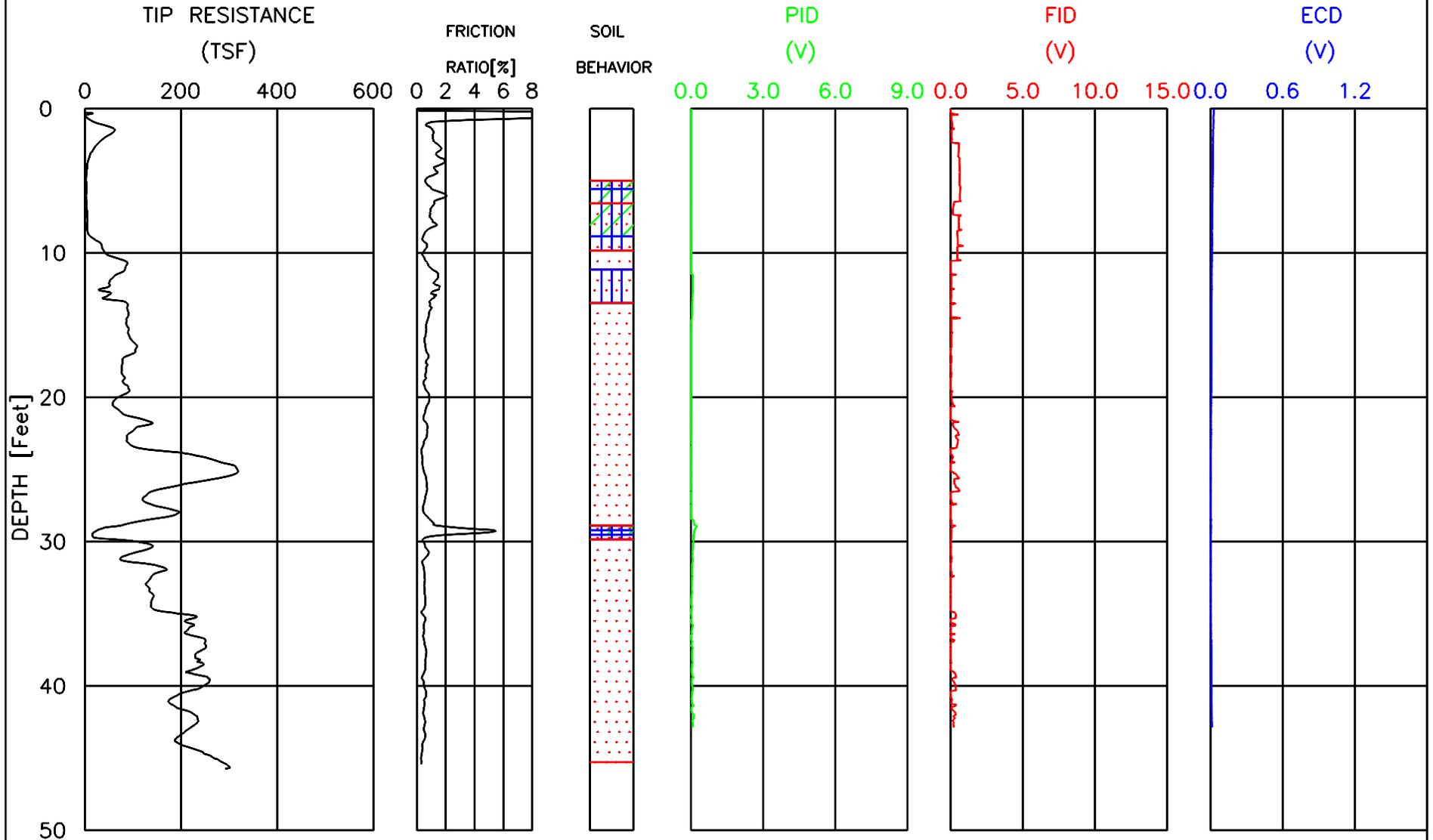
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CONE NUMBER: F7.5CKEW1303

DATE: 03-30-2006

PLATE: 2 OF 2

# CPT/MIP TEST RESULTS



JOB NUMBER: 0305-1830

ELEVATION: 0.00

CPT NUMBER: P-93-10

CONE NUMBER: F7.5CKEW1303

DATE: 03-31-2006

PLATE: 1 OF 1



# West Fenceline Data Review

**Laboratory SDG:** NPC0479

**Reviewer:** Tony Sedlacek

**Date Reviewed:** 2/11/2007

**Guidance:** USEPA Contract Laboratory National Functional Guidelines for Organic Data Review (USEPA 1999).

**Applicable Work Plan:** West Fenceline P-93 Dissolved Phase Benzene Investigation (2006)

Sample Identification #	Sample Identification #
P6603020601	P7303020601
P5803020601	P5803020602
P73030206EB	03020601TB

## 1.0 Data Package Completeness

*Were all items delivered as specified in the QAPP and COC?*

Yes

## 2.0 Laboratory Case Narrative \ Cooler Receipt Form

*Were problems noted in the laboratory case narrative or cooler receipt form?*

Yes, the laboratory case narrative indicated that hexachlorobutadiene was detected in the method blank and benzene was detected in the equipment blank. These issues are addressed further in the appropriate sections below.

The cooler receipt form did not indicate any problems.

## 3.0 Holding Times

*Were samples extracted/analyzed within QAPP limits?*

Yes

Field ID	Parameter	Analyte	Qualification
N/A			

#### 4.0 Blank Contamination

*Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?*

Yes

Blank ID	Parameter	Analyte	Concentration	Units
P73030206EB	VOCs	Benzene	2.62	µg/L
6032146-BLK1	VOCs	Hexachlorobutadiene	1.71	µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration (10X for common laboratory contaminants) did not require qualification.

Field ID	Parameter	Analyte	New RL	Qualification
P6603020601	VOCs	Benzene	11.6	U

#### 5.0 Laboratory Control Sample

*Were LCS recoveries within evaluation criteria?*

Yes

LCS ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD/RPD Criteria
N/A					

Analytical data that required qualification based on LCS data are included in the table below. Analytical data which were reported as nondetect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
N/A			

## 6.0 Surrogate Recoveries

*Were surrogate recoveries within evaluation criteria?*

Yes

Field ID	Parameter	Surrogate	Recovery	Criteria
N/A				

Analytical data that required qualification based on surrogate data are included in the table below. Analytical data which were reported as nondetect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
N/A			

## 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

*Were MS/MSD samples reported as part of this SDG?*

No

*Were MS/MSD recoveries within evaluation criteria?*

N/A

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
N/A					

Analytical data that required qualification based on MS/MSD data are included in the table below.

Field ID	Parameter	Analyte	Qualification
N/A			

## 8.0 Laboratory Duplicate Results

*Were laboratory duplicate samples collected as part of this SDG?*

No

*Were laboratory duplicate sample RPDs within criteria?*

N/A

Field ID	Parameter	Analyte	RPD	Criteria
N/A				

Data qualified due to outlying laboratory duplicate recoveries are identified below:

Field ID	Parameter	Analyte	Qualification
N/A			

## 9.0 Field Duplicate Results

*Were field duplicate samples collected as part of this SDG?*

Yes

Field ID	Field Duplicate ID
P5803020601	P5803020602

*Were field duplicates within evaluation criteria?*

Yes

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
N/A					

## 10.0 Sample Dilutions

*For samples that were diluted and nondetect, were undiluted results also reported?*

No

The following table identifies the analyses which were reported as nondetect, diluted, and an undiluted run *was not* reported:

Field ID	Parameter	Dilution Factor
P5803020601	VOCs	5000
P5803020602	VOCs	5000

#### 11.0 Additional Qualifications

*Were additional qualifications applied?*

No

April 26, 2006

Client: URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn: Jeff Adams

Work Order: NPC0479  
Project Name: West Fenceline P-93 Project  
Project Nbr: SAP 340061  
P/O Nbr: 97216640  
Date Received: 03/03/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
P6603020601	NPC0479-01	03/02/06 10:40
P7303020601	NPC0479-02	03/02/06 14:20
P5803020601	NPC0479-03	03/02/06 15:50
P5803020602	NPC0479-04	03/02/06 15:50
P73030206EB	NPC0479-05	03/02/06 11:05
03020601TB	NPC0479-06	03/02/06 00:01

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

**Additional Laboratory Comments:**

Per enclosed Chain of Custody, "samples were properly preserved and received in good condition on 3/3/06. Analyses were extracted and performed within method required holding times following Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)". Package was completed as a "Level IV".

Please note for QC batch 6032146: Hexachlorobutadiene was detected in the method prep blank above the MRL. P73030206EB was analyzed this method prep blank with no reported detection for Hexachlorobutadiene, therefore no data impact.

Please note for QC batch 6031174: The MRL for P5803020601 (NPC0479-03) and P5803020602 (NPC0479-04) was elevated due sample matrix interference. The % recovery for sec-Butylbenzene, Styrene, 1,3,5-Trimethylbenzene, 1,2,4-Trimethylbenzene in the matrix spike and matrix spike duplicate were outside laboratory acceptable QC limit biased low. The % recovery for Bromomethane in the matrix spike duplicate was outside acceptable QC limit biased high. The % RPD for sec-Butylbenzene and 1,2,4-Trimethylbenzene was outside laboratory acceptable QC limit. Please note the LCS for QC for this batch.

Organics: Unknown analyte concentrations were determined using the average response factor from the initial calibration curve for all analytes whose % RSD is less than or equal to 15. All other analyte concentrations were determined using linear regression analysis. Copies of curves for compounds with %RSD's greater than 15 are supplied.

As you review this data package, please call me if you require any additional information at # 1-800-765-0980 ext 1256.

Illinois Certification Number: 001177

The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

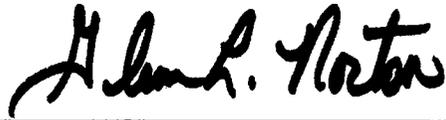
Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Jeff Adams

Work Order: NPC0479  
Project Name: West Fenceline P-93 Project  
Project Number: SAP 340061  
Received: 03/03/06 08:00

---

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:



Glenn Lee Norton  
Data Package Coordinator

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-01 (P6603020601 - Ground Water) Sampled: 03/02/06 10:40</b>									
<b>Field Sampling Parameters</b>									
pH	6.58		pH Units	NA	NA	1	03/02/06 10:40	EPA 150.1	6031459
Specific conductance	1260		uS/cm	NA	0.100	1	03/02/06 10:40	EPA 120.1	6031459
Temperature	63.5		°F	0.00	NA	1	03/02/06 10:40	EPA 170.1	6031459
<b>Volatile Organic Compounds by EPA Method 8260B</b>									
Acetone	ND		ug/L	5.91	50.0	1	03/06/06 19:42	SW846 8260B	6031391
Benzene	<del>ND</del> 11.6	"u"	ug/L	0.290	<del>1.00</del> 11.6	1	03/06/06 19:42	SW846 8260B	6031391
Bromobenzene	ND		ug/L	0.470	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Bromochloromethane	ND		ug/L	0.420	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Bromodichloromethane	ND		ug/L	0.380	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Bromoform	ND		ug/L	0.500	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Bromomethane	ND		ug/L	0.600	1.00	1	03/06/06 19:42	SW846 8260B	6031391
2-Butanone	ND		ug/L	5.09	50.0	1	03/06/06 19:42	SW846 8260B	6031391
sec-Butylbenzene	18.1		ug/L	0.380	1.00	1	03/06/06 19:42	SW846 8260B	6031391
n-Butylbenzene	13.1		ug/L	0.460	1.00	1	03/06/06 19:42	SW846 8260B	6031391
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Carbon disulfide	ND		ug/L	0.310	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Chlorobenzene	ND		ug/L	0.320	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Chloroethane	ND		ug/L	0.500	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Chloroform	ND		ug/L	0.380	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Chloromethane	ND		ug/L	0.460	1.00	1	03/06/06 19:42	SW846 8260B	6031391
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	03/06/06 19:42	SW846 8260B	6031391
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	03/06/06 19:42	SW846 8260B	6031391
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Dibromomethane	ND		ug/L	0.570	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	03/06/06 19:42	SW846 8260B	6031391
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	03/06/06 19:42	SW846 8260B	6031391
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	03/06/06 19:42	SW846 8260B	6031391
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	03/06/06 19:42	SW846 8260B	6031391
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	03/06/06 19:42	SW846 8260B	6031391
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Ethylbenzene	ND		ug/L	0.340	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	03/06/06 19:42	SW846 8260B	6031391

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-01 (P6603020601 - Ground Water) - cont. Sampled: 03/02/06 10:40</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Hexanone	ND		ug/L	2.53	50.0	1	03/06/06 19:42	SW846 8260B	6031391
Isopropylbenzene	125		ug/L	0.340	1.00	1	03/06/06 19:42	SW846 8260B	6031391
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Methyl tert-Butyl Ether	107		ug/L	0.320	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Methylene Chloride	ND		ug/L	1.26	5.00	1	03/06/06 19:42	SW846 8260B	6031391
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	03/06/06 19:42	SW846 8260B	6031391
Naphthalene	3.31	J	ug/L	1.13	5.00	1	03/06/06 19:42	SW846 8260B	6031391
n-Propylbenzene	142		ug/L	0.370	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Styrene	ND		ug/L	0.390	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Tetrachloroethene	ND		ug/L	0.390	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Toluene	1.99		ug/L	0.280	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	03/06/06 19:42	SW846 8260B	6031391
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	03/06/06 19:42	SW846 8260B	6031391
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Trichloroethene	ND		ug/L	0.450	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,3,5-Trimethylbenzene	ND		ug/L	0.280	1.00	1	03/06/06 19:42	SW846 8260B	6031391
1,2,4-Trimethylbenzene	1.25		ug/L	0.340	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Vinyl chloride	ND		ug/L	0.430	1.00	1	03/06/06 19:42	SW846 8260B	6031391
Xylenes, total	1.85	J	ug/L	0.820	3.00	1	03/06/06 19:42	SW846 8260B	6031391
Surr: 1,2-Dichloroethane-d4 (70-130%)	91 %					1	03/06/06 19:42	SW846 8260B	6031391
Surr: Dibromofluoromethane (79-122%)	103 %					1	03/06/06 19:42	SW846 8260B	6031391
Surr: Toluene-d8 (78-121%)	94 %					1	03/06/06 19:42	SW846 8260B	6031391
Surr: 4-Bromofluorobenzene (78-126%)	101 %					1	03/06/06 19:42	SW846 8260B	6031391

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-02 (P7303020601 - Ground Water) Sampled: 03/02/06 14:20</b>									
<b>Field Sampling Parameters</b>									
pH	6.71		pH Units	NA	NA	1	03/02/06 14:20	EPA 150.1	6031459
Specific conductance	1170		uS/cm	NA	0.100	1	03/02/06 14:20	EPA 120.1	6031459
Temperature	61.0		°F	0.00	NA	1	03/02/06 14:20	EPA 170.1	6031459
<b>Volatile Organic Compounds by EPA Method 8260B</b>									
Acetone	ND		ug/L	5.91	50.0	1	03/06/06 20:07	SW846 8260B	6031391
Benzene	22400		ug/L	58.0	200	200	03/11/06 00:12	SW846 8260B	6032156
Bromobenzene	ND		ug/L	0.470	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Bromochloromethane	ND		ug/L	0.420	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Bromodichloromethane	ND		ug/L	0.380	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Bromoform	ND		ug/L	0.500	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Bromomethane	ND		ug/L	0.600	1.00	1	03/06/06 20:07	SW846 8260B	6031391
2-Butanone	ND		ug/L	5.09	50.0	1	03/06/06 20:07	SW846 8260B	6031391
sec-Butylbenzene	23.7		ug/L	0.380	1.00	1	03/06/06 20:07	SW846 8260B	6031391
n-Butylbenzene	ND		ug/L	0.460	1.00	1	03/06/06 20:07	SW846 8260B	6031391
tert-Butylbenzene	56.0		ug/L	0.390	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Carbon disulfide	ND		ug/L	0.310	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Chlorobenzene	ND		ug/L	0.320	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Chloroethane	ND		ug/L	0.500	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Chloroform	0.890	J	ug/L	0.380	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Chloromethane	ND		ug/L	0.460	1.00	1	03/06/06 20:07	SW846 8260B	6031391
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	03/06/06 20:07	SW846 8260B	6031391
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	03/06/06 20:07	SW846 8260B	6031391
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Dibromomethane	ND		ug/L	0.570	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,2-Dichloroethane	ND		ug/L	5.60	20.0	20	03/10/06 23:47	SW846 8260B	6032156
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	03/06/06 20:07	SW846 8260B	6031391
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	03/06/06 20:07	SW846 8260B	6031391
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	03/06/06 20:07	SW846 8260B	6031391
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	03/06/06 20:07	SW846 8260B	6031391
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Ethylbenzene	1740		ug/L	6.80	20.0	20	03/10/06 23:47	SW846 8260B	6032156
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	03/06/06 20:07	SW846 8260B	6031391

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-02 (P7303020601 - Ground Water) - cont. Sampled: 03/02/06 14:20</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Hexanone	ND		ug/L	2.53	50.0	1	03/06/06 20:07	SW846 8260B	6031391
Isopropylbenzene	88.0		ug/L	0.340	1.00	1	03/06/06 20:07	SW846 8260B	6031391
p-Isopropyltoluene	13.1		ug/L	0.340	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Methyl tert-Butyl Ether	40.0		ug/L	0.320	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Methylene Chloride	ND		ug/L	1.26	5.00	1	03/06/06 20:07	SW846 8260B	6031391
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	03/06/06 20:07	SW846 8260B	6031391
Naphthalene	250		ug/L	22.6	100	20	03/10/06 23:47	SW846 8260B	6032156
n-Propylbenzene	149		ug/L	0.370	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Styrene	ND		ug/L	0.390	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Tetrachloroethene	ND		ug/L	0.390	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Toluene	8500		ug/L	56.0	200	200	03/11/06 00:12	SW846 8260B	6032156
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	03/06/06 20:07	SW846 8260B	6031391
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	03/06/06 20:07	SW846 8260B	6031391
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Trichloroethene	ND		ug/L	0.450	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,3,5-Trimethylbenzene	155		ug/L	0.280	1.00	1	03/06/06 20:07	SW846 8260B	6031391
1,2,4-Trimethylbenzene	928		ug/L	6.80	20.0	20	03/10/06 23:47	SW846 8260B	6032156
Vinyl chloride	ND		ug/L	0.430	1.00	1	03/06/06 20:07	SW846 8260B	6031391
Xylenes, total	4530		ug/L	16.4	60.0	20	03/10/06 23:47	SW846 8260B	6032156
Surr: 1,2-Dichloroethane-d4 (70-130%)	88 %					1	03/06/06 20:07	SW846 8260B	6031391
Surr: 1,2-Dichloroethane-d4 (70-130%)	104 %					1	03/10/06 23:47	SW846 8260B	6032156
Surr: Dibromofluoromethane (79-122%)	107 %					1	03/06/06 20:07	SW846 8260B	6031391
Surr: Dibromofluoromethane (79-122%)	103 %					1	03/10/06 23:47	SW846 8260B	6032156
Surr: Toluene-d8 (78-121%)	100 %					1	03/06/06 20:07	SW846 8260B	6031391
Surr: Toluene-d8 (78-121%)	104 %					1	03/10/06 23:47	SW846 8260B	6032156
Surr: 4-Bromofluorobenzene (78-126%)	101 %					1	03/06/06 20:07	SW846 8260B	6031391
Surr: 4-Bromofluorobenzene (78-126%)	104 %					1	03/10/06 23:47	SW846 8260B	6032156

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-03 (P5803020601 - Ground Water) Sampled: 03/02/06 15:50</b>									
<b>Field Sampling Parameters</b>									
pH	6.78		pH Units	NA	NA	1	03/02/06 15:50	EPA 150.1	6031459
Specific conductance	3460		uS/cm	NA	0.100	1	03/02/06 15:50	EPA 120.1	6031459
Temperature	59.2		°F	0.00	NA	1	03/02/06 15:50	EPA 170.1	6031459
<b>Volatile Organic Compounds by EPA Method 8260B</b>									
Acetone	ND	RL5	ug/L	29600	250000	5000	03/11/06 09:15	SW846 8260B	6031174
Benzene	409000	RL5	ug/L	1450	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Bromobenzene	ND	RL5	ug/L	2350	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Bromochloromethane	ND	RL5	ug/L	2100	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Bromodichloromethane	ND	RL5	ug/L	1900	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Bromoform	ND	RL5	ug/L	2500	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Bromomethane	ND	RL5	ug/L	3000	5000	5000	03/11/06 09:15	SW846 8260B	6031174
2-Butanone	ND	RL5	ug/L	25400	250000	5000	03/11/06 09:15	SW846 8260B	6031174
sec-Butylbenzene	ND	RL5	ug/L	1900	5000	5000	03/11/06 09:15	SW846 8260B	6031174
n-Butylbenzene	ND	RL5	ug/L	2300	5000	5000	03/11/06 09:15	SW846 8260B	6031174
tert-Butylbenzene	ND	RL5	ug/L	1950	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Carbon disulfide	ND	RL5	ug/L	1550	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Carbon Tetrachloride	ND	RL5	ug/L	2400	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Chlorobenzene	ND	RL5	ug/L	1600	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Chlorodibromomethane	ND	RL5	ug/L	1800	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Chloroethane	ND	RL5	ug/L	2500	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Chloroform	ND	RL5	ug/L	1900	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Chloromethane	ND	RL5	ug/L	2300	5000	5000	03/11/06 09:15	SW846 8260B	6031174
2-Chlorotoluene	ND	RL5	ug/L	1350	5000	5000	03/11/06 09:15	SW846 8260B	6031174
4-Chlorotoluene	ND	RL5	ug/L	1850	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,2-Dibromo-3-chloropropane	ND	RL5	ug/L	8200	25000	5000	03/11/06 09:15	SW846 8260B	6031174
1,2-Dibromoethane (EDB)	ND	RL5	ug/L	1900	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Dibromomethane	ND	RL5	ug/L	2850	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,4-Dichlorobenzene	ND	RL5	ug/L	2300	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,3-Dichlorobenzene	ND	RL5	ug/L	1800	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,2-Dichlorobenzene	ND	RL5	ug/L	1850	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Dichlorodifluoromethane	ND	RL5	ug/L	2050	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,1-Dichloroethane	ND	RL5	ug/L	1600	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,2-Dichloroethane	ND	RL5	ug/L	1400	5000	5000	03/11/06 09:15	SW846 8260B	6031174
cis-1,2-Dichloroethene	ND	RL5	ug/L	1950	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,1-Dichloroethene	ND	RL5	ug/L	2250	5000	5000	03/11/06 09:15	SW846 8260B	6031174
trans-1,2-Dichloroethene	ND	RL5	ug/L	1700	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,3-Dichloropropane	ND	RL5	ug/L	3150	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,2-Dichloropropane	ND	RL5	ug/L	2500	5000	5000	03/11/06 09:15	SW846 8260B	6031174
2,2-Dichloropropane	ND	RL5	ug/L	3300	5000	5000	03/11/06 09:15	SW846 8260B	6031174
cis-1,3-Dichloropropene	ND	RL5	ug/L	2250	5000	5000	03/11/06 09:15	SW846 8260B	6031174
trans-1,3-Dichloropropene	ND	RL5	ug/L	2450	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,1-Dichloropropene	ND	RL5	ug/L	2550	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Ethylbenzene	ND	RL5	ug/L	1700	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Hexachlorobutadiene	ND	RL5	ug/L	3350	5000	5000	03/11/06 09:15	SW846 8260B	6031174

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-03 (P5803020601 - Ground Water) - cont. Sampled: 03/02/06 15:50</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Hexanone	ND	RL5	ug/L	12600	250000	5000	03/11/06 09:15	SW846 8260B	6031174
Isopropylbenzene	ND	RL5	ug/L	1700	5000	5000	03/11/06 09:15	SW846 8260B	6031174
p-Isopropyltoluene	ND	RL5	ug/L	1700	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Methyl tert-Butyl Ether	ND	RL5	ug/L	1600	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Methylene Chloride	ND	RL5	ug/L	6300	25000	5000	03/11/06 09:15	SW846 8260B	6031174
4-Methyl-2-pentanone	ND	RL5	ug/L	21200	250000	5000	03/11/06 09:15	SW846 8260B	6031174
Naphthalene	ND	RL5	ug/L	5650	25000	5000	03/11/06 09:15	SW846 8260B	6031174
n-Propylbenzene	ND	RL5	ug/L	1850	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Styrene	ND	RL5	ug/L	1950	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,1,1,2-Tetrachloroethane	ND	RL5	ug/L	1850	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,1,2,2-Tetrachloroethane	ND	RL5	ug/L	2450	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Tetrachloroethene	ND	RL5	ug/L	1950	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Toluene	ND	RL5	ug/L	1400	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,2,3-Trichlorobenzene	ND	RL5	ug/L	2800	10000	5000	03/11/06 09:15	SW846 8260B	6031174
1,2,4-Trichlorobenzene	ND	RL5	ug/L	3950	10000	5000	03/11/06 09:15	SW846 8260B	6031174
1,1,2-Trichloroethane	ND	RL5	ug/L	2100	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,1,1-Trichloroethane	ND	RL5	ug/L	2000	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Trichloroethene	ND	RL5	ug/L	2250	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Trichlorofluoromethane	ND	RL5	ug/L	2400	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,2,3-Trichloropropane	ND	RL5	ug/L	2800	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,3,5-Trimethylbenzene	ND	RL5	ug/L	1400	5000	5000	03/11/06 09:15	SW846 8260B	6031174
1,2,4-Trimethylbenzene	ND	RL5	ug/L	1700	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Vinyl chloride	ND	RL5	ug/L	2150	5000	5000	03/11/06 09:15	SW846 8260B	6031174
Xylenes, total	ND	RL5	ug/L	4100	15000	5000	03/11/06 09:15	SW846 8260B	6031174
Surr: 1,2-Dichloroethane-d4 (70-130%)	106 %					1	03/11/06 09:15	SW846 8260B	6031174
Surr: Dibromofluoromethane (79-122%)	104 %					1	03/11/06 09:15	SW846 8260B	6031174
Surr: Toluene-d8 (78-121%)	103 %					1	03/11/06 09:15	SW846 8260B	6031174
Surr: 4-Bromofluorobenzene (78-126%)	101 %					1	03/11/06 09:15	SW846 8260B	6031174

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-04 (P5803020602 - Ground Water) Sampled: 03/02/06 15:50</b>									
<b>Field Sampling Parameters</b>									
pH	6.78		pH Units	NA	NA	1	03/02/06 15:50	EPA 150.1	6031459
Specific conductance	3460		uS/cm	NA	0.100	1	03/02/06 15:50	EPA 120.1	6031459
Temperature	59.2		°F	0.00	NA	1	03/02/06 15:50	EPA 170.1	6031459
<b>Volatile Organic Compounds by EPA Method 8260B</b>									
Acetone	ND	RL5	ug/L	29600	250000	5000	03/11/06 09:40	SW846 8260B	6031174
Benzene	464000	RL5	ug/L	1450	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Bromobenzene	ND	RL5	ug/L	2350	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Bromochloromethane	ND	RL5	ug/L	2100	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Bromodichloromethane	ND	RL5	ug/L	1900	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Bromoform	ND	RL5	ug/L	2500	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Bromomethane	ND	RL5	ug/L	3000	5000	5000	03/11/06 09:40	SW846 8260B	6031174
2-Butanone	ND	RL5	ug/L	25400	250000	5000	03/11/06 09:40	SW846 8260B	6031174
sec-Butylbenzene	ND	RL5	ug/L	1900	5000	5000	03/11/06 09:40	SW846 8260B	6031174
n-Butylbenzene	ND	RL5	ug/L	2300	5000	5000	03/11/06 09:40	SW846 8260B	6031174
tert-Butylbenzene	ND	RL5	ug/L	1950	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Carbon disulfide	ND	RL5	ug/L	1550	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Carbon Tetrachloride	ND	RL5	ug/L	2400	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Chlorobenzene	ND	RL5	ug/L	1600	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Chlorodibromomethane	ND	RL5	ug/L	1800	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Chloroethane	ND	RL5	ug/L	2500	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Chloroform	ND	RL5	ug/L	1900	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Chloromethane	ND	RL5	ug/L	2300	5000	5000	03/11/06 09:40	SW846 8260B	6031174
2-Chlorotoluene	ND	RL5	ug/L	1350	5000	5000	03/11/06 09:40	SW846 8260B	6031174
4-Chlorotoluene	ND	RL5	ug/L	1850	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,2-Dibromo-3-chloropropane	ND	RL5	ug/L	8200	25000	5000	03/11/06 09:40	SW846 8260B	6031174
1,2-Dibromoethane (EDB)	ND	RL5	ug/L	1900	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Dibromomethane	ND	RL5	ug/L	2850	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,4-Dichlorobenzene	ND	RL5	ug/L	2300	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,3-Dichlorobenzene	ND	RL5	ug/L	1800	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,2-Dichlorobenzene	ND	RL5	ug/L	1850	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Dichlorodifluoromethane	ND	RL5	ug/L	2050	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,1-Dichloroethane	ND	RL5	ug/L	1600	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,2-Dichloroethane	ND	RL5	ug/L	1400	5000	5000	03/11/06 09:40	SW846 8260B	6031174
cis-1,2-Dichloroethene	ND	RL5	ug/L	1950	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,1-Dichloroethene	ND	RL5	ug/L	2250	5000	5000	03/11/06 09:40	SW846 8260B	6031174
trans-1,2-Dichloroethene	ND	RL5	ug/L	1700	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,3-Dichloropropane	ND	RL5	ug/L	3150	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,2-Dichloropropane	ND	RL5	ug/L	2500	5000	5000	03/11/06 09:40	SW846 8260B	6031174
2,2-Dichloropropane	ND	RL5	ug/L	3300	5000	5000	03/11/06 09:40	SW846 8260B	6031174
cis-1,3-Dichloropropene	ND	RL5	ug/L	2250	5000	5000	03/11/06 09:40	SW846 8260B	6031174
trans-1,3-Dichloropropene	ND	RL5	ug/L	2450	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,1-Dichloropropene	ND	RL5	ug/L	2550	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Ethylbenzene	ND	RL5	ug/L	1700	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Hexachlorobutadiene	ND	RL5	ug/L	3350	5000	5000	03/11/06 09:40	SW846 8260B	6031174

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-04 (P5803020602 - Ground Water) - cont. Sampled: 03/02/06 15:50</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Hexanone	ND	RL5	ug/L	12600	250000	5000	03/11/06 09:40	SW846 8260B	6031174
Isopropylbenzene	ND	RL5	ug/L	1700	5000	5000	03/11/06 09:40	SW846 8260B	6031174
p-Isopropyltoluene	ND	RL5	ug/L	1700	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Methyl tert-Butyl Ether	ND	RL5	ug/L	1600	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Methylene Chloride	ND	RL5	ug/L	6300	25000	5000	03/11/06 09:40	SW846 8260B	6031174
4-Methyl-2-pentanone	ND	RL5	ug/L	21200	250000	5000	03/11/06 09:40	SW846 8260B	6031174
Naphthalene	ND	RL5	ug/L	5650	25000	5000	03/11/06 09:40	SW846 8260B	6031174
n-Propylbenzene	ND	RL5	ug/L	1850	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Styrene	ND	RL5	ug/L	1950	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,1,1,2-Tetrachloroethane	ND	RL5	ug/L	1850	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,1,2,2-Tetrachloroethane	ND	RL5	ug/L	2450	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Tetrachloroethene	ND	RL5	ug/L	1950	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Toluene	ND	RL5	ug/L	1400	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,2,3-Trichlorobenzene	ND	RL5	ug/L	2800	10000	5000	03/11/06 09:40	SW846 8260B	6031174
1,2,4-Trichlorobenzene	ND	RL5	ug/L	3950	10000	5000	03/11/06 09:40	SW846 8260B	6031174
1,1,2-Trichloroethane	ND	RL5	ug/L	2100	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,1,1-Trichloroethane	ND	RL5	ug/L	2000	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Trichloroethene	ND	RL5	ug/L	2250	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Trichlorofluoromethane	ND	RL5	ug/L	2400	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,2,3-Trichloropropane	ND	RL5	ug/L	2800	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,3,5-Trimethylbenzene	ND	RL5	ug/L	1400	5000	5000	03/11/06 09:40	SW846 8260B	6031174
1,2,4-Trimethylbenzene	ND	RL5	ug/L	1700	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Vinyl chloride	ND	RL5	ug/L	2150	5000	5000	03/11/06 09:40	SW846 8260B	6031174
Xylenes, total	ND	RL5	ug/L	4100	15000	5000	03/11/06 09:40	SW846 8260B	6031174
Surr: 1,2-Dichloroethane-d4 (70-130%)	109 %					1	03/11/06 09:40	SW846 8260B	6031174
Surr: Dibromofluoromethane (79-122%)	104 %					1	03/11/06 09:40	SW846 8260B	6031174
Surr: Toluene-d8 (78-121%)	103 %					1	03/11/06 09:40	SW846 8260B	6031174
Surr: 4-Bromofluorobenzene (78-126%)	101 %					1	03/11/06 09:40	SW846 8260B	6031174

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-05 (P73030206EB - Ground Water) Sampled: 03/02/06 11:05</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND		ug/L	5.91	50.0	1	03/10/06 03:02	SW846 8260B	6032146
Benzene	2.62		ug/L	0.290	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Bromobenzene	ND		ug/L	0.470	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Bromochloromethane	ND		ug/L	0.420	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Bromodichloromethane	ND		ug/L	0.380	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Bromoform	ND		ug/L	0.500	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Bromomethane	ND		ug/L	0.600	1.00	1	03/10/06 03:02	SW846 8260B	6032146
2-Butanone	ND		ug/L	5.09	50.0	1	03/10/06 03:02	SW846 8260B	6032146
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	03/10/06 03:02	SW846 8260B	6032146
n-Butylbenzene	ND		ug/L	0.460	1.00	1	03/10/06 03:02	SW846 8260B	6032146
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Carbon disulfide	ND		ug/L	0.310	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Chlorobenzene	ND		ug/L	0.320	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Chloroethane	ND		ug/L	0.500	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Chloroform	ND		ug/L	0.380	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Chloromethane	ND		ug/L	0.460	1.00	1	03/10/06 03:02	SW846 8260B	6032146
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	03/10/06 03:02	SW846 8260B	6032146
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	03/10/06 03:02	SW846 8260B	6032146
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Dibromomethane	ND		ug/L	0.570	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	03/10/06 03:02	SW846 8260B	6032146
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	03/10/06 03:02	SW846 8260B	6032146
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	03/10/06 03:02	SW846 8260B	6032146
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	03/10/06 03:02	SW846 8260B	6032146
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	03/10/06 03:02	SW846 8260B	6032146
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Ethylbenzene	ND		ug/L	0.340	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	03/10/06 03:02	SW846 8260B	6032146
2-Hexanone	ND		ug/L	2.53	50.0	1	03/10/06 03:02	SW846 8260B	6032146
Isopropylbenzene	ND		ug/L	0.340	1.00	1	03/10/06 03:02	SW846 8260B	6032146
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Methyl tert-Butyl Ether	ND		ug/L	0.320	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Methylene Chloride	ND		ug/L	1.26	5.00	1	03/10/06 03:02	SW846 8260B	6032146

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-05 (P73030206EB - Ground Water) - cont. Sampled: 03/02/06 11:05</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	03/10/06 03:02	SW846 8260B	6032146
Naphthalene	ND		ug/L	1.13	5.00	1	03/10/06 03:02	SW846 8260B	6032146
n-Propylbenzene	ND		ug/L	0.370	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Styrene	ND		ug/L	0.390	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Tetrachloroethene	ND		ug/L	0.390	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Toluene	ND		ug/L	0.280	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	03/10/06 03:02	SW846 8260B	6032146
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	03/10/06 03:02	SW846 8260B	6032146
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Trichloroethene	ND		ug/L	0.450	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,3,5-Trimethylbenzene	ND		ug/L	0.280	1.00	1	03/10/06 03:02	SW846 8260B	6032146
1,2,4-Trimethylbenzene	ND		ug/L	0.340	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Vinyl chloride	ND		ug/L	0.430	1.00	1	03/10/06 03:02	SW846 8260B	6032146
Xylenes, total	ND		ug/L	0.820	3.00	1	03/10/06 03:02	SW846 8260B	6032146
Surr: 1,2-Dichloroethane-d4 (70-130%)	102 %					1	03/10/06 03:02	SW846 8260B	6032146
Surr: Dibromofluoromethane (79-122%)	104 %					1	03/10/06 03:02	SW846 8260B	6032146
Surr: Toluene-d8 (78-121%)	103 %					1	03/10/06 03:02	SW846 8260B	6032146
Surr: 4-Bromofluorobenzene (78-126%)	105 %					1	03/10/06 03:02	SW846 8260B	6032146

### Sample ID: NPC0479-06 (03020601TB - Ground Water) Sampled: 03/02/06 00:01

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND		ug/L	5.91	50.0	1	03/10/06 15:33	SW846 8260B	6032156
Benzene	ND		ug/L	0.290	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Bromobenzene	ND		ug/L	0.470	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Bromochloromethane	ND		ug/L	0.420	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Bromodichloromethane	ND		ug/L	0.380	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Bromoform	ND		ug/L	0.500	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Bromomethane	ND		ug/L	0.600	1.00	1	03/10/06 15:33	SW846 8260B	6032156
2-Butanone	ND		ug/L	5.09	50.0	1	03/10/06 15:33	SW846 8260B	6032156
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	03/10/06 15:33	SW846 8260B	6032156
n-Butylbenzene	ND		ug/L	0.460	1.00	1	03/10/06 15:33	SW846 8260B	6032156
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Carbon disulfide	ND		ug/L	0.310	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Chlorobenzene	ND		ug/L	0.320	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Chloroethane	ND		ug/L	0.500	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Chloroform	ND		ug/L	0.380	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Chloromethane	ND		ug/L	0.460	1.00	1	03/10/06 15:33	SW846 8260B	6032156

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-06 (03020601TB - Ground Water) - cont. Sampled: 03/02/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	03/10/06 15:33	SW846 8260B	6032156
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	03/10/06 15:33	SW846 8260B	6032156
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Dibromomethane	ND		ug/L	0.570	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	03/10/06 15:33	SW846 8260B	6032156
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	03/10/06 15:33	SW846 8260B	6032156
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	03/10/06 15:33	SW846 8260B	6032156
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	03/10/06 15:33	SW846 8260B	6032156
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	03/10/06 15:33	SW846 8260B	6032156
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Ethylbenzene	ND		ug/L	0.340	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	03/10/06 15:33	SW846 8260B	6032156
2-Hexanone	ND		ug/L	2.53	50.0	1	03/10/06 15:33	SW846 8260B	6032156
Isopropylbenzene	ND		ug/L	0.340	1.00	1	03/10/06 15:33	SW846 8260B	6032156
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Methyl tert-Butyl Ether	ND		ug/L	0.320	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Methylene Chloride	ND		ug/L	1.26	5.00	1	03/10/06 15:33	SW846 8260B	6032156
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	03/10/06 15:33	SW846 8260B	6032156
Naphthalene	ND		ug/L	1.13	5.00	1	03/10/06 15:33	SW846 8260B	6032156
n-Propylbenzene	ND		ug/L	0.370	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Styrene	ND		ug/L	0.390	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Tetrachloroethene	ND		ug/L	0.390	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Toluene	ND		ug/L	0.280	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	03/10/06 15:33	SW846 8260B	6032156
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	03/10/06 15:33	SW846 8260B	6032156
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Trichloroethene	ND		ug/L	0.450	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,3,5-Trimethylbenzene	ND		ug/L	0.280	1.00	1	03/10/06 15:33	SW846 8260B	6032156
1,2,4-Trimethylbenzene	ND		ug/L	0.340	1.00	1	03/10/06 15:33	SW846 8260B	6032156
Vinyl chloride	ND		ug/L	0.430	1.00	1	03/10/06 15:33	SW846 8260B	6032156

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0479  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/03/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0479-06 (03020601TB - Ground Water) - cont. Sampled: 03/02/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Xylenes, total	ND		ug/L	0.820	3.00	1	03/10/06 15:33	SW846 8260B	6032156
Surr: 1,2-Dichloroethane-d4 (70-130%)	105 %					1	03/10/06 15:33	SW846 8260B	6032156
Surr: Dibromofluoromethane (79-122%)	106 %					1	03/10/06 15:33	SW846 8260B	6032156
Surr: Toluene-d8 (78-121%)	104 %					1	03/10/06 15:33	SW846 8260B	6032156
Surr: 4-Bromofluorobenzene (78-126%)	109 %					1	03/10/06 15:33	SW846 8260B	6032156

Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Jeff Adams

Work Order: NPC0479  
Project Name: West Fenceline P-93 Project  
Project Number: SAP 340061  
Received: 03/03/06 08:00

## DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- M7** The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).
- M8** The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).
- R2** The RPD exceeded the acceptance limit.
- RL5** Reporting limit raised due to high single peak analyte.

## METHOD MODIFICATION NOTES

TEST AMERICA NPC0479  
 03/08/06 17:00  
 03/08/06 17:00  
 Phone 817-571-6800  
 Phone 800-572-9839  
 Phone 847-868-7766  
 Phone 719-593-9911

SOP US Project Manager to be Invoiced:

- ENVIRONMENTAL SERVICES
- TECHNICAL SERVICES
- RMT HOUSTON
- BILL CONSULTANT

SOP US Project Manager to be Invoiced:

- SHELL RATES
- STATE REIMBURSEMENT RATES

INCIDENT # (SEE ONE)

NAME OF PM TO BILL: Herb Hand (SOPUS)  
 NAME OF TS TO BILL:   
 DATE: 3/2/06  
 PAGE: 1 of 2

INVOICE WITH SAMPLING EVENTS FOR THIS SITE, SAMPLED THROUGH THE FOLLOWING DATE:

9 7 2 1 6 4 0

CONSULTANT COMPANY: URS Corporation

ADDRESS: 900 South Central Avenue, Roxana, IL 62048

CITY: 1001 Highlands Plaza Drive West, Suite 300

ST. LOUIS, MO 63110

TELEPHONE: (office) 314-426-0100 (cell) 431-426-0482 (fax) 314-409-4460 (trailer) 618-252-1872

TURNAROUND TIME (CALENDAR DAYS): 5 DAYS 24 HOURS

TEMPERATURE ON RECEIPT C

SPECIAL INSTRUCTIONS OR NOTES: Level 4 QC Deliverables

CONSULTANT PROJECT NO.: 2004-01

PROJECT CONTRACT (Report to): Herb Hand (SOPUS)

SAMPLER NAME(S) (Print): Jeff Adams (URS)

PROJECT CONTRACT (Report to): SOPUS West Engine Line P-93 Project

DATE: 3/2/06

PAGE: 1 of 2

FIELD SAMPLE IDENTIFICATION	SAMPLING		MATRIX	PRESERVATIVE			NO. OF CONT.
	DATE	TIME		HCL	HNO3	H2SO4	
P66 03020601	3/1/06	1040	GW	X			3
P7303020601	1/20			Y			3
P5803020601	1/20			X			3
P5803020602	1/20			Y			3
P7303020602	1/05			X			3
03020601TB							1

Requested Analysis: VOCs Method 8290, TPH-GRO (9015), TPH-DRO (9015), 8290 / 9015 Isotopes

Container PID Readings or Laboratory Notes	Time
APFC0479-01	8:00
	3/3/04

Requested Analysis: If more than one method is listed, circle one

RECEIVED BY: (Signature) [Signature]  
 RECEIVED BY: (Signature) [Signature]  
 RECEIVED BY: (Signature) [Signature]



# West Fenceline Data Review

**Laboratory SDG:** NPC0653

**Reviewer:** Tony Sedlacek

**Date Reviewed:** 2/11/2007

**Guidance:** USEPA Contract Laboratory National Functional Guidelines for Organic Data Review (USEPA 1999).

**Applicable Work Plan:** West Fenceline P-93 Dissolved Phase Benzene Investigation (2006)

Sample Identification #	Sample Identification #
P7503030601	P93A03030601
P93B03030601	P5703030601
03030602TB	

## 1.0 Data Package Completeness

*Were all items delivered as specified in the QAPP and COC?*

No, the COC designated sample P93A03030601 as an MS/MSD to be analyzed for VOCs. The VOC MS/MSD data was not received as part of the data package. The laboratory was contacted and the data was requested.

## 2.0 Laboratory Case Narrative \ Cooler Receipt Form

*Were problems noted in the laboratory case narrative or cooler receipt form?*

Yes, the laboratory case narrative indicated that several LCS recoveries were outside evaluation criteria. Some samples were diluted due to high levels of target analytes and professional judgment was used to evaluate and qualify methylene chloride in sample P5703030601. These issues are addressed further in the appropriate sections below.

The cooler receipt form did not indicate any problems.

### 3.0 Holding Times

*Were samples extracted/analyzed within QAPP limits?*

Yes

Field ID	Parameter	Analyte	Qualification
N/A			

### 4.0 Blank Contamination

*Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?*

No

Blank ID	Parameter	Analyte	Concentration	Units
N/A				

Qualifications due to blank contamination are included in the table below. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration (10X for common laboratory contaminants) did not require qualification.

Field ID	Parameter	Analyte	New RL	Qualification
N/A				

### 5.0 Laboratory Control Sample

*Were LCS recoveries within evaluation criteria?*

No

LCS ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD/ RPD Criteria
6031695-BS1	VOCs	sec-butylbenzene	138	N/A	75-131
6031695-BS1	VOCs	tert-butylbenzene	138	N/A	74-129
6031695-BS1	VOCs	Isopropylbenzene	134	N/A	75-130
6031695-BS1	VOCs	p-Isopropyltoluene	137	N/A	76-133

Analytical data that required qualification based on LCS data are included in the table below. Analytical data which were reported as nondetect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
N/A			

## 6.0 Surrogate Recoveries

*Were surrogate recoveries within evaluation criteria?*

Yes

Field ID	Parameter	Surrogate	Recovery	Criteria
N/A				

Analytical data that required qualification based on surrogate data are included in the table below. Analytical data which were reported as nondetect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
N/A			

## 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

*Were MS/MSD samples reported as part of this SDG?*

Yes, the COC designated sample P93A03030601 as an MS/MSD to be analyzed for VOCs. The VOC MS/MSD data was not received as part of the data package. The laboratory was contacted and the data was requested.

*Were MS/MSD recoveries within evaluation criteria?*

N/A

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
N/A					

Analytical data that required qualification based on MS/MSD data are included in the table below.

Field ID	Parameter	Analyte	Qualification
N/A			

## 8.0 Laboratory Duplicate Results

*Were laboratory duplicate samples collected as part of this SDG?*

No

*Were laboratory duplicate sample RPDs within criteria?*

N/A

Field ID	Parameter	Analyte	RPD	Criteria
N/A				

Data qualified due to outlying laboratory duplicate recoveries are identified below:

Field ID	Parameter	Analyte	Qualification
N/A			

## 9.0 Field Duplicate Results

*Were field duplicate samples collected as part of this SDG?*

No

Field ID	Field Duplicate ID
N/A	

*Were field duplicates within evaluation criteria?*

N/A

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
N/A					

## 10.0 Sample Dilutions

*For samples that were diluted and nondetect, were undiluted results also reported?*

Yes

The following table identifies the analyses which were reported as nondetect, diluted, and an undiluted run *was not* reported:

Field ID	Parameter	Dilution Factor
P93A03030601	VOCs	5000
P93B03030601	VOCs	5000
P5703030601	VOCs	1000

## 11.0 Additional Qualifications

*Were additional qualifications applied?*

Yes

Professional judgment was used to qualify the common laboratory contaminant methylene chloride reported at concentrations less than two times (2X) the RL

Field ID	Analyte	New RL	Qualification	Comments
P5703030601DL	Methylene chloride	1400	U	Professional Judgment

April 21, 2006

Client: URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn: Jeff Adams

Work Order: NPC0653  
Project Name: West Fenceline P-93 Project  
Project Nbr: SAP 340061  
P/O Nbr: 97216640  
Date Received: 03/04/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
P7503030601	NPC0653-01	03/03/06 10:30
P93A03030601 MS/MSD	NPC0653-02	03/03/06 14:30
P93B03030601	NPC0653-03	03/03/06 15:45
P5703030601	NPC0653-04	03/03/06 15:50
03030602TB	NPC0653-05	03/03/06 00:01

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

#### Additional Laboratory Comments:

Per enclosed Chain of Custody, "samples were properly preserved and received in good condition on 3/4/06. Analysis was extracted and performed within method required holding times following Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)". Initial and Continuing Calibration requirements were met. Package was completed as a "Level IV".

Please note for QC batch 6031174: Please note that the reporting limit for P93A03030601 MS/MSD and P93A03030601 were elevated due to the matrix effect. Several % Recovery and % RPD for the Matrix Spike and Matrix Spike Duplicate were outside laboratory acceptable QC limit due to the matrix of the sample spiked.

Please note for QC batch 6031695: sec-Butylbenzene, tert-Butylbenzene, Isopropylbenzene, and p-Isopropylbenzene in the LCS were outside laboratory acceptable QC limit biased high. These analytes were not detected in this QC batch, therefore the data was not impacted.

Organics: Unknown analyte concentrations were determined using the average response factor from the initial calibration curve for all analytes whose % RSD is less than or equal to 15. All other analyte concentrations were determined using linear regression analysis. Copies of curves for compounds with %RSD's greater than 15 are supplied.

As you review this data package, please call me if you require any additional information at # 1-800-765-0980 ext 1256.

Illinois Certification Number: 001177

The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

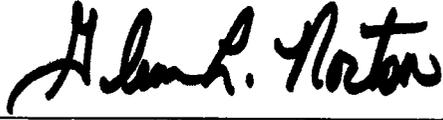
These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Jeff Adams

Work Order: NPC0653  
Project Name: West Fenceline P-93 Project  
Project Number: SAP 340061  
Received: 03/04/06 08:00

---



Glenn Lee Norton  
Data Package Coordinator

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0653  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/04/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0653-01 (P7503030601 - Ground Water) Sampled: 03/03/06 10:30</b>									
<b>Field Sampling Parameters</b>									
pH	6.45		pH Units	NA	NA	1	03/03/06 10:30	EPA 150.1	6031453
Specific conductance	1220		uS/cm	NA	0.100	1	03/03/06 10:30	EPA 120.1	6031453
Temperature	61.7		°F	0.00	NA	1	03/03/06 10:30	EPA 170.1	6031453
<b>Volatile Organic Compounds by EPA Method 8260B</b>									
Acetone	ND		ug/L	5.91	50.0	1	03/08/06 11:08	SW846 8260B	6031695
Benzene	2780		ug/L	5.80	20.0	20	03/11/06 03:05	SW846 8260B	6031174
Bromobenzene	ND		ug/L	0.470	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Bromochloromethane	ND		ug/L	0.420	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Bromodichloromethane	ND		ug/L	0.380	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Bromoform	ND		ug/L	0.500	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Bromomethane	ND		ug/L	0.600	1.00	1	03/08/06 11:08	SW846 8260B	6031695
2-Butanone	ND		ug/L	5.09	50.0	1	03/08/06 11:08	SW846 8260B	6031695
sec-Butylbenzene	ND		ug/L	7.60	20.0	20	03/11/06 03:05	SW846 8260B	6031174
n-Butylbenzene	30.0		ug/L	0.460	1.00	1	03/08/06 11:08	SW846 8260B	6031695
tert-Butylbenzene	14.6	J	ug/L	7.80	20.0	20	03/11/06 03:05	SW846 8260B	6031174
Carbon disulfide	ND		ug/L	0.310	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Chlorobenzene	ND		ug/L	0.320	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Chloroethane	ND		ug/L	0.500	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Chloroform	ND		ug/L	0.380	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Chloromethane	ND		ug/L	0.460	1.00	1	03/08/06 11:08	SW846 8260B	6031695
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	03/08/06 11:08	SW846 8260B	6031695
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	03/08/06 11:08	SW846 8260B	6031695
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Dibromomethane	ND		ug/L	0.570	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	03/08/06 11:08	SW846 8260B	6031695
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	03/08/06 11:08	SW846 8260B	6031695
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	03/08/06 11:08	SW846 8260B	6031695
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	03/08/06 11:08	SW846 8260B	6031695
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	03/08/06 11:08	SW846 8260B	6031695
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Ethylbenzene	29.6		ug/L	0.340	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	03/08/06 11:08	SW846 8260B	6031695

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0653  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/04/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0653-01 (P7503030601 - Ground Water) - cont. Sampled: 03/03/06 10:30</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Hexanone	ND		ug/L	2.53	50.0	1	03/08/06 11:08	SW846 8260B	6031695
Isopropylbenzene	103		ug/L	6.80	20.0	20	03/11/06 03:05	SW846 8260B	6031174
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Methyl tert-Butyl Ether	191		ug/L	0.320	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Methylene Chloride	ND		ug/L	1.26	5.00	1	03/08/06 11:08	SW846 8260B	6031695
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	03/08/06 11:08	SW846 8260B	6031695
Naphthalene	28.6		ug/L	1.13	5.00	1	03/08/06 11:08	SW846 8260B	6031695
n-Propylbenzene	156		ug/L	0.370	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Styrene	ND		ug/L	0.390	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Tetrachloroethene	ND		ug/L	0.390	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Toluene	16.9		ug/L	0.280	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	03/08/06 11:08	SW846 8260B	6031695
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	03/08/06 11:08	SW846 8260B	6031695
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Trichloroethene	ND		ug/L	0.450	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,3,5-Trimethylbenzene	14.6		ug/L	0.280	1.00	1	03/08/06 11:08	SW846 8260B	6031695
1,2,4-Trimethylbenzene	66.4		ug/L	0.340	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Vinyl chloride	ND		ug/L	0.430	1.00	1	03/08/06 11:08	SW846 8260B	6031695
Xylenes, total	39.3		ug/L	0.820	3.00	1	03/08/06 11:08	SW846 8260B	6031695
Diisopropyl Ether	616		ug/L	8.40	20.0	20	03/11/06 03:05	SW846 8260B	6031174
Surr: 1,2-Dichloroethane-d4 (70-130%)	90 %					1	03/08/06 11:08	SW846 8260B	6031695
Surr: 1,2-Dichloroethane-d4 (70-130%)	101 %					1	03/11/06 03:05	SW846 8260B	6031174
Surr: Dibromofluoromethane (79-122%)	100 %					1	03/08/06 11:08	SW846 8260B	6031695
Surr: Dibromofluoromethane (79-122%)	104 %					1	03/11/06 03:05	SW846 8260B	6031174
Surr: Toluene-d8 (78-121%)	90 %					1	03/08/06 11:08	SW846 8260B	6031695
Surr: Toluene-d8 (78-121%)	104 %					1	03/11/06 03:05	SW846 8260B	6031174
Surr: 4-Bromofluorobenzene (78-126%)	85 %					1	03/08/06 11:08	SW846 8260B	6031695
Surr: 4-Bromofluorobenzene (78-126%)	104 %					1	03/11/06 03:05	SW846 8260B	6031174

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0653  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/04/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0653-02 (P93A03030601 MS/MSD - Ground Water) Sampled: 03/03/06 14:30</b>									
<b>Field Sampling Parameters</b>									
pH	6.61		pH Units	NA	NA	1	03/03/06 14:30	EPA 150.1	6031453
Specific conductance	1020		uS/cm	NA	0.100	1	03/03/06 14:30	EPA 120.1	6031453
Temperature	62.6		°F	0.00	NA	1	03/03/06 14:30	EPA 170.1	6031453
<b>Volatile Organic Compounds by EPA Method 8260B</b>									
Acetone	ND	RL1	ug/L	29600	250000	5000	03/11/06 08:26	SW846 8260B	6031174
Benzene	506000		ug/L	1450	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Bromobenzene	ND	RL1	ug/L	2350	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Bromochloromethane	ND	RL1	ug/L	2100	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Bromodichloromethane	ND	RL1	ug/L	1900	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Bromoform	ND	RL1	ug/L	2500	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Bromomethane	ND	RL1	ug/L	3000	5000	5000	03/11/06 08:26	SW846 8260B	6031174
2-Butanone	ND	RL1	ug/L	25400	250000	5000	03/11/06 08:26	SW846 8260B	6031174
sec-Butylbenzene	ND	RL1	ug/L	1900	5000	5000	03/11/06 08:26	SW846 8260B	6031174
n-Butylbenzene	ND	RL1	ug/L	2300	5000	5000	03/11/06 08:26	SW846 8260B	6031174
tert-Butylbenzene	ND	RL1	ug/L	1950	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Carbon disulfide	ND	RL1	ug/L	1550	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Carbon Tetrachloride	ND	RL1	ug/L	2400	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Chlorobenzene	ND	RL1	ug/L	1600	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Chlorodibromomethane	ND	RL1	ug/L	1800	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Chloroethane	ND	RL1	ug/L	2500	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Chloroform	ND	RL1	ug/L	1900	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Chloromethane	ND	RL1	ug/L	2300	5000	5000	03/11/06 08:26	SW846 8260B	6031174
2-Chlorotoluene	ND	RL1	ug/L	1350	5000	5000	03/11/06 08:26	SW846 8260B	6031174
4-Chlorotoluene	ND	RL1	ug/L	1850	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,2-Dibromo-3-chloropropane	ND	RL1	ug/L	8200	25000	5000	03/11/06 08:26	SW846 8260B	6031174
1,2-Dibromoethane (EDB)	ND	RL1	ug/L	1900	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Dibromomethane	ND	RL1	ug/L	2850	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,4-Dichlorobenzene	ND	RL1	ug/L	2300	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,3-Dichlorobenzene	ND	RL1	ug/L	1800	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,2-Dichlorobenzene	ND	RL1	ug/L	1850	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Dichlorodifluoromethane	ND	RL1	ug/L	2050	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,1-Dichloroethane	ND	RL1	ug/L	1600	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,2-Dichloroethane	ND	RL1	ug/L	1400	5000	5000	03/11/06 08:26	SW846 8260B	6031174
cis-1,2-Dichloroethene	ND	RL1	ug/L	1950	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,1-Dichloroethene	ND	RL1	ug/L	2250	5000	5000	03/11/06 08:26	SW846 8260B	6031174
trans-1,2-Dichloroethene	ND	RL1	ug/L	1700	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,3-Dichloropropane	ND	RL1	ug/L	3150	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,2-Dichloropropane	ND	RL1	ug/L	2500	5000	5000	03/11/06 08:26	SW846 8260B	6031174
2,2-Dichloropropane	ND	RL1	ug/L	3300	5000	5000	03/11/06 08:26	SW846 8260B	6031174
cis-1,3-Dichloropropene	ND	RL1	ug/L	2250	5000	5000	03/11/06 08:26	SW846 8260B	6031174
trans-1,3-Dichloropropene	ND	RL1	ug/L	2450	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,1-Dichloropropene	ND	RL1	ug/L	2550	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Ethylbenzene	ND	RL1	ug/L	1700	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Hexachlorobutadiene	ND	RL1	ug/L	3350	5000	5000	03/11/06 08:26	SW846 8260B	6031174

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0653  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/04/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0653-02 (P93A03030601 MS/MSD - Ground Water) - cont. Sampled: 03/03/06 14:30</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Hexanone	ND	RL1	ug/L	12600	250000	5000	03/11/06 08:26	SW846 8260B	6031174
Isopropylbenzene	ND	RL1	ug/L	1700	5000	5000	03/11/06 08:26	SW846 8260B	6031174
p-Isopropyltoluene	ND	RL1	ug/L	1700	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Methyl tert-Butyl Ether	2550	RL1, J	ug/L	1600	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Methylene Chloride	ND	RL1	ug/L	6300	25000	5000	03/11/06 08:26	SW846 8260B	6031174
4-Methyl-2-pentanone	ND	RL1	ug/L	21200	250000	5000	03/11/06 08:26	SW846 8260B	6031174
Naphthalene	ND	RL1	ug/L	5650	25000	5000	03/11/06 08:26	SW846 8260B	6031174
n-Propylbenzene	ND	RL1	ug/L	1850	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Styrene	ND	RL1	ug/L	1950	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,1,1,2-Tetrachloroethane	ND	RL1	ug/L	1850	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,1,2,2-Tetrachloroethane	ND	RL1	ug/L	2450	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Tetrachloroethene	ND	RL1	ug/L	1950	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Toluene	ND	RL1	ug/L	1400	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,2,3-Trichlorobenzene	ND	RL1	ug/L	2800	10000	5000	03/11/06 08:26	SW846 8260B	6031174
1,2,4-Trichlorobenzene	ND	RL1	ug/L	3950	10000	5000	03/11/06 08:26	SW846 8260B	6031174
1,1,2-Trichloroethane	ND	RL1	ug/L	2100	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,1,1-Trichloroethane	ND	RL1	ug/L	2000	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Trichloroethene	ND	RL1	ug/L	2250	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Trichlorofluoromethane	ND	RL1	ug/L	2400	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,2,3-Trichloropropane	ND	RL1	ug/L	2800	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,3,5-Trimethylbenzene	ND	RL1	ug/L	1400	5000	5000	03/11/06 08:26	SW846 8260B	6031174
1,2,4-Trimethylbenzene	ND	RL1	ug/L	1700	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Vinyl chloride	ND	RL1	ug/L	2150	5000	5000	03/11/06 08:26	SW846 8260B	6031174
Xylenes, total	ND	RL1	ug/L	4100	15000	5000	03/11/06 08:26	SW846 8260B	6031174
Surr: 1,2-Dichloroethane-d4 (70-130%)	105 %					1	03/11/06 08:26	SW846 8260B	6031174
Surr: Dibromofluoromethane (79-122%)	104 %					1	03/11/06 08:26	SW846 8260B	6031174
Surr: Toluene-d8 (78-121%)	103 %					1	03/11/06 08:26	SW846 8260B	6031174
Surr: 4-Bromofluorobenzene (78-126%)	98 %					1	03/11/06 08:26	SW846 8260B	6031174

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0653  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/04/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0653-03 (P93B03030601 - Ground Water) Sampled: 03/03/06 15:45</b>									
<b>Field Sampling Parameters</b>									
pH	7.09		pH Units	NA	NA	1	03/03/06 15:45	EPA 150.1	6031453
Specific conductance	1160		uS/cm	NA	0.100	1	03/03/06 15:45	EPA 120.1	6031453
Temperature	57.9		°F	0.00	NA	1	03/03/06 15:45	EPA 170.1	6031453
<b>Volatile Organic Compounds by EPA Method 8260B</b>									
Acetone	ND	RL1	ug/L	29600	250000	5000	03/11/06 08:50	SW846 8260B	6031174
Benzene	370000		ug/L	1450	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Bromobenzene	ND	RL1	ug/L	2350	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Bromochloromethane	ND	RL1	ug/L	2100	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Bromodichloromethane	ND	RL1	ug/L	1900	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Bromoform	ND	RL1	ug/L	2500	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Bromomethane	ND	RL1	ug/L	3000	5000	5000	03/11/06 08:50	SW846 8260B	6031174
2-Butanone	ND	RL1	ug/L	25400	250000	5000	03/11/06 08:50	SW846 8260B	6031174
sec-Butylbenzene	ND	RL1	ug/L	1900	5000	5000	03/11/06 08:50	SW846 8260B	6031174
n-Butylbenzene	ND	RL1	ug/L	2300	5000	5000	03/11/06 08:50	SW846 8260B	6031174
tert-Butylbenzene	ND	RL1	ug/L	1950	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Carbon disulfide	ND	RL1	ug/L	1550	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Carbon Tetrachloride	ND	RL1	ug/L	2400	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Chlorobenzene	ND	RL1	ug/L	1600	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Chlorodibromomethane	ND	RL1	ug/L	1800	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Chloroethane	ND	RL1	ug/L	2500	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Chloroform	ND	RL1	ug/L	1900	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Chloromethane	ND	RL1	ug/L	2300	5000	5000	03/11/06 08:50	SW846 8260B	6031174
2-Chlorotoluene	ND	RL1	ug/L	1350	5000	5000	03/11/06 08:50	SW846 8260B	6031174
4-Chlorotoluene	ND	RL1	ug/L	1850	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,2-Dibromo-3-chloropropane	ND	RL1	ug/L	8200	25000	5000	03/11/06 08:50	SW846 8260B	6031174
1,2-Dibromoethane (EDB)	ND	RL1	ug/L	1900	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Dibromomethane	ND	RL1	ug/L	2850	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,4-Dichlorobenzene	ND	RL1	ug/L	2300	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,3-Dichlorobenzene	ND	RL1	ug/L	1800	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,2-Dichlorobenzene	ND	RL1	ug/L	1850	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Dichlorodifluoromethane	ND	RL1	ug/L	2050	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,1-Dichloroethane	ND	RL1	ug/L	1600	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,2-Dichloroethane	ND	RL1	ug/L	1400	5000	5000	03/11/06 08:50	SW846 8260B	6031174
cis-1,2-Dichloroethene	ND	RL1	ug/L	1950	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,1-Dichloroethene	ND	RL1	ug/L	2250	5000	5000	03/11/06 08:50	SW846 8260B	6031174
trans-1,2-Dichloroethene	ND	RL1	ug/L	1700	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,3-Dichloropropane	ND	RL1	ug/L	3150	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,2-Dichloropropane	ND	RL1	ug/L	2500	5000	5000	03/11/06 08:50	SW846 8260B	6031174
2,2-Dichloropropane	ND	RL1	ug/L	3300	5000	5000	03/11/06 08:50	SW846 8260B	6031174
cis-1,3-Dichloropropene	ND	RL1	ug/L	2250	5000	5000	03/11/06 08:50	SW846 8260B	6031174
trans-1,3-Dichloropropene	ND	RL1	ug/L	2450	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,1-Dichloropropene	ND	RL1	ug/L	2550	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Ethylbenzene	ND	RL1	ug/L	1700	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Hexachlorobutadiene	ND	RL1	ug/L	3350	5000	5000	03/11/06 08:50	SW846 8260B	6031174

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0653  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/04/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0653-03 (P93B03030601 - Ground Water) - cont. Sampled: 03/03/06 15:45</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Hexanone	ND	RL1	ug/L	12600	250000	5000	03/11/06 08:50	SW846 8260B	6031174
Isopropylbenzene	ND	RL1	ug/L	1700	5000	5000	03/11/06 08:50	SW846 8260B	6031174
p-Isopropyltoluene	ND	RL1	ug/L	1700	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Methyl tert-Butyl Ether	2350	RL1, J	ug/L	1600	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Methylene Chloride	ND	RL1	ug/L	6300	25000	5000	03/11/06 08:50	SW846 8260B	6031174
4-Methyl-2-pentanone	ND	RL1	ug/L	21200	250000	5000	03/11/06 08:50	SW846 8260B	6031174
Naphthalene	ND	RL1	ug/L	5650	25000	5000	03/11/06 08:50	SW846 8260B	6031174
n-Propylbenzene	ND	RL1	ug/L	1850	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Styrene	ND	RL1	ug/L	1950	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,1,1,2-Tetrachloroethane	ND	RL1	ug/L	1850	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,1,2,2-Tetrachloroethane	ND	RL1	ug/L	2450	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Tetrachloroethene	ND	RL1	ug/L	1950	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Toluene	ND	RL1	ug/L	1400	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,2,3-Trichlorobenzene	ND	RL1	ug/L	2800	10000	5000	03/11/06 08:50	SW846 8260B	6031174
1,2,4-Trichlorobenzene	ND	RL1	ug/L	3950	10000	5000	03/11/06 08:50	SW846 8260B	6031174
1,1,2-Trichloroethane	ND	RL1	ug/L	2100	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,1,1-Trichloroethane	ND	RL1	ug/L	2000	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Trichloroethene	ND	RL1	ug/L	2250	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Trichlorofluoromethane	ND	RL1	ug/L	2400	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,2,3-Trichloropropane	ND	RL1	ug/L	2800	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,3,5-Trimethylbenzene	ND	RL1	ug/L	1400	5000	5000	03/11/06 08:50	SW846 8260B	6031174
1,2,4-Trimethylbenzene	ND	RL1	ug/L	1700	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Vinyl chloride	ND	RL1	ug/L	2150	5000	5000	03/11/06 08:50	SW846 8260B	6031174
Xylenes, total	ND	RL1	ug/L	4100	15000	5000	03/11/06 08:50	SW846 8260B	6031174
Surr: 1,2-Dichloroethane-d4 (70-130%)	107 %					1	03/11/06 08:50	SW846 8260B	6031174
Surr: Dibromofluoromethane (79-122%)	105 %					1	03/11/06 08:50	SW846 8260B	6031174
Surr: Toluene-d8 (78-121%)	105 %					1	03/11/06 08:50	SW846 8260B	6031174
Surr: 4-Bromofluorobenzene (78-126%)	100 %					1	03/11/06 08:50	SW846 8260B	6031174

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0653  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/04/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0653-04 (P5703030601 - Ground Water) Sampled: 03/03/06 15:50</b>									
<b>Field Sampling Parameters</b>									
pH	6.72		pH Units	NA	NA	1	03/03/06 15:50	EPA 150.1	6031453
Specific conductance	1220		uS/cm	NA	0.100	1	03/03/06 15:50	EPA 120.1	6031453
Temperature	55.8		°F	0.00	NA	1	03/03/06 15:50	EPA 170.1	6031453
<b>Volatile Organic Compounds by EPA Method 8260B</b>									
Acetone	ND	RL1	ug/L	5910	50000	1000	03/11/06 03:29	SW846 8260B	6031174
Benzene	177000		ug/L	290	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Bromobenzene	ND	RL1	ug/L	470	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Bromochloromethane	ND	RL1	ug/L	420	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Bromodichloromethane	ND	RL1	ug/L	380	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Bromoform	ND	RL1	ug/L	500	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Bromomethane	ND	RL1	ug/L	600	1000	1000	03/11/06 03:29	SW846 8260B	6031174
2-Butanone	ND	RL1	ug/L	5090	50000	1000	03/11/06 03:29	SW846 8260B	6031174
sec-Butylbenzene	ND	RL1	ug/L	380	1000	1000	03/11/06 03:29	SW846 8260B	6031174
n-Butylbenzene	ND	RL1	ug/L	460	1000	1000	03/11/06 03:29	SW846 8260B	6031174
tert-Butylbenzene	ND	RL1	ug/L	390	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Carbon disulfide	ND	RL1	ug/L	310	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Carbon Tetrachloride	ND	RL1	ug/L	480	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Chlorobenzene	ND	RL1	ug/L	320	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Chlorodibromomethane	ND	RL1	ug/L	360	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Chloroethane	ND	RL1	ug/L	500	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Chloroform	ND	RL1	ug/L	380	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Chloromethane	ND	RL1	ug/L	460	1000	1000	03/11/06 03:29	SW846 8260B	6031174
2-Chlorotoluene	ND	RL1	ug/L	270	1000	1000	03/11/06 03:29	SW846 8260B	6031174
4-Chlorotoluene	ND	RL1	ug/L	370	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,2-Dibromo-3-chloropropane	ND	RL1	ug/L	1640	5000	1000	03/11/06 03:29	SW846 8260B	6031174
1,2-Dibromoethane (EDB)	ND	RL1	ug/L	380	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Dibromomethane	ND	RL1	ug/L	570	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,4-Dichlorobenzene	ND	RL1	ug/L	460	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,3-Dichlorobenzene	ND	RL1	ug/L	360	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,2-Dichlorobenzene	ND	RL1	ug/L	370	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Dichlorodifluoromethane	ND	RL1	ug/L	410	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,1-Dichloroethane	ND	RL1	ug/L	320	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,2-Dichloroethane	ND	RL1	ug/L	280	1000	1000	03/11/06 03:29	SW846 8260B	6031174
cis-1,2-Dichloroethene	ND	RL1	ug/L	390	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,1-Dichloroethene	ND	RL1	ug/L	450	1000	1000	03/11/06 03:29	SW846 8260B	6031174
trans-1,2-Dichloroethene	ND	RL1	ug/L	340	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,3-Dichloropropane	ND	RL1	ug/L	630	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,2-Dichloropropane	ND	RL1	ug/L	500	1000	1000	03/11/06 03:29	SW846 8260B	6031174
2,2-Dichloropropane	ND	RL1	ug/L	660	1000	1000	03/11/06 03:29	SW846 8260B	6031174
cis-1,3-Dichloropropene	ND	RL1	ug/L	450	1000	1000	03/11/06 03:29	SW846 8260B	6031174
trans-1,3-Dichloropropene	ND	RL1	ug/L	490	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,1-Dichloropropene	ND	RL1	ug/L	510	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Ethylbenzene	1120		ug/L	340	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Hexachlorobutadiene	ND	RL1	ug/L	670	1000	1000	03/11/06 03:29	SW846 8260B	6031174

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0653  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/04/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0653-04 (P5703030601 - Ground Water) - cont. Sampled: 03/03/06 15:50</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Hexanone	ND	RL1	ug/L	2530	50000	1000	03/11/06 03:29	SW846 8260B	6031174
Isopropylbenzene	ND	RL1	ug/L	340	1000	1000	03/11/06 03:29	SW846 8260B	6031174
p-Isopropyltoluene	ND	RL1	ug/L	340	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Methyl tert-Butyl Ether	ND	RL1	ug/L	320	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Methylene Chloride	<del>ND</del> <b>1400</b>	<del>RL1</del> <b>J, RL1</b>	ug/L	1260	<del>5000</del> <b>5000</b>	<del>1000</del> <b>1000</b>	03/11/06 03:29	SW846 8260B	6031174
4-Methyl-2-pentanone	ND	RL1	ug/L	4250	50000	1000	03/11/06 03:29	SW846 8260B	6031174
Naphthalene	ND	RL1	ug/L	1130	5000	1000	03/11/06 03:29	SW846 8260B	6031174
n-Propylbenzene	ND	RL1	ug/L	370	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Styrene	ND	RL1	ug/L	390	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,1,1,2-Tetrachloroethane	ND	RL1	ug/L	370	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,1,2,2-Tetrachloroethane	ND	RL1	ug/L	490	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Tetrachloroethene	ND	RL1	ug/L	390	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Toluene	ND	RL1	ug/L	280	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,2,3-Trichlorobenzene	ND	RL1	ug/L	560	2000	1000	03/11/06 03:29	SW846 8260B	6031174
1,2,4-Trichlorobenzene	ND	RL1	ug/L	790	2000	1000	03/11/06 03:29	SW846 8260B	6031174
1,1,2-Trichloroethane	ND	RL1	ug/L	420	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,1,1-Trichloroethane	ND	RL1	ug/L	400	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Trichloroethene	ND	RL1	ug/L	450	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Trichlorofluoromethane	ND	RL1	ug/L	480	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,2,3-Trichloropropane	ND	RL1	ug/L	560	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,3,5-Trimethylbenzene	ND	RL1	ug/L	280	1000	1000	03/11/06 03:29	SW846 8260B	6031174
1,2,4-Trimethylbenzene	ND	RL1	ug/L	340	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Vinyl chloride	ND	RL1	ug/L	430	1000	1000	03/11/06 03:29	SW846 8260B	6031174
Xylenes, total	<b>1040</b>	<b>J, RL1</b>	ug/L	820	3000	1000	03/11/06 03:29	SW846 8260B	6031174
Surr: 1,2-Dichloroethane-d4 (70-130%)	103 %					1	03/11/06 03:29	SW846 8260B	6031174
Surr: Dibromofluoromethane (79-122%)	105 %					1	03/11/06 03:29	SW846 8260B	6031174
Surr: Toluene-d8 (78-121%)	102 %					1	03/11/06 03:29	SW846 8260B	6031174
Surr: 4-Bromofluorobenzene (78-126%)	101 %					1	03/11/06 03:29	SW846 8260B	6031174

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0653  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/04/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0653-05 (03030602TB - Ground Water) Sampled: 03/03/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND		ug/L	5.91	50.0	1	03/08/06 05:23	SW846 8260B	6031695
Benzene	ND		ug/L	0.290	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Bromobenzene	ND		ug/L	0.470	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Bromochloromethane	ND		ug/L	0.420	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Bromodichloromethane	ND		ug/L	0.380	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Bromoform	ND		ug/L	0.500	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Bromomethane	ND		ug/L	0.600	1.00	1	03/08/06 05:23	SW846 8260B	6031695
2-Butanone	ND		ug/L	5.09	50.0	1	03/08/06 05:23	SW846 8260B	6031695
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	03/08/06 05:23	SW846 8260B	6031695
n-Butylbenzene	ND		ug/L	0.460	1.00	1	03/08/06 05:23	SW846 8260B	6031695
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Carbon disulfide	ND		ug/L	0.310	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Chlorobenzene	ND		ug/L	0.320	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Chloroethane	ND		ug/L	0.500	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Chloroform	ND		ug/L	0.380	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Chloromethane	ND		ug/L	0.460	1.00	1	03/08/06 05:23	SW846 8260B	6031695
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	03/08/06 05:23	SW846 8260B	6031695
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	03/08/06 05:23	SW846 8260B	6031695
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Dibromomethane	ND		ug/L	0.570	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	03/08/06 05:23	SW846 8260B	6031695
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	03/08/06 05:23	SW846 8260B	6031695
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	03/08/06 05:23	SW846 8260B	6031695
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	03/08/06 05:23	SW846 8260B	6031695
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	03/08/06 05:23	SW846 8260B	6031695
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Ethylbenzene	ND		ug/L	0.340	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	03/08/06 05:23	SW846 8260B	6031695
2-Hexanone	ND		ug/L	2.53	50.0	1	03/08/06 05:23	SW846 8260B	6031695
Isopropylbenzene	ND		ug/L	0.340	1.00	1	03/08/06 05:23	SW846 8260B	6031695
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Methyl tert-Butyl Ether	ND		ug/L	0.320	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Methylene Chloride	ND		ug/L	1.26	5.00	1	03/08/06 05:23	SW846 8260B	6031695

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPC0653  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 03/04/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPC0653-05 (03030602TB - Ground Water) - cont. Sampled: 03/03/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	03/08/06 05:23	SW846 8260B	6031695
Naphthalene	ND		ug/L	1.13	5.00	1	03/08/06 05:23	SW846 8260B	6031695
n-Propylbenzene	ND		ug/L	0.370	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Styrene	ND		ug/L	0.390	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Tetrachloroethene	ND		ug/L	0.390	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Toluene	ND		ug/L	0.280	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	03/08/06 05:23	SW846 8260B	6031695
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	03/08/06 05:23	SW846 8260B	6031695
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Trichloroethene	ND		ug/L	0.450	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,3,5-Trimethylbenzene	ND		ug/L	0.280	1.00	1	03/08/06 05:23	SW846 8260B	6031695
1,2,4-Trimethylbenzene	ND		ug/L	0.340	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Vinyl chloride	ND		ug/L	0.430	1.00	1	03/08/06 05:23	SW846 8260B	6031695
Xylenes, total	ND		ug/L	0.820	3.00	1	03/08/06 05:23	SW846 8260B	6031695
<i>Surr: 1,2-Dichloroethane-d4 (70-130%)</i>	83 %					1	03/08/06 05:23	SW846 8260B	6031695
<i>Surr: Dibromofluoromethane (79-122%)</i>	98 %					1	03/08/06 05:23	SW846 8260B	6031695
<i>Surr: Toluene-d8 (78-121%)</i>	97 %					1	03/08/06 05:23	SW846 8260B	6031695
<i>Surr: 4-Bromofluorobenzene (78-126%)</i>	102 %					1	03/08/06 05:23	SW846 8260B	6031695

Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Jeff Adams

Work Order: NPC0653  
Project Name: West Fenceline P-93 Project  
Project Number: SAP 340061  
Received: 03/04/06 08:00

## DATA QUALIFIERS AND DEFINITIONS

- J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- L** Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
- M7** The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).
- M8** The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).
- R2** The RPD exceeded the acceptance limit.
- RL1** Reporting limit raised due to sample matrix effects.
- RL5** Reporting limit raised due to high single peak analyte.

## METHOD MODIFICATION NOTES







# West Fenceline Data Review

**Laboratory SDG:** NPD0520

**Reviewer:** Tony Sedlacek

**Date Reviewed:** 2/11/2007

**Guidance:** USEPA Contract Laboratory National Functional Guidelines for Organic Data Review (USEPA 1999).

**Applicable Work Plan:** West Fenceline P-93 Dissolved Phase Benzene Investigation (2006)

Sample Identification #	Sample Identification #
P9302GWP43	P9302GWP59
P9311GWP41	TB04050601

## 1.0 Data Package Completeness

*Were all items delivered as specified in the QAPP and COC?*

Yes

## 2.0 Laboratory Case Narrative \ Cooler Receipt Form

*Were problems noted in the laboratory case narrative or cooler receipt form?*

No, the laboratory case narrative did not indicate any problems although samples were diluted due to high levels of target analytes. This issue is addressed further in the appropriate sections below.

The cooler receipt form did not indicate any problems.

## 3.0 Holding Times

*Were samples extracted/analyzed within QAPP limits?*

Yes

Field ID	Parameter	Analyte	Qualification
N/A			

#### 4.0 Blank Contamination

*Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?*

No

Blank ID	Parameter	Analyte	Concentration	Units
N/A				

Qualifications due to blank contamination are included in the table below. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration (10X for common laboratory contaminants) did not require qualification.

Field ID	Parameter	Analyte	New RL	Qualification
N/A				

#### 5.0 Laboratory Control Sample

*Were LCS recoveries within evaluation criteria?*

Yes

LCS ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD/RPD Criteria
N/A					

Analytical data that required qualification based on LCS data are included in the table below. Analytical data which were reported as nondetect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
N/A			

#### 6.0 Surrogate Recoveries

*Were surrogate recoveries within evaluation criteria?*

Yes

Field ID	Parameter	Surrogate	Recovery	Criteria
N/A				

Analytical data that required qualification based on surrogate data are included in the table below. Analytical data which were reported as nondetect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
N/A			

## 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

*Were MS/MSD samples reported as part of this SDG?*

No

*Were MS/MSD recoveries within evaluation criteria?*

N/A

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
N/A					

Analytical data that required qualification based on MS/MSD data are included in the table below.

Field ID	Parameter	Analyte	Qualification
N/A			

## 8.0 Laboratory Duplicate Results

*Were laboratory duplicate samples collected as part of this SDG?*

No

*Were laboratory duplicate sample RPDs within criteria?*

N/A

Field ID	Parameter	Analyte	RPD	Criteria
N/A				

Data qualified due to outlying laboratory duplicate recoveries are identified below:

Field ID	Parameter	Analyte	Qualification
N/A			

## 9.0 Field Duplicate Results

*Were field duplicate samples collected as part of this SDG?*

No

Field ID	Field Duplicate ID
N/A	

*Were field duplicates within evaluation criteria?*

N/A

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
N/A					

## 10.0 Sample Dilutions

*For samples that were diluted and nondetect, were undiluted results also reported?*

No

The following table identifies the analyses which were reported as nondetect, diluted, and an undiluted run *was not* reported:

Field ID	Parameter	Dilution Factor
P9302GWP43	VOCs	10000
P9302GWP59	VOCs	10000
P9311GWP41	VOCs	10000

## 11.0 Additional Qualifications

*Were additional qualifications applied?*

No

May 25, 2006

Client: URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn: Amelia Turnell

Work Order: NPD0520  
Project Name: West Fenceline P-93 Project  
Project Nbr: SAP 340061  
P/O Nbr: 97216640  
Date Received: 04/06/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
P9302GWP43	NPD0520-01	04/05/06 13:30
P9302GWP59	NPD0520-02	04/05/06 15:15
P9311GWP41	NPD0520-03	04/05/06 17:20
TB04050601	NPD0520-04	04/05/06 00:01

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

**Additional Laboratory Comments:**

Samples were properly preserved and received in good condition on 04/06/06. Analyses were performed within method required holding times. There were no anomalies noted at sample log-in. MS/MSD was not performed due to insufficient sample volume. All QC results were within acceptable limits. Please note: Reporting limits are elevated due to sample matrix effects. See Data Qualifiers and Definitions at end of this report for further explanation. Initial and Continuing Calibration requirements were met.

As you review this data package, please call me if you require any additional information at # 1-800-765-0980.  
Illinois Certification Number: 001177

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:



Sandra McMillin  
Senior Project Manager

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD0520  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/06/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0520-01 (P9302GWP43 - Water) Sampled: 04/05/06 13:30</b>									
<b>Volatile Organic Compounds by EPA Method 8260B</b>									
Acetone	ND	RL1	ug/L	59100	500000	10000	04/11/06 02:44	SW846 8260B	6041767
Benzene	1310000	RL1	ug/L	2900	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Bromobenzene	ND	RL1	ug/L	4700	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Bromochloromethane	ND	RL1	ug/L	4200	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Bromodichloromethane	ND	RL1	ug/L	3800	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Bromoform	ND	RL1	ug/L	5000	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Bromomethane	ND	RL1	ug/L	6000	10000	10000	04/11/06 02:44	SW846 8260B	6041767
2-Butanone	ND	RL1	ug/L	50900	500000	10000	04/11/06 02:44	SW846 8260B	6041767
sec-Butylbenzene	ND	RL1	ug/L	3800	10000	10000	04/11/06 02:44	SW846 8260B	6041767
n-Butylbenzene	ND	RL1	ug/L	4600	10000	10000	04/11/06 02:44	SW846 8260B	6041767
tert-Butylbenzene	ND	RL1	ug/L	3900	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Carbon disulfide	ND	RL1	ug/L	3100	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Carbon Tetrachloride	ND	RL1	ug/L	4800	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Chlorobenzene	ND	RL1	ug/L	3200	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Chlorodibromomethane	ND	RL1	ug/L	3600	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Chloroethane	ND	RL1	ug/L	5000	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Chloroform	ND	RL1	ug/L	3800	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Chloromethane	ND	RL1	ug/L	4600	10000	10000	04/11/06 02:44	SW846 8260B	6041767
2-Chlorotoluene	ND	RL1	ug/L	2700	10000	10000	04/11/06 02:44	SW846 8260B	6041767
4-Chlorotoluene	ND	RL1	ug/L	3700	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,2-Dibromo-3-chloropropane	ND	RL1	ug/L	16400	50000	10000	04/11/06 02:44	SW846 8260B	6041767
1,2-Dibromoethane (EDB)	ND	RL1	ug/L	3800	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Dibromomethane	ND	RL1	ug/L	5700	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,4-Dichlorobenzene	ND	RL1	ug/L	4600	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,3-Dichlorobenzene	ND	RL1	ug/L	3600	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,2-Dichlorobenzene	ND	RL1	ug/L	3700	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Dichlorodifluoromethane	ND	RL1	ug/L	4100	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,1-Dichloroethane	ND	RL1	ug/L	3200	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,2-Dichloroethane	ND	RL1	ug/L	2800	10000	10000	04/11/06 02:44	SW846 8260B	6041767
cis-1,2-Dichloroethene	ND	RL1	ug/L	3900	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,1-Dichloroethene	ND	RL1	ug/L	4500	10000	10000	04/11/06 02:44	SW846 8260B	6041767
trans-1,2-Dichloroethene	ND	RL1	ug/L	3400	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,3-Dichloropropane	ND	RL1	ug/L	6300	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,2-Dichloropropane	ND	RL1	ug/L	5000	10000	10000	04/11/06 02:44	SW846 8260B	6041767
2,2-Dichloropropane	ND	RL1	ug/L	6600	10000	10000	04/11/06 02:44	SW846 8260B	6041767
cis-1,3-Dichloropropene	ND	RL1	ug/L	4500	10000	10000	04/11/06 02:44	SW846 8260B	6041767
trans-1,3-Dichloropropene	ND	RL1	ug/L	4900	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,1-Dichloropropene	ND	RL1	ug/L	5100	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Ethylbenzene	6200	RL1, J	ug/L	3400	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Hexachlorobutadiene	ND	RL1	ug/L	6700	10000	10000	04/11/06 02:44	SW846 8260B	6041767
2-Hexanone	ND	RL1	ug/L	25300	500000	10000	04/11/06 02:44	SW846 8260B	6041767
Isopropylbenzene	ND	RL1	ug/L	3400	10000	10000	04/11/06 02:44	SW846 8260B	6041767
p-Isopropyltoluene	ND	RL1	ug/L	3400	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Methyl tert-Butyl Ether	ND	RL1	ug/L	3200	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Methylene Chloride	ND	RL1	ug/L	12600	50000	10000	04/11/06 02:44	SW846 8260B	6041767

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD0520  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/06/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0520-01 (P9302GWP43 - Water) - cont. Sampled: 04/05/06 13:30</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
4-Methyl-2-pentanone	ND	RL1	ug/L	42500	500000	10000	04/11/06 02:44	SW846 8260B	6041767
Naphthalene	ND	RL1	ug/L	11300	50000	10000	04/11/06 02:44	SW846 8260B	6041767
n-Propylbenzene	ND	RL1	ug/L	3700	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Styrene	ND	RL1	ug/L	3900	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,1,1,2-Tetrachloroethane	ND	RL1	ug/L	3700	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,1,2,2-Tetrachloroethane	ND	RL1	ug/L	4900	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Tetrachloroethene	ND	RL1	ug/L	3900	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Toluene	<b>29500</b>	RL1	ug/L	2800	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,2,3-Trichlorobenzene	ND	RL1	ug/L	5600	20000	10000	04/11/06 02:44	SW846 8260B	6041767
1,2,4-Trichlorobenzene	ND	RL1	ug/L	7900	20000	10000	04/11/06 02:44	SW846 8260B	6041767
1,1,2-Trichloroethane	ND	RL1	ug/L	4200	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,1,1-Trichloroethane	ND	RL1	ug/L	4000	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Trichloroethene	ND	RL1	ug/L	4500	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Trichlorofluoromethane	ND	RL1	ug/L	4800	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,2,3-Trichloropropane	ND	RL1	ug/L	5600	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,3,5-Trimethylbenzene	ND	RL1	ug/L	2800	10000	10000	04/11/06 02:44	SW846 8260B	6041767
1,2,4-Trimethylbenzene	<b>9800</b>	J, RL1	ug/L	3400	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Vinyl chloride	ND	RL1	ug/L	4300	10000	10000	04/11/06 02:44	SW846 8260B	6041767
Xylenes, total	<b>26400</b>	RL1, J	ug/L	8200	30000	10000	04/11/06 02:44	SW846 8260B	6041767
<i>Surr: 1,2-Dichloroethane-d4 (70-130%)</i>	85 %					1	04/11/06 02:44	SW846 8260B	6041767
<i>Surr: Dibromofluoromethane (79-122%)</i>	94 %					1	04/11/06 02:44	SW846 8260B	6041767
<i>Surr: Toluene-d8 (78-121%)</i>	98 %					1	04/11/06 02:44	SW846 8260B	6041767
<i>Surr: 4-Bromofluorobenzene (78-126%)</i>	91 %					1	04/11/06 02:44	SW846 8260B	6041767

## Sample ID: NPD0520-02 (P9302GWP59 - Water) Sampled: 04/05/06 15:15

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND	RL1	ug/L	59100	500000	10000	04/11/06 02:19	SW846 8260B	6041767
Benzene	<b>264000</b>	RL1	ug/L	2900	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Bromobenzene	ND	RL1	ug/L	4700	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Bromochloromethane	ND	RL1	ug/L	4200	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Bromodichloromethane	ND	RL1	ug/L	3800	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Bromoform	ND	RL1	ug/L	5000	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Bromomethane	ND	RL1	ug/L	6000	10000	10000	04/11/06 02:19	SW846 8260B	6041767
2-Butanone	ND	RL1	ug/L	50900	500000	10000	04/11/06 02:19	SW846 8260B	6041767
sec-Butylbenzene	ND	RL1	ug/L	3800	10000	10000	04/11/06 02:19	SW846 8260B	6041767
n-Butylbenzene	ND	RL1	ug/L	4600	10000	10000	04/11/06 02:19	SW846 8260B	6041767
tert-Butylbenzene	ND	RL1	ug/L	3900	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Carbon disulfide	ND	RL1	ug/L	3100	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Carbon Tetrachloride	ND	RL1	ug/L	4800	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Chlorobenzene	ND	RL1	ug/L	3200	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Chlorodibromomethane	ND	RL1	ug/L	3600	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Chloroethane	ND	RL1	ug/L	5000	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Chloroform	ND	RL1	ug/L	3800	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Chloromethane	ND	RL1	ug/L	4600	10000	10000	04/11/06 02:19	SW846 8260B	6041767

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD0520  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/06/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0520-02 (P9302GWP59 - Water) - cont. Sampled: 04/05/06 15:15</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Chlorotoluene	ND	RL1	ug/L	2700	10000	10000	04/11/06 02:19	SW846 8260B	6041767
4-Chlorotoluene	ND	RL1	ug/L	3700	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,2-Dibromo-3-chloropropane	ND	RL1	ug/L	16400	50000	10000	04/11/06 02:19	SW846 8260B	6041767
1,2-Dibromoethane (EDB)	ND	RL1	ug/L	3800	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Dibromomethane	ND	RL1	ug/L	5700	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,4-Dichlorobenzene	ND	RL1	ug/L	4600	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,3-Dichlorobenzene	ND	RL1	ug/L	3600	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,2-Dichlorobenzene	ND	RL1	ug/L	3700	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Dichlorodifluoromethane	ND	RL1	ug/L	4100	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,1-Dichloroethane	ND	RL1	ug/L	3200	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,2-Dichloroethane	ND	RL1	ug/L	2800	10000	10000	04/11/06 02:19	SW846 8260B	6041767
cis-1,2-Dichloroethene	ND	RL1	ug/L	3900	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,1-Dichloroethene	ND	RL1	ug/L	4500	10000	10000	04/11/06 02:19	SW846 8260B	6041767
trans-1,2-Dichloroethene	ND	RL1	ug/L	3400	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,3-Dichloropropane	ND	RL1	ug/L	6300	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,2-Dichloropropane	ND	RL1	ug/L	5000	10000	10000	04/11/06 02:19	SW846 8260B	6041767
2,2-Dichloropropane	ND	RL1	ug/L	6600	10000	10000	04/11/06 02:19	SW846 8260B	6041767
cis-1,3-Dichloropropene	ND	RL1	ug/L	4500	10000	10000	04/11/06 02:19	SW846 8260B	6041767
trans-1,3-Dichloropropene	ND	RL1	ug/L	4900	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,1-Dichloropropene	ND	RL1	ug/L	5100	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Ethylbenzene	<b>10900</b>	RL1	ug/L	3400	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Hexachlorobutadiene	ND	RL1	ug/L	6700	10000	10000	04/11/06 02:19	SW846 8260B	6041767
2-Hexanone	ND	RL1	ug/L	25300	500000	10000	04/11/06 02:19	SW846 8260B	6041767
Isopropylbenzene	ND	RL1	ug/L	3400	10000	10000	04/11/06 02:19	SW846 8260B	6041767
p-Isopropyltoluene	ND	RL1	ug/L	3400	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Methyl tert-Butyl Ether	ND	RL1	ug/L	3200	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Methylene Chloride	ND	RL1	ug/L	12600	50000	10000	04/11/06 02:19	SW846 8260B	6041767
4-Methyl-2-pentanone	ND	RL1	ug/L	42500	500000	10000	04/11/06 02:19	SW846 8260B	6041767
Naphthalene	ND	RL1	ug/L	11300	50000	10000	04/11/06 02:19	SW846 8260B	6041767
n-Propylbenzene	ND	RL1	ug/L	3700	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Styrene	ND	RL1	ug/L	3900	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,1,1,2-Tetrachloroethane	ND	RL1	ug/L	3700	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,1,2,2-Tetrachloroethane	ND	RL1	ug/L	4900	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Tetrachloroethene	ND	RL1	ug/L	3900	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Toluene	<b>56500</b>	RL1	ug/L	2800	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,2,3-Trichlorobenzene	ND	RL1	ug/L	5600	20000	10000	04/11/06 02:19	SW846 8260B	6041767
1,2,4-Trichlorobenzene	ND	RL1	ug/L	7900	20000	10000	04/11/06 02:19	SW846 8260B	6041767
1,1,2-Trichloroethane	ND	RL1	ug/L	4200	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,1,1-Trichloroethane	ND	RL1	ug/L	4000	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Trichloroethene	ND	RL1	ug/L	4500	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Trichlorofluoromethane	ND	RL1	ug/L	4800	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,2,3-Trichloropropane	ND	RL1	ug/L	5600	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,3,5-Trimethylbenzene	<b>4600</b>	RL1, J	ug/L	2800	10000	10000	04/11/06 02:19	SW846 8260B	6041767
1,2,4-Trimethylbenzene	<b>16600</b>	RL1	ug/L	3400	10000	10000	04/11/06 02:19	SW846 8260B	6041767
Vinyl chloride	ND	RL1	ug/L	4300	10000	10000	04/11/06 02:19	SW846 8260B	6041767

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD0520  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/06/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0520-02 (P9302GWP59 - Water) - cont. Sampled: 04/05/06 15:15</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Xylenes, total	48900	RL1	ug/L	8200	30000	10000	04/11/06 02:19	SW846 8260B	6041767
Surr: 1,2-Dichloroethane-d4 (70-130%)	84 %					1	04/11/06 02:19	SW846 8260B	6041767
Surr: Dibromofluoromethane (79-122%)	93 %					1	04/11/06 02:19	SW846 8260B	6041767
Surr: Toluene-d8 (78-121%)	99 %					1	04/11/06 02:19	SW846 8260B	6041767
Surr: 4-Bromofluorobenzene (78-126%)	91 %					1	04/11/06 02:19	SW846 8260B	6041767

## Sample ID: NPD0520-03 (P9311GWP41 - Water) Sampled: 04/05/06 17:20

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND	RL1	ug/L	59100	500000	10000	04/11/06 03:09	SW846 8260B	6041767
Benzene	1060000	RL1	ug/L	2900	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Bromobenzene	ND	RL1	ug/L	4700	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Bromochloromethane	ND	RL1	ug/L	4200	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Bromodichloromethane	ND	RL1	ug/L	3800	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Bromoform	ND	RL1	ug/L	5000	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Bromomethane	ND	RL1	ug/L	6000	10000	10000	04/11/06 03:09	SW846 8260B	6041767
2-Butanone	ND	RL1	ug/L	50900	500000	10000	04/11/06 03:09	SW846 8260B	6041767
sec-Butylbenzene	ND	RL1	ug/L	3800	10000	10000	04/11/06 03:09	SW846 8260B	6041767
n-Butylbenzene	ND	RL1	ug/L	4600	10000	10000	04/11/06 03:09	SW846 8260B	6041767
tert-Butylbenzene	ND	RL1	ug/L	3900	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Carbon disulfide	ND	RL1	ug/L	3100	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Carbon Tetrachloride	ND	RL1	ug/L	4800	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Chlorobenzene	ND	RL1	ug/L	3200	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Chlorodibromomethane	ND	RL1	ug/L	3600	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Chloroethane	ND	RL1	ug/L	5000	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Chloroform	ND	RL1	ug/L	3800	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Chloromethane	ND	RL1	ug/L	4600	10000	10000	04/11/06 03:09	SW846 8260B	6041767
2-Chlorotoluene	ND	RL1	ug/L	2700	10000	10000	04/11/06 03:09	SW846 8260B	6041767
4-Chlorotoluene	ND	RL1	ug/L	3700	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,2-Dibromo-3-chloropropane	ND	RL1	ug/L	16400	50000	10000	04/11/06 03:09	SW846 8260B	6041767
1,2-Dibromoethane (EDB)	ND	RL1	ug/L	3800	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Dibromomethane	ND	RL1	ug/L	5700	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,4-Dichlorobenzene	ND	RL1	ug/L	4600	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,3-Dichlorobenzene	ND	RL1	ug/L	3600	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,2-Dichlorobenzene	ND	RL1	ug/L	3700	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Dichlorodifluoromethane	ND	RL1	ug/L	4100	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,1-Dichloroethane	ND	RL1	ug/L	3200	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,2-Dichloroethane	ND	RL1	ug/L	2800	10000	10000	04/11/06 03:09	SW846 8260B	6041767
cis-1,2-Dichloroethene	ND	RL1	ug/L	3900	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,1-Dichloroethene	ND	RL1	ug/L	4500	10000	10000	04/11/06 03:09	SW846 8260B	6041767
trans-1,2-Dichloroethene	ND	RL1	ug/L	3400	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,3-Dichloropropane	ND	RL1	ug/L	6300	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,2-Dichloropropane	ND	RL1	ug/L	5000	10000	10000	04/11/06 03:09	SW846 8260B	6041767
2,2-Dichloropropane	ND	RL1	ug/L	6600	10000	10000	04/11/06 03:09	SW846 8260B	6041767
cis-1,3-Dichloropropene	ND	RL1	ug/L	4500	10000	10000	04/11/06 03:09	SW846 8260B	6041767

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD0520  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/06/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0520-03 (P9311GWP41 - Water) - cont. Sampled: 04/05/06 17:20</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
trans-1,3-Dichloropropene	ND	RL1	ug/L	4900	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,1-Dichloropropene	ND	RL1	ug/L	5100	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Ethylbenzene	ND	RL1	ug/L	3400	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Hexachlorobutadiene	ND	RL1	ug/L	6700	10000	10000	04/11/06 03:09	SW846 8260B	6041767
2-Hexanone	ND	RL1	ug/L	25300	500000	10000	04/11/06 03:09	SW846 8260B	6041767
Isopropylbenzene	ND	RL1	ug/L	3400	10000	10000	04/11/06 03:09	SW846 8260B	6041767
p-Isopropyltoluene	ND	RL1	ug/L	3400	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Methyl tert-Butyl Ether	ND	RL1	ug/L	3200	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Methylene Chloride	ND	RL1	ug/L	12600	50000	10000	04/11/06 03:09	SW846 8260B	6041767
4-Methyl-2-pentanone	ND	RL1	ug/L	42500	500000	10000	04/11/06 03:09	SW846 8260B	6041767
Naphthalene	ND	RL1	ug/L	11300	50000	10000	04/11/06 03:09	SW846 8260B	6041767
n-Propylbenzene	ND	RL1	ug/L	3700	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Styrene	ND	RL1	ug/L	3900	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,1,1,2-Tetrachloroethane	ND	RL1	ug/L	3700	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,1,2,2-Tetrachloroethane	ND	RL1	ug/L	4900	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Tetrachloroethene	ND	RL1	ug/L	3900	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Toluene	<b>17500</b>	RL1	ug/L	2800	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,2,3-Trichlorobenzene	ND	RL1	ug/L	5600	20000	10000	04/11/06 03:09	SW846 8260B	6041767
1,2,4-Trichlorobenzene	ND	RL1	ug/L	7900	20000	10000	04/11/06 03:09	SW846 8260B	6041767
1,1,2-Trichloroethane	ND	RL1	ug/L	4200	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,1,1-Trichloroethane	ND	RL1	ug/L	4000	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Trichloroethene	ND	RL1	ug/L	4500	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Trichlorofluoromethane	ND	RL1	ug/L	4800	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,2,3-Trichloropropane	ND	RL1	ug/L	5600	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,3,5-Trimethylbenzene	ND	RL1	ug/L	2800	10000	10000	04/11/06 03:09	SW846 8260B	6041767
1,2,4-Trimethylbenzene	<b>6400</b>	RL1, J	ug/L	3400	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Vinyl chloride	ND	RL1	ug/L	4300	10000	10000	04/11/06 03:09	SW846 8260B	6041767
Xylenes, total	<b>16500</b>	RL1, J	ug/L	8200	30000	10000	04/11/06 03:09	SW846 8260B	6041767
Surr: 1,2-Dichloroethane-d4 (70-130%)	85 %					1	04/11/06 03:09	SW846 8260B	6041767
Surr: Dibromofluoromethane (79-122%)	93 %					1	04/11/06 03:09	SW846 8260B	6041767
Surr: Toluene-d8 (78-121%)	99 %					1	04/11/06 03:09	SW846 8260B	6041767
Surr: 4-Bromofluorobenzene (78-126%)	91 %					1	04/11/06 03:09	SW846 8260B	6041767

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD0520  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/06/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0520-04 (TB04050601 - Water) Sampled: 04/05/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND		ug/L	5.91	50.0	1	04/07/06 01:49	SW846 8260B	6041267
Benzene	ND		ug/L	0.290	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Bromobenzene	ND		ug/L	0.470	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Bromoform	ND		ug/L	0.500	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Bromomethane	ND		ug/L	0.600	1.00	1	04/07/06 01:49	SW846 8260B	6041267
2-Butanone	ND		ug/L	5.09	50.0	1	04/07/06 01:49	SW846 8260B	6041267
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/07/06 01:49	SW846 8260B	6041267
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/07/06 01:49	SW846 8260B	6041267
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Chloroethane	ND		ug/L	0.500	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Chloroform	ND		ug/L	0.380	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Chloromethane	ND		ug/L	0.460	1.00	1	04/07/06 01:49	SW846 8260B	6041267
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/07/06 01:49	SW846 8260B	6041267
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/07/06 01:49	SW846 8260B	6041267
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Dibromomethane	ND		ug/L	0.570	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/07/06 01:49	SW846 8260B	6041267
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/07/06 01:49	SW846 8260B	6041267
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/07/06 01:49	SW846 8260B	6041267
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/07/06 01:49	SW846 8260B	6041267
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/07/06 01:49	SW846 8260B	6041267
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Ethylbenzene	ND		ug/L	0.340	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	04/07/06 01:49	SW846 8260B	6041267
2-Hexanone	ND		ug/L	2.53	50.0	1	04/07/06 01:49	SW846 8260B	6041267
Isopropylbenzene	ND		ug/L	0.340	1.00	1	04/07/06 01:49	SW846 8260B	6041267
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Methyl tert-Butyl Ether	ND		ug/L	0.320	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Methylene Chloride	ND		ug/L	1.26	5.00	1	04/07/06 01:49	SW846 8260B	6041267

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD0520  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/06/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0520-04 (TB04050601 - Water) - cont. Sampled: 04/05/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	04/07/06 01:49	SW846 8260B	6041267
Naphthalene	ND		ug/L	1.13	5.00	1	04/07/06 01:49	SW846 8260B	6041267
n-Propylbenzene	ND		ug/L	0.370	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Styrene	ND		ug/L	0.390	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Tetrachloroethene	ND		ug/L	0.390	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Toluene	ND		ug/L	0.280	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	04/07/06 01:49	SW846 8260B	6041267
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/07/06 01:49	SW846 8260B	6041267
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Trichloroethene	ND		ug/L	0.450	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,3,5-Trimethylbenzene	ND		ug/L	0.280	1.00	1	04/07/06 01:49	SW846 8260B	6041267
1,2,4-Trimethylbenzene	ND		ug/L	0.340	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Vinyl chloride	ND		ug/L	0.430	1.00	1	04/07/06 01:49	SW846 8260B	6041267
Xylenes, total	ND		ug/L	0.820	3.00	1	04/07/06 01:49	SW846 8260B	6041267
Surr: 1,2-Dichloroethane-d4 (70-130%)	111 %					1	04/07/06 01:49	SW846 8260B	6041267
Surr: Dibromofluoromethane (79-122%)	104 %					1	04/07/06 01:49	SW846 8260B	6041267
Surr: Toluene-d8 (78-121%)	95 %					1	04/07/06 01:49	SW846 8260B	6041267
Surr: 4-Bromofluorobenzene (78-126%)	121 %					1	04/07/06 01:49	SW846 8260B	6041267

Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Amelia Turnell

Work Order: NPD0520  
Project Name: West Fenceline P-93 Project  
Project Number: SAP 340061  
Received: 04/06/06 08:00

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## DATA QUALIFIERS AND DEFINITIONS

- J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- RL1** Reporting limit raised due to sample matrix effects.

## METHOD MODIFICATION NOTES





# West Fenceline Data Review

**Laboratory SDG:** NPD0794

**Reviewer:** Tony Sedlacek

**Date Reviewed:** 2/12/2007

**Guidance:** USEPA Contract Laboratory National Functional Guidelines for Organic Data Review (USEPA 1999).

**Applicable Work Plan:** West Fenceline P-93 Dissolved Phase Benzene Investigation (2006)

Sample Identification #	Sample Identification #
P9311GWP59	P9311GWP59D
TB04060602	P9303GWP40

## 1.0 Data Package Completeness

*Were all items delivered as specified in the QAPP and COC?*

Yes

## 2.0 Laboratory Case Narrative \ Cooler Receipt Form

*Were problems noted in the laboratory case narrative or cooler receipt form?*

No, the laboratory case narrative indicated that surrogate recovery for 1,2-dichloroethane-d<sub>4</sub> was outside evaluation criteria. Although, not indicated in the laboratory case narrative several analytes were detected in the method blanks, and samples were evaluated and qualified using professional judgment. These issues are addressed further in the appropriate sections below.

The cooler receipt form did not indicate any problems.

## 3.0 Holding Times

*Were samples extracted/analyzed within QAPP limits?*

Yes

Field ID	Parameter	Analyte	Qualification
N/A			

#### 4.0 Blank Contamination

*Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?*

Yes

Blank ID	Parameter	Analyte	Concentration	Units
6041664-BLK1	VOCs	Hexachlorobutadiene	0.860	µg/L
6041664-BLK1	VOCs	Naphthalene	3.22	µg/L
6041664-BLK1	VOCs	1,2,3-Trichlorobenzene	1.84	µg/L
6041664-BLK2	VOCs	Naphthalene	3.66	µg/L
6041664-BLK2	VOCs	1,2,3-Trichlorobenzene	1.72	µg/L
6042192-BLK1	VOCs	Naphthalene	3.24	µg/L
6042192-BLK1	VOCs	1,2,3-Trichlorobenzene	1.69	µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration (10X for common laboratory contaminants) did not require qualification.

Field ID	Parameter	Analyte	New RL	Qualification
N/A				

#### 5.0 Laboratory Control Sample

*Were LCS recoveries within evaluation criteria?*

Yes

LCS ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD/RPD Criteria
N/A					

Analytical data that required qualification based on LCS data are included in the table below. Analytical data which were reported as nondetect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
N/A			

## 6.0 Surrogate Recoveries

*Were surrogate recoveries within evaluation criteria?*

No

Field ID	Parameter	Surrogate	Recovery	Criteria
P9303GWP40	VOCs	1,2-Dichloroethane-d <sub>4</sub>	29	70-130

Analytical data that required qualification based on surrogate data are included in the table below. Analytical data which were reported as nondetect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Sample P9303GWP40 was analyzed undiluted as part of batch 6041664 and also at a dilution due to high levels of target analytes. Surrogate recoveries in the diluted sample were within evaluation criteria; therefore, no qualification of data was required.

Field ID	Parameter	Analyte	Qualification
P9303GWP40	VOCs	All detects/nondetects	J/UJ

## 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

*Were MS/MSD samples reported as part of this SDG?*

No

*Were MS/MSD recoveries within evaluation criteria?*

N/A

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
N/A					

Analytical data that required qualification based on MS/MSD data are included in the table below.

Field ID	Parameter	Analyte	Qualification
N/A			

## 8.0 Laboratory Duplicate Results

*Were laboratory duplicate samples collected as part of this SDG?*

No

Were laboratory duplicate sample RPDs within criteria?

N/A

Field ID	Parameter	Analyte	RPD	Criteria
N/A				

Data qualified due to outlying laboratory duplicate recoveries are identified below:

Field ID	Parameter	Analyte	Qualification
N/A			

## 9.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
P9311GWP59	P9311GWP59D

Were field duplicates within evaluation criteria?

Yes

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
N/A					

## 10.0 Sample Dilutions

For samples that were diluted and nondetect, were undiluted results also reported?

Yes

The following table identifies the analyses which were reported as nondetect, diluted, and an undiluted run *was not* reported:

Field ID	Parameter	Dilution Factor
N/A		

## 11.0 Additional Qualifications

*Were additional qualifications applied?*

Yes

Professional judgment was used to qualify the common laboratory contaminant 2-butanone reported at concentrations less than two times (2X) the RL.

Field ID	Analyte	New RL	Qualification	Comments
P9311GWP59	2-Butanone	-	U	Professional Judgment

May 12, 2006

Client: URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn: Herb Hand

Work Order: NPD0794  
Project Name: West Fenceline P-93 Project  
Project Nbr: SAP 340061  
P/O Nbr: 97216634  
Date Received: 04/07/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
P9311GWP59	NPD0794-01	04/06/06 09:30
P9311GWP59D	NPD0794-02	04/06/06 09:30
TB04060602	NPD0794-03	04/06/06 00:01
P9303GWP40	NPD0794-04	04/06/06 16:10

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

Additional Laboratory Comments:

Samples were properly preserved and received in good condition on 04/07/06. Analyses were performed within method required holding times. There were no anomalies noted at sample log-in. Surrogate % recovery was outside QC criteria in low level run due to sample matrix; however, diluted run had surrogates within QC limits. All QC results were within acceptable limits. MS/MSD was not performed due to insufficient sample volume. Initial and Continuing Calibration requirements were met.

As you review this data package, please call me if you require any additional information at # 1-800-765-0980.  
Illinois Certification Number: 001177

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:



Sandra McMillin  
Senior Project Manager

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Herb Hand

Work Order: NPD0794  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/07/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0794-01 (P9311GWP59 - Water) Sampled: 04/06/06 09:30</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND		ug/L	5.91	50.0	1	04/10/06 12:01	SW846 8260B	6041664
Benzene	11800		ug/L	29.0	100	100	04/11/06 11:49	SW846 8260B	6042192
Bromobenzene	ND		ug/L	0.470	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Bromoform	ND		ug/L	0.500	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Bromomethane	ND		ug/L	0.600	1.00	1	04/10/06 12:01	SW846 8260B	6041664
2-Butanone	ND 37.6	+	ug/L	5.09	50.0	1	04/10/06 12:01	SW846 8260B	6041664
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/10/06 12:01	SW846 8260B	6041664
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/10/06 12:01	SW846 8260B	6041664
tert-Butylbenzene	4.18		ug/L	0.390	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Chloroethane	ND		ug/L	0.500	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Chloroform	ND		ug/L	0.380	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Chloromethane	ND		ug/L	0.460	1.00	1	04/10/06 12:01	SW846 8260B	6041664
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/10/06 12:01	SW846 8260B	6041664
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/10/06 12:01	SW846 8260B	6041664
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Dibromomethane	ND		ug/L	0.570	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/10/06 12:01	SW846 8260B	6041664
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/10/06 12:01	SW846 8260B	6041664
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/10/06 12:01	SW846 8260B	6041664
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/10/06 12:01	SW846 8260B	6041664
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/10/06 12:01	SW846 8260B	6041664
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Ethylbenzene	92.6		ug/L	0.340	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	04/10/06 12:01	SW846 8260B	6041664
2-Hexanone	ND		ug/L	2.53	50.0	1	04/10/06 12:01	SW846 8260B	6041664
Isopropylbenzene	6.18		ug/L	0.340	1.00	1	04/10/06 12:01	SW846 8260B	6041664
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Methyl tert-Butyl Ether	4.49		ug/L	0.320	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Methylene Chloride	ND		ug/L	1.26	5.00	1	04/10/06 12:01	SW846 8260B	6041664

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Herb Hand

Work Order: NPD0794  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/07/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
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**Sample ID: NPD0794-01 (P9311GWP59 - Water) - cont. Sampled: 04/06/06 09:30**

Volatile Organic Compounds by EPA Method 8260B - cont.

4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	04/10/06 12:01	SW846 8260B	6041664
Naphthalene	20.8		ug/L	1.13	5.00	1	04/10/06 12:01	SW846 8260B	6041664
n-Propylbenzene	11.6		ug/L	0.370	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Styrene	ND		ug/L	0.390	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Tetrachloroethene	ND		ug/L	0.390	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Toluene	182		ug/L	0.280	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	04/10/06 12:01	SW846 8260B	6041664
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/10/06 12:01	SW846 8260B	6041664
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Trichloroethene	ND		ug/L	0.450	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,3,5-Trimethylbenzene	17.2		ug/L	0.280	1.00	1	04/10/06 12:01	SW846 8260B	6041664
1,2,4-Trimethylbenzene	52.6		ug/L	0.340	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Vinyl chloride	ND		ug/L	0.430	1.00	1	04/10/06 12:01	SW846 8260B	6041664
Xylenes, total	295		ug/L	0.820	3.00	1	04/10/06 12:01	SW846 8260B	6041664
Surr: 1,2-Dichloroethane-d4 (70-130%)	100 %					1	04/10/06 12:01	SW846 8260B	6041664
Surr: 1,2-Dichloroethane-d4 (70-130%)	99 %					1	04/11/06 11:49	SW846 8260B	6042192
Surr: Dibromofluoromethane (79-122%)	92 %					1	04/10/06 12:01	SW846 8260B	6041664
Surr: Dibromofluoromethane (79-122%)	97 %					1	04/11/06 11:49	SW846 8260B	6042192
Surr: Toluene-d8 (78-121%)	97 %					1	04/10/06 12:01	SW846 8260B	6041664
Surr: Toluene-d8 (78-121%)	95 %					1	04/11/06 11:49	SW846 8260B	6042192
Surr: 4-Bromofluorobenzene (78-126%)	108 %					1	04/10/06 12:01	SW846 8260B	6041664
Surr: 4-Bromofluorobenzene (78-126%)	101 %					1	04/11/06 11:49	SW846 8260B	6042192

**Sample ID: NPD0794-02 (P9311GWP59D - Water) Sampled: 04/06/06 09:30**

Volatile Organic Compounds by EPA Method 8260B

Acetone	ND		ug/L	5.91	50.0	1	04/10/06 12:30	SW846 8260B	6041664
Benzene	13100		ug/L	29.0	100	100	04/11/06 12:18	SW846 8260B	6042192
Bromobenzene	ND		ug/L	0.470	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Bromoform	ND		ug/L	0.500	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Bromomethane	ND		ug/L	0.600	1.00	1	04/10/06 12:30	SW846 8260B	6041664
2-Butanone	ND		ug/L	5.09	50.0	1	04/10/06 12:30	SW846 8260B	6041664
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/10/06 12:30	SW846 8260B	6041664
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/10/06 12:30	SW846 8260B	6041664
tert-Butylbenzene	4.20		ug/L	0.390	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/10/06 12:30	SW846 8260B	6041664

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Herb Hand

Work Order: NPD0794  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/07/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0794-02 (P9311GWP59D - Water) - cont. Sampled: 04/06/06 09:30</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Chloroethane	ND		ug/L	0.500	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Chloroform	ND		ug/L	0.380	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Chloromethane	ND		ug/L	0.460	1.00	1	04/10/06 12:30	SW846 8260B	6041664
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/10/06 12:30	SW846 8260B	6041664
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/10/06 12:30	SW846 8260B	6041664
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Dibromomethane	ND		ug/L	0.570	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/10/06 12:30	SW846 8260B	6041664
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/10/06 12:30	SW846 8260B	6041664
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/10/06 12:30	SW846 8260B	6041664
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/10/06 12:30	SW846 8260B	6041664
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/10/06 12:30	SW846 8260B	6041664
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Ethylbenzene	87.6		ug/L	0.340	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	04/10/06 12:30	SW846 8260B	6041664
2-Hexanone	ND		ug/L	2.53	50.0	1	04/10/06 12:30	SW846 8260B	6041664
Isopropylbenzene	6.08		ug/L	0.340	1.00	1	04/10/06 12:30	SW846 8260B	6041664
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Methyl tert-Butyl Ether	4.64		ug/L	0.320	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Methylene Chloride	ND		ug/L	1.26	5.00	1	04/10/06 12:30	SW846 8260B	6041664
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	04/10/06 12:30	SW846 8260B	6041664
Naphthalene	21.4		ug/L	1.13	5.00	1	04/10/06 12:30	SW846 8260B	6041664
n-Propylbenzene	11.2		ug/L	0.370	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Styrene	ND		ug/L	0.390	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Tetrachloroethene	ND		ug/L	0.390	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Toluene	183		ug/L	0.280	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	04/10/06 12:30	SW846 8260B	6041664
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/10/06 12:30	SW846 8260B	6041664
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Trichloroethene	ND		ug/L	0.450	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/10/06 12:30	SW846 8260B	6041664

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Herb Hand

Work Order: NPD0794  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/07/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0794-02 (P9311GWP59D - Water) - cont. Sampled: 04/06/06 09:30</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,3,5-Trimethylbenzene	16.9		ug/L	0.280	1.00	1	04/10/06 12:30	SW846 8260B	6041664
1,2,4-Trimethylbenzene	50.7		ug/L	0.340	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Vinyl chloride	ND		ug/L	0.430	1.00	1	04/10/06 12:30	SW846 8260B	6041664
Xylenes, total	278		ug/L	0.820	3.00	1	04/10/06 12:30	SW846 8260B	6041664
<i>Surr: 1,2-Dichloroethane-d4 (70-130%)</i>	99 %					1	04/10/06 12:30	SW846 8260B	6041664
<i>Surr: 1,2-Dichloroethane-d4 (70-130%)</i>	100 %					1	04/11/06 12:18	SW846 8260B	6042192
<i>Surr: Dibromofluoromethane (79-122%)</i>	92 %					1	04/10/06 12:30	SW846 8260B	6041664
<i>Surr: Dibromofluoromethane (79-122%)</i>	122 %					1	04/11/06 12:18	SW846 8260B	6042192
<i>Surr: Toluene-d8 (78-121%)</i>	97 %					1	04/10/06 12:30	SW846 8260B	6041664
<i>Surr: Toluene-d8 (78-121%)</i>	96 %					1	04/11/06 12:18	SW846 8260B	6042192
<i>Surr: 4-Bromofluorobenzene (78-126%)</i>	108 %					1	04/10/06 12:30	SW846 8260B	6041664
<i>Surr: 4-Bromofluorobenzene (78-126%)</i>	102 %					1	04/11/06 12:18	SW846 8260B	6042192

## Sample ID: NPD0794-03 (TB04060602 - Water) Sampled: 04/06/06 00:01

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND		ug/L	5.91	50.0	1	04/09/06 21:56	SW846 8260B	6041664
Benzene	ND		ug/L	0.290	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Bromobenzene	ND		ug/L	0.470	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Bromoform	ND		ug/L	0.500	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Bromomethane	ND		ug/L	0.600	1.00	1	04/09/06 21:56	SW846 8260B	6041664
2-Butanone	ND		ug/L	5.09	50.0	1	04/09/06 21:56	SW846 8260B	6041664
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/09/06 21:56	SW846 8260B	6041664
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/09/06 21:56	SW846 8260B	6041664
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Chloroethane	ND		ug/L	0.500	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Chloroform	ND		ug/L	0.380	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Chloromethane	ND		ug/L	0.460	1.00	1	04/09/06 21:56	SW846 8260B	6041664
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/09/06 21:56	SW846 8260B	6041664
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/09/06 21:56	SW846 8260B	6041664
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Dibromomethane	ND		ug/L	0.570	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/09/06 21:56	SW846 8260B	6041664

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Herb Hand

Work Order: NPD0794  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/07/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0794-03 (TB04060602 - Water) - cont. Sampled: 04/06/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/09/06 21:56	SW846 8260B	6041664
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/09/06 21:56	SW846 8260B	6041664
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/09/06 21:56	SW846 8260B	6041664
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/09/06 21:56	SW846 8260B	6041664
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/09/06 21:56	SW846 8260B	6041664
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Ethylbenzene	ND		ug/L	0.340	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	04/09/06 21:56	SW846 8260B	6041664
2-Hexanone	ND		ug/L	2.53	50.0	1	04/09/06 21:56	SW846 8260B	6041664
Isopropylbenzene	ND		ug/L	0.340	1.00	1	04/09/06 21:56	SW846 8260B	6041664
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Methyl tert-Butyl Ether	ND		ug/L	0.320	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Methylene Chloride	ND		ug/L	1.26	5.00	1	04/09/06 21:56	SW846 8260B	6041664
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	04/09/06 21:56	SW846 8260B	6041664
Naphthalene	ND		ug/L	1.13	5.00	1	04/09/06 21:56	SW846 8260B	6041664
n-Propylbenzene	ND		ug/L	0.370	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Styrene	ND		ug/L	0.390	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Tetrachloroethene	ND		ug/L	0.390	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Toluene	ND		ug/L	0.280	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	04/09/06 21:56	SW846 8260B	6041664
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/09/06 21:56	SW846 8260B	6041664
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Trichloroethene	ND		ug/L	0.450	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,3,5-Trimethylbenzene	ND		ug/L	0.280	1.00	1	04/09/06 21:56	SW846 8260B	6041664
1,2,4-Trimethylbenzene	ND		ug/L	0.340	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Vinyl chloride	ND		ug/L	0.430	1.00	1	04/09/06 21:56	SW846 8260B	6041664
Xylenes, total	ND		ug/L	0.820	3.00	1	04/09/06 21:56	SW846 8260B	6041664
Surr: 1,2-Dichloroethane-d4 (70-130%)	107 %					1	04/09/06 21:56	SW846 8260B	6041664
Surr: Dibromofluoromethane (79-122%)	110 %					1	04/09/06 21:56	SW846 8260B	6041664
Surr: Toluene-d8 (78-121%)	96 %					1	04/09/06 21:56	SW846 8260B	6041664
Surr: 4-Bromofluorobenzene (78-126%)	106 %					1	04/09/06 21:56	SW846 8260B	6041664

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Herb Hand

Work Order: NPD0794  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/07/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0794-04 (P9303GWP40 - Water) Sampled: 04/06/06 16:10</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND	— "uJ"	ug/L	5.91	50.0	1	04/10/06 06:41	SW846 8260B	6041664
Benzene	348000		ug/L	1450	5000	5000	04/11/06 10:51	SW846 8260B	6042192
Bromobenzene	ND	— "uJ"	ug/L	0.470	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Bromoform	ND		ug/L	0.500	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Bromomethane	ND		ug/L	0.600	1.00	1	04/10/06 06:41	SW846 8260B	6041664
2-Butanone	ND		ug/L	5.09	50.0	1	04/10/06 06:41	SW846 8260B	6041664
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/10/06 06:41	SW846 8260B	6041664
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/10/06 06:41	SW846 8260B	6041664
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Chloroethane	ND		ug/L	0.500	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Chloroform	ND		ug/L	0.380	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Chloromethane	ND		ug/L	0.460	1.00	1	04/10/06 06:41	SW846 8260B	6041664
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/10/06 06:41	SW846 8260B	6041664
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/10/06 06:41	SW846 8260B	6041664
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Dibromomethane	ND		ug/L	0.570	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/10/06 06:41	SW846 8260B	6041664
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/10/06 06:41	SW846 8260B	6041664
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/10/06 06:41	SW846 8260B	6041664
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/10/06 06:41	SW846 8260B	6041664
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/10/06 06:41	SW846 8260B	6041664
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,1-Dichloropropene	ND	— "uJ"	ug/L	0.510	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Ethylbenzene	534		ug/L	34.0	100	100	04/11/06 10:22	SW846 8260B	6042192
Hexachlorobutadiene	ND	— "uJ"	ug/L	0.670	1.00	1	04/10/06 06:41	SW846 8260B	6041664
2-Hexanone	ND	— "uJ"	ug/L	2.53	50.0	1	04/10/06 06:41	SW846 8260B	6041664
Isopropylbenzene	15.4	— "J"	ug/L	0.340	1.00	1	04/10/06 06:41	SW846 8260B	6041664
p-Isopropyltoluene	ND	— "uJ"	ug/L	0.340	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Methyl tert-Butyl Ether	36.0	— "J"	ug/L	0.320	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Methylene Chloride	ND	— "uJ"	ug/L	1.26	5.00	1	04/10/06 06:41	SW846 8260B	6041664

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Herb Hand

Work Order: NPD0794  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/07/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0794-04 (P9303GWP40 - Water) - cont. Sampled: 04/06/06 16:10</b>									
Volatile Organic Compounds by EPA Method 8260B, - cont.									
4-Methyl-2-pentanone	ND	- "uJ"	ug/L	4.25	50.0	1	04/10/06 06:41	SW846 8260B	6041664
Naphthalene	70.2	- "J"	ug/L	1.13	5.00	1	04/10/06 06:41	SW846 8260B	6041664
n-Propylbenzene	26.1	- "J"	ug/L	0.370	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Styrene	ND	- "uJ"	ug/L	0.390	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Tetrachloroethene	ND	- "uJ"	ug/L	0.390	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Toluene	123	- "J"	ug/L	0.280	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,2,3-Trichlorobenzene	ND	- "uJ"	ug/L	0.560	2.00	1	04/10/06 06:41	SW846 8260B	6041664
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/10/06 06:41	SW846 8260B	6041664
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Trichloroethene	ND		ug/L	0.450	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,3,5-Trimethylbenzene	ND	- "uJ"	ug/L	0.280	1.00	1	04/10/06 06:41	SW846 8260B	6041664
1,2,4-Trimethylbenzene	129	- "J"	ug/L	0.340	1.00	1	04/10/06 06:41	SW846 8260B	6041664
Vinyl chloride	ND	- "uJ"	ug/L	0.430	1.00	1	04/10/06 06:41	SW846 8260B	6041664
o-Xylene	470		ug/L	32.0	100	100	04/11/06 10:22	SW846 8260B	6042192
m,p-Xylene	1140		ug/L	50.0	100	100	04/11/06 10:22	SW846 8260B	6042192
Xylenes, total	1610		ug/L	82.0	300	100	04/11/06 10:22	SW846 8260B	6042192
Surr: 1,2-Dichloroethane-d4 (70-130%)	29 %	Z				1	04/10/06 06:41	SW846 8260B	6041664
Surr: 1,2-Dichloroethane-d4 (70-130%)	95 %					1	04/11/06 10:22	SW846 8260B	6042192
Surr: Dibromofluoromethane (79-122%)	79 %					1	04/10/06 06:41	SW846 8260B	6041664
Surr: Dibromofluoromethane (79-122%)	91 %					1	04/11/06 10:22	SW846 8260B	6042192
Surr: Toluene-d8 (78-121%)	94 %					1	04/10/06 06:41	SW846 8260B	6041664
Surr: Toluene-d8 (78-121%)	97 %					1	04/11/06 10:22	SW846 8260B	6042192
Surr: 4-Bromofluorobenzene (78-126%)	125 %					1	04/10/06 06:41	SW846 8260B	6041664
Surr: 4-Bromofluorobenzene (78-126%)	105 %					1	04/11/06 10:22	SW846 8260B	6042192

Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Herb Hand

Work Order: NPD0794  
Project Name: West Fenceline P-93 Project  
Project Number: SAP 340061  
Received: 04/07/06 08:00

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## DATA QUALIFIERS AND DEFINITIONS

- J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- MNRI** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike.
- Z** Due to sample matrix effects, the surrogate recovery was below the acceptance limits.

## METHOD MODIFICATION NOTES

**TEST AMERICA**  2690 FOSTER CREIGHTON, NASHVILLE, TN 37204 PHONE 800-765-0980 FAX 800-833-7036  
 7602 Commerce Drive, Watertown, WI 53094 Phone 800-833-7036  
 704 Enterprise Drive, Cedar Falls, IA 50613 Phone 319-277-2401  
 14500 Trinity Blvd., Suite 106, Fort Worth, TX 76155 Phone 817-571-6800  
 3601 South Dixie Drive, Dayton, OH 45439 Phone 800-572-9839  
 1380 Busch Parkway, Buffalo Grove, IL 60089 Phone 847-808-7766  
 1110 Elkton Drive, Suite A, Colorado Springs, CO 80907 Phone 719-593-9911  
 Other \_\_\_\_\_

**Shell Oil Products US Chain Of Custody Record**

**SOP US Project Manager to be Invoiced:**  
 ENVIRONMENTAL SERVICES  
 TECHNICAL SERVICES  
 RMT HOUSTON  
 BILL CONSULTANT

NAME OF PM TO BILL: Herb Hand (SOPUS)  
 NAME OF TR TO BILL:  SHELL RATES  STATE REIMBURSEMENT RATES

INCIDENT # (SEE ONE'S)  
 9 7 2 1 6 6 3 4

DATE: 4/6/06  
 PAGE: 1 of 1

Invoice with \_\_\_\_\_ sampling events for this site, following date: \_\_\_\_\_

PROJECT CONTACT (Report to): **West Fence Line P-93**  
 (Copy to): \_\_\_\_\_  
 PROJECT CONTACT (Report to): Herb Hand (SOPUS) Jeff Adams (URS)  
 SAMPLER NAME(S) (Print): **Michael Corbett**

CONSULTANT PROJECT NO.: **West Fence Line P-93**

**REQUESTED ANALYSIS** If more than one method is listed, circle one

Field Sample Identification	DATE	TIME	MATRIX	HCL	HN03	H2SO4	NONE	OTHER	NO. OF CONT.	Level 4 QC Deliverables	Container PID Readings or Laboratory Notes
P9311GWP59	4/6/06	0930	water	X					3	X	NPD 0794-01
P9311GWP59 D	4/6/06	0930	water	X					3	X	-02
TB 04060602	4/6/06		water	X					1	X	-03
P9303GWP40	4/6/06	1610	water	X					3	X	-04

**SPECIAL INSTRUCTIONS OR NOTES:**  
 Level 4 QC Deliverables Temp Blank Included

TEMPERATURE ON RECEIPT C

TURNAROUND TIME (CALENDAR DAYS):  
 STANDARD (10 DAY)  5 DAYS  3 DAYS  2 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND

CONSULTANT COMPANY: URS Corporation  
 ADDRESS: 1001 Highlands Plaza Drive West; Suite 300  
 CITY: St. Louis, MO 63110  
 TELEPHONE: (Office) 314-429-0100 (Office) 431-428-0462 (Trailer) 618-284-1512  
 FAX: \_\_\_\_\_ E-MAIL: Jeff Adams Thomas\_Adams@urscorp.com

Relinquished by: (Signature) *Michael Corbett* 4/6/06 1730  
 Received by: (Signature) \_\_\_\_\_  
 Relinquished by: (Signature) \_\_\_\_\_  
 Received by: (Signature) \_\_\_\_\_  
 Relinquished by: (Signature) \_\_\_\_\_  
 Received by: (Signature) \_\_\_\_\_

Date: 4/7/06 Time: 8:00



# West Fenceline Data Review

**Laboratory SDG:** NPD0934

**Reviewer:** Tony Sedlacek

**Date Reviewed:** 2/12/2007

**Guidance:** USEPA Contract Laboratory National Functional Guidelines for Organic Data Review (USEPA 1999).

**Applicable Work Plan:** West Fenceline P-93 Dissolved Phase Benzene Investigation (2006)

Sample Identification #	Sample Identification #
P9303GWP59	P9305GWP45
P9305GWP58	TB04070603
P9306GWP50EB	P9306GWP50

## 1.0 Data Package Completeness

*Were all items delivered as specified in the QAPP and COC?*

No, the COC designated sample P9305GWP58 as an MS/MSD to be analyzed for VOCs. The laboratory did not spike this sample for VOCs, due to high levels of target analytes in the native sample. Therefore, VOC MS/MSD data for sample P9305GWP58 was not received as part of the data package.

## 2.0 Laboratory Case Narrative \ Cooler Receipt Form

*Were problems noted in the laboratory case narrative or cooler receipt form?*

Yes, the laboratory case narrative indicated that several surrogate recoveries and LCS recovery for bromochloromethane were outside evaluation criteria. Although not indicated in the laboratory case narrative, analytes were detected in method and equipment blanks. These issues are addressed further in the appropriate sections below.

The cooler receipt form did not indicate any problems.

### 3.0 Holding Times

*Were samples extracted/analyzed within QAPP limits?*

Yes

Field ID	Parameter	Analyte	Qualification
N/A			

### 4.0 Blank Contamination

*Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?*

Yes

Blank ID	Parameter	Analyte	Concentration	Units
P9306GWP50EB	VOCs	Benzene	41.1	µg/L
6041550-BLK1	VOCs	Naphthalene	2.94	µg/L
6041550-BLK1	VOCs	1,2,3-Trichlorobenzene	1.32	µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration (10X for common laboratory contaminants) did not require qualification.

Field ID	Parameter	Analyte	New RL	Qualification
P9305GWP45	VOCs	Naphthalene	-	U
P9306GWP50	VOCs	Naphthalene	-	U

### 5.0 Laboratory Control Sample

*Were LCS recoveries within evaluation criteria?*

No

LCS ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD/RPD Criteria
6041550-BS1	VOCs	Bromochloromethane	131	N/A	74-130

Analytical data that required qualification based on LCS data are included in the table below. Analytical data which were reported as nondetect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
N/A			

## 6.0 Surrogate Recoveries

*Were surrogate recoveries within evaluation criteria?*

No

Field ID	Parameter	Surrogate	Recovery	Criteria
P9305GWP45	VOCs	1,2-Dichloroethane-d <sub>4</sub>	28	70-130
P9305GWP45	VOCs	Dibromofluoromethane	39	79-122
P9305GWP58	VOCs	1,2-Dichloroethane-d <sub>4</sub>	55	70-130
P9306GWP50	VOCs	1,2-Dichloroethane-d <sub>4</sub>	30	70-130
P9306GWP50	VOCs	Dibromofluoromethane	132	79-122

Analytical data that required qualification based on surrogate data are included in the table below. Analytical data which were reported as nondetect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
P9305GWP45	VOCs	All detects/nondetects	J/UJ
P9305GWP58	VOCs	All detects/nondetects	J/UJ
P9306GWP50	VOCs	All detects/nondetects	J/UJ

## 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

*Were MS/MSD samples reported as part of this SDG?*

No, the COC designated sample P9305GWP58 as an MS/MSD to be analyzed for VOCs. The laboratory did not spike this sample for VOCs, due to high levels of target analytes in the native sample. Therefore, VOC MS/MSD data for sample P9305GWP58 was not received as part of the data package.

*Were MS/MSD recoveries within evaluation criteria?*

N/A

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
N/A					

Analytical data that required qualification based on MS/MSD data are included in the table below.

Field ID	Parameter	Analyte	Qualification
N/A			

### 8.0 Laboratory Duplicate Results

*Were laboratory duplicate samples collected as part of this SDG?*

No

*Were laboratory duplicate sample RPDs within criteria?*

N/A

Field ID	Parameter	Analyte	RPD	Criteria
N/A				

Data qualified due to outlying laboratory duplicate recoveries are identified below:

Field ID	Parameter	Analyte	Qualification
N/A			

### 9.0 Field Duplicate Results

*Were field duplicate samples collected as part of this SDG?*

No

Field ID	Field Duplicate ID
N/A	

*Were field duplicates within evaluation criteria?*

N/A

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
N/A					

## 10.0 Sample Dilutions

*For samples that were diluted and nondetect, were undiluted results also reported?*

Yes

The following table identifies the analyses which were reported as nondetect, diluted, and an undiluted run *was not* reported:

Field ID	Parameter	Dilution Factor
N/A		

## 11.0 Additional Qualifications

*Were additional qualifications applied?*

No

## 1.0 FULL VALIDATION OF VOC DATA - SDG NPD0934

This section describes the full validation for four water samples which were prepared by USEPA SW-846 Method 5030B and analyzed for volatile organic compounds (VOCs) by USEPA SW-846 Method 8260B. Samples were analyzed by Test America Analytical Testing Corporation of Nashville, Tennessee, and submitted as part of sample delivery group (SDG) NPD0934. Samples included as part of this validation are listed below:

Sample Identification
P9303GWP59
P9305GWP45
P9305GWP58
P9306GWP50

QA/QC criteria were identified in the West Fenceline P-93 Dissolved Phase Benzene Investigation 2006 work plan and USEPA SW-846 Method 8260B. Evaluation of the analytical data followed procedures outlined in the USEPA Contract Program National Functional Guidelines for Organic Data Review (USEPA 1999) where applicable to SW-846 Method 8260B.

Criteria evaluated included the following method performance criteria:

- Data package completeness
- Laboratory case narrative/cooler receipt form
- Holding times and sample preservation
- GC/MS instrument performance
- Initial calibration
- Calibration verification
- Blank samples
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Internal standards and retention times
- Laboratory control spike (LCS) samples
- Target compound identification and quantitation
- Overall data assessment

### 1.1 Data Package Completeness

The data package was reviewed to make certain that it contained the data contractually required in the deliverable. This included checking the data package for the results of each analyte requested for each field sample submitted in the analytical batch, along with

requested QC documentation for the respective methods. The COC designated sample P9305GWP58 as an MS/MSD to be analyzed for VOCs. The laboratory did not spike this sample for VOCs, due to high levels of target analytes in the native sample. Therefore, VOC MS/MSD data for sample P9305GWP58 was not received and the data package was not complete.

## **1.2 Laboratory Case Narrative/Cooler Receipt Form**

The laboratory case narrative indicated that several surrogate recoveries and LCS recovery for bromochloromethane were outside evaluation criteria. Although not indicated in the laboratory case narrative, analytes were detected in method and equipment blanks. These issues are addressed further in the appropriate section below. No problems were indicated in the cooler receipt form for the validated samples.

## **1.3 Holding Times and Sample Preservation**

Review of the sample collection and analysis dates involved comparing the chains-of-custody, the summary forms, the raw data forms, and the chromatograms for accuracy, consistency, and holding time compliance. The samples were received at  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , and at a pH  $< 2$  and were analyzed within the 14 day holding time criteria. No qualification of data was required due to sample preservation or holding time criteria.

## **1.4 GC/MS Instrument Performance**

GC/MS instrument performance checks were performed to ensure mass resolution, identification, and instrument sensitivity. Criteria for evaluation of instrument performance included possible transcription/calculation errors, adherence to instrument tuning frequency requirements, mass assignments, and ion abundance criteria. Instrument performance check samples were evaluated against criteria established in USEPA SW-846 Method 8260B.

Based on the raw data, the ion abundance criteria were within evaluation criteria for all masses, and no qualification of data was required. The raw data forms were checked against the summary forms and no calculation or transcription errors were noted.

## **1.5 Initial Calibration**

An Initial calibration (ICAL) was established to assess whether the instrument was capable of producing acceptable qualitative and quantitative data for volatile analysis. Samples as part of SDG NPD0934 were analyzed using instrument HP36. The ICAL for instrument HP36 was established on 4-8-06 prior to sample analysis and using at least five concentration standards to establish the initial calibration curve as required by Method 8260B. An average response factor (RF) was determined for each target analyte, the RFs were reviewed and verified greater than 0.10 for chloromethane, 1,1-dichloroethane and bromoform, 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane and

greater than 0.05 for all other target analytes, with the exception of acetone (0.024) and 2-butanone (0.028). The ICAL for compound 2-butanone was determined by linear least squares regression; therefore, no qualification of data was required. Acetone data qualifications are summarized in the table below.

Field ID	Analyte	Qualification
P9303GWP59	Acetone	R
P9305GWP45	Acetone	R
P9305GWP58	Acetone	R
P9306GWP50	Acetone	R

Review of the initial calibration summary forms indicated %RSDs were  $\leq 30\%$  for calibration check compounds (CCCs) [1,1-dichloroethene, toluene, chloroform, ethylbenzene, 1,2-dichloropropane, and vinyl chloride], and  $\leq 15\%$  for non-CCCs with some exceptions. The initial calibration for compounds with %RSD values above 15% was determined using least square linear regression. All correlation coefficients (r) were greater than 0.990, with the exception of bromoform (.989). Bromoform was previously qualified in samples P9305GWP58 and P9306GWP50 due to low surrogate recovery; therefore, no additional qualification is needed. Bromoform data qualifications are summarized in the table below.

Field ID	Analyte	Qualification
P9303GWP59	Bromoform	UJ
P9305GWP45	Bromoform	UJ

Percent RSDs were recalculated from the raw data and no errors in calculation were noted; therefore, no qualification of data was required. A second source verification was analyzed following the initial calibration. All percent difference values were within 15 percent, with the exception of those compounds summarized in the table below.

Analyte	%D
Acetone	-20.5
Bromochloromethane	-16.0
1,3-Dichloropropane	-16.4
1,2-Dichlorobenzene	-17.3

Acetone was previously qualified because of ICAL RF less than 0.05 in all associated samples and bromochloromethane, 1,3-dichloropropane and 1,2-dichlorobenzene were previously qualified due to low surrogate recovery in samples P9305GWP58 and P9306GWP50; therefore, no additional qualification is needed. Qualifications for compounds with %Ds greater than 15% are summarized in the table below.

Field ID	Analyte	Qualification
P9303GWP59	Bromochloromethane	UJ

Field ID	Analyte	Qualification
P9303GWP59	1,3-Dichloropropane	UJ
P9303GWP59	1,2-Dichlorobenzene	UJ
P9305GWP45	Bromochloromethane	UJ
P9305GWP45	1,3-Dichloropropane	UJ
P9305GWP45	1,2-Dichlorobenzene	UJ

## 1.6 Calibration verification

Review of the sample chromatograms indicated the calibration verifications (CVs) were performed at the required frequency every 12 hours. Review of continuing calibration summary forms indicated all RFs met the evaluation criteria of greater than 0.10 (chloromethane, 1,1-dichloroethane and bromoform), 0.30 (chlorobenzene and 1,1,2,2-tetrachloroethane) and greater than 0.05 for all other analytes with the exception of acetone (0.027) and 2-butanone (0.034). Acetone was previously qualified due to initial calibration RFs less than 0.05 and the 2-butanone calibration was determined by linear least squares; therefore, no additional qualification of data was required. In addition, percent differences (%Ds) and percent drift (%Drift) met the evaluation criteria of  $\leq 20$  percent for CCCs and  $< 30$  percent for all other target analytes with the exceptions those summarized below:

CV (Date/Time)	Analyte	%D or %Drift
04/07/07 1738	Hexachlorobutadiene	33.5

The compound hexachlorobutadiene was previously qualified due to low surrogate recovery in samples P9305GWP58 and P9306GWP50; therefore, no additional qualification of data is needed. Qualifications due to %D greater than 30% are summarized in the table below.

Field ID	Analyte	Qualification
P9303GWP59	Hexachlorobutadiene	UJ
P9305GWP45	Hexachlorobutadiene	UJ

Recalculations of the RFs and %Ds for two target compounds were completed for each CV, and no errors in calculation were noted. No qualification of data was required.

## 1.7 Blank Samples

The purpose of the method blank samples is to evaluate the existence and magnitude of contamination problems emanating from laboratory activities. Method blank samples were analyzed with each analytical batch as required by USEPA SW-846 Method 8260B. All target compounds were reported as nondetect in all method blanks and equipment blanks analyzed as part of this SDG with the exception of those summarized in the table below.

Blank ID	Parameter	Analyte	Concentration	Units
P9306GWP50EB	VOCs	Benzene	41.1	µg/L
6041550-BLK1	VOCs	Naphthalene	2.94	µg/L
6041550-BLK1	VOCs	1,2,3-Trichlorobenzene	1.32	µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration (10X for common laboratory contaminants) did not require qualification.

Field ID	Parameter	Analyte	New RL	Qualification
P9305GWP45	VOCs	Naphthalene	-	U
P9306GWP50	VOCs	Naphthalene	-	U

Target analytes for all trip blank samples were reported as nondetect. The review of chromatograms indicates all peaks present were accounted or the concentrations reported were below the method detection limit. No qualification of data was required.

## 1.8 Surrogate Spike Recoveries

Surrogate compounds were used to evaluate the overall laboratory sample preparation efficiency on a per sample basis. All surrogate recoveries were within the method acceptance criteria, with the exception of those summarized in the table below.

Field ID	Surrogate	Recovery	Criteria
P9305GWP45	1,2-Dichloroethane-d4	28	70-130
P9305GWP45	Dibromofluoromethane	39	79-122
P9305GWP58	1,2-Dichloroethane-d4	55	70-130
P9306GWP50	1,2-Dichloroethane-d4	30	70-130
P9306GWP50	Dibromofluoromethane	132	79-122

Analytical data that required qualification based on surrogate data are included in the table below. Analytical data which were reported as nondetect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Analyte	Qualification
P9305GWP45	All detects/nondetects	J/UJ
P9305GWP58	All detects/nondetects	J/UJ
P9306GWP50	All detects/nondetects	J/UJ

A minimum of ten percent of the recoveries were recalculated, and the summary forms versus the raw data were verified. No calculation or transcription errors were noted and no qualification of data was required.

## 1.9 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

MS/MSD samples are analyzed to assess potential matrix effects. Sample PS11-1106 was spiked and analyzed for VOCs. The COC designated sample P9305GWP58 as an MS/MSD to be analyzed for VOCs. The laboratory did not spike this sample for VOCs, due to high levels of target analytes in the native sample. Therefore, VOC MS/MSD data for sample P9305GWP58 was not received as part of the data package.

## 1.10 Internal Standards and Retention Times

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during each analytical run. IS areas must be within -50 percent to +100 percent, and the IS retention times must be within 30 seconds of the IS continuing calibration retention time. IS areas and retention times for the validated samples in this SDG were within evaluation criteria, with the exception of those summarized in the table below.

Field ID	Internal standard	Internal standard area	Internal standard criteria
P9306GWP50	Chlorobenzene-d5	1570129	380174-1520696

The internal standard area was above evaluation criteria and all analytes associated with Chlorobenzene-d5 were nondetect; therefore no qualification of data was required. The retention time for internal standard fluorobenzene (5.96) minutes was outside evaluation criteria (4.47-5.47) minutes in samples P9305GWP45 and P9306GWP50. The retention time shifted due to elevated levels of benzene in the samples. Therefore, analytes quantified with internal standard fluorobenzene were qualified as summarized in the table below with the exception of acetone. Acetone was previously qualified due to an ICAL RF less than 0.5; therefore, no additional qualification of data is needed. The methyl tert-butyl ether result was reported from the diluted sample and not associated with internal standard fluorobenzene; no qualification of data was required.

Field ID	Analyte	Qualification
P9305GWP45	Bromodichloromethane	R
P9305GWP45	Carbon disulfide	R
P9305GWP45	Carbon tetrachloride	R
P9305GWP45	Chloroform	R
P9305GWP45	Chloromethane	R
P9305GWP45	1,2-Dichloroethane	R
P9305GWP45	cis-1,2-Dichloroethene	R
P9305GWP45	1,1-Dichloroethene	R
P9305GWP45	trans-1,2-Dichloroethene	R
P9305GWP45	2,2-Dichloropropane	R
P9305GWP45	1,1-Dichloropropene	R
P9305GWP45	Methyl tert-butyl ether	R
P9305GWP45	1,1,1-Trichloroethane	R
P9305GWP45	Trichlorofluoromethane	R

Field ID	Analyte	Qualification
P9305GWP45	Vinyl chloride	R
P9306GWP50	Bromodichloromethane	R
P9306GWP50	Carbon disulfide	R
P9306GWP50	Carbon tetrachloride	R
P9306GWP50	Chloroform	R
P9306GWP50	Chloromethane	R
P9306GWP50	1,2-Dichloroethane	R
P9306GWP50	cis-1,2-Dichloroethene	R
P9306GWP50	1,1-Dichloroethene	R
P9306GWP50	trans-1,2-Dichloroethene	R
P9306GWP50	2,2-Dichloropropane	R
P9306GWP50	1,1-Dichloropropene	R
P9306GWP50	1,1,1-Trichloroethane	R
P9306GWP50	Trichlorofluoromethane	R
P9306GWP50	Vinyl chloride	R

The summary forms versus the raw data were verified and no transcription errors were noted.

### 1.11 Laboratory Control Spike Samples

Laboratory control samples were analyzed with each analytical batch to assess the accuracy of the analytical process. LCS recoveries were within evaluation criteria, with the exception of bromochloromethane (131%) with criteria (74-130%). All associated samples were nondetect for bromochloromethane and did not require qualification.

A minimum of ten percent of the spiking compound recoveries for the LCS's were recalculated using the LCS summary forms, and no calculation or transcription errors were noted.

### 1.12 Target Compound Identification and Quantitation

For validation of the compound identification, chromatograms were reviewed to verify the major peaks were identified, the spectra of the identified compounds were verified against the library spectra, and the relative retention time was no greater than 0.06 different from the associated CV retention times. A minimum of ten percent of the detected target analytes and spiking compounds were verified. No anomalies were noted with the identification of the target compounds in the samples.

For the validation of compound quantitation, 10% of the target analytes were recalculated from the raw data, and no calculation errors were noted. Additionally, the reporting limits were verified to determine if reporting limits (RLs) were adjusted for dilutions. No qualification of the data was required and review of the data indicated the correct RLs were reported.

### **1.13 Overall Data Assessment**

Based on the criteria outlined, it is recommended that the results reported for these analyses be accepted for their intended use, with the exception of rejected (R) data. Acceptable levels of accuracy and precision, based on LCS, and surrogate data were achieved for this SDG. In addition, completeness, defined to be the percentage of analytical results which are judged to be valid, including estimated (J/UJ) data, was 86 percent for VOC data for this SDG and should be used for their intended purpose. The percentage of valid analytical results for all SDGs included in the project, met the project goal of 95 percent.

May 15, 2006

Client: URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn: Jeff Adams

Work Order: NPD0934  
Project Name: 170 E. Rand Avenue, Hartford, IL  
Project Nbr: SAP 340061  
P/O Nbr: 97216634  
Date Received: 04/08/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
P9303GWP59	NPD0934-01	04/07/06 09:05
P9305GWP45	NPD0934-02	04/07/06 11:00
P9305GWP58	NPD0934-03	04/07/06 12:05
TB04070603	NPD0934-04	04/07/06 00:01
P9306GWP50EB	NPD0934-05	04/07/06 15:10
P9306GWP50	NPD0934-06	04/07/06 16:00

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

#### Additional Laboratory Comments:

Per enclosed Chain of Custody, "samples were properly preserved and received in good condition on 4/8/06. Analysis was extracted and performed within method required holding times following Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)". All QC results were within acceptable limits. Initial and Continuing Calibration requirements were met. Package was completed as a "Level IV".

Please note for this work order: Sample NPD0934-03 (P9305GWP58) was not analyzed as the MS/MSD sample due to the high concentration of target analytes that are present in the sample. A Blank Spike was the only QC reported with these samples. Due to sample matrix interference, the surrogate recoveries were outside laboratory acceptable QC limit. Bromochloromethane in the LCS for QC batch 6041550 was outside laboratory acceptable QC limit biased high. Analyte not detected in the samples, therefore data not impacted.

Organics: Unknown analyte concentrations were determined using the average response factor from the initial calibration curve for all analytes whose % RSD is less than or equal to 15. All other analyte concentrations were determined using linear regression analysis. Copies of curves for compounds with %RSD's greater than 15 are supplied.

As you review this data package, please call me if you require any additional information at # 1-800-765-0980 ext 1256.

Illinois Certification Number: 001177

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

# TestAmerica

ANALYTICAL TESTING CORPORATION

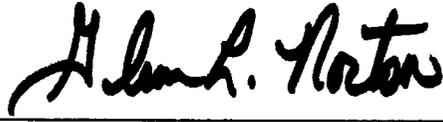
2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

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Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Jeff Adams

Work Order: NPD0934  
Project Name: 170 E. Rand Avenue, Hartford, IL  
Project Number: SAP 340061  
Received: 04/08/06 08:30

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Glenn Lee Norton  
Data Package Coordinator

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPD0934  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/08/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0934-01 (P9303GWP59 - Water) Sampled: 04/07/06 09:05</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND	— "uJ"	ug/L	5.91	50.0	1	04/12/06 13:11	SW846 8260B	6041550
Benzene	3650		ug/L	14.5	50.0	50	04/13/06 00:29	SW846 8260B	6042169
Bromobenzene	ND		ug/L	0.470	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Bromochloromethane	ND	— "uJ"	ug/L	0.420	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Bromoform	ND	— "uJ"	ug/L	0.500	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Bromomethane	ND		ug/L	0.600	1.00	1	04/12/06 13:11	SW846 8260B	6041550
2-Butanone	ND		ug/L	5.09	50.0	1	04/12/06 13:11	SW846 8260B	6041550
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/12/06 13:11	SW846 8260B	6041550
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/12/06 13:11	SW846 8260B	6041550
tert-Butylbenzene	6.21		ug/L	0.390	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Carbon disulfide	1.08		ug/L	0.310	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Chloroethane	ND		ug/L	0.500	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Chloroform	ND		ug/L	0.380	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Chloromethane	ND		ug/L	0.460	1.00	1	04/12/06 13:11	SW846 8260B	6041550
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/12/06 13:11	SW846 8260B	6041550
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/12/06 13:11	SW846 8260B	6041550
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Dibromomethane	ND		ug/L	0.570	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,2-Dichlorobenzene	ND	— "uJ"	ug/L	0.370	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/12/06 13:11	SW846 8260B	6041550
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/12/06 13:11	SW846 8260B	6041550
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,3-Dichloropropane	ND	— "uJ"	ug/L	0.630	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/12/06 13:11	SW846 8260B	6041550
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/12/06 13:11	SW846 8260B	6041550
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/12/06 13:11	SW846 8260B	6041550
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Ethylbenzene	153		ug/L	0.340	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Hexachlorobutadiene	ND	— "uJ"	ug/L	0.670	1.00	1	04/12/06 13:11	SW846 8260B	6041550
2-Hexanone	ND		ug/L	2.53	50.0	1	04/12/06 13:11	SW846 8260B	6041550
Isopropylbenzene	16.0		ug/L	0.340	1.00	1	04/12/06 13:11	SW846 8260B	6041550
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Diisopropyl Ether	ND		ug/L	0.420	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Methyl tert-Butyl Ether	ND		ug/L	0.320	1.00	1	04/12/06 13:11	SW846 8260B	6041550

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPD0934  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/08/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0934-01 (P9303GWP59 - Water) - cont. Sampled: 04/07/06 09:05</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Methylene Chloride	ND		ug/L	1.26	5.00	1	04/12/06 13:11	SW846 8260B	6041550
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	04/12/06 13:11	SW846 8260B	6041550
Naphthalene	21.4		ug/L	1.13	5.00	1	04/12/06 13:11	SW846 8260B	6041550
n-Propylbenzene	40.6		ug/L	0.370	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Styrene	ND		ug/L	0.390	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Tetrachloroethene	ND		ug/L	0.390	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Toluene	4.63		ug/L	0.280	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	04/12/06 13:11	SW846 8260B	6041550
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/12/06 13:11	SW846 8260B	6041550
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Trichloroethene	ND		ug/L	0.450	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,3,5-Trimethylbenzene	48.2		ug/L	0.280	1.00	1	04/12/06 13:11	SW846 8260B	6041550
1,2,4-Trimethylbenzene	167		ug/L	0.340	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Vinyl chloride	ND		ug/L	0.430	1.00	1	04/12/06 13:11	SW846 8260B	6041550
m,p-Xylene	246		ug/L	0.500	1.00	1	04/12/06 13:11	SW846 8260B	6041550
o-Xylene	16.0		ug/L	0.320	1.00	1	04/12/06 13:11	SW846 8260B	6041550
Xylenes, total	262		ug/L	0.820	3.00	1	04/12/06 13:11	SW846 8260B	6041550
Surr: 1,2-Dichloroethane-d4 (70-130%)	94 %					1	04/12/06 13:11	SW846 8260B	6041550
Surr: 1,2-Dichloroethane-d4 (70-130%)	109 %					1	04/13/06 00:29	SW846 8260B	6042169
Surr: Dibromofluoromethane (79-122%)	119 %					1	04/12/06 13:11	SW846 8260B	6041550
Surr: Dibromofluoromethane (79-122%)	100 %					1	04/13/06 00:29	SW846 8260B	6042169
Surr: Toluene-d8 (78-121%)	93 %					1	04/12/06 13:11	SW846 8260B	6041550
Surr: Toluene-d8 (78-121%)	84 %					1	04/13/06 00:29	SW846 8260B	6042169
Surr: 4-Bromofluorobenzene (78-126%)	101 %					1	04/12/06 13:11	SW846 8260B	6041550
Surr: 4-Bromofluorobenzene (78-126%)	89 %					1	04/13/06 00:29	SW846 8260B	6042169

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPD0934  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/08/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0934-02 (P9305GWP45 - Water) Sampled: 04/07/06 11:00</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone ✓	ND	"R"	ug/L	5.91	50.0	1	04/12/06 13:40	SW846 8260B	6041550
Benzene	1460000		ug/L	29000	100000	100000	04/13/06 01:00	SW846 8260B	6042169
Bromobenzene	ND	"uJ"	ug/L	0.470	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Bromochloromethane	ND	"uJ"	ug/L	0.420	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Bromodichloromethane	1.86	"J"	ug/L	0.380	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Bromoform	ND	"uJ"	ug/L	0.500	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Bromomethane	ND		ug/L	0.600	1.00	1	04/12/06 13:40	SW846 8260B	6041550
2-Butanone	ND		ug/L	5.09	50.0	1	04/12/06 13:40	SW846 8260B	6041550
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/12/06 13:40	SW846 8260B	6041550
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/12/06 13:40	SW846 8260B	6041550
tert-Butylbenzene	ND	"uJ"	ug/L	0.390	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Carbon disulfide ✓	ND	"R"	ug/L	0.310	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Carbon Tetrachloride	2.03	"J"	ug/L	0.480	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Chlorobenzene	ND	"uJ"	ug/L	0.320	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Chlorodibromomethane	ND	"uJ"	ug/L	0.360	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Chloroethane	ND	"uJ"	ug/L	0.500	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Chloroform ✓	ND	"R"	ug/L	0.380	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Chloromethane	ND	"R"	ug/L	0.460	1.00	1	04/12/06 13:40	SW846 8260B	6041550
2-Chlorotoluene	ND	"uJ"	ug/L	0.270	1.00	1	04/12/06 13:40	SW846 8260B	6041550
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/12/06 13:40	SW846 8260B	6041550
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Dibromomethane	ND		ug/L	0.570	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,2-Dichlorobenzene	ND	"uJ"	ug/L	0.370	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Dichlorodifluoromethane	ND	"uJ"	ug/L	0.410	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,1-Dichloroethane	ND	"uJ"	ug/L	0.320	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,2-Dichloroethane ✓	ND	"R"	ug/L	0.280	1.00	1	04/12/06 13:40	SW846 8260B	6041550
cis-1,2-Dichloroethene ✓	ND	"R"	ug/L	0.390	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,1-Dichloroethene ✓	ND	"R"	ug/L	0.450	1.00	1	04/12/06 13:40	SW846 8260B	6041550
trans-1,2-Dichloroethene ✓	ND	"R"	ug/L	0.340	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,3-Dichloropropane	ND	"uJ"	ug/L	0.630	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,2-Dichloropropane	ND	"uJ"	ug/L	0.500	1.00	1	04/12/06 13:40	SW846 8260B	6041550
2,2-Dichloropropane ✓	ND	"R"	ug/L	0.660	1.00	1	04/12/06 13:40	SW846 8260B	6041550
cis-1,3-Dichloropropene	ND	"uJ"	ug/L	0.450	1.00	1	04/12/06 13:40	SW846 8260B	6041550
trans-1,3-Dichloropropene	ND	"uJ"	ug/L	0.490	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,1-Dichloropropene ✓	ND	"R"	ug/L	0.510	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Ethylbenzene	5.80	"J"	ug/L	0.340	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Hexachlorobutadiene	ND	"uJ"	ug/L	0.670	1.00	1	04/12/06 13:40	SW846 8260B	6041550
2-Hexanone	ND	"uJ"	ug/L	2.53	50.0	1	04/12/06 13:40	SW846 8260B	6041550
Isopropylbenzene	3.76	"J"	ug/L	0.340	1.00	1	04/12/06 13:40	SW846 8260B	6041550
p-Isopropyltoluene	ND	"uJ"	ug/L	0.340	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Diisopropyl Ether	ND	"uJ"	ug/L	0.420	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Methyl tert-Butyl Ether ✓	116	"R"	ug/L	0.320	1.00	1	04/12/06 13:40	SW846 8260B	6041550

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPD0934  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/08/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0934-02 (P9305GWP45 - Water) - cont. Sampled: 04/07/06 11:00</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Methylene Chloride	ND	— "UJ"	ug/L	1.26	5.00	1	04/12/06 13:40	SW846 8260B	6041550
4-Methyl-2-pentanone	ND	— "UJ"	ug/L	4.25	50.0	1	04/12/06 13:40	SW846 8260B	6041550
Naphthalene	ND 4.89	— "UJ"	ug/L	1.13	5.00	1	04/12/06 13:40	SW846 8260B	6041550
n-Propylbenzene	2.71	— "J"	ug/L	0.370	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Styrene	ND	— "UJ"	ug/L	0.390	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,1,1,2-Tetrachloroethane	ND	↓	ug/L	0.370	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,1,2,2-Tetrachloroethane	ND	↓	ug/L	0.490	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Tetrachloroethene	ND	— "UJ"	ug/L	0.390	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Toluene	14.7	— "J"	ug/L	0.280	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,2,3-Trichlorobenzene	ND	— "UJ"	ug/L	0.560	2.00	1	04/12/06 13:40	SW846 8260B	6041550
1,2,4-Trichlorobenzene	ND	↓	ug/L	0.790	2.00	1	04/12/06 13:40	SW846 8260B	6041550
1,1,2-Trichloroethane	ND	— "UJ"	ug/L	0.420	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,1,1-Trichloroethane	ND	— "R"	ug/L	0.400	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Trichloroethene	ND	— "UJ"	ug/L	0.450	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Trichlorofluoromethane	ND	— "R"	ug/L	0.480	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,2,3-Trichloropropane	ND	— "UJ"	ug/L	0.560	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,3,5-Trimethylbenzene	3.52	— "J"	ug/L	0.280	1.00	1	04/12/06 13:40	SW846 8260B	6041550
1,2,4-Trimethylbenzene	5.37	— "J"	ug/L	0.340	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Vinyl chloride	ND	— "R"	ug/L	0.430	1.00	1	04/12/06 13:40	SW846 8260B	6041550
m,p-Xylene	9.71	— "J"	ug/L	0.500	1.00	1	04/12/06 13:40	SW846 8260B	6041550
o-Xylene	4.97	— "J"	ug/L	0.320	1.00	1	04/12/06 13:40	SW846 8260B	6041550
Xylenes, total	14.7	— "J"	ug/L	0.820	3.00	1	04/12/06 13:40	SW846 8260B	6041550
Surr: 1,2-Dichloroethane-d4 (70-130%)	28 %	Z				1	04/12/06 13:40	SW846 8260B	6041550
Surr: 1,2-Dichloroethane-d4 (70-130%)	106 %					1	04/13/06 01:00	SW846 8260B	6042169
Surr: Dibromofluoromethane (79-122%)	39 %	Z				1	04/12/06 13:40	SW846 8260B	6041550
Surr: Dibromofluoromethane (79-122%)	101 %					1	04/13/06 01:00	SW846 8260B	6042169
Surr: Toluene-d8 (78-121%)	97 %					1	04/12/06 13:40	SW846 8260B	6041550
Surr: Toluene-d8 (78-121%)	85 %					1	04/13/06 01:00	SW846 8260B	6042169
Surr: 4-Bromofluorobenzene (78-126%)	124 %					1	04/12/06 13:40	SW846 8260B	6041550
Surr: 4-Bromofluorobenzene (78-126%)	107 %					1	04/13/06 01:00	SW846 8260B	6042169

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPD0934  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/08/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0934-03 (P9305GWP58 - Water) Sampled: 04/07/06 12:05</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND	— "uJ"	ug/L	5.91	50.0	1	04/12/06 14:09	SW846 8260B	6041550
Benzene	52200	— "uJ"	ug/L	290	1000	1000	04/13/06 02:01	SW846 8260B	6042169
Bromobenzene	ND	— "uJ"	ug/L	0.470	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Bromochloromethane	ND	— "uJ"	ug/L	0.420	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Bromodichloromethane	ND	— "uJ"	ug/L	0.380	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Bromoform	ND	— "uJ"	ug/L	0.500	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Bromomethane	ND	— "uJ"	ug/L	0.600	1.00	1	04/12/06 14:09	SW846 8260B	6041550
2-Butanone	ND	— "uJ"	ug/L	5.09	50.0	1	04/12/06 14:09	SW846 8260B	6041550
sec-Butylbenzene	5.87	— "uJ"	ug/L	0.380	1.00	1	04/12/06 14:09	SW846 8260B	6041550
n-Butylbenzene	ND	— "uJ"	ug/L	0.460	1.00	1	04/12/06 14:09	SW846 8260B	6041550
tert-Butylbenzene	6.32	— "uJ"	ug/L	0.390	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Carbon disulfide	ND	— "uJ"	ug/L	0.310	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Carbon Tetrachloride	ND	— "uJ"	ug/L	0.480	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Chlorobenzene	ND	— "uJ"	ug/L	0.320	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Chlorodibromomethane	ND	— "uJ"	ug/L	0.360	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Chloroethane	ND	— "uJ"	ug/L	0.500	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Chloroform	ND	— "uJ"	ug/L	0.380	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Chloromethane	ND	— "uJ"	ug/L	0.460	1.00	1	04/12/06 14:09	SW846 8260B	6041550
2-Chlorotoluene	ND	— "uJ"	ug/L	0.270	1.00	1	04/12/06 14:09	SW846 8260B	6041550
4-Chlorotoluene	ND	— "uJ"	ug/L	0.370	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,2-Dibromo-3-chloropropane	ND	— "uJ"	ug/L	1.64	5.00	1	04/12/06 14:09	SW846 8260B	6041550
1,2-Dibromoethane (EDB)	ND	— "uJ"	ug/L	0.380	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Dibromomethane	ND	— "uJ"	ug/L	0.570	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,4-Dichlorobenzene	ND	— "uJ"	ug/L	0.460	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,3-Dichlorobenzene	ND	— "uJ"	ug/L	0.360	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,2-Dichlorobenzene	ND	— "uJ"	ug/L	0.370	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Dichlorodifluoromethane	ND	— "uJ"	ug/L	0.410	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,1-Dichloroethane	ND	— "uJ"	ug/L	0.320	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,2-Dichloroethane	ND	— "uJ"	ug/L	0.280	1.00	1	04/12/06 14:09	SW846 8260B	6041550
cis-1,2-Dichloroethene	ND	— "uJ"	ug/L	0.390	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,1-Dichloroethene	ND	— "uJ"	ug/L	0.450	1.00	1	04/12/06 14:09	SW846 8260B	6041550
trans-1,2-Dichloroethene	ND	— "uJ"	ug/L	0.340	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,3-Dichloropropane	ND	— "uJ"	ug/L	0.630	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,2-Dichloropropane	ND	— "uJ"	ug/L	0.500	1.00	1	04/12/06 14:09	SW846 8260B	6041550
2,2-Dichloropropane	ND	— "uJ"	ug/L	0.660	1.00	1	04/12/06 14:09	SW846 8260B	6041550
cis-1,3-Dichloropropene	ND	— "uJ"	ug/L	0.450	1.00	1	04/12/06 14:09	SW846 8260B	6041550
trans-1,3-Dichloropropene	ND	— "uJ"	ug/L	0.490	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,1-Dichloropropene	ND	— "uJ"	ug/L	0.510	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Ethylbenzene	203	— "uJ"	ug/L	6.80	20.0	20	04/13/06 01:30	SW846 8260B	6042169
Hexachlorobutadiene	ND	— "uJ"	ug/L	0.670	1.00	1	04/12/06 14:09	SW846 8260B	6041550
2-Hexanone	ND	— "uJ"	ug/L	2.53	50.0	1	04/12/06 14:09	SW846 8260B	6041550
Isopropylbenzene	26.0	— "uJ"	ug/L	0.340	1.00	1	04/12/06 14:09	SW846 8260B	6041550
p-Isopropyltoluene	ND	— "uJ"	ug/L	0.340	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Diisopropyl Ether	ND	— "uJ"	ug/L	0.420	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Methyl tert-Butyl Ether	ND	— "uJ"	ug/L	0.320	1.00	1	04/12/06 14:09	SW846 8260B	6041550

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPD0934  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/08/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0934-03 (P9305GWP58 - Water) - cont. Sampled: 04/07/06 12:05</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Methylene Chloride	ND	"uJ"	ug/L	1.26	5.00	1	04/12/06 14:09	SW846 8260B	6041550
4-Methyl-2-pentanone	ND	"uJ"	ug/L	4.25	50.0	1	04/12/06 14:09	SW846 8260B	6041550
Naphthalene	24.2	"J"	ug/L	1.13	5.00	1	04/12/06 14:09	SW846 8260B	6041550
n-Propylbenzene	59.6	"J"	ug/L	0.370	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Styrene	ND	"uJ"	ug/L	0.390	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,1,1,2-Tetrachloroethane	ND	↓	ug/L	0.370	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,1,2,2-Tetrachloroethane	ND	↓	ug/L	0.490	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Tetrachloroethene	ND	"uJ"	ug/L	0.390	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Toluene	233	"J"	ug/L	5.60	20.0	20	04/13/06 01:30	SW846 8260B	6042169
1,2,3-Trichlorobenzene	ND	"uJ"	ug/L	0.560	2.00	1	04/12/06 14:09	SW846 8260B	6041550
1,2,4-Trichlorobenzene	ND	"J"	ug/L	0.790	2.00	1	04/12/06 14:09	SW846 8260B	6041550
1,1,2-Trichloroethane	ND	"J"	ug/L	0.420	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,1,1-Trichloroethane	ND	"J"	ug/L	0.400	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Trichloroethene	ND	"J"	ug/L	0.450	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Trichlorofluoromethane	ND	↓	ug/L	0.480	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,2,3-Trichloropropane	ND	"uJ"	ug/L	0.560	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,3,5-Trimethylbenzene	40.8	"J"	ug/L	0.280	1.00	1	04/12/06 14:09	SW846 8260B	6041550
1,2,4-Trimethylbenzene	103	"J"	ug/L	0.340	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Vinyl chloride	ND	"uJ"	ug/L	0.430	1.00	1	04/12/06 14:09	SW846 8260B	6041550
m,p-Xylene	376	"J"	ug/L	0.500	1.00	1	04/12/06 14:09	SW846 8260B	6041550
o-Xylene	112	"J"	ug/L	0.320	1.00	1	04/12/06 14:09	SW846 8260B	6041550
Xylenes, total	488	"J"	ug/L	0.820	3.00	1	04/12/06 14:09	SW846 8260B	6041550
Surr: 1,2-Dichloroethane-d4 (70-130%)	55 %	Z				1	04/12/06 14:09	SW846 8260B	6041550
Surr: 1,2-Dichloroethane-d4 (70-130%)	107 %					1	04/13/06 01:30	SW846 8260B	6042169
Surr: Dibromofluoromethane (79-122%)	89 %					1	04/12/06 14:09	SW846 8260B	6041550
Surr: Dibromofluoromethane (79-122%)	101 %					1	04/13/06 01:30	SW846 8260B	6042169
Surr: Toluene-d8 (78-121%)	91 %					1	04/12/06 14:09	SW846 8260B	6041550
Surr: Toluene-d8 (78-121%)	84 %					1	04/13/06 01:30	SW846 8260B	6042169
Surr: 4-Bromofluorobenzene (78-126%)	116 %					1	04/12/06 14:09	SW846 8260B	6041550
Surr: 4-Bromofluorobenzene (78-126%)	99 %					1	04/13/06 01:30	SW846 8260B	6042169



Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPD0934  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/08/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0934-04RE1 (TB04070603 - Water) Sampled: 04/07/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND		ug/L	5.91	50.0	1	04/12/06 23:28	SW846 8260B	6042169
Benzene	ND		ug/L	0.290	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Bromobenzene	ND		ug/L	0.470	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Bromoform	ND		ug/L	0.500	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Bromomethane	ND		ug/L	0.600	1.00	1	04/12/06 23:28	SW846 8260B	6042169
2-Butanone	ND		ug/L	5.09	50.0	1	04/12/06 23:28	SW846 8260B	6042169
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/12/06 23:28	SW846 8260B	6042169
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/12/06 23:28	SW846 8260B	6042169
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Chloroethane	ND		ug/L	0.500	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Chloroform	ND		ug/L	0.380	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Chloromethane	ND		ug/L	0.460	1.00	1	04/12/06 23:28	SW846 8260B	6042169
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/12/06 23:28	SW846 8260B	6042169
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/12/06 23:28	SW846 8260B	6042169
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Dibromomethane	ND		ug/L	0.570	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/12/06 23:28	SW846 8260B	6042169
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/12/06 23:28	SW846 8260B	6042169
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/12/06 23:28	SW846 8260B	6042169
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/12/06 23:28	SW846 8260B	6042169
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/12/06 23:28	SW846 8260B	6042169
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Ethylbenzene	ND		ug/L	0.340	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	04/12/06 23:28	SW846 8260B	6042169
2-Hexanone	ND		ug/L	2.53	50.0	1	04/12/06 23:28	SW846 8260B	6042169
Isopropylbenzene	ND		ug/L	0.340	1.00	1	04/12/06 23:28	SW846 8260B	6042169
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Methyl tert-Butyl Ether	ND		ug/L	0.320	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Methylene Chloride	ND		ug/L	1.26	5.00	1	04/12/06 23:28	SW846 8260B	6042169

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPD0934  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/08/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0934-04RE1 (TB04070603 - Water) - cont. Sampled: 04/07/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	04/12/06 23:28	SW846 8260B	6042169
Naphthalene	ND		ug/L	1.13	5.00	1	04/12/06 23:28	SW846 8260B	6042169
n-Propylbenzene	ND		ug/L	0.370	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Styrene	ND		ug/L	0.390	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Tetrachloroethene	ND		ug/L	0.390	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Toluene	ND		ug/L	0.280	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	04/12/06 23:28	SW846 8260B	6042169
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/12/06 23:28	SW846 8260B	6042169
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Trichloroethene	ND		ug/L	0.450	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,3,5-Trimethylbenzene	ND		ug/L	0.280	1.00	1	04/12/06 23:28	SW846 8260B	6042169
1,2,4-Trimethylbenzene	ND		ug/L	0.340	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Vinyl chloride	ND		ug/L	0.430	1.00	1	04/12/06 23:28	SW846 8260B	6042169
Xylenes, total	ND		ug/L	0.820	3.00	1	04/12/06 23:28	SW846 8260B	6042169
Surr: 1,2-Dichloroethane-d4 (70-130%)	103 %					1	04/12/06 12:42	SW846 8260B	6041550
Surr: 1,2-Dichloroethane-d4 (70-130%)	107 %					1	04/12/06 23:28	SW846 8260B	6042169
Surr: Dibromofluoromethane (79-122%)	134 %	Z				1	04/12/06 12:42	SW846 8260B	6041550
Surr: Dibromofluoromethane (79-122%)	101 %					1	04/12/06 23:28	SW846 8260B	6042169
Surr: Toluene-d8 (78-121%)	94 %					1	04/12/06 12:42	SW846 8260B	6041550
Surr: Toluene-d8 (78-121%)	85 %					1	04/12/06 23:28	SW846 8260B	6042169
Surr: 4-Bromofluorobenzene (78-126%)	103 %					1	04/12/06 12:42	SW846 8260B	6041550
Surr: 4-Bromofluorobenzene (78-126%)	99 %					1	04/12/06 23:28	SW846 8260B	6042169

### Sample ID: NPD0934-05 (P9306GWP50EB - Water) Sampled: 04/07/06 15:10

Volatile Organic Compounds by EPA Method 8260B

Acetone	ND		ug/L	5.91	50.0	1	04/12/06 23:59	SW846 8260B	6042169
Benzene	41.1		ug/L	0.290	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Bromobenzene	ND		ug/L	0.470	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Bromoform	ND		ug/L	0.500	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Bromomethane	ND		ug/L	0.600	1.00	1	04/12/06 23:59	SW846 8260B	6042169
2-Butanone	ND		ug/L	5.09	50.0	1	04/12/06 23:59	SW846 8260B	6042169
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/12/06 23:59	SW846 8260B	6042169
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/12/06 23:59	SW846 8260B	6042169
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/12/06 23:59	SW846 8260B	6042169

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPD0934  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/08/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0934-05 (P9306GWP50EB - Water) - cont. Sampled: 04/07/06 15:10</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Chloroethane	ND		ug/L	0.500	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Chloroform	ND		ug/L	0.380	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Chloromethane	ND		ug/L	0.460	1.00	1	04/12/06 23:59	SW846 8260B	6042169
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/12/06 23:59	SW846 8260B	6042169
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/12/06 23:59	SW846 8260B	6042169
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Dibromomethane	ND		ug/L	0.570	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/12/06 23:59	SW846 8260B	6042169
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/12/06 23:59	SW846 8260B	6042169
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/12/06 23:59	SW846 8260B	6042169
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/12/06 23:59	SW846 8260B	6042169
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/12/06 23:59	SW846 8260B	6042169
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Ethylbenzene	ND		ug/L	0.340	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	04/12/06 23:59	SW846 8260B	6042169
2-Hexanone	ND		ug/L	2.53	50.0	1	04/12/06 23:59	SW846 8260B	6042169
Isopropylbenzene	ND		ug/L	0.340	1.00	1	04/12/06 23:59	SW846 8260B	6042169
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Methyl tert-Butyl Ether	ND		ug/L	0.320	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Methylene Chloride	ND		ug/L	1.26	5.00	1	04/12/06 23:59	SW846 8260B	6042169
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	04/12/06 23:59	SW846 8260B	6042169
Naphthalene	ND		ug/L	1.13	5.00	1	04/12/06 23:59	SW846 8260B	6042169
n-Propylbenzene	ND		ug/L	0.370	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Styrene	ND		ug/L	0.390	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Tetrachloroethene	ND		ug/L	0.390	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Toluene	ND		ug/L	0.280	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	04/12/06 23:59	SW846 8260B	6042169
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/12/06 23:59	SW846 8260B	6042169
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Trichloroethene	ND		ug/L	0.450	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/12/06 23:59	SW846 8260B	6042169

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPD0934  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/08/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0934-05 (P9306GWP50EB - Water) - cont. Sampled: 04/07/06 15:10</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,3,5-Trimethylbenzene	ND		ug/L	0.280	1.00	1	04/12/06 23:59	SW846 8260B	6042169
1,2,4-Trimethylbenzene	ND		ug/L	0.340	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Vinyl chloride	ND		ug/L	0.430	1.00	1	04/12/06 23:59	SW846 8260B	6042169
Xylenes, total	ND		ug/L	0.820	3.00	1	04/12/06 23:59	SW846 8260B	6042169
Surr: 1,2-Dichloroethane-d4 (70-130%)	108 %					1	04/12/06 23:59	SW846 8260B	6042169
Surr: Dibromofluoromethane (79-122%)	100 %					1	04/12/06 23:59	SW846 8260B	6042169
Surr: Toluene-d8 (78-121%)	84 %					1	04/12/06 23:59	SW846 8260B	6042169
Surr: 4-Bromofluorobenzene (78-126%)	93 %					1	04/12/06 23:59	SW846 8260B	6042169

## Sample ID: NPD0934-06 (P9306GWP50 - Water) Sampled: 04/07/06 16:00

Volatile Organic Compounds by EPA Method 8260B

Acetone	ND		ug/L	5.91	50.0	1	04/12/06 15:08	SW846 8260B	6041550
Benzene	1310000		ug/L	29000	100000	100000	04/13/06 03:02	SW846 8260B	6042169
Bromobenzene	ND		ug/L	0.470	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Bromodichloromethane	1.86		ug/L	0.380	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Bromoform	ND	RL5	ug/L	500	1000	1000	04/13/06 02:32	SW846 8260B	6042169
Bromomethane	ND		ug/L	0.600	1.00	1	04/12/06 15:08	SW846 8260B	6041550
2-Butanone	ND		ug/L	5.09	50.0	1	04/12/06 15:08	SW846 8260B	6041550
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/12/06 15:08	SW846 8260B	6041550
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/12/06 15:08	SW846 8260B	6041550
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Carbon Tetrachloride	2.03		ug/L	0.480	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Chlorobenzene	ND	RL5	ug/L	320	1000	1000	04/13/06 02:32	SW846 8260B	6042169
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Chloroethane	ND		ug/L	0.500	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Chloroform	ND		ug/L	0.380	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Chloromethane	ND		ug/L	0.460	1.00	1	04/12/06 15:08	SW846 8260B	6041550
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/12/06 15:08	SW846 8260B	6041550
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/12/06 15:08	SW846 8260B	6041550
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/12/06 15:08	SW846 8260B	6041550
1,2-Dibromoethane (EDB)	ND	RL5	ug/L	380	1000	1000	04/13/06 02:32	SW846 8260B	6042169
Dibromomethane	1.43		ug/L	0.570	1.00	1	04/12/06 15:08	SW846 8260B	6041550
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/12/06 15:08	SW846 8260B	6041550
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/12/06 15:08	SW846 8260B	6041550
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/12/06 15:08	SW846 8260B	6041550
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/12/06 15:08	SW846 8260B	6041550
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/12/06 15:08	SW846 8260B	6041550
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/12/06 15:08	SW846 8260B	6041550
cis-1,2-Dichloroethene	ND	RL5	ug/L	390	1000	1000	04/13/06 02:32	SW846 8260B	6042169
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/12/06 15:08	SW846 8260B	6041550

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Jeff Adams

Work Order: NPD0934  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/08/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD0934-06 (P9306GWP50 - Water) - cont. Sampled: 04/07/06 16:00</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
trans-1,2-Dichloroethene	ND	—	ug/L	0.340	1.00	1	04/12/06 15:08	SW846 8260B	6041550
1,3-Dichloropropane	ND	RL5	ug/L	630	1000	1000	04/13/06 02:32	SW846 8260B	6042169
1,2-Dichloropropane	2.21	—	ug/L	0.500	1.00	1	04/12/06 15:08	SW846 8260B	6041550
2,2-Dichloropropane	ND	—	ug/L	0.660	1.00	1	04/12/06 15:08	SW846 8260B	6041550
cis-1,3-Dichloropropene	ND	RL5	ug/L	450	1000	1000	04/13/06 02:32	SW846 8260B	6042169
trans-1,3-Dichloropropene	ND	RL5	ug/L	490	1000	1000	04/13/06 02:32	SW846 8260B	6042169
1,1-Dichloropropene	ND	—	ug/L	0.510	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Ethylbenzene	ND	RL5	ug/L	340	1000	1000	04/13/06 02:32	SW846 8260B	6042169
Hexachlorobutadiene	ND	—	ug/L	0.670	1.00	1	04/12/06 15:08	SW846 8260B	6041550
2-Hexanone	ND	RL5	ug/L	2530	50000	1000	04/13/06 02:32	SW846 8260B	6042169
Isopropylbenzene	ND	—	ug/L	0.340	1.00	1	04/12/06 15:08	SW846 8260B	6041550
p-Isopropyltoluene	ND	—	ug/L	0.340	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Diisopropyl Ether	ND	—	ug/L	0.420	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Methyl tert-Butyl Ether	25300	—	ug/L	320	1000	1000	04/13/06 02:32	SW846 8260B	6042169
Methylene Chloride	ND	—	ug/L	1.26	5.00	1	04/12/06 15:08	SW846 8260B	6041550
4-Methyl-2-pentanone	ND	RL5	ug/L	4250	50000	1000	04/13/06 02:32	SW846 8260B	6042169
Naphthalene	ND	—	ug/L	1.13	5.00	1	04/12/06 15:08	SW846 8260B	6041550
n-Propylbenzene	ND	—	ug/L	0.370	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Styrene	ND	RL5	ug/L	390	1000	1000	04/13/06 02:32	SW846 8260B	6042169
1,1,1,2-Tetrachloroethane	ND	RL5	ug/L	370	1000	1000	04/13/06 02:32	SW846 8260B	6042169
1,1,2,2-Tetrachloroethane	ND	—	ug/L	0.490	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Tetrachloroethene	ND	RL5	ug/L	390	1000	1000	04/13/06 02:32	SW846 8260B	6042169
Toluene	ND	RL5	ug/L	280	1000	1000	04/13/06 02:32	SW846 8260B	6042169
1,2,3-Trichlorobenzene	ND	—	ug/L	0.560	2.00	1	04/12/06 15:08	SW846 8260B	6041550
1,2,4-Trichlorobenzene	ND	—	ug/L	0.790	2.00	1	04/12/06 15:08	SW846 8260B	6041550
1,1,2-Trichloroethane	ND	RL5	ug/L	420	1000	1000	04/13/06 02:32	SW846 8260B	6042169
1,1,1-Trichloroethane	ND	—	ug/L	0.400	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Trichloroethene	ND	—	ug/L	0.450	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Trichlorofluoromethane	ND	—	ug/L	0.480	1.00	1	04/12/06 15:08	SW846 8260B	6041550
1,2,3-Trichloropropane	ND	—	ug/L	0.560	1.00	1	04/12/06 15:08	SW846 8260B	6041550
1,3,5-Trimethylbenzene	3.05	—	ug/L	0.280	1.00	1	04/12/06 15:08	SW846 8260B	6041550
1,2,4-Trimethylbenzene	4.31	—	ug/L	0.340	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Vinyl chloride	ND	—	ug/L	0.430	1.00	1	04/12/06 15:08	SW846 8260B	6041550
Xylenes, total	ND	RL5	ug/L	820	3000	1000	04/13/06 02:32	SW846 8260B	6042169
Surr: 1,2-Dichloroethane-d4 (70-130%)	30 %	Z				1	04/12/06 15:08	SW846 8260B	6041550
Surr: 1,2-Dichloroethane-d4 (70-130%)	109 %					1	04/13/06 02:32	SW846 8260B	6042169
Surr: Dibromofluoromethane (79-122%)	132 %	Z				1	04/12/06 15:08	SW846 8260B	6041550
Surr: Dibromofluoromethane (79-122%)	99 %					1	04/13/06 02:32	SW846 8260B	6042169
Surr: Toluene-d8 (78-121%)	95 %					1	04/12/06 15:08	SW846 8260B	6041550
Surr: Toluene-d8 (78-121%)	85 %					1	04/13/06 02:32	SW846 8260B	6042169
Surr: 4-Bromofluorobenzene (78-126%)	124 %					1	04/12/06 15:08	SW846 8260B	6041550
Surr: 4-Bromofluorobenzene (78-126%)	105 %					1	04/13/06 02:32	SW846 8260B	6042169

Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Jeff Adams

Work Order: NPD0934  
Project Name: 170 E. Rand Avenue, Hartford, IL  
Project Number: SAP 340061  
Received: 04/08/06 08:30

## DATA QUALIFIERS AND DEFINITIONS

- J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- L** Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
- RL5** Reporting limit raised due to high single peak analyte.
- Z** Due to sample matrix effects, the surrogate recovery was below the acceptance limits.
- Z2** Surrogate recovery was above the acceptance limits. Data not impacted.

## METHOD MODIFICATION NOTES



# West Fenceline Data Review

**Laboratory SDG:** NPD1163

**Reviewer:** Tony Sedlacek

**Date Reviewed:** 2/26/2007

**Guidance:** USEPA Contract Laboratory National Functional Guidelines for Organic Data Review (USEPA 1999).

**Applicable Work Plan:** West Fenceline P-93 Dissolved Phase Benzene Investigation (2006)

Sample Identification #	Sample Identification #
P9306GWP62.5	TB04100604

## 1.0 Data Package Completeness

*Were all items delivered as specified in the QAPP and COC?*

Yes

## 2.0 Laboratory Case Narrative \ Cooler Receipt Form

*Were problems noted in the laboratory case narrative or cooler receipt form?*

Yes, the laboratory case narrative indicated that 1,2-dichloroethane-d<sub>4</sub> and dibromofluoromethane surrogate recoveries for were outside evaluation criteria. This issue is addressed further in the appropriate section below.

The cooler receipt form did not indicate any problems.

## 3.0 Holding Times

*Were samples extracted/analyzed within QAPP limits?*

Yes

Field ID	Parameter	Analyte	Qualification
N/A			

#### 4.0 Blank Contamination

*Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?*

No

Blank ID	Parameter	Analyte	Concentration	Units
N/A				

Qualifications due to blank contamination are included in the table below. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration (10X for common laboratory contaminants) did not require qualification.

Field ID	Parameter	Analyte	New RL	Qualification
N/A				

#### 5.0 Laboratory Control Sample

*Were LCS recoveries within evaluation criteria?*

Yes

LCS ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD/RPD Criteria
N/A					

Analytical data that required qualification based on LCS data are included in the table below. Analytical data which were reported as nondetect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
N/A			

#### 6.0 Surrogate Recoveries

*Were surrogate recoveries within evaluation criteria?*

No

Field ID	Parameter	Surrogate	Recovery	Criteria
P9306GWP62.5	VOCs	1,2-Dichlorethane-d <sub>4</sub>	3	70-130
P9306GWP62.5	VOCs	Dibromofluoromethane	33	79-122

Analytical data that required qualification based on surrogate data are included in the table below. Analytical data which were reported as nondetect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
P9306GWP62.5	VOCs	All detects/nondetects	J/R

## 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

*Were MS/MSD samples reported as part of this SDG?*

No

*Were MS/MSD recoveries within evaluation criteria?*

N/A

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
N/A					

Analytical data that required qualification based on MS/MSD data are included in the table below.

Field ID	Parameter	Analyte	Qualification
N/A			

## 8.0 Laboratory Duplicate Results

*Were laboratory duplicate samples collected as part of this SDG?*

No

*Were laboratory duplicate sample RPDs within criteria?*

N/A

Field ID	Parameter	Analyte	RPD	Criteria
N/A				

Data qualified due to outlying laboratory duplicate recoveries are identified below:

Field ID	Parameter	Analyte	Qualification
N/A			

## 9.0 Field Duplicate Results

*Were field duplicate samples collected as part of this SDG?*

No

Field ID	Field Duplicate ID
N/A	

*Were field duplicates within evaluation criteria?*

N/A

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
N/A					

## 10.0 Sample Dilutions

*For samples that were diluted and nondetect, were undiluted results also reported?*

Analytes were detected in sample that were diluted.

The following table identifies the analyses which were reported as nondetect, diluted, and an undiluted run *was not* reported:

Field ID	Parameter	Dilution Factor
N/A		

## 11.0 Additional Qualifications

*Were additional qualifications applied?*

No

April 28, 2006

Client: URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn: Amelia Turnell

Work Order: NPD1163  
Project Name: West Fenceline P-93 Project  
Project Nbr: SAP 340061  
P/O Nbr: 97216640  
Date Received: 04/11/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
P9306GWP62.5	NPD1163-01	04/10/06 09:20
TB04100604	NPD1163-02	04/10/06 00:01

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

**Additional Laboratory Comments:**

Per enclosed Chain of Custody, "samples were properly preserved and received in good condition on 4/11/06. Analysis was extracted and performed within method required holding times following Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)". All QC results were within acceptable limits. Initial and Continuing Calibration requirements were met. Package was completed as a "Level IV".

Please note for P9306GWP62.5 (NPD1163-01): Surrogates 1,2-Dichloroethane-d4 and Dibromofluoromethane were outside laboratory acceptable QC limit biased low in the 1X analysis due matrix interference. Ethylbenzene, Toluene, and Total Xylene were reported results are greater than the upper level of the calibration due to high concentration of Benzene in this sample. These analytes were flagged with an "E".

Organics: Unknown analyte concentrations were determined using the average response factor from the initial calibration curve for all analytes whose % RSD is less than or equal to 15. All other analyte concentrations were determined using linear regression analysis. Copies of curves for compounds with %RSD's greater than 15 are supplied.

As you review this data package, please call me if you require any additional information at # 1-800-765-0980 ext 1256.

Illinois Certification Number: 001177

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:



# TestAmerica

ANALYTICAL TESTING CORPORATION

2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

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Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Amelia Turnell

Work Order: NPD1163  
Project Name: West Fenceline P-93 Project  
Project Number: SAP 340061  
Received: 04/11/06 08:30

---

Glenn Lee Norton  
Data Package Coordinator

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1163  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/11/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1163-01 (P9306GWP62.5 - Water) Sampled: 04/10/06 09:20</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	325	"J"	ug/L	5.91	50.0	1	04/12/06 02:09	SW846 8260B	6042516
Benzene	827000		ug/L	29000	100000	100000	04/13/06 06:36	SW846 8260B	6042516
Bromobenzene	ND	"R"	ug/L	0.470	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Bromoform	ND	"R"	ug/L	0.500	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Bromomethane	4.32	"J"	ug/L	0.600	1.00	1	04/12/06 02:09	SW846 8260B	6042516
2-Butanone	ND	"R"	ug/L	5.09	50.0	1	04/12/06 02:09	SW846 8260B	6042516
sec-Butylbenzene	ND	"R"	ug/L	0.380	1.00	1	04/12/06 02:09	SW846 8260B	6042516
n-Butylbenzene	4.05	"J"	ug/L	0.460	1.00	1	04/12/06 02:09	SW846 8260B	6042516
tert-Butylbenzene	ND	"R"	ug/L	0.390	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Chloroethane	ND		ug/L	0.500	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Chloroform	ND		ug/L	0.380	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Chloromethane	ND		ug/L	0.460	1.00	1	04/12/06 02:09	SW846 8260B	6042516
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/12/06 02:09	SW846 8260B	6042516
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/12/06 02:09	SW846 8260B	6042516
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Dibromomethane	ND		ug/L	0.570	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/12/06 02:09	SW846 8260B	6042516
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/12/06 02:09	SW846 8260B	6042516
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/12/06 02:09	SW846 8260B	6042516
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/12/06 02:09	SW846 8260B	6042516
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/12/06 02:09	SW846 8260B	6042516
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,1-Dichloropropene	ND	"R"	ug/L	0.510	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Ethylbenzene	ND	"R"	ug/L	0.340	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Hexachlorobutadiene	ND	"R"	ug/L	0.670	1.00	1	04/12/06 02:09	SW846 8260B	6042516
2-Hexanone	ND	"R"	ug/L	2.53	50.0	1	04/12/06 02:09	SW846 8260B	6042516
Isopropylbenzene	45.4	"J"	ug/L	0.340	1.00	1	04/12/06 02:09	SW846 8260B	6042516
p-Isopropyltoluene	ND	"R"	ug/L	0.340	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Methyl tert-Butyl Ether	18600		ug/L	320	1000	1000	04/13/06 06:06	SW846 8260B	6042516
Methylene Chloride	ND	"R"	ug/L	1.26	5.00	1	04/12/06 02:09	SW846 8260B	6042516

Handwritten notes:   
 >100 -401   
 "R"   
 "J"

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1163  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/11/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1163-01 (P9306GWP62.5 - Water) - cont. Sampled: 04/10/06 09:20</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
4-Methyl-2-pentanone	ND	"R"	ug/L	4.25	50.0	1	04/12/06 02:09	SW846 8260B	6042516
Naphthalene	104	"J"	ug/L	1.13	5.00	1	04/12/06 02:09	SW846 8260B	6042516
n-Propylbenzene	118	"J"	ug/L	0.370	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Styrene	ND	"R"	ug/L	0.390	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Tetrachloroethene	ND	"R"	ug/L	0.390	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Toluene	>1000	E	ug/L	280	1000	1000	04/13/06 06:06	SW846 8260B	6042516
1,2,3-Trichlorobenzene	ND	"R"	ug/L	0.560	2.00	1	04/12/06 02:09	SW846 8260B	6042516
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/12/06 02:09	SW846 8260B	6042516
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Trichloroethene	ND		ug/L	0.450	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,2,3-Trichloropropane	ND	"R"	ug/L	0.560	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,3,5-Trimethylbenzene	56.3	"J"	ug/L	0.280	1.00	1	04/12/06 02:09	SW846 8260B	6042516
1,2,4-Trimethylbenzene	164	"J"	ug/L	0.340	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Vinyl chloride	ND		ug/L	0.430	1.00	1	04/12/06 02:09	SW846 8260B	6042516
Xylenes, total	>100	E "J"	ug/L	0.820	3.00	1	04/12/06 02:09	SW846 8260B	6042516
Surr: 1,2-Dichloroethane-d4 (70-130%)	3%	Z				1	04/12/06 02:09	SW846 8260B	6042516
Surr: Dibromofluoromethane (79-122%)	33%	Z				1	04/12/06 02:09	SW846 8260B	6042516
Surr: Toluene-d8 (78-121%)	86%					1	04/12/06 02:09	SW846 8260B	6042516
Surr: 4-Bromofluorobenzene (78-126%)	117%					1	04/12/06 02:09	SW846 8260B	6042516

### Sample ID: NPD1163-02 (TB04100604 - Water) Sampled: 04/10/06 00:01

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND		ug/L	5.91	50.0	1	04/11/06 23:36	SW846 8260B	6042516
Benzene	ND		ug/L	0.290	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Bromobenzene	ND		ug/L	0.470	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Bromoform	ND		ug/L	0.500	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Bromomethane	ND		ug/L	0.600	1.00	1	04/11/06 23:36	SW846 8260B	6042516
2-Butanone	ND		ug/L	5.09	50.0	1	04/11/06 23:36	SW846 8260B	6042516
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/11/06 23:36	SW846 8260B	6042516
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/11/06 23:36	SW846 8260B	6042516
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Chloroethane	ND		ug/L	0.500	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Chloroform	ND		ug/L	0.380	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Chloromethane	ND		ug/L	0.460	1.00	1	04/11/06 23:36	SW846 8260B	6042516

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1163  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/11/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1163-02 (TB04100604 - Water) - cont. Sampled: 04/10/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/11/06 23:36	SW846 8260B	6042516
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/11/06 23:36	SW846 8260B	6042516
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Dibromomethane	ND		ug/L	0.570	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/11/06 23:36	SW846 8260B	6042516
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/11/06 23:36	SW846 8260B	6042516
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/11/06 23:36	SW846 8260B	6042516
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/11/06 23:36	SW846 8260B	6042516
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/11/06 23:36	SW846 8260B	6042516
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Ethylbenzene	ND		ug/L	0.340	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	04/11/06 23:36	SW846 8260B	6042516
2-Hexanone	ND		ug/L	2.53	50.0	1	04/11/06 23:36	SW846 8260B	6042516
Isopropylbenzene	ND		ug/L	0.340	1.00	1	04/11/06 23:36	SW846 8260B	6042516
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Methyl tert-Butyl Ether	ND		ug/L	0.320	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Methylene Chloride	ND		ug/L	1.26	5.00	1	04/11/06 23:36	SW846 8260B	6042516
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	04/11/06 23:36	SW846 8260B	6042516
Naphthalene	ND		ug/L	1.13	5.00	1	04/11/06 23:36	SW846 8260B	6042516
n-Propylbenzene	ND		ug/L	0.370	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Styrene	ND		ug/L	0.390	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Tetrachloroethene	ND		ug/L	0.390	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Toluene	ND		ug/L	0.280	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	04/11/06 23:36	SW846 8260B	6042516
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/11/06 23:36	SW846 8260B	6042516
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Trichloroethene	ND		ug/L	0.450	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,3,5-Trimethylbenzene	ND		ug/L	0.280	1.00	1	04/11/06 23:36	SW846 8260B	6042516
1,2,4-Trimethylbenzene	ND		ug/L	0.340	1.00	1	04/11/06 23:36	SW846 8260B	6042516
Vinyl chloride	ND		ug/L	0.430	1.00	1	04/11/06 23:36	SW846 8260B	6042516

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1163  
 Project Name: West Fenceline P-93 Project  
 Project Number: SAP 340061  
 Received: 04/11/06 08:30

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1163-02 (TB04100604 - Water) - cont. Sampled: 04/10/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Xylenes, total	ND		ug/L	0.820	3.00	1	04/11/06 23:36	SW846 8260B	6042516
Surr: 1,2-Dichloroethane-d4 (70-130%)	108 %					1	04/11/06 23:36	SW846 8260B	6042516
Surr: Dibromofluoromethane (79-122%)	100 %					1	04/11/06 23:36	SW846 8260B	6042516
Surr: Toluene-d8 (78-121%)	86 %					1	04/11/06 23:36	SW846 8260B	6042516
Surr: 4-Bromofluorobenzene (78-126%)	104 %					1	04/11/06 23:36	SW846 8260B	6042516

Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Amelia Turnell

Work Order: NPD1163  
Project Name: West Fenceline P-93 Project  
Project Number: SAP 340061  
Received: 04/11/06 08:30

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## DATA QUALIFIERS AND DEFINITIONS

**E** Concentration exceeds the calibration range and therefore result is semi-quantitative.  
**Z** Due to sample matrix effects, the surrogate recovery was below the acceptance limits.

## METHOD MODIFICATION NOTES





# West Fenceline Data Review

**Laboratory SDG:** NPD1302

**Reviewer:** Tony Sedlacek

**Date Reviewed:** 2/26/2007

**Guidance:** USEPA Contract Laboratory National Functional Guidelines for Organic Data Review (USEPA 1999).

**Applicable Work Plan:** West Fenceline P-93 Dissolved Phase Benzene Investigation (2006)

Sample Identification #	Sample Identification #
P93309GWP66	P9309GWP66D
P9309GWP52	TB04110605
P9309GWP52EB	

## 1.0 Data Package Completeness

*Were all items delivered as specified in the QAPP and COC?*

Yes

## 2.0 Laboratory Case Narrative \ Cooler Receipt Form

*Were problems noted in the laboratory case narrative or cooler receipt form?*

Yes, the laboratory case narrative indicated that surrogate recoveries were outside evaluation criteria. Analytes were detected in the trip blank, equipment blank and method blank samples. In addition, samples were diluted due to high levels of target analytes. These issues are addressed further in the appropriate sections below.

The cooler receipt form did not indicate any problems.

## 3.0 Holding Times

*Were samples extracted/analyzed within QAPP limits?*

Yes

Field ID	Parameter	Analyte	Qualification
N/A			

#### 4.0 Blank Contamination

*Were any analytes detected in the Method Blanks, Field Blanks or Trip Blanks?*

Yes

Blank ID	Parameter	Analyte	Concentration	Units
TB04110605	VOCs	1,2,3-Trichlorobenzene	0.870	µg/L
P9309GWP52EB	VOCs	Benzene	1.01	µg/L
P9309GWP52EB	VOCs	1,2-dichloroethane	9.64	µg/L
P9309GWP52EB	VOCs	trans-1,3-dichloropropene	1.20	µg/L
P9309GWP52EB	VOCs	Ethylbenzene	1.40	µg/L
P9309GWP52EB	VOCs	Methyl tert-butyl ether	2.63	µg/L
P9309GWP52EB	VOCs	Naphthalene	4.54	µg/L
P9309GWP52EB	VOCs	1,2,4-Trimethylbenzene	0.610	µg/L
P9309GWP52EB	VOCs	Xylenes, total	1.12	µg/L
6042030-BLK1	VOCs	Benzene	0.680	µg/L
6042030-BLK1	VOCs	1,2,3-Trichlorobenzene	0.870	µg/L
6042030-BLK2	VOCs	Hexachlorobutadiene	1.11	µg/L
6042030-BLK2	VOCs	Naphthalene	1.39	µg/L
6042030-BLK2	VOCs	1,2,3-Trichlorobenzene	1.73	µg/L

Qualifications due to blank contamination are included in the table below. Analytical data that were reported nondetect or at concentrations greater than five times (5X) the associated blank concentration (10X for common laboratory contaminants) did not require qualification.

Field ID	Parameter	Analyte	New RL	Qualification
N/A				

#### 5.0 Laboratory Control Sample

*Were LCS recoveries within evaluation criteria?*

Yes

LCS ID	Parameter	Analyte	LCS/LCSD Recovery	RPD	LCS/LCSD/RPD Criteria
N/A					

Analytical data that required qualification based on LCS data are included in the table below. Analytical data which were reported as nondetect and associated with LCS recoveries above evaluation criteria, indicating a possible high bias, did not require qualification.

Field ID	Parameter	Analyte	Qualification
N/A			

## 6.0 Surrogate Recoveries

*Were surrogate recoveries within evaluation criteria?*

No

Field ID	Parameter	Surrogate	Recovery	Criteria
P9309GWP66	VOCs	1,2-Dichloroethane-d <sub>4</sub>	16	70-130
P9309GWP66	VOCs	Dibromofluoromethane	63	79-122

Analytical data that required qualification based on surrogate data are included in the table below. Analytical data which were reported as nondetect and associated with surrogate recoveries above evaluation criteria, indicating a possible high bias, did not require qualification. Sample P9309GWP66 was diluted and analyzed as part of batch 6044135. The benzene result was reported from the diluted sample; therefore, benzene was not qualified.

Field ID	Parameter	Analyte	Qualification
P9309GWP66	VOCs	All detects/nondetects	J/UJ

## 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

*Were MS/MSD samples reported as part of this SDG?*

No

*Were MS/MSD recoveries within evaluation criteria?*

N/A

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
N/A					

Analytical data that required qualification based on MS/MSD data are included in the table below.

Field ID	Parameter	Analyte	Qualification
N/A			

## 8.0 Laboratory Duplicate Results

*Were laboratory duplicate samples collected as part of this SDG?*

No

*Were laboratory duplicate sample RPDs within criteria?*

N/A

Field ID	Parameter	Analyte	RPD	Criteria
N/A				

Data qualified due to outlying laboratory duplicate recoveries are identified below:

Field ID	Parameter	Analyte	Qualification
N/A			

## 9.0 Field Duplicate Results

*Were field duplicate samples collected as part of this SDG?*

Yes

Field ID	Field Duplicate ID
P9309GWP66	P9309GWP66D

*Were field duplicates within evaluation criteria?*

Yes

Field ID	Field Duplicate ID	Parameter	Analyte	RPD	Qualification
N/A					

## 10.0 Sample Dilutions

*For samples that were diluted and nondetect, were undiluted results also reported?*

No

The following table identifies the analyses which were reported as nondetect, diluted, and an undiluted run *was not* reported:

Field ID	Parameter	Dilution Factor
P9309GWP66D	VOCs	10
P9309GWP52	VOCs	10

## 11.0 Additional Qualifications

*Were additional qualifications applied?*

No

May 12, 2006

Client: URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn: Amelia Turnell

Work Order: NPD1302  
Project Name: 170 E. Rand Avenue, Hartford, IL  
Project Nbr: SAP 340061  
P/O Nbr: 97216634  
Date Received: 04/12/06

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
P9309GWP66	NPD1302-01	04/11/06 15:00
P9309GWP66D	NPD1302-02	04/11/06 15:00
P9309GWP52	NPD1302-03	04/11/06 14:30
TB04110605	NPD1302-04	04/11/06 00:01
P9309GWP52EB	NPD1302-05	04/10/06 13:15

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

This material is intended only for the use of the individual(s) or entity to whom it is addressed, and may contain information that is privileged and confidential. If you are not the intended recipient, or the employee or agent responsible for delivering this material to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this material is strictly prohibited. If you have received this material in error, please notify us immediately at 615-726-0177.

**Additional Laboratory Comments:**

Per enclosed Chain of Custody, "samples were properly preserved and received in good condition on 4/12/06. Analysis was extracted and performed within method required holding times following Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)". Initial and Continuing Calibration requirements were met. Package was completed as a "Level IV" with 'NJ' electronic data deliverables.

Please note for QC batch 6042030: Naphthalene and 1,2,3-Trichlorobenzene in the method prep was detected above the MDL but less than the MRL in 6042030-BLK2. Hexachloropropane was detected above the MRL in 6042030-BLK2. No impact on data results. 1,2,3-Trichlorobenzene in the method prep was detected above the MDL but less than the MRL in 6042030-BLK1. Surrogates 1,2-Dichloroethane--d4 and Dibromofluoromethane in P9309GWP66 were outside laboratory acceptable QC limit biased low due to matrix interference.

Organics: Unknown analyte concentrations were determined using the average response factor from the initial calibration curve for all analytes whose % RSD is less than or equal to 15. All other analyte concentrations were determined using linear regression analysis. Copies of curves for compounds with %RSD's greater than 15 are supplied.

As you review this data package, please call me if you require any additional information at # 1-800-765-0980 ext 1256.

Illinois Certification Number: 001177

The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

Report Approved By:

# TestAmerica

ANALYTICAL TESTING CORPORATION

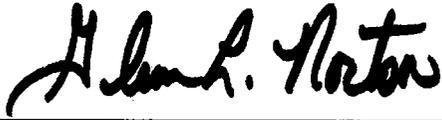
2960 Foster Creighton Road Nashville, TN 37204 \* 800-765-0980 \* Fax 615-726-3404

---

Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Amelia Turnell

Work Order: NPD1302  
Project Name: 170 E. Rand Avenue, Hartford, IL  
Project Number: SAP 340061  
Received: 04/12/06 08:00

---



Glenn Lee Norton  
Data Package Coordinator

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1302  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/12/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1302-01 (P9309GWP66 - Water) Sampled: 04/11/06 15:00</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND	"UJ"	ug/L	5.91	50.0	1	04/15/06 07:24	SW846 8260B	6042030
<del>Benzene</del>	<del>62000</del>	<del>"UJ"</del>	<del>ug/L</del>	<del>580</del>	<del>2000</del>	<del>2000</del>	<del>04/16/06 16:51</del>	<del>SW846 8260B</del>	<del>6042030</del>
Benzene	295000	"UJ"	ug/L	1450	5000	5000	04/17/06 13:09	SW846 8260B	6044135
Bromobenzene	ND	"UJ"	ug/L	0.470	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Bromochloromethane	ND	"UJ"	ug/L	0.420	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Bromodichloromethane	ND	"UJ"	ug/L	0.380	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Bromoform	ND	"UJ"	ug/L	0.500	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Bromomethane	ND	"UJ"	ug/L	0.600	1.00	1	04/15/06 07:24	SW846 8260B	6042030
2-Butanone	ND	"UJ"	ug/L	5.09	50.0	1	04/15/06 07:24	SW846 8260B	6042030
sec-Butylbenzene	4.54	"J"	ug/L	0.380	1.00	1	04/15/06 07:24	SW846 8260B	6042030
n-Butylbenzene	ND	"UJ"	ug/L	0.460	1.00	1	04/15/06 07:24	SW846 8260B	6042030
tert-Butylbenzene	0.590	"J"	ug/L	0.390	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Carbon disulfide	ND	"UJ"	ug/L	0.310	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Carbon Tetrachloride	ND	"UJ"	ug/L	0.480	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Chlorobenzene	ND	"UJ"	ug/L	0.320	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Chlorodibromomethane	ND	"UJ"	ug/L	0.360	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Chloroethane	ND	"UJ"	ug/L	0.500	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Chloroform	ND	"UJ"	ug/L	0.380	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Chloromethane	ND	"UJ"	ug/L	0.460	1.00	1	04/15/06 07:24	SW846 8260B	6042030
2-Chlorotoluene	ND	"UJ"	ug/L	0.270	1.00	1	04/15/06 07:24	SW846 8260B	6042030
4-Chlorotoluene	ND	"UJ"	ug/L	0.370	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,2-Dibromo-3-chloropropane	ND	"UJ"	ug/L	1.64	5.00	1	04/15/06 07:24	SW846 8260B	6042030
1,2-Dibromoethane (EDB)	ND	"UJ"	ug/L	0.380	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Dibromomethane	ND	"UJ"	ug/L	0.570	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,4-Dichlorobenzene	ND	"UJ"	ug/L	0.460	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,3-Dichlorobenzene	ND	"UJ"	ug/L	0.360	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,2-Dichlorobenzene	ND	"UJ"	ug/L	0.370	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Dichlorodifluoromethane	ND	"UJ"	ug/L	0.410	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,1-Dichloroethane	ND	"UJ"	ug/L	0.320	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,2-Dichloroethane	ND	"UJ"	ug/L	0.280	1.00	1	04/15/06 07:24	SW846 8260B	6042030
cis-1,2-Dichloroethene	ND	"UJ"	ug/L	0.390	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,1-Dichloroethene	ND	"UJ"	ug/L	0.450	1.00	1	04/15/06 07:24	SW846 8260B	6042030
trans-1,2-Dichloroethene	ND	"UJ"	ug/L	0.340	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,3-Dichloropropane	ND	"UJ"	ug/L	0.630	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,2-Dichloropropane	ND	"UJ"	ug/L	0.500	1.00	1	04/15/06 07:24	SW846 8260B	6042030
2,2-Dichloropropane	ND	"UJ"	ug/L	0.660	1.00	1	04/15/06 07:24	SW846 8260B	6042030
cis-1,3-Dichloropropene	ND	"UJ"	ug/L	0.450	1.00	1	04/15/06 07:24	SW846 8260B	6042030
trans-1,3-Dichloropropene	ND	"UJ"	ug/L	0.490	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,1-Dichloropropene	ND	"UJ"	ug/L	0.510	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Ethylbenzene	740	"UJ"	ug/L	3.40	10.0	10	04/15/06 07:54	SW846 8260B	6042030
Hexachlorobutadiene	ND	"UJ"	ug/L	0.670	1.00	1	04/15/06 07:24	SW846 8260B	6042030
2-Hexanone	ND	"UJ"	ug/L	2.53	50.0	1	04/15/06 07:24	SW846 8260B	6042030
Isopropylbenzene	15.4	"J"	ug/L	0.340	1.00	1	04/15/06 07:24	SW846 8260B	6042030
p-Isopropyltoluene	4.39	"J"	ug/L	0.340	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Methyl tert-Butyl Ether	8570	"UJ"	ug/L	32.0	100	100	04/16/06 16:22	SW846 8260B	6042030

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1302  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/12/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1302-01 (P9309GWP66 - Water) - cont. Sampled: 04/11/06 15:00</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Methylene Chloride	ND	— "uJ"	ug/L	1.26	5.00	1	04/15/06 07:24	SW846 8260B	6042030
4-Methyl-2-pentanone	ND	— "uJ"	ug/L	4.25	50.0	1	04/15/06 07:24	SW846 8260B	6042030
Naphthalene	53.1	— "J"	ug/L	1.13	5.00	1	04/15/06 07:24	SW846 8260B	6042030
n-Propylbenzene	26.2	— "J"	ug/L	0.370	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Styrene	ND	— "uJ"	ug/L	0.390	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,1,1,2-Tetrachloroethane	ND	↓	ug/L	0.370	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,1,2,2-Tetrachloroethane	ND	↓	ug/L	0.490	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Tetrachloroethene	ND	— "uJ"	ug/L	0.390	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Toluene	156	— "J"	ug/L	0.280	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,2,3-Trichlorobenzene	ND	— "uJ"	ug/L	0.560	2.00	1	04/15/06 07:24	SW846 8260B	6042030
1,2,4-Trichlorobenzene	ND	↓	ug/L	0.790	2.00	1	04/15/06 07:24	SW846 8260B	6042030
1,1,2-Trichloroethane	ND	↓	ug/L	0.420	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,1,1-Trichloroethane	ND	↓	ug/L	0.400	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Trichloroethene	ND	↓	ug/L	0.450	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Trichlorofluoromethane	ND	— "uJ"	ug/L	0.480	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,2,3-Trichloropropane	ND	— "uJ"	ug/L	0.560	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,3,5-Trimethylbenzene	35.0	— "J"	ug/L	0.280	1.00	1	04/15/06 07:24	SW846 8260B	6042030
1,2,4-Trimethylbenzene	137	— "J"	ug/L	0.340	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Vinyl chloride	ND	— "uJ"	ug/L	0.430	1.00	1	04/15/06 07:24	SW846 8260B	6042030
Xylenes, total	502	— "J"	ug/L	0.820	3.00	1	04/15/06 07:24	SW846 8260B	6042030
Surr: 1,2-Dichloroethane-d4 (70-130%)	16 %	Z				1	04/15/06 07:24	SW846 8260B	6042030
Surr: 1,2-Dichloroethane-d4 (70-130%)	103 %					1	04/17/06 13:09	SW846 8260B	6044135
Surr: Dibromofluoromethane (79-122%)	63 %	Z				1	04/15/06 07:24	SW846 8260B	6042030
Surr: Dibromofluoromethane (79-122%)	116 %					1	04/17/06 13:09	SW846 8260B	6044135
Surr: Toluene-d8 (78-121%)	111 %					1	04/15/06 07:24	SW846 8260B	6042030
Surr: Toluene-d8 (78-121%)	98 %					1	04/17/06 13:09	SW846 8260B	6044135
Surr: 4-Bromofluorobenzene (78-126%)	118 %					1	04/15/06 07:24	SW846 8260B	6042030
Surr: 4-Bromofluorobenzene (78-126%)	104 %					1	04/17/06 13:09	SW846 8260B	6044135

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1302  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/12/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1302-02 (P9309GWP66D - Water) Sampled: 04/11/06 15:00</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND		ug/L	59.1	500	10	04/16/06 13:26	SW846 8260B	6042030
Benzene	<b>569000</b>		ug/L	1450	5000	5000	04/16/06 14:24	SW846 8260B	6042030
Bromobenzene	ND		ug/L	4.70	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Bromochloromethane	ND		ug/L	4.20	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Bromodichloromethane	ND		ug/L	3.80	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Bromoform	ND		ug/L	5.00	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Bromomethane	ND		ug/L	6.00	10.0	10	04/16/06 13:26	SW846 8260B	6042030
2-Butanone	ND		ug/L	50.9	500	10	04/16/06 13:26	SW846 8260B	6042030
sec-Butylbenzene	<b>5.20</b>	J	ug/L	3.80	10.0	10	04/16/06 13:26	SW846 8260B	6042030
n-Butylbenzene	ND		ug/L	4.60	10.0	10	04/16/06 13:26	SW846 8260B	6042030
tert-Butylbenzene	ND		ug/L	3.90	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Carbon disulfide	ND		ug/L	3.10	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Carbon Tetrachloride	ND		ug/L	4.80	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Chlorobenzene	ND		ug/L	3.20	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Chlorodibromomethane	ND		ug/L	3.60	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Chloroethane	ND		ug/L	5.00	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Chloroform	ND		ug/L	3.80	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Chloromethane	ND		ug/L	4.60	10.0	10	04/16/06 13:26	SW846 8260B	6042030
2-Chlorotoluene	ND		ug/L	2.70	10.0	10	04/16/06 13:26	SW846 8260B	6042030
4-Chlorotoluene	ND		ug/L	3.70	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,2-Dibromo-3-chloropropane	ND		ug/L	16.4	50.0	10	04/16/06 13:26	SW846 8260B	6042030
1,2-Dibromoethane (EDB)	ND		ug/L	3.80	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Dibromomethane	ND		ug/L	5.70	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,4-Dichlorobenzene	ND		ug/L	4.60	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,3-Dichlorobenzene	ND		ug/L	3.60	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,2-Dichlorobenzene	ND		ug/L	3.70	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Dichlorodifluoromethane	ND		ug/L	4.10	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,1-Dichloroethane	ND		ug/L	3.20	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,2-Dichloroethane	ND		ug/L	2.80	10.0	10	04/16/06 13:26	SW846 8260B	6042030
cis-1,2-Dichloroethene	ND		ug/L	3.90	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,1-Dichloroethene	ND		ug/L	4.50	10.0	10	04/16/06 13:26	SW846 8260B	6042030
trans-1,2-Dichloroethene	ND		ug/L	3.40	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,3-Dichloropropane	ND		ug/L	6.30	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,2-Dichloropropane	ND		ug/L	5.00	10.0	10	04/16/06 13:26	SW846 8260B	6042030
2,2-Dichloropropane	ND		ug/L	6.60	10.0	10	04/16/06 13:26	SW846 8260B	6042030
cis-1,3-Dichloropropene	ND		ug/L	4.50	10.0	10	04/16/06 13:26	SW846 8260B	6042030
trans-1,3-Dichloropropene	ND		ug/L	4.90	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,1-Dichloropropene	ND		ug/L	5.10	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Ethylbenzene	<b>698</b>		ug/L	3.40	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Hexachlorobutadiene	ND		ug/L	6.70	10.0	10	04/16/06 13:26	SW846 8260B	6042030
2-Hexanone	ND		ug/L	25.3	500	10	04/16/06 13:26	SW846 8260B	6042030
Isopropylbenzene	ND		ug/L	3.40	10.0	10	04/16/06 13:26	SW846 8260B	6042030
p-Isopropyltoluene	ND		ug/L	3.40	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Methyl tert-Butyl Ether	<b>8730</b>		ug/L	64.0	200	200	04/16/06 13:55	SW846 8260B	6042030
Methylene Chloride	ND		ug/L	12.6	50.0	10	04/16/06 13:26	SW846 8260B	6042030

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1302  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/12/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1302-02 (P9309GWP66D - Water) - cont. Sampled: 04/11/06 15:00</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
4-Methyl-2-pentanone	ND		ug/L	42.5	500	10	04/16/06 13:26	SW846 8260B	6042030
Naphthalene	36.2	J	ug/L	11.3	50.0	10	04/16/06 13:26	SW846 8260B	6042030
n-Propylbenzene	21.3		ug/L	3.70	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Styrene	ND		ug/L	3.90	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,1,1,2-Tetrachloroethane	ND		ug/L	3.70	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,1,2,2-Tetrachloroethane	ND		ug/L	4.90	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Tetrachloroethene	ND		ug/L	3.90	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Toluene	130		ug/L	2.80	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,2,3-Trichlorobenzene	ND		ug/L	5.60	20.0	10	04/16/06 13:26	SW846 8260B	6042030
1,2,4-Trichlorobenzene	ND		ug/L	7.90	20.0	10	04/16/06 13:26	SW846 8260B	6042030
1,1,2-Trichloroethane	ND		ug/L	4.20	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,1,1-Trichloroethane	ND		ug/L	4.00	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Trichloroethene	ND		ug/L	4.50	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Trichlorofluoromethane	ND		ug/L	4.80	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,2,3-Trichloropropane	ND		ug/L	5.60	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,3,5-Trimethylbenzene	34.2		ug/L	2.80	10.0	10	04/16/06 13:26	SW846 8260B	6042030
1,2,4-Trimethylbenzene	131		ug/L	3.40	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Vinyl chloride	ND		ug/L	4.30	10.0	10	04/16/06 13:26	SW846 8260B	6042030
Xylenes, total	548		ug/L	8.20	30.0	10	04/16/06 13:26	SW846 8260B	6042030
Surr: 1,2-Dichloroethane-d4 (70-130%)	79 %	Z				1	04/16/06 13:26	SW846 8260B	6042030
Surr: Dibromofluoromethane (79-122%)	81 %	Z				1	04/16/06 13:26	SW846 8260B	6042030
Surr: Toluene-d8 (78-121%)	100 %					1	04/16/06 13:26	SW846 8260B	6042030
Surr: 4-Bromofluorobenzene (78-126%)	109 %					1	04/16/06 13:26	SW846 8260B	6042030

### Sample ID: NPD1302-03 (P9309GWP52 - Water) Sampled: 04/11/06 14:30

Volatile Organic Compounds by EPA Method 8260B

Acetone	ND		ug/L	59.1	500	10	04/16/06 14:54	SW846 8260B	6042030
Benzene	250000		ug/L	1450	5000	5000	04/16/06 15:53	SW846 8260B	6042030
Bromobenzene	ND		ug/L	4.70	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Bromochloromethane	ND		ug/L	4.20	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Bromodichloromethane	ND		ug/L	3.80	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Bromoform	ND		ug/L	5.00	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Bromomethane	ND		ug/L	6.00	10.0	10	04/16/06 14:54	SW846 8260B	6042030
2-Butanone	ND		ug/L	50.9	500	10	04/16/06 14:54	SW846 8260B	6042030
sec-Butylbenzene	117		ug/L	3.80	10.0	10	04/16/06 14:54	SW846 8260B	6042030
n-Butylbenzene	ND		ug/L	4.60	10.0	10	04/16/06 14:54	SW846 8260B	6042030
tert-Butylbenzene	32.8		ug/L	3.90	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Carbon disulfide	ND		ug/L	3.10	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Carbon Tetrachloride	ND		ug/L	4.80	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Chlorobenzene	ND		ug/L	3.20	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Chlorodibromomethane	ND		ug/L	3.60	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Chloroethane	ND		ug/L	5.00	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Chloroform	ND		ug/L	3.80	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Chloromethane	ND		ug/L	4.60	10.0	10	04/16/06 14:54	SW846 8260B	6042030

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1302  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/12/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1302-03 (P9309GWP52 - Water) - cont. Sampled: 04/11/06 14:30</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
2-Chlorotoluene	ND		ug/L	2.70	10.0	10	04/16/06 14:54	SW846 8260B	6042030
4-Chlorotoluene	ND		ug/L	3.70	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,2-Dibromo-3-chloropropane	ND		ug/L	16.4	50.0	10	04/16/06 14:54	SW846 8260B	6042030
1,2-Dibromoethane (EDB)	ND		ug/L	3.80	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Dibromomethane	ND		ug/L	5.70	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,4-Dichlorobenzene	ND		ug/L	4.60	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,3-Dichlorobenzene	ND		ug/L	3.60	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,2-Dichlorobenzene	ND		ug/L	3.70	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Dichlorodifluoromethane	ND		ug/L	4.10	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,1-Dichloroethane	ND		ug/L	3.20	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,2-Dichloroethane	ND		ug/L	2.80	10.0	10	04/16/06 14:54	SW846 8260B	6042030
cis-1,2-Dichloroethene	ND		ug/L	3.90	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,1-Dichloroethene	ND		ug/L	4.50	10.0	10	04/16/06 14:54	SW846 8260B	6042030
trans-1,2-Dichloroethene	ND		ug/L	3.40	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,3-Dichloropropane	ND		ug/L	6.30	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,2-Dichloropropane	ND		ug/L	5.00	10.0	10	04/16/06 14:54	SW846 8260B	6042030
2,2-Dichloropropane	ND		ug/L	6.60	10.0	10	04/16/06 14:54	SW846 8260B	6042030
cis-1,3-Dichloropropene	ND		ug/L	4.50	10.0	10	04/16/06 14:54	SW846 8260B	6042030
trans-1,3-Dichloropropene	ND		ug/L	4.90	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,1-Dichloropropene	ND		ug/L	5.10	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Ethylbenzene	1260		ug/L	3.40	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Hexachlorobutadiene	ND		ug/L	6.70	10.0	10	04/16/06 14:54	SW846 8260B	6042030
2-Hexanone	ND		ug/L	25.3	500	10	04/16/06 14:54	SW846 8260B	6042030
Isopropylbenzene	123		ug/L	3.40	10.0	10	04/16/06 14:54	SW846 8260B	6042030
p-Isopropyltoluene	69.6		ug/L	3.40	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Methyl tert-Butyl Ether	10100		ug/L	64.0	200	200	04/16/06 15:23	SW846 8260B	6042030
Methylene Chloride	ND		ug/L	12.6	50.0	10	04/16/06 14:54	SW846 8260B	6042030
4-Methyl-2-pentanone	ND		ug/L	42.5	500	10	04/16/06 14:54	SW846 8260B	6042030
Naphthalene	215		ug/L	11.3	50.0	10	04/16/06 14:54	SW846 8260B	6042030
n-Propylbenzene	310		ug/L	3.70	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Styrene	ND		ug/L	3.90	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,1,1,2-Tetrachloroethane	ND		ug/L	3.70	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,1,2,2-Tetrachloroethane	ND		ug/L	4.90	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Tetrachloroethene	ND		ug/L	3.90	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Toluene	68.5		ug/L	2.80	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,2,3-Trichlorobenzene	ND		ug/L	5.60	20.0	10	04/16/06 14:54	SW846 8260B	6042030
1,2,4-Trichlorobenzene	ND		ug/L	7.90	20.0	10	04/16/06 14:54	SW846 8260B	6042030
1,1,2-Trichloroethane	ND		ug/L	4.20	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,1,1-Trichloroethane	ND		ug/L	4.00	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Trichloroethene	ND		ug/L	4.50	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Trichlorofluoromethane	ND		ug/L	4.80	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,2,3-Trichloropropane	ND		ug/L	5.60	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,3,5-Trimethylbenzene	485		ug/L	2.80	10.0	10	04/16/06 14:54	SW846 8260B	6042030
1,2,4-Trimethylbenzene	1770		ug/L	3.40	10.0	10	04/16/06 14:54	SW846 8260B	6042030
Vinyl chloride	ND		ug/L	4.30	10.0	10	04/16/06 14:54	SW846 8260B	6042030

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1302  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/12/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1302-03 (P9309GWP52 - Water) - cont. Sampled: 04/11/06 14:30</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
Xylenes, total	2340		ug/L	8.20	30.0	10	04/16/06 14:54	SW846 8260B	6042030
Surr: 1,2-Dichloroethane-d4 (70-130%)	94 %					1	04/16/06 14:54	SW846 8260B	6042030
Surr: Dibromofluoromethane (79-122%)	94 %					1	04/16/06 14:54	SW846 8260B	6042030
Surr: Toluene-d8 (78-121%)	97 %					1	04/16/06 14:54	SW846 8260B	6042030
Surr: 4-Bromofluorobenzene (78-126%)	105 %					1	04/16/06 14:54	SW846 8260B	6042030

### Sample ID: NPD1302-04 (TB04110605 - Water) Sampled: 04/11/06 00:01

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND		ug/L	5.91	50.0	1	04/15/06 04:28	SW846 8260B	6042030
Benzene	ND		ug/L	0.290	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Bromobenzene	ND		ug/L	0.470	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Bromoform	ND		ug/L	0.500	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Bromomethane	ND		ug/L	0.600	1.00	1	04/15/06 04:28	SW846 8260B	6042030
2-Butanone	ND		ug/L	5.09	50.0	1	04/15/06 04:28	SW846 8260B	6042030
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/15/06 04:28	SW846 8260B	6042030
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/15/06 04:28	SW846 8260B	6042030
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Chloroethane	ND		ug/L	0.500	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Chloroform	ND		ug/L	0.380	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Chloromethane	ND		ug/L	0.460	1.00	1	04/15/06 04:28	SW846 8260B	6042030
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/15/06 04:28	SW846 8260B	6042030
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/15/06 04:28	SW846 8260B	6042030
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Dibromomethane	ND		ug/L	0.570	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,2-Dichloroethane	ND		ug/L	0.280	1.00	1	04/15/06 04:28	SW846 8260B	6042030
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/15/06 04:28	SW846 8260B	6042030
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/15/06 04:28	SW846 8260B	6042030
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/15/06 04:28	SW846 8260B	6042030
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/15/06 04:28	SW846 8260B	6042030

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1302  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/12/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1302-04 (TB04110605 - Water) - cont. Sampled: 04/11/06 00:01</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
trans-1,3-Dichloropropene	ND		ug/L	0.490	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Ethylbenzene	ND		ug/L	0.340	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	04/15/06 04:28	SW846 8260B	6042030
2-Hexanone	ND		ug/L	2.53	50.0	1	04/15/06 04:28	SW846 8260B	6042030
Isopropylbenzene	ND		ug/L	0.340	1.00	1	04/15/06 04:28	SW846 8260B	6042030
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Methyl tert-Butyl Ether	ND		ug/L	0.320	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Methylene Chloride	ND		ug/L	1.26	5.00	1	04/15/06 04:28	SW846 8260B	6042030
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	04/15/06 04:28	SW846 8260B	6042030
Naphthalene	ND		ug/L	1.13	5.00	1	04/15/06 04:28	SW846 8260B	6042030
n-Propylbenzene	ND		ug/L	0.370	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Styrene	ND		ug/L	0.390	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Tetrachloroethene	ND		ug/L	0.390	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Toluene	ND		ug/L	0.280	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,2,3-Trichlorobenzene	<b>0.870</b>	J	ug/L	0.560	2.00	1	04/15/06 04:28	SW846 8260B	6042030
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/15/06 04:28	SW846 8260B	6042030
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Trichloroethene	ND		ug/L	0.450	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,3,5-Trimethylbenzene	ND		ug/L	0.280	1.00	1	04/15/06 04:28	SW846 8260B	6042030
1,2,4-Trimethylbenzene	ND		ug/L	0.340	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Vinyl chloride	ND		ug/L	0.430	1.00	1	04/15/06 04:28	SW846 8260B	6042030
Xylenes, total	ND		ug/L	0.820	3.00	1	04/15/06 04:28	SW846 8260B	6042030
Surr: 1,2-Dichloroethane-d4 (70-130%)	99 %					1	04/15/06 04:28	SW846 8260B	6042030
Surr: Dibromofluoromethane (79-122%)	100 %					1	04/15/06 04:28	SW846 8260B	6042030
Surr: Toluene-d8 (78-121%)	99 %					1	04/15/06 04:28	SW846 8260B	6042030
Surr: 4-Bromofluorobenzene (78-126%)	104 %					1	04/15/06 04:28	SW846 8260B	6042030

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1302  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/12/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1302-05 (P9309GWP52EB - Water) Sampled: 04/10/06 13:15</b>									
Volatile Organic Compounds by EPA Method 8260B									
Acetone	ND		ug/L	5.91	50.0	1	04/15/06 05:56	SW846 8260B	6042030
Benzene	1.01		ug/L	0.290	1.00	1	04/16/06 12:27	SW846 8260B	6042030
Bromobenzene	ND		ug/L	0.470	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Bromochloromethane	ND		ug/L	0.420	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Bromodichloromethane	ND		ug/L	0.380	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Bromoform	ND		ug/L	0.500	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Bromomethane	ND		ug/L	0.600	1.00	1	04/15/06 05:56	SW846 8260B	6042030
2-Butanone	ND		ug/L	5.09	50.0	1	04/15/06 05:56	SW846 8260B	6042030
sec-Butylbenzene	ND		ug/L	0.380	1.00	1	04/15/06 05:56	SW846 8260B	6042030
n-Butylbenzene	ND		ug/L	0.460	1.00	1	04/15/06 05:56	SW846 8260B	6042030
tert-Butylbenzene	ND		ug/L	0.390	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Carbon disulfide	ND		ug/L	0.310	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Carbon Tetrachloride	ND		ug/L	0.480	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Chlorobenzene	ND		ug/L	0.320	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Chlorodibromomethane	ND		ug/L	0.360	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Chloroethane	ND		ug/L	0.500	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Chloroform	ND		ug/L	0.380	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Chloromethane	ND		ug/L	0.460	1.00	1	04/15/06 05:56	SW846 8260B	6042030
2-Chlorotoluene	ND		ug/L	0.270	1.00	1	04/15/06 05:56	SW846 8260B	6042030
4-Chlorotoluene	ND		ug/L	0.370	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,2-Dibromo-3-chloropropane	ND		ug/L	1.64	5.00	1	04/15/06 05:56	SW846 8260B	6042030
1,2-Dibromoethane (EDB)	ND		ug/L	0.380	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Dibromomethane	ND		ug/L	0.570	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,4-Dichlorobenzene	ND		ug/L	0.460	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,3-Dichlorobenzene	ND		ug/L	0.360	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,2-Dichlorobenzene	ND		ug/L	0.370	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Dichlorodifluoromethane	ND		ug/L	0.410	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,1-Dichloroethane	ND		ug/L	0.320	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,2-Dichloroethane	9.64		ug/L	0.280	1.00	1	04/15/06 05:56	SW846 8260B	6042030
cis-1,2-Dichloroethene	ND		ug/L	0.390	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,1-Dichloroethene	ND		ug/L	0.450	1.00	1	04/15/06 05:56	SW846 8260B	6042030
trans-1,2-Dichloroethene	ND		ug/L	0.340	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,3-Dichloropropane	ND		ug/L	0.630	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,2-Dichloropropane	ND		ug/L	0.500	1.00	1	04/15/06 05:56	SW846 8260B	6042030
2,2-Dichloropropane	ND		ug/L	0.660	1.00	1	04/15/06 05:56	SW846 8260B	6042030
cis-1,3-Dichloropropene	ND		ug/L	0.450	1.00	1	04/15/06 05:56	SW846 8260B	6042030
trans-1,3-Dichloropropene	1.20		ug/L	0.490	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,1-Dichloropropene	ND		ug/L	0.510	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Ethylbenzene	1.40		ug/L	0.340	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Hexachlorobutadiene	ND		ug/L	0.670	1.00	1	04/15/06 05:56	SW846 8260B	6042030
2-Hexanone	ND		ug/L	2.53	50.0	1	04/15/06 05:56	SW846 8260B	6042030
Isopropylbenzene	ND		ug/L	0.340	1.00	1	04/15/06 05:56	SW846 8260B	6042030
p-Isopropyltoluene	ND		ug/L	0.340	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Methyl tert-Butyl Ether	2.63		ug/L	0.320	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Methylene Chloride	ND		ug/L	1.26	5.00	1	04/15/06 05:56	SW846 8260B	6042030

Client URS Corporation (St. Louis)/SHELL (13668)  
 1001 Highlands Plaza Dr. West, Suite 300  
 St. Louis, MO 63110  
 Attn Amelia Turnell

Work Order: NPD1302  
 Project Name: 170 E. Rand Avenue, Hartford, IL  
 Project Number: SAP 340061  
 Received: 04/12/06 08:00

## ANALYTICAL REPORT

Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
<b>Sample ID: NPD1302-05 (P9309GWP52EB - Water) - cont. Sampled: 04/10/06 13:15</b>									
Volatile Organic Compounds by EPA Method 8260B - cont.									
4-Methyl-2-pentanone	ND		ug/L	4.25	50.0	1	04/15/06 05:56	SW846 8260B	6042030
Naphthalene	4.54	J	ug/L	1.13	5.00	1	04/15/06 05:56	SW846 8260B	6042030
n-Propylbenzene	ND		ug/L	0.370	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Styrene	ND		ug/L	0.390	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,1,1,2-Tetrachloroethane	ND		ug/L	0.370	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,1,2,2-Tetrachloroethane	ND		ug/L	0.490	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Tetrachloroethene	ND		ug/L	0.390	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Toluene	ND		ug/L	0.280	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,2,3-Trichlorobenzene	ND		ug/L	0.560	2.00	1	04/15/06 05:56	SW846 8260B	6042030
1,2,4-Trichlorobenzene	ND		ug/L	0.790	2.00	1	04/15/06 05:56	SW846 8260B	6042030
1,1,2-Trichloroethane	ND		ug/L	0.420	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,1,1-Trichloroethane	ND		ug/L	0.400	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Trichloroethene	ND		ug/L	0.450	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Trichlorofluoromethane	ND		ug/L	0.480	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,2,3-Trichloropropane	ND		ug/L	0.560	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,3,5-Trimethylbenzene	ND		ug/L	0.280	1.00	1	04/15/06 05:56	SW846 8260B	6042030
1,2,4-Trimethylbenzene	0.610	J	ug/L	0.340	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Vinyl chloride	ND		ug/L	0.430	1.00	1	04/15/06 05:56	SW846 8260B	6042030
Xylenes, total	1.12	J	ug/L	0.820	3.00	1	04/15/06 05:56	SW846 8260B	6042030
Surr: 1,2-Dichloroethane-d4 (70-130%)	92 %					1	04/15/06 05:56	SW846 8260B	6042030
Surr: Dibromofluoromethane (79-122%)	95 %					1	04/15/06 05:56	SW846 8260B	6042030
Surr: Toluene-d8 (78-121%)	100 %					1	04/15/06 05:56	SW846 8260B	6042030
Surr: 4-Bromofluorobenzene (78-126%)	108 %					1	04/15/06 05:56	SW846 8260B	6042030



Client URS Corporation (St. Louis)/SHELL (13668)  
1001 Highlands Plaza Dr. West, Suite 300  
St. Louis, MO 63110  
Attn Amelia Turnell

Work Order: NPD1302  
Project Name: 170 E. Rand Avenue, Hartford, IL  
Project Number: SAP 340061  
Received: 04/12/06 08:00

## DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- E1** Concentration estimated. Analyte exceeded calibration range. Reanalysis not possible due to insufficient sample.
- J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated.
- Z** Due to sample matrix effects, the surrogate recovery was below the acceptance limits.

## METHOD MODIFICATION NOTES

NPD1302

TEST AMERICA 7690 FOSTER CREIGHTON, NASHVILLE, TN 37204 PHONE 800-765-09 04/17/06 23:59

Shell Oil Products US Chain Of Custody Record

7602 Commerce Drive, Watertown, WI 53094 Phone 800-833-7036  
 704 Enterprise Drive, Cedar Falls, IA 50613 Phone 319-277-2401  
 14500 Trinity Blvd., Suite 106, Fort Worth, TX 76155 Phone 817-571-6800  
 3601 South Dixie Drive, Dayton, OH 45439 Phone 800-572-9839  
 1380 Busch Parkway, Buffalo Grove, IL 60089 Phone 847-808-7766  
 1110 Elkton Drive, Suite A, Colorado Springs, CO 80907 Phone 719-593-9911  
 Other \_\_\_\_\_

**SOP US Project Manager to be invoiced:**  
 ENVIRONMENTAL SERVICES  
 TECHNICAL SERVICES  
 RMT HOUSTON  
 BILL CONSULTANT

**NAME OF PM TO BILL:** Herb Hand (SOPUS)  
**NAME OF TS TO BILL:** \_\_\_\_\_  
 SHELL RATES  STATE REIMBURSEMENT RATES

**INCIDENT # (S&E ONLY):** \_\_\_\_\_  
**DATE:** 04/11/06 **PAGE:** \_\_\_\_\_ of \_\_\_\_\_

**Invoice with \_\_\_\_\_ sampling events for this site, sampled through the following date:** \_\_\_\_\_

**CONSULTANT COMPANY:** URS Corporation  
**ADDRESS:** 1001 Highlands Plaza Drive West, Suite 300  
**CITY:** St. Louis, MO 63110  
**TELEPHONE:** (office) 314-429-0100 **FAX:** (office) 431-429-0462  
 (call) 314-409-6460 (Trailer) 618-254-1512  
**EMAIL:** Thomas\_Adams@urscorp.com  
**TURNAROUND TIME (CALENDAR DAYS):** Jeff Adams  
 STANDARD (10 DAY)  5 DAYS  3 DAYS  24 HOURS  RESULTS NEEDED ON WEEKEND

**PROJECT CONTACT (Report to):** Herb Hand (SOPUS) **CONSULTANT PROJECT NO.:** SOPUS-Rand Avenue  
**SAMPLER NAME(S) (PMT):** Jeff Adams (URS) **DATE:** \_\_\_\_\_

TEMPERATURE ON RECEIPT C° \_\_\_\_\_

SPECIAL INSTRUCTIONS OR NOTES :  
**Level 4 QC Deliverables**

REQUESTED ANALYSIS if more than one method is listed, circle one

LAB USE ONLY	SAMPLING		MATRIX	PRESERVATIVE			NO. OF CONT.	Container PID Readings or Laboratory Notes
	DATE	TIME		HCL	HNO3	H2SO4		
	P9309GWPG66	04/11/06	W	✓			3	
	P9309GWPG66D	04/11/06	W	✓			3	
	P9309GWPS2	04/11/06	W	✓			3	
	TB04110605	04/11/06	W	✓			1	
	P9309GWPS2EB	04/11/06	W	✓			3	

VOCs Method 8260  TP4-GRO (8015)  TP4-DRO (8015)  8260 / 8015 Metcure  Level 4 QC Deliverables

**Received by: (Signature)** **Date:** 04/11/06 **Time:** 1830  
**Received by: (Signature)** **Date:** 4/12/06 **Time:** 8:00  
**Received by: (Signature)** **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

DISTRIBUTION: White with final report, Green to File, Yellow and Pink to Client. 05/01 Revision