URS

Memorandum

Date: November 19, 2010

To: Amy Boley, IEPA Springfield

From: Jeff Adams

Subject: **Roxana, Illinois—Dissolved Phase Groundwater Investigation**
Proposed Groundwater Monitoring Well

URS Corporation (URS) is submitting this memorandum requesting concurrence for the placement of a monitoring well on ConocoPhillips' West Property, on behalf of Shell Oil Products US (SOPUS). The purpose of this well is to monitor conditions outside the southwest portion of the benzene groundwater plume.

Groundwater quality at this location (GWP-27) was recently delineated vertically via groundwater profiling (**Figure 1**). The sampling was conducted to address comments provided in the August 5th, 2010 agency letter. The work was completed in accordance with the workplan and approval conditions (dated January 21, 2009 and approved May 12, 2009). Grab groundwater samples were collected via sampling through a four-foot long, mill-slotted sampler advanced by a Geoprobe. Samples were collected after purging and monitoring field parameters for stabilization criteria. Two samples were collected, the first from just below the water table at a depth which provided sufficient head for sampling (approximately 28.5 feet below ground surface (bgs)) and the second approximately eight-feet below that sample (approximately 36.5 feet bgs). The samples were analyzed for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs), including Polycyclic Aromatic Hydrocarbons (PAHs).

The analytical results were loaded into an Access database, and an initial data screening was performed by comparing the concentrations of detected analytes to the Illinois Class I groundwater criteria (35 IAC Part 620 Class I Groundwater Quality Standards (GQS)). **Figure 1** provides the results of this screening, showing both detections and exceedances. The bis(2-ethylhexyl)phthalate detections are likely attributed to sample tubing or are laboratory artifacts. The complete laboratory data package from the profiling exercise is also attached.

We plan to install a well at a location to be determined in the square shown on **Figure 1**. This general location is the best location in the West Property to monitor the southwest portion of the benzene groundwater plume, due to the groundwater results (non detect for benzene) and surrounding structures that limit well placement in this area. The monitoring well will be installed per the workplan and subsequent Agency correspondence. As an example, the monitoring well will be with a maximum 10 foot long screen.

We will implement the subject plan upon Agency approval.

cc: Gina Search, IEPA Collinsville
Kevin Dyer, SOPUS

EIGHTH ST

NORTH PROPERTY

MW-5

P-93-06

P-93-05

MW-7

GP-1

MW-8

P-93-03

P-58

P-93-11

P-93-02

GP-4

GP-3

RAND AVE

GP-5

APPROXIMATE AREA FOR WELL INSTALLATION (PRE-APPROVED BY WOOD RIVER REFINERY FACILITY)

GWP-22

P-66

P-75

MW-6A
MW-6B
MW-6C
MW-6D

WEST PROPERTY

HIGHWAY 111

MAIN PROPERTY

GP-27

GWP-24

GWP-23

Location	Depth	Date	Analyte	Result (mg/L)
GWP-27	28.5	10/29/2010	bis(2-ethylhexyl) phthalate	0.007 J
			MTBE	3.92 J
			Toluene	1.05 J
	36.5	10/29/2010	bis(2-ethylhexyl) phthalate	0.003 J

N

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SCALE FEET

LEGEND

- GROUNDWATER PROFILE LOCATION
- APPROXIMATE AREA FOR MONITORING WELL INSTALLATION
- MONITOING WELL LOCATION

NOTES:

1. "J" QUALIFIER INDICATES THAT RESULT IS ESTIMATED.
2. RESULTS HIGHLIGHTED IN YELLOW EXCEED THE TACO TIER 1 CLASS I GROUNDWATER SCREENING CRITERIA.

SHELL OIL PRODUCTS US
ROXANA, ILLINOIS

PROJECT NO. 21562291

URS

DRN. BY: wmp 11/5/10
DSGN. BY: wmp
CHKD. BY:

Groundwater Profile Results Summary and Proposed New Well West Property

FIG. NO. 1

File: P:\ENVIRONMENTAL\SHELL OIL PRODUCT US\B--ROXANA--ROUTE 111\21560001_ROXANA INVESTIGATION & ASSESSMENT\DRAWINGS\WEST PROPERTY GWP--MW.DWG Last edited: NOV. 11, 10 @ 4:03 p.m. by: derkd_degutre

Analytical Report 395411

for

URS Corporation-St. Louis

Project Manager: Wendy Pennington

900 S Central Avenue

Roxana-Route 111/21562291.00006

03-NOV-10

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

4143 Greenbriar Dr., Stafford, TX 77477
Ph:(281) 240-4200 Fax:(281) 240-4280

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)
Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370)
Xenco-Boca Raton (EPA Lab Code: FL01273):
Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)

Xenco Phoenix (EPA Lab Code: AZ00901):
Arizona(AZ0757), California(06244CA), Texas(104704435-10-2), Nevada(NAC-445A), DoD(65816)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

03-NOV-10

Project Manager: **Wendy Pennington**
URS Corporation-St. Louis
1001 Highlands Plaza Drive West, Suite 300
St. Louis, MO 63110

Reference: XENCO Report No: **395411**
900 S Central Avenue
Project Address: Roxana, IL 62084

Wendy Pennington:

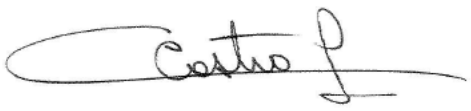
We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 395411. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 395411 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,



Carlos Castro
Managing Director, Texas

Sample Cross Reference 395411

URS Corporation-St. Louis, St. Louis, MO

900 S Central Avenue

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
GWP-27-28.5	W	Oct-29-10 14:15		395411-001
GWP-27-28.5EB	W	Oct-29-10 14:30		395411-002
GWP-27-36.5	W	Oct-29-10 15:50		395411-003
TB102910	W	Oct-29-10 00:00		395411-004

CASE NARRATIVE

Client Name: URS Corporation-St. Louis
Project Name: 900 S Central Avenue

Project ID:	Roxana-Route 111/215622	Report Date:	03-NOV-10
Work Order Number:	395411	Date Received:	10/30/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-830272 TCLP SVOCs by EPA 8270C
3,3-Dichlorobenzidine, 4-Chloroaniline, Aniline (Phenylamine, Aminobenzene), Pyridine RPD was outside laboratory control limits.
Samples affected are: 395411-001, -003, -002

Pyridine recovered below QC limits in the Blank Spike Duplicate but was passing in the Blank Spike. 4-Nitrophenol recovered above QC limits in the Blank Spike and Blank Spike Duplicate. Benzoic Acid recovered above QC limits in the Blank Spike Duplicate.
Samples affected are: 395411-001, -003, -002.

4-Nitrophenol, Benzoic Acid, Pentachlorophenol recovered above QC limits in the Matrix Spike.
Samples affected are: 395411-001, -003, -002.
The Laboratory Control Sample for Benzoic Acid, Pentachlorophenol is within laboratory Control Limits

Batch: LBA-830346 VOAs by SW-846 8260B
Methylene Chloride detected in the blank below the RL but above the MDL; possible laboratory contamination.
Samples affected are: 395411-004, -002.

Bromomethane, Chloromethane, Vinyl Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Carbon Disulfide, trans-1,2-dichloroethene recovered below QC limits in the Matrix Spike Duplicate.
Samples affected are: 395411-004, -002.
The Laboratory Control Sample for Bromomethane, Carbon Disulfide, Chloromethane, trans-1,2-dichloroethene, Vinyl Chloride is within laboratory Control Limits

Batch: LBA-830354 VOAs by SW-846 8260B
Note: Both samples 395411-001 and 395411-003 have high concentrations of Isopropyl alcohol.

Certificate of Analysis Summary 395411

URS Corporation-St. Louis, St. Louis, MO

Project Name: 900 S Central Avenue

Project Id: Roxana-Route 111/21562291.00006
Contact: Wendy Pennington
Project Location: Roxana, IL 62084

Date Received in Lab: Sat Oct-30-10 09:30 am
Report Date: 03-NOV-10
Project Manager: Debbie Simmons

Analysis Requested													
	Lab Id:	395411-001		395411-002		395411-003		395411-004					
	Field Id:	GWP-27-28.5		GWP-27-28.5EB		GWP-27-36.5		TB102910					
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER					
	Sampled:	Oct-29-10 14:15		Oct-29-10 14:30		Oct-29-10 15:50		Oct-29-10 00:00					
SVOAs by SW-846 8270C	*Extracted:*	Nov-01-10 09:06		Nov-01-10 09:09		Nov-01-10 09:12							
	Analyzed:	Nov-02-10 23:08		Nov-02-10 23:32		Nov-02-10 23:55							
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL						
Acenaphthene		U	0.011	U	0.009	U	0.010						
Acenaphthylene		U	0.011	U	0.009	U	0.010						
Aniline (Phenylamine, Aminobenzene)		U	0.021	U	0.019	U	0.021						
Anthracene		U	0.011	U	0.009	U	0.010						
Benzo(a)anthracene		U	0.011	U	0.009	U	0.010						
Benzo(a)pyrene		U	0.011	U	0.009	U	0.010						
Benzo(b)fluoranthene		U	0.011	U	0.009	U	0.010						
Benzo(k)fluoranthene		U	0.011	U	0.009	U	0.010						
Benzo(g,h,i)perylene		U	0.011	U	0.009	U	0.010						
Benzoic Acid		U	0.053	U	0.047	U	0.052						
Benzyl Butyl Phthalate		U	0.011	U	0.009	U	0.010						
bis(2-chloroethoxy) methane		U	0.011	U	0.009	U	0.010						
bis(2-chloroethyl) ether		U	0.011	U	0.009	U	0.010						
bis(2-chloroisopropyl) ether		U	0.011	U	0.009	U	0.010						
bis(2-ethylhexyl) phthalate		0.007 J	0.011	0.004 J	0.009	0.003 J	0.010						
4-Bromophenyl-phenylether		U	0.011	U	0.009	U	0.010						
4-chloro-3-methylphenol		U	0.011	U	0.009	U	0.010						
4-Chloroaniline		U	0.021	U	0.019	U	0.021						
2-Chloronaphthalene		U	0.011	U	0.009	U	0.010						
2-Chlorophenol		U	0.011	U	0.009	U	0.010						
4-Chlorophenyl Phenyl Ether		U	0.011	U	0.009	U	0.010						
Chrysene		U	0.011	U	0.009	U	0.010						
Dibenz(a,h)anthracene		U	0.011	U	0.009	U	0.010						
Dibenzofuran		U	0.011	U	0.009	U	0.010						
di-n-Butyl Phthalate		U	0.011	U	0.009	U	0.010						

Carlos Castro
Managing Director, Texas

Certificate of Analysis Summary 395411

URS Corporation-St. Louis, St. Louis, MO

Project Name: 900 S Central Avenue

Project Id: Roxana-Route 111/21562291.00006
Contact: Wendy Pennington
Project Location: Roxana, IL 62084

Date Received in Lab: Sat Oct-30-10 09:30 am
Report Date: 03-NOV-10
Project Manager: Debbie Simmons

Analysis Requested													
	Lab Id:	395411-001		395411-002		395411-003		395411-004					
	Field Id:	GWP-27-28.5		GWP-27-28.5EB		GWP-27-36.5		TB102910					
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER					
	Sampled:	Oct-29-10 14:15		Oct-29-10 14:30		Oct-29-10 15:50		Oct-29-10 00:00					
SVOAs by SW-846 8270C	*Extracted:*	Nov-01-10 09:06		Nov-01-10 09:09		Nov-01-10 09:12							
	Analyzed:	Nov-02-10 23:08		Nov-02-10 23:32		Nov-02-10 23:55							
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL						
3,3-Dichlorobenzidine		U	0.011	U	0.009	U	0.010						
2,4-Dichlorophenol		U	0.011	U	0.009	U	0.010						
Diethyl Phthalate		U	0.011	U	0.009	U	0.010						
Dimethyl Phthalate		U	0.011	U	0.009	U	0.010						
2,4-Dimethylphenol		U	0.011	U	0.009	U	0.010						
4,6-dinitro-2-methyl phenol		U	0.011	U	0.009	U	0.010						
2,4-Dinitrophenol		U	0.021	U	0.019	U	0.021						
2,4-Dinitrotoluene		U	0.011	U	0.009	U	0.010						
2,6-Dinitrotoluene		U	0.011	U	0.009	U	0.010						
di-n-Octyl Phthalate		U	0.011	U	0.009	U	0.010						
Fluoranthene		U	0.011	U	0.009	U	0.010						
Fluorene		U	0.011	U	0.009	U	0.010						
Hexachlorobenzene		U	0.011	U	0.009	U	0.010						
Hexachlorocyclopentadiene		U	0.011	U	0.009	U	0.010						
Hexachloroethane		U	0.011	U	0.009	U	0.010						
Indeno(1,2,3-c,d)Pyrene		U	0.011	U	0.009	U	0.010						
Isophorone		U	0.011	U	0.009	U	0.010						
2-Methylnaphthalene		U	0.011	U	0.009	U	0.010						
2-methylphenol		U	0.011	U	0.009	U	0.010						
3&4-Methylphenol		U	0.011	U	0.009	U	0.010						
Naphthalene		U	0.011	U	0.009	U	0.010						
2-Nitroaniline		U	0.021	U	0.019	U	0.021						
3-Nitroaniline		U	0.021	U	0.019	U	0.021						
4-Nitroaniline		U	0.021	U	0.019	U	0.021						
Nitrobenzene		U	0.011	U	0.009	U	0.010						

Carlos Castro
Managing Director, Texas

Certificate of Analysis Summary 395411

URS Corporation-St. Louis, St. Louis, MO

Project Name: 900 S Central Avenue

Project Id: Roxana-Route 111/21562291.00006
Contact: Wendy Pennington
Project Location: Roxana, IL 62084

Date Received in Lab: Sat Oct-30-10 09:30 am
Report Date: 03-NOV-10
Project Manager: Debbie Simmons

Analysis Requested													
	Lab Id:	395411-001		395411-002		395411-003		395411-004					
	Field Id:	GWP-27-28.5		GWP-27-28.5EB		GWP-27-36.5		TB102910					
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER					
	Sampled:	Oct-29-10 14:15		Oct-29-10 14:30		Oct-29-10 15:50		Oct-29-10 00:00					
SVOAs by SW-846 8270C	*Extracted:*	Nov-01-10 09:06		Nov-01-10 09:09		Nov-01-10 09:12							
	Analyzed:	Nov-02-10 23:08		Nov-02-10 23:32		Nov-02-10 23:55							
	Units/RL:	mg/L	RL	mg/L	RL	mg/L	RL						
2-Nitrophenol		U	0.011	U	0.009	U	0.010						
4-Nitrophenol		U	0.011	U	0.009	U	0.010						
N-Nitrosodi-n-Propylamine		U	0.011	U	0.009	U	0.010						
N-Nitrosodiphenylamine		U	0.011	U	0.009	U	0.010						
Pentachlorophenol		U	0.011	U	0.009	U	0.010						
Phenanthrene		U	0.011	U	0.009	U	0.010						
Phenol		U	0.011	U	0.009	U	0.010						
Pyrene		U	0.011	U	0.009	U	0.010						
Pyridine		U	0.021	U	0.019	U	0.021						
2,4,5-Trichlorophenol		U	0.011	U	0.009	U	0.010						
2,4,6-Trichlorophenol		U	0.011	U	0.009	U	0.010						

Carlos Castro
Managing Director, Texas

Certificate of Analysis Summary 395411

URS Corporation-St. Louis, St. Louis, MO

Project Name: 900 S Central Avenue

Project Id: Roxana-Route 111/21562291.00006
Contact: Wendy Pennington
Project Location: Roxana, IL 62084

Date Received in Lab: Sat Oct-30-10 09:30 am
Report Date: 03-NOV-10
Project Manager: Debbie Simmons

Analysis Requested													
	Lab Id:	395411-001		395411-002		395411-003		395411-004					
	Field Id:	GWP-27-28.5		GWP-27-28.5EB		GWP-27-36.5		TB102910					
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER					
	Sampled:	Oct-29-10 14:15		Oct-29-10 14:30		Oct-29-10 15:50		Oct-29-10 00:00					
VOAs by SW-846 8260B	*Extracted:*	Nov-03-10 10:02		Nov-02-10 11:02		Nov-03-10 10:00		Nov-02-10 11:00					
	Analyzed:	Nov-03-10 11:27		Nov-02-10 13:22		Nov-03-10 11:01		Nov-02-10 12:55					
	Units/RL:	ug/L	RL	ug/L	RL	ug/L	RL	ug/L	RL				
Acetone		256	100	U	100	37.1 J	100	U	100				
Benzene		U	5.00	U	5.00	U	5.00	U	5.00				
Bromobenzene		U	5.00	U	5.00	U	5.00	U	5.00				
Bromochloromethane		U	5.00	U	5.00	U	5.00	U	5.00				
Bromodichloromethane		U	5.00	U	5.00	U	5.00	U	5.00				
Bromoform		U	5.00	U	5.00	U	5.00	U	5.00				
Bromomethane		U	5.00	U	5.00	U	5.00	U	5.00				
2-Butanone		U	50.0	U	50.0	U	50.0	U	50.0				
MTBE		3.92 J	5.00	U	5.00	U	5.00	U	5.00				
n-Butylbenzene		U	5.00	U	5.00	U	5.00	U	5.00				
Sec-Butylbenzene		U	5.00	U	5.00	U	5.00	U	5.00				
tert-Butylbenzene		U	5.00	U	5.00	U	5.00	U	5.00				
Carbon Disulfide		U	50.0	U	50.0	U	50.0	U	50.0				
Carbon Tetrachloride		U	5.00	U	5.00	U	5.00	U	5.00				
Chlorobenzene		U	5.00	U	5.00	U	5.00	U	5.00				
Chloroethane		U	10.0	U	10.0	U	10.0	U	10.0				
Chloroform		U	5.00	U	5.00	U	5.00	U	5.00				
Chloromethane		U	10.0	U	10.0	U	10.0	U	10.0				
2-Chlorotoluene		U	5.00	U	5.00	U	5.00	U	5.00				
4-Chlorotoluene		U	5.00	U	5.00	U	5.00	U	5.00				
p-Cymene (p-Isopropyltoluene)		U	5.00	U	5.00	U	5.00	U	5.00				
Dibromochloromethane		U	5.00	U	5.00	U	5.00	U	5.00				
1,2-Dibromo-3-Chloropropane		U	5.00	U	5.00	U	5.00	U	5.00				
Dibromomethane		U	5.00	U	5.00	U	5.00	U	5.00				
1,2-Dichlorobenzene		U	5.00	U	5.00	U	5.00	U	5.00				

Carlos Castro
Managing Director, Texas

Certificate of Analysis Summary 395411

URS Corporation-St. Louis, St. Louis, MO

Project Name: 900 S Central Avenue

Project Id: Roxana-Route 111/21562291.00006
Contact: Wendy Pennington
Project Location: Roxana, IL 62084

Date Received in Lab: Sat Oct-30-10 09:30 am
Report Date: 03-NOV-10
Project Manager: Debbie Simmons

Analysis Requested													
	Lab Id:	395411-001		395411-002		395411-003		395411-004					
	Field Id:	GWP-27-28.5		GWP-27-28.5EB		GWP-27-36.5		TB102910					
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER					
	Sampled:	Oct-29-10 14:15		Oct-29-10 14:30		Oct-29-10 15:50		Oct-29-10 00:00					
VOAs by SW-846 8260B	*Extracted:*	Nov-03-10 10:02		Nov-02-10 11:02		Nov-03-10 10:00		Nov-02-10 11:00					
	Analyzed:	Nov-03-10 11:27		Nov-02-10 13:22		Nov-03-10 11:01		Nov-02-10 12:55					
	Units/RL:	ug/L	RL	ug/L	RL	ug/L	RL	ug/L	RL				
1,3-Dichlorobenzene		U	5.00	U	5.00	U	5.00	U	5.00				
1,4-Dichlorobenzene		U	5.00	U	5.00	U	5.00	U	5.00				
Dichlorodifluoromethane		U	5.00	U	5.00	U	5.00	U	5.00				
1,1-Dichloroethane		U	5.00	U	5.00	U	5.00	U	5.00				
1,2-Dichloroethane		U	5.00	U	5.00	U	5.00	U	5.00				
1,1-Dichloroethene		U	5.00	U	5.00	U	5.00	U	5.00				
cis-1,2-Dichloroethene		U	5.00	U	5.00	U	5.00	U	5.00				
trans-1,2-dichloroethene		U	5.00	U	5.00	U	5.00	U	5.00				
1,2-Dichloropropane		U	5.00	U	5.00	U	5.00	U	5.00				
1,3-Dichloropropane		U	5.00	U	5.00	U	5.00	U	5.00				
2,2-Dichloropropane		U	5.00	U	5.00	U	5.00	U	5.00				
1,1-Dichloropropene		U	5.00	U	5.00	U	5.00	U	5.00				
cis-1,3-Dichloropropene		U	5.00	U	5.00	U	5.00	U	5.00				
trans-1,3-dichloropropene		U	5.00	U	5.00	U	5.00	U	5.00				
Ethylbenzene		U	5.00	U	5.00	U	5.00	U	5.00				
Hexachlorobutadiene		U	5.00	U	5.00	U	5.00	U	5.00				
isopropylbenzene		U	5.00	U	5.00	U	5.00	U	5.00				
Methylene Chloride		U	5.00	U	5.00	U	5.00	3.24 JB	5.00				
n-Propylbenzene		U	5.00	U	5.00	U	5.00	U	5.00				
Styrene		U	5.00	U	5.00	U	5.00	U	5.00				
1,1,1,2-Tetrachloroethane		U	5.00	U	5.00	U	5.00	U	5.00				
1,1,2,2-Tetrachloroethane		U	5.00	U	5.00	U	5.00	U	5.00				
Tetrachloroethylene		U	5.00	U	5.00	U	5.00	U	5.00				
Toluene		1.05 J	5.00	U	5.00	U	5.00	U	5.00				
1,2,3-Trichlorobenzene		U	5.00	U	5.00	U	5.00	U	5.00				

Carlos Castro
Managing Director, Texas

Certificate of Analysis Summary 395411

URS Corporation-St. Louis, St. Louis, MO

Project Name: 900 S Central Avenue

Project Id: Roxana-Route 111/21562291.00006
Contact: Wendy Pennington
Project Location: Roxana, IL 62084

Date Received in Lab: Sat Oct-30-10 09:30 am
Report Date: 03-NOV-10
Project Manager: Debbie Simmons

Analysis Requested													
	Lab Id:	395411-001		395411-002		395411-003		395411-004					
	Field Id:	GWP-27-28.5		GWP-27-28.5EB		GWP-27-36.5		TB102910					
	Depth:												
	Matrix:	WATER		WATER		WATER		WATER					
	Sampled:	Oct-29-10 14:15		Oct-29-10 14:30		Oct-29-10 15:50		Oct-29-10 00:00					
VOAs by SW-846 8260B	*Extracted:*	Nov-03-10 10:02		Nov-02-10 11:02		Nov-03-10 10:00		Nov-02-10 11:00					
	Analyzed:	Nov-03-10 11:27		Nov-02-10 13:22		Nov-03-10 11:01		Nov-02-10 12:55					
	Units/RL:	ug/L	RL	ug/L	RL	ug/L	RL	ug/L	RL				
1,2,4-Trichlorobenzene		U	5.00	U	5.00	U	5.00	U	5.00				
1,1,1-Trichloroethane		U	5.00	U	5.00	U	5.00	U	5.00				
1,1,2-Trichloroethane		U	5.00	U	5.00	U	5.00	U	5.00				
Trichloroethene		U	5.00	U	5.00	U	5.00	U	5.00				
Trichlorofluoromethane		U	5.00	U	5.00	U	5.00	U	5.00				
1,2,3-Trichloropropane		U	5.00	U	5.00	U	5.00	U	5.00				
1,2,4-Trimethylbenzene		U	5.00	U	5.00	U	5.00	U	5.00				
1,3,5-Trimethylbenzene		U	5.00	U	5.00	U	5.00	U	5.00				
o-Xylene		U	5.00	U	5.00	U	5.00	U	5.00				
m,p-Xylenes		U	10.0	U	10.0	U	10.0	U	10.0				
Vinyl Acetate		U	50.0	U	50.0	U	50.0	U	50.0				
Vinyl Chloride		U	2.00	U	2.00	U	2.00	U	2.00				

Carlos Castro
Managing Director, Texas

XENCO Laboratories

XENCO Laboratories
CHRONOLOGY OF HOLDING TIMES

Analytical Method : VOAs by SW-846 8260B

Client : URS Corporation-St. Louis

Work Order #: 395411

Project ID: Roxana-Route 111/21562291.

Field Sample ID	Date Collected	Date Received	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
GWP-27-28.5EB	Oct. 29, 2010	Oct. 30, 2010				Nov.2, 2010	14	4	P
GWP-27-28.5	Oct. 29, 2010	Oct. 30, 2010				Nov.3, 2010	14	5	P
TB102910	Oct. 29, 2010	Oct. 30, 2010				Nov.2, 2010	14	4	P
GWP-27-36.5	Oct. 29, 2010	Oct. 30, 2010				Nov.3, 2010	14	5	P

XENCO Laboratories
CHRONOLOGY OF HOLDING TIMES

Analytical Method : SVOAs by SW-846 8270C

Client : URS Corporation-St. Louis

Work Order #: 395411

Project ID: Roxana-Route 111/21562291.

Field Sample ID	Date Collected	Date Received	Date Extracted	Max Holding Time Extracted (Days)	Time Held Extracted (Days)	Date Analyzed	Max Holding Time Analyzed (Days)	Time Held Analyzed (Days)	Q
GWP-27-28.5	Oct. 29, 2010	Oct. 30, 2010	Nov. 1, 2010	7	3	Nov.2, 2010	40	1	P
GWP-27-36.5	Oct. 29, 2010	Oct. 30, 2010	Nov. 1, 2010	7	3	Nov.2, 2010	40	1	P
GWP-27-28.5EB	Oct. 29, 2010	Oct. 30, 2010	Nov. 1, 2010	7	3	Nov.2, 2010	40	1	P

F = These samples were analyzed outside the recommended holding time.
P = Samples analyzed within the recommended holding time.

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the MQL and above the SQL.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

PQL Practical Quantitation Limit

* Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: 900 S Central Avenue

Work Orders : 395411,

Project ID: Roxana-Route 111/21562291.00006

Lab Batch #: 830272 **Sample:** 577544-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 18:26

SVOAs by SW-846 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.027	0.050	54	43-116	
2-Fluorophenol	0.026	0.050	52	21-100	
Nitrobenzene-d5	0.026	0.050	52	35-114	
Phenol-d6	0.014	0.050	28	10-94	
Terphenyl-D14	0.030	0.050	60	33-141	
2,4,6-Tribromophenol	0.048	0.050	96	10-123	

Lab Batch #: 830272 **Sample:** 577544-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 18:49

SVOAs by SW-846 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.028	0.050	56	43-116	
2-Fluorophenol	0.032	0.050	64	21-100	
Nitrobenzene-d5	0.027	0.050	54	35-114	
Phenol-d6	0.023	0.050	46	10-94	
Terphenyl-D14	0.029	0.050	58	33-141	
2,4,6-Tribromophenol	0.054	0.050	108	10-123	

Lab Batch #: 830272 **Sample:** 577544-1-BSD / BSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 19:13

SVOAs by SW-846 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.028	0.050	56	43-116	
2-Fluorophenol	0.031	0.050	62	21-100	
Nitrobenzene-d5	0.027	0.050	54	35-114	
Phenol-d6	0.023	0.050	46	10-94	
Terphenyl-D14	0.030	0.050	60	33-141	
2,4,6-Tribromophenol	0.056	0.050	112	10-123	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 900 S Central Avenue

Work Orders : 395411,

Project ID: Roxana-Route 111/21562291.00006

Lab Batch #: 830272 **Sample:** 395023-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/L **Date Analyzed:** 11/02/10 21:57

SVOAs by SW-846 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.148	0.250	59	43-116	
2-Fluorophenol	0.194	0.250	78	21-100	
Nitrobenzene-d5	0.146	0.250	58	35-114	
Phenol-d6	0.175	0.250	70	10-94	
Terphenyl-D14	0.150	0.250	60	33-141	
2,4,6-Tribromophenol	0.287	0.250	115	10-123	

Lab Batch #: 830272 **Sample:** 395023-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/L **Date Analyzed:** 11/02/10 22:44

SVOAs by SW-846 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.157	0.250	63	43-116	
2-Fluorophenol	0.206	0.250	82	21-100	
Nitrobenzene-d5	0.154	0.250	62	35-114	
Phenol-d6	0.192	0.250	77	10-94	
Terphenyl-D14	0.160	0.250	64	33-141	
2,4,6-Tribromophenol	0.297	0.250	119	10-123	

Lab Batch #: 830272 **Sample:** 395411-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 23:08

SVOAs by SW-846 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.029	0.053	55	43-116	
2-Fluorophenol	0.022	0.053	42	21-100	
Nitrobenzene-d5	0.028	0.053	53	35-114	
Phenol-d6	0.013	0.053	25	10-94	
Terphenyl-D14	0.033	0.053	62	33-141	
2,4,6-Tribromophenol	0.062	0.053	117	10-123	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 900 S Central Avenue

Work Orders : 395411,

Project ID: Roxana-Route 111/21562291.00006

Lab Batch #: 830272 **Sample:** 395411-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 23:32

SVOAs by SW-846 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.020	0.047	43	43-116	
2-Fluorophenol	0.013	0.047	28	21-100	
Nitrobenzene-d5	0.020	0.047	43	35-114	
Phenol-d6	0.008	0.047	17	10-94	
Terphenyl-D14	0.026	0.047	55	33-141	
2,4,6-Tribromophenol	0.041	0.047	87	10-123	

Lab Batch #: 830272 **Sample:** 395411-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 23:55

SVOAs by SW-846 8270C Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
2-Fluorobiphenyl	0.028	0.052	54	43-116	
2-Fluorophenol	0.017	0.052	33	21-100	
Nitrobenzene-d5	0.027	0.052	52	35-114	
Phenol-d6	0.010	0.052	19	10-94	
Terphenyl-D14	0.030	0.052	58	33-141	
2,4,6-Tribromophenol	0.056	0.052	108	10-123	

Lab Batch #: 830346 **Sample:** 577786-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 08:42

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0506	0.0500	101	74-124	
Dibromofluoromethane	0.0522	0.0500	104	75-131	
1,2-Dichloroethane-D4	0.0511	0.0500	102	63-144	
Toluene-D8	0.0520	0.0500	104	80-117	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 900 S Central Avenue

Work Orders : 395411,

Project ID: Roxana-Route 111/21562291.00006

Lab Batch #: 830346 **Sample:** 577786-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 09:42

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0499	0.0500	100	74-124	
Dibromofluoromethane	0.0544	0.0500	109	75-131	
1,2-Dichloroethane-D4	0.0547	0.0500	109	63-144	
Toluene-D8	0.0499	0.0500	100	80-117	

Lab Batch #: 830346 **Sample:** 395099-011 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 11:37

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0542	0.0500	108	74-124	
Dibromofluoromethane	0.0496	0.0500	99	75-131	
1,2-Dichloroethane-D4	0.0491	0.0500	98	63-144	
Toluene-D8	0.0521	0.0500	104	80-117	

Lab Batch #: 830346 **Sample:** 395099-011 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 12:03

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0552	0.0500	110	74-124	
Dibromofluoromethane	0.0487	0.0500	97	75-131	
1,2-Dichloroethane-D4	0.0470	0.0500	94	63-144	
Toluene-D8	0.0520	0.0500	104	80-117	

Lab Batch #: 830346 **Sample:** 395411-004 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 12:55

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0533	0.0500	107	74-124	
Dibromofluoromethane	0.0523	0.0500	105	75-131	
1,2-Dichloroethane-D4	0.0523	0.0500	105	63-144	
Toluene-D8	0.0507	0.0500	101	80-117	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 900 S Central Avenue

Work Orders : 395411,

Project ID: Roxana-Route 111/21562291.00006

Lab Batch #: 830346 **Sample:** 395411-002 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/02/10 13:22

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0529	0.0500	106	74-124	
Dibromofluoromethane	0.0538	0.0500	108	75-131	
1,2-Dichloroethane-D4	0.0546	0.0500	109	63-144	
Toluene-D8	0.0505	0.0500	101	80-117	

Lab Batch #: 830354 **Sample:** 577792-1-BKS / BKS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/03/10 09:33

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0531	0.0500	106	74-124	
Dibromofluoromethane	0.0507	0.0500	101	75-131	
1,2-Dichloroethane-D4	0.0498	0.0500	100	63-144	
Toluene-D8	0.0527	0.0500	105	80-117	

Lab Batch #: 830354 **Sample:** 577792-1-BLK / BLK **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/03/10 10:26

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0503	0.0500	101	74-124	
Dibromofluoromethane	0.0537	0.0500	107	75-131	
1,2-Dichloroethane-D4	0.0526	0.0500	105	63-144	
Toluene-D8	0.0502	0.0500	100	80-117	

Lab Batch #: 830354 **Sample:** 395411-003 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/03/10 11:01

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0537	0.0500	107	74-124	
Dibromofluoromethane	0.0528	0.0500	106	75-131	
1,2-Dichloroethane-D4	0.0517	0.0500	103	63-144	
Toluene-D8	0.0505	0.0500	101	80-117	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 900 S Central Avenue

Work Orders : 395411,

Project ID: Roxana-Route 111/21562291.00006

Lab Batch #: 830354 **Sample:** 395411-001 / SMP **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/03/10 11:27

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0559	0.0500	112	74-124	
Dibromofluoromethane	0.0504	0.0500	101	75-131	
1,2-Dichloroethane-D4	0.0499	0.0500	100	63-144	
Toluene-D8	0.0497	0.0500	99	80-117	

Lab Batch #: 830354 **Sample:** 395411-003 S / MS **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/03/10 11:53

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0531	0.0500	106	74-124	
Dibromofluoromethane	0.0511	0.0500	102	75-131	
1,2-Dichloroethane-D4	0.0492	0.0500	98	63-144	
Toluene-D8	0.0525	0.0500	105	80-117	

Lab Batch #: 830354 **Sample:** 395411-003 SD / MSD **Batch:** 1 **Matrix:** Water

Units: mg/L **Date Analyzed:** 11/03/10 12:20

VOAs by SW-846 8260B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0543	0.0500	109	74-124	
Dibromofluoromethane	0.0502	0.0500	100	75-131	
1,2-Dichloroethane-D4	0.0501	0.0500	100	63-144	
Toluene-D8	0.0520	0.0500	104	80-117	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Blank Spike Recovery

Project Name: 900 S Central Avenue

Work Order #: 395411 **Project ID:** Roxana-Route 111/21562291.00006

Lab Batch #: 830346 **Sample:** 577786-1-BKS **Matrix:** Water

Date Analyzed: 11/02/2010 **Date Prepared:** 11/02/2010 **Analyst:** EZB

Reporting Units: ug/L **Batch #:** 1

VOAs by SW-846 8260B Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Acetone	<20.0	100	100	100	60-140	
Benzene	<1.00	50.0	46.1	92	66-142	
Bromobenzene	<1.00	50.0	50.1	100	75-125	
Bromochloromethane	<1.00	50.0	46.2	92	73-125	
Bromodichloromethane	<1.00	50.0	49.2	98	75-125	
Bromoform	<1.00	50.0	51.8	104	75-125	
Bromomethane	<1.00	50.0	43.2	86	70-130	
2-Butanone	<10.0	100	102	102	60-140	
MTBE	<1.00	50.0	49.8	100	65-135	
n-Butylbenzene	<1.00	50.0	50.8	102	75-125	
Sec-Butylbenzene	<1.00	50.0	52.1	104	75-125	
tert-Butylbenzene	<1.00	50.0	51.2	102	75-125	
Carbon Disulfide	<10.0	50.0	39.3	79	60-140	
Carbon Tetrachloride	<1.00	50.0	48.0	96	62-125	
Chlorobenzene	<1.00	50.0	46.7	93	60-133	
Chloroethane	<2.00	50.0	46.6	93	70-130	
Chloroform	<1.00	50.0	47.9	96	74-125	
Chloromethane	<2.00	50.0	44.1	88	70-130	
2-Chlorotoluene	<1.00	50.0	50.8	102	73-125	
4-Chlorotoluene	<1.00	50.0	50.8	102	74-125	
p-Cymene (p-Isopropyltoluene)	<1.00	50.0	52.5	105	75-125	
Dibromochloromethane	<1.00	50.0	49.6	99	73-125	
1,2-Dibromo-3-Chloropropane	<1.00	50.0	49.9	100	59-125	
Dibromomethane	<1.00	50.0	46.6	93	69-127	
1,2-Dichlorobenzene	<1.00	50.0	49.7	99	75-125	
1,3-Dichlorobenzene	<1.00	50.0	49.2	98	75-125	
1,4-Dichlorobenzene	<1.00	50.0	47.8	96	75-125	
Dichlorodifluoromethane	<1.00	50.0	47.0	94	70-130	
1,1-Dichloroethane	<1.00	50.0	49.4	99	72-125	
1,2-Dichloroethane	<1.00	50.0	45.4	91	68-127	
1,1-Dichloroethene	<1.00	50.0	45.0	90	59-172	
cis-1,2-Dichloroethene	<1.00	50.0	48.4	97	75-125	
trans-1,2-dichloroethene	<1.00	50.0	44.8	90	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Blank Spike Recovery

Project Name: 900 S Central Avenue

Work Order #: 395411 **Project ID:** Roxana-Route 111/21562291.00006

Lab Batch #: 830346 **Sample:** 577786-1-BKS **Matrix:** Water

Date Analyzed: 11/02/2010 **Date Prepared:** 11/02/2010 **Analyst:** EZB

Reporting Units: ug/L **Batch #:** 1

VOAs by SW-846 8260B Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,2-Dichloropropane	<1.00	50.0	48.5	97	74-125	
1,3-Dichloropropane	<1.00	50.0	48.5	97	75-125	
2,2-Dichloropropane	<1.00	50.0	56.4	113	75-125	
1,1-Dichloropropene	<1.00	50.0	46.1	92	75-125	
cis-1,3-Dichloropropene	<1.00	50.0	51.9	104	74-125	
trans-1,3-dichloropropene	<1.00	50.0	53.7	107	66-125	
Ethylbenzene	<1.00	50.0	47.8	96	75-125	
Hexachlorobutadiene	<1.00	50.0	46.2	92	75-125	
isopropylbenzene	<1.00	50.0	52.7	105	75-125	
Methylene Chloride	4.67	50.0	52.9	106	75-125	
n-Propylbenzene	<1.00	50.0	52.4	105	75-125	
Styrene	<1.00	50.0	48.4	97	75-125	
1,1,1,2-Tetrachloroethane	<1.00	50.0	46.9	94	72-125	
1,1,2,2-Tetrachloroethane	<1.00	50.0	51.6	103	74-125	
Tetrachloroethylene	<1.00	50.0	44.5	89	71-125	
Toluene	<1.00	50.0	47.8	96	59-139	
1,2,3-Trichlorobenzene	<1.00	50.0	49.6	99	75-137	
1,2,4-Trichlorobenzene	<1.00	50.0	48.7	97	75-135	
1,1,1-Trichloroethane	<1.00	50.0	50.0	100	75-125	
1,1,2-Trichloroethane	<1.00	50.0	49.3	99	75-127	
Trichloroethene	<1.00	50.0	46.9	94	62-137	
Trichlorofluoromethane	<1.00	50.0	46.8	94	67-125	
1,2,3-Trichloropropane	<1.00	50.0	52.9	106	75-125	
1,2,4-Trimethylbenzene	<1.00	50.0	50.7	101	75-125	
1,3,5-Trimethylbenzene	<1.00	50.0	51.1	102	70-125	
o-Xylene	<1.00	50.0	47.7	95	75-125	
m,p-Xylenes	<2.00	100	95.5	96	75-125	
Vinyl Acetate	<10.0	100	100	100	60-140	
Vinyl Chloride	<0.400	50.0	48.1	96	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Blank Spike Recovery

Project Name: 900 S Central Avenue

Work Order #: 395411 **Project ID:** Roxana-Route 111/21562291.00006

Lab Batch #: 830354 **Sample:** 577792-1-BKS **Matrix:** Water

Date Analyzed: 11/03/2010 **Date Prepared:** 11/03/2010 **Analyst:** EZB

Reporting Units: ug/L **Batch #:** 1

VOAs by SW-846 8260B Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Acetone	<20.0	100	115	115	60-140	
Benzene	<1.00	50.0	48.0	96	66-142	
Bromobenzene	<1.00	50.0	50.5	101	75-125	
Bromochloromethane	<1.00	50.0	49.1	98	73-125	
Bromodichloromethane	<1.00	50.0	52.5	105	75-125	
Bromoform	<1.00	50.0	55.1	110	75-125	
Bromomethane	<1.00	50.0	47.3	95	70-130	
2-Butanone	<10.0	100	112	112	60-140	
MTBE	<1.00	50.0	54.6	109	65-135	
n-Butylbenzene	<1.00	50.0	49.7	99	75-125	
Sec-Butylbenzene	<1.00	50.0	50.7	101	75-125	
tert-Butylbenzene	<1.00	50.0	50.9	102	75-125	
Carbon Disulfide	<10.0	50.0	46.8	94	60-140	
Carbon Tetrachloride	<1.00	50.0	50.6	101	62-125	
Chlorobenzene	<1.00	50.0	47.3	95	60-133	
Chloroethane	<2.00	50.0	49.3	99	70-130	
Chloroform	<1.00	50.0	48.9	98	74-125	
Chloromethane	<2.00	50.0	47.7	95	70-130	
2-Chlorotoluene	<1.00	50.0	51.7	103	73-125	
4-Chlorotoluene	<1.00	50.0	51.4	103	74-125	
p-Cymene (p-Isopropyltoluene)	<1.00	50.0	51.5	103	75-125	
Dibromochloromethane	<1.00	50.0	53.4	107	73-125	
1,2-Dibromo-3-Chloropropane	<1.00	50.0	51.9	104	59-125	
Dibromomethane	<1.00	50.0	52.1	104	69-127	
1,2-Dichlorobenzene	<1.00	50.0	47.4	95	75-125	
1,3-Dichlorobenzene	<1.00	50.0	48.6	97	75-125	
1,4-Dichlorobenzene	<1.00	50.0	46.8	94	75-125	
Dichlorodifluoromethane	<1.00	50.0	52.2	104	70-130	
1,1-Dichloroethane	<1.00	50.0	50.3	101	72-125	
1,2-Dichloroethane	<1.00	50.0	51.3	103	68-127	
1,1-Dichloroethene	<1.00	50.0	46.7	93	59-172	
cis-1,2-Dichloroethene	<1.00	50.0	49.6	99	75-125	
trans-1,2-dichloroethene	<1.00	50.0	47.3	95	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Blank Spike Recovery

Project Name: 900 S Central Avenue

Work Order #: 395411 **Project ID:** Roxana-Route 111/21562291.00006

Lab Batch #: 830354 **Sample:** 577792-1-BKS **Matrix:** Water

Date Analyzed: 11/03/2010 **Date Prepared:** 11/03/2010 **Analyst:** EZB

Reporting Units: ug/L **Batch #:** 1

VOAs by SW-846 8260B Analytes	BLANK /BLANK SPIKE RECOVERY STUDY					
	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
1,2-Dichloropropane	<1.00	50.0	51.5	103	74-125	
1,3-Dichloropropane	<1.00	50.0	51.8	104	75-125	
2,2-Dichloropropane	<1.00	50.0	55.8	112	75-125	
1,1-Dichloropropene	<1.00	50.0	49.2	98	75-125	
cis-1,3-Dichloropropene	<1.00	50.0	56.9	114	74-125	
trans-1,3-dichloropropene	<1.00	50.0	59.4	119	66-125	
Ethylbenzene	<1.00	50.0	49.2	98	75-125	
Hexachlorobutadiene	<1.00	50.0	45.1	90	75-125	
isopropylbenzene	<1.00	50.0	51.8	104	75-125	
Methylene Chloride	<1.00	50.0	47.9	96	75-125	
n-Propylbenzene	<1.00	50.0	51.8	104	75-125	
Styrene	<1.00	50.0	49.6	99	75-125	
1,1,1,2-Tetrachloroethane	<1.00	50.0	48.5	97	72-125	
1,1,2,2-Tetrachloroethane	<1.00	50.0	53.5	107	74-125	
Tetrachloroethylene	<1.00	50.0	44.6	89	71-125	
Toluene	<1.00	50.0	49.6	99	59-139	
1,2,3-Trichlorobenzene	<1.00	50.0	49.2	98	75-137	
1,2,4-Trichlorobenzene	<1.00	50.0	48.2	96	75-135	
1,1,1-Trichloroethane	<1.00	50.0	51.0	102	75-125	
1,1,2-Trichloroethane	<1.00	50.0	54.9	110	75-127	
Trichloroethene	<1.00	50.0	49.3	99	62-137	
Trichlorofluoromethane	<1.00	50.0	49.9	100	67-125	
1,2,3-Trichloropropane	<1.00	50.0	55.5	111	75-125	
1,2,4-Trimethylbenzene	<1.00	50.0	51.6	103	75-125	
1,3,5-Trimethylbenzene	<1.00	50.0	51.5	103	70-125	
o-Xylene	<1.00	50.0	49.1	98	75-125	
m,p-Xylenes	<2.00	100	97.4	97	75-125	
Vinyl Acetate	<10.0	100	108	108	60-140	
Vinyl Chloride	<0.400	50.0	50.4	101	75-125	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

BS / BSD Recoveries

Project Name: 900 S Central Avenue

Work Order #: 395411 **Project ID:** Roxana-Route 111/21562291.00006

Analyst: DAE **Date Prepared:** 11/01/2010 **Date Analyzed:** 11/02/2010

Lab Batch ID: 830272 **Sample:** 577544-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

SVOAs by SW-846 8270C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Acenaphthene	<0.001	0.050	0.046	92	0.05	0.046	92	0	27-132	31	
Acenaphthylene	<0.003	0.050	0.046	92	0.05	0.046	92	0	46-108	25	
Aniline (Phenylamine, Aminobenzene)	<0.001	0.050	0.031	62	0.05	0.014	28	76	5-115	25	F
Anthracene	<0.001	0.050	0.048	96	0.05	0.048	96	0	47-145	25	
Benzo(a)anthracene	<0.001	0.050	0.049	98	0.05	0.050	100	2	33-143	25	
Benzo(a)pyrene	<0.001	0.050	0.051	102	0.05	0.054	108	6	65-135	25	
Benzo(b)fluoranthene	<0.001	0.050	0.049	98	0.05	0.053	106	8	24-159	25	
Benzo(k)fluoranthene	<0.001	0.050	0.052	104	0.05	0.055	110	6	25-125	25	
Benzo(g,h,i)perylene	<0.001	0.050	0.051	102	0.05	0.053	106	4	65-135	25	
Benzoic Acid	<0.012	0.150	0.170	113	0.15	0.184	123	8	30-115	40	H
Benzyl Butyl Phthalate	<0.001	0.050	0.048	96	0.05	0.050	100	4	65-135	25	
bis(2-chloroethoxy) methane	<0.001	0.050	0.040	80	0.05	0.040	80	0	54-188	25	
bis(2-chloroethyl) ether	<0.001	0.050	0.042	84	0.05	0.041	82	2	65-135	25	
bis(2-chloroisopropyl) ether	<0.001	0.050	0.039	78	0.05	0.039	78	0	65-135	25	
bis(2-ethylhexyl) phthalate	0.001	0.050	0.050	100	0.05	0.054	108	8	8-158	25	
4-Bromophenyl-phenylether	<0.001	0.050	0.049	98	0.05	0.049	98	0	65-135	25	
4-chloro-3-methylphenol	<0.001	0.050	0.047	94	0.05	0.047	94	0	16-129	33	
4-Chloroaniline	<0.004	0.050	0.042	84	0.05	0.026	52	47	9-128	25	F
2-Chloronaphthalene	<0.003	0.050	0.045	90	0.05	0.046	92	2	65-135	25	
2-Chlorophenol	<0.002	0.050	0.044	88	0.05	0.044	88	0	16-116	40	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: 900 S Central Avenue

Work Order #: 395411
Analyst: DAE
Lab Batch ID: 830272
Sample: 577544-1-BKS
Units: mg/L

Date Prepared: 11/01/2010
Batch #: 1

Project ID: Roxana-Route 111/21562291.00006
Date Analyzed: 11/02/2010
Matrix: Water

SVOAs by SW-846 8270C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
4-Chlorophenyl Phenyl Ether	<0.001	0.050	0.048	96	0.05	0.048	96	0	65-135	25	
Chrysene	<0.001	0.050	0.049	98	0.05	0.052	104	6	65-135	25	
Dibenz(a,h)anthracene	<0.001	0.050	0.051	102	0.05	0.056	112	9	50-125	25	
Dibenzofuran	<0.003	0.050	0.047	94	0.05	0.047	94	0	52-125	25	
di-n-Butyl Phthalate	<0.001	0.050	0.049	98	0.05	0.051	102	4	49-135	50	
3,3-Dichlorobenzidine	<0.003	0.050	0.039	78	0.05	0.010	20	118	12-147	25	F
2,4-Dichlorophenol	<0.001	0.050	0.049	98	0.05	0.049	98	0	65-135	25	
Diethyl Phthalate	<0.001	0.050	0.048	96	0.05	0.049	98	2	37-125	50	
Dimethyl Phthalate	<0.001	0.050	0.048	96	0.05	0.048	96	0	25-175	50	
2,4-Dimethylphenol	<0.003	0.050	0.045	90	0.05	0.045	90	0	32-119	25	
4,6-dinitro-2-methyl phenol	<0.003	0.050	0.047	94	0.05	0.050	100	6	2-181	25	
2,4-Dinitrophenol	<0.002	0.050	0.057	114	0.05	0.059	118	3	65-135	25	
2,4-Dinitrotoluene	<0.003	0.050	0.051	102	0.05	0.052	104	2	22-135	38	
2,6-Dinitrotoluene	<0.001	0.050	0.050	100	0.05	0.050	100	0	49-122	38	
di-n-Octyl Phthalate	<0.001	0.050	0.049	98	0.05	0.054	108	10	43-134	50	
Fluoranthene	<0.001	0.050	0.051	102	0.05	0.052	104	2	47-125	25	
Fluorene	<0.001	0.050	0.048	96	0.05	0.048	96	0	48-139	25	
Hexachlorobenzene	<0.001	0.050	0.048	96	0.05	0.049	98	2	46-133	25	
Hexachlorocyclopentadiene	<0.003	0.050	0.028	56	0.05	0.029	58	4	41-125	25	
Hexachloroethane	<0.003	0.050	0.043	86	0.05	0.043	86	0	25-153	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: 900 S Central Avenue

Work Order #: 395411
Analyst: DAE
Lab Batch ID: 830272
Sample: 577544-1-BKS
Units: mg/L

Date Prepared: 11/01/2010
Batch #: 1

Project ID: Roxana-Route 111/21562291.00006
Date Analyzed: 11/02/2010
Matrix: Water

SVOAs by SW-846 8270C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Indeno(1,2,3-c,d)Pyrene	<0.001	0.050	0.051	102	0.05	0.055	110	8	27-160	25	
Isophorone	<0.001	0.050	0.043	86	0.05	0.043	86	0	26-175	25	
2-Methylnaphthalene	<0.003	0.050	0.055	110	0.05	0.058	116	5	25-175	25	
2-methylphenol	<0.003	0.050	0.049	98	0.05	0.044	88	11	14-176	25	
3&4-Methylphenol	<0.002	0.100	0.043	43	0.1	0.040	40	7	14-176	25	
Naphthalene	<0.002	0.050	0.043	86	0.05	0.044	88	2	26-175	25	
2-Nitroaniline	<0.001	0.050	0.045	90	0.05	0.043	86	5	65-135	25	
3-Nitroaniline	<0.006	0.050	0.048	96	0.05	0.042	84	13	65-135	25	
4-Nitroaniline	<0.004	0.050	0.048	96	0.05	0.043	86	11	65-135	25	
Nitrobenzene	<0.001	0.050	0.040	80	0.05	0.038	76	5	65-135	25	
2-Nitrophenol	<0.001	0.050	0.046	92	0.05	0.046	92	0	65-135	25	
4-Nitrophenol	<0.001	0.050	0.045	90	0.05	0.041	82	9	10-80	50	H
N-Nitrosodi-n-Propylamine	<0.001	0.050	0.041	82	0.05	0.041	82	0	22-134	38	
N-Nitrosodiphenylamine	<0.003	0.050	0.047	94	0.05	0.044	88	7	2-196	25	
Pentachlorophenol	<0.003	0.050	0.039	78	0.05	0.053	106	30	17-117	50	
Phenanthrene	<0.001	0.050	0.047	94	0.05	0.049	98	4	65-135	25	
Phenol	<0.001	0.050	0.024	48	0.05	0.024	48	0	12-110	25	
Pyrene	<0.001	0.050	0.048	96	0.05	0.050	100	4	23-152	31	
Pyridine	<0.006	0.050	0.013	26	0.05	0.006	12	74	16-86	28	FL
2,4,5-Trichlorophenol	<0.001	0.050	0.059	118	0.05	0.062	124	5	65-135	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: 900 S Central Avenue

Work Order #: 395411
Analyst: DAE
Lab Batch ID: 830272
Sample: 577544-1-BKS
Units: mg/L

Date Prepared: 11/01/2010
Batch #: 1

Project ID: Roxana-Route 111/21562291.00006
Date Analyzed: 11/02/2010
Matrix: Water

SVOAs by SW-846 8270C Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
2,4,6-Trichlorophenol	<0.002	0.050	0.053	106	0.05	0.054	108	2	65-135	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: 900 S Central Avenue

Work Order #: 395411
Lab Batch #: 830272
Project ID: Roxana-Route 111/21562291.00006
Date Analyzed: 11/02/2010
Date Prepared: 11/01/2010
Analyst: DAE
QC- Sample ID: 395023-003 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/L

SVOAs by SW-846 8270C Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Acenaphthene	<0.050	0.250	0.242	97	27-132	
Acenaphthylene	<0.050	0.250	0.242	97	46-108	
Aniline (Phenylamine, Aminobenzene)	<0.100	0.250	0.127	51	5-115	
Anthracene	<0.050	0.250	0.250	100	47-145	
Benzo(a)anthracene	<0.050	0.250	0.255	102	33-143	
Benzo(a)pyrene	<0.050	0.250	0.264	106	65-135	
Benzo(b)fluoranthene	<0.050	0.250	0.260	104	24-159	
Benzo(k)fluoranthene	<0.050	0.250	0.259	104	25-125	
Benzo(g,h,i)perylene	<0.050	0.250	0.267	107	65-135	
Benzoic Acid	<0.250	0.750	0.894	119	30-115	X
Benzyl Butyl Phthalate	<0.050	0.250	0.246	98	65-135	
bis(2-chloroethoxy) methane	<0.050	0.250	0.209	84	54-188	
bis(2-chloroethyl) ether	<0.050	0.250	0.223	89	65-135	
bis(2-chloroisopropyl) ether	<0.050	0.250	0.202	81	65-135	
bis(2-ethylhexyl) phthalate	0.017	0.250	0.267	100	8-158	
4-Bromophenyl-phenylether	<0.050	0.250	0.262	105	65-135	
4-chloro-3-methylphenol	<0.050	0.250	0.242	97	16-129	
4-Chloroaniline	<0.100	0.250	0.190	76	9-128	
2-Chloronaphthalene	<0.050	0.250	0.243	97	65-135	
2-Chlorophenol	<0.050	0.250	0.238	95	16-116	
4-Chlorophenyl Phenyl Ether	<0.050	0.250	0.248	99	65-135	
Chrysene	<0.050	0.250	0.259	104	65-135	
Dibenz(a,h)anthracene	<0.050	0.250	0.274	110	50-125	
Dibenzofuran	<0.050	0.250	0.245	98	52-125	
di-n-Butyl Phthalate	<0.050	0.250	0.259	104	49-135	
3,3-Dichlorobenzidine	<0.050	0.250	0.204	82	12-147	
2,4-Dichlorophenol	<0.050	0.250	0.247	99	65-135	
Diethyl Phthalate	<0.050	0.250	0.252	101	37-125	
Dimethyl Phthalate	<0.050	0.250	0.250	100	25-175	
2,4-Dimethylphenol	<0.050	0.250	0.239	96	32-119	
4,6-dinitro-2-methyl phenol	<0.050	0.250	0.236	94	2-181	
2,4-Dinitrophenol	<0.100	0.250	0.274	110	65-135	
2,4-Dinitrotoluene	<0.050	0.250	0.268	107	22-135	
2,6-Dinitrotoluene	<0.050	0.250	0.257	103	49-122	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS Recoveries

Project Name: 900 S Central Avenue

Work Order #: 395411
Lab Batch #: 830272
Project ID: Roxana-Route 111/21562291.00006
Date Analyzed: 11/02/2010
Date Prepared: 11/01/2010
Analyst: DAE
QC- Sample ID: 395023-003 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/L

SVOAs by SW-846 8270C Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
		Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
di-n-Octyl Phthalate	<0.050	0.250	0.249	100	43-134	
Fluoranthene	<0.050	0.250	0.268	107	47-125	
Fluorene	<0.050	0.250	0.251	100	48-139	
Hexachlorobenzene	<0.050	0.250	0.255	102	46-133	
Hexachlorocyclopentadiene	<0.050	0.250	0.144	58	41-125	
Hexachloroethane	<0.050	0.250	0.223	89	25-153	
Indeno(1,2,3-c,d)Pyrene	<0.050	0.250	0.270	108	27-160	
Isophorone	<0.050	0.250	0.227	91	26-175	
2-Methylnaphthalene	<0.050	0.250	0.269	108	25-175	
2-methylphenol	<0.050	0.250	0.250	100	14-176	
3&4-Methylphenol	<0.050	0.500	0.232	46	14-176	
Naphthalene	<0.050	0.250	0.233	93	26-175	
2-Nitroaniline	<0.100	0.250	0.232	93	65-135	
3-Nitroaniline	<0.100	0.250	0.242	97	65-135	
4-Nitroaniline	<0.100	0.250	0.249	100	65-135	
Nitrobenzene	<0.050	0.250	0.254	102	65-135	
2-Nitrophenol	<0.050	0.250	0.244	98	65-135	
4-Nitrophenol	<0.050	0.250	0.231	92	10-80	X
N-Nitrosodi-n-Propylamine	<0.050	0.250	0.216	86	22-134	
N-Nitrosodiphenylamine	<0.050	0.250	0.247	99	2-196	
Pentachlorophenol	<0.050	0.250	0.290	116	17-117	
Phenanthrene	<0.050	0.250	0.247	99	65-135	
Phenol	<0.050	0.250	0.185	74	12-110	
Pyrene	<0.050	0.250	0.244	98	23-152	
Pyridine	<0.100	0.250	0.098	39	16-86	
2,4,5-Trichlorophenol	<0.050	0.250	0.306	122	65-135	
2,4,6-Trichlorophenol	<0.050	0.250	0.271	108	65-135	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS Recoveries

Project Name: 900 S Central Avenue

Work Order #: 395411
Lab Batch #: 830272
Project ID: Roxana-Route 111/21562291.00006
Date Analyzed: 11/02/2010
Date Prepared: 11/01/2010
Analyst: DAE
QC- Sample ID: 395023-004 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/L

SVOAs by SW-846 8270C Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Acenaphthene	<0.050	0.250	0.260	104	27-132	
Acenaphthylene	<0.050	0.250	0.259	104	46-108	
Aniline (Phenylamine, Aminobenzene)	<0.100	0.250	0.145	58	5-115	
Anthracene	<0.050	0.250	0.268	107	47-145	
Benzo(a)anthracene	<0.050	0.250	0.273	109	33-143	
Benzo(a)pyrene	<0.050	0.250	0.282	113	65-135	
Benzo(b)fluoranthene	<0.050	0.250	0.270	108	24-159	
Benzo(k)fluoranthene	<0.050	0.250	0.287	115	25-125	
Benzo(g,h,i)perylene	<0.050	0.250	0.286	114	65-135	
Benzoic Acid	<0.250	0.750	0.933	124	30-115	X
Benzyl Butyl Phthalate	<0.050	0.250	0.264	106	65-135	
bis(2-chloroethoxy) methane	<0.050	0.250	0.226	90	54-188	
bis(2-chloroethyl) ether	<0.050	0.250	0.238	95	65-135	
bis(2-chloroisopropyl) ether	<0.050	0.250	0.218	87	65-135	
bis(2-ethylhexyl) phthalate	0.019	0.250	0.290	108	8-158	
4-Bromophenyl-phenylether	<0.050	0.250	0.280	112	65-135	
4-chloro-3-methylphenol	<0.050	0.250	0.262	105	16-129	
4-Chloroaniline	<0.100	0.250	0.214	86	9-128	
2-Chloronaphthalene	<0.050	0.250	0.255	102	65-135	
2-Chlorophenol	<0.050	0.250	0.254	102	16-116	
4-Chlorophenyl Phenyl Ether	<0.050	0.250	0.267	107	65-135	
Chrysene	<0.050	0.250	0.274	110	65-135	
Dibenz(a,h)anthracene	<0.050	0.250	0.288	115	50-125	
Dibenzofuran	<0.050	0.250	0.266	106	52-125	
di-n-Butyl Phthalate	<0.050	0.250	0.276	110	49-135	
3,3-Dichlorobenzidine	<0.050	0.250	0.221	88	12-147	
2,4-Dichlorophenol	<0.050	0.250	0.277	111	65-135	
Diethyl Phthalate	<0.050	0.250	0.273	109	37-125	
Dimethyl Phthalate	<0.050	0.250	0.268	107	25-175	
2,4-Dimethylphenol	<0.050	0.250	0.260	104	32-119	
4,6-dinitro-2-methyl phenol	<0.050	0.250	0.246	98	2-181	
2,4-Dinitrophenol	<0.100	0.250	0.335	134	65-135	
2,4-Dinitrotoluene	<0.050	0.250	0.284	114	22-135	
2,6-Dinitrotoluene	<0.050	0.250	0.274	110	49-122	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS Recoveries

Project Name: 900 S Central Avenue

Work Order #: 395411
Lab Batch #: 830272
Project ID: Roxana-Route 111/21562291.00006
Date Analyzed: 11/02/2010
Date Prepared: 11/01/2010
Analyst: DAE
QC- Sample ID: 395023-004 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/L

SVOAs by SW-846 8270C Analytes	MATRIX / MATRIX SPIKE RECOVERY STUDY					
		Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
di-n-Octyl Phthalate	<0.050	0.250	0.270	108	43-134	
Fluoranthene	<0.050	0.250	0.285	114	47-125	
Fluorene	<0.050	0.250	0.269	108	48-139	
Hexachlorobenzene	<0.050	0.250	0.269	108	46-133	
Hexachlorocyclopentadiene	<0.050	0.250	0.161	64	41-125	
Hexachloroethane	<0.050	0.250	0.241	96	25-153	
Indeno(1,2,3-c,d)Pyrene	<0.050	0.250	0.286	114	27-160	
Isophorone	<0.050	0.250	0.245	98	26-175	
2-Methylnaphthalene	<0.050	0.250	0.269	108	25-175	
2-methylphenol	<0.050	0.250	0.259	104	14-176	
3&4-Methylphenol	<0.050	0.500	0.252	50	14-176	
Naphthalene	<0.050	0.250	0.249	100	26-175	
2-Nitroaniline	<0.100	0.250	0.252	101	65-135	
3-Nitroaniline	<0.100	0.250	0.266	106	65-135	
4-Nitroaniline	<0.100	0.250	0.269	108	65-135	
Nitrobenzene	<0.050	0.250	0.272	109	65-135	
2-Nitrophenol	<0.050	0.250	0.261	104	65-135	
4-Nitrophenol	<0.050	0.250	0.248	99	10-80	X
N-Nitrosodi-n-Propylamine	<0.050	0.250	0.236	94	22-134	
N-Nitrosodiphenylamine	<0.050	0.250	0.269	108	2-196	
Pentachlorophenol	<0.050	0.250	0.332	133	17-117	X
Phenanthrene	<0.050	0.250	0.265	106	65-135	
Phenol	<0.050	0.250	0.200	80	12-110	
Pyrene	<0.050	0.250	0.264	106	23-152	
Pyridine	<0.100	0.250	0.084	34	16-86	
2,4,5-Trichlorophenol	<0.050	0.250	0.326	130	65-135	
2,4,6-Trichlorophenol	<0.050	0.250	0.300	120	65-135	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Form 3 - MS / MSD Recoveries

Project Name: 900 S Central Avenue

Work Order # : 395411 **Project ID:** Roxana-Route 111/21562291.00006

Lab Batch ID: 830346 **QC- Sample ID:** 395099-011 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/02/2010 **Date Prepared:** 11/02/2010 **Analyst:** EZB

Reporting Units: ug/L

VOAs by SW-846 8260B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Acetone	<100	100	72.6	73	100	77.2	77	6	60-140	21	
Benzene	<5.00	50.0	40.7	81	50.0	40.7	81	0	66-142	21	
Bromobenzene	<5.00	50.0	48.0	96	50.0	48.5	97	1	75-125	20	
Bromochloromethane	<5.00	50.0	43.9	88	50.0	42.7	85	3	73-125	20	
Bromodichloromethane	<5.00	50.0	49.7	99	50.0	49.1	98	1	75-125	20	
Bromoform	<5.00	50.0	50.3	101	50.0	52.7	105	5	75-125	20	
Bromomethane	<5.00	50.0	34.4	69	50.0	31.4	63	9	70-130	20	X
2-Butanone	<50.0	100	75.2	75	100	81.7	82	8	60-140	20	
MTBE	1.42	50.0	50.8	99	50.0	49.5	96	3	65-135	20	
n-Butylbenzene	<5.00	50.0	43.8	88	50.0	42.4	85	3	75-125	20	
Sec-Butylbenzene	<5.00	50.0	46.3	93	50.0	45.0	90	3	75-125	20	
tert-Butylbenzene	<5.00	50.0	48.1	96	50.0	46.5	93	3	75-125	20	
Carbon Disulfide	<50.0	50.0	31.0	62	50.0	29.3	59	6	60-140	20	X
Carbon Tetrachloride	<5.00	50.0	42.5	85	50.0	41.3	83	3	62-125	20	
Chlorobenzene	<5.00	50.0	44.3	89	50.0	44.2	88	0	60-133	21	
Chloroethane	<10.0	50.0	36.5	73	50.0	35.8	72	2	70-130	20	
Chloroform	<5.00	50.0	44.4	89	50.0	42.7	85	4	74-125	20	
Chloromethane	<10.0	50.0	34.3	69	50.0	31.3	63	9	70-130	20	X
2-Chlorotoluene	<5.00	50.0	47.7	95	50.0	47.1	94	1	73-125	20	
4-Chlorotoluene	<5.00	50.0	47.7	95	50.0	47.8	96	0	74-125	20	
p-Cymene (p-Isopropyltoluene)	<5.00	50.0	46.9	94	50.0	45.3	91	3	75-125	20	
Dibromochloromethane	<5.00	50.0	50.7	101	50.0	51.0	102	1	73-125	20	
1,2-Dibromo-3-Chloropropane	<5.00	50.0	39.8	80	50.0	40.8	82	2	59-125	28	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: 900 S Central Avenue

Work Order # : 395411 **Project ID:** Roxana-Route 111/21562291.00006

Lab Batch ID: 830346 **QC- Sample ID:** 395099-011 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/02/2010 **Date Prepared:** 11/02/2010 **Analyst:** EZB

Reporting Units: ug/L

VOAs by SW-846 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Dibromomethane	<5.00	50.0	45.6	91	50.0	45.8	92	0	69-127	23	
1,2-Dichlorobenzene	<5.00	50.0	46.0	92	50.0	45.5	91	1	75-125	20	
1,3-Dichlorobenzene	<5.00	50.0	45.8	92	50.0	45.1	90	2	75-125	20	
1,4-Dichlorobenzene	<5.00	50.0	44.2	88	50.0	43.4	87	2	75-125	20	
Dichlorodifluoromethane	<5.00	50.0	37.1	74	50.0	34.8	70	6	70-130	23	
1,1-Dichloroethane	<5.00	50.0	43.2	86	50.0	42.2	84	2	72-125	20	
1,2-Dichloroethane	<5.00	50.0	46.2	92	50.0	46.7	93	1	68-127	20	
1,1-Dichloroethene	<5.00	50.0	36.4	73	50.0	34.6	69	5	59-172	22	
cis-1,2-Dichloroethene	<5.00	50.0	42.9	86	50.0	41.7	83	3	75-125	20	
trans-1,2-dichloroethene	<5.00	50.0	38.1	76	50.0	36.2	72	5	75-125	20	X
1,2-Dichloropropane	<5.00	50.0	45.8	92	50.0	46.2	92	1	74-125	20	
1,3-Dichloropropane	<5.00	50.0	48.0	96	50.0	49.0	98	2	75-125	20	
2,2-Dichloropropane	<5.00	50.0	47.1	94	50.0	45.0	90	5	75-125	20	
1,1-Dichloropropene	<5.00	50.0	39.3	79	50.0	38.9	78	1	75-125	20	
cis-1,3-Dichloropropene	<5.00	50.0	51.1	102	50.0	51.5	103	1	74-125	20	
trans-1,3-dichloropropene	<5.00	50.0	55.9	112	50.0	54.9	110	2	66-125	20	
Ethylbenzene	<5.00	50.0	44.6	89	50.0	44.0	88	1	75-125	20	
Hexachlorobutadiene	<5.00	50.0	41.7	83	50.0	39.7	79	5	75-125	20	
isopropylbenzene	<5.00	50.0	48.1	96	50.0	47.7	95	1	75-125	20	
Methylene Chloride	2.27	50.0	42.8	81	50.0	40.5	76	6	75-125	35	
n-Propylbenzene	<5.00	50.0	46.7	93	50.0	46.2	92	1	75-125	20	
Styrene	<5.00	50.0	46.1	92	50.0	45.7	91	1	75-125	51	
1,1,1,2-Tetrachloroethane	<5.00	50.0	46.8	94	50.0	45.9	92	2	72-125	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: 900 S Central Avenue

Work Order # : 395411 **Project ID:** Roxana-Route 111/21562291.00006

Lab Batch ID: 830346 **QC- Sample ID:** 395099-011 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/02/2010 **Date Prepared:** 11/02/2010 **Analyst:** EZB

Reporting Units: ug/L

VOAs by SW-846 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,1,2,2-Tetrachloroethane	<5.00	50.0	47.4	95	50.0	48.4	97	2	74-125	31	
Tetrachloroethylene	<5.00	50.0	40.0	80	50.0	39.6	79	1	71-125	20	
Toluene	<5.00	50.0	44.3	89	50.0	43.5	87	2	59-139	21	
1,2,3-Trichlorobenzene	<5.00	50.0	45.6	91	50.0	42.4	85	7	75-137	20	
1,2,4-Trichlorobenzene	<5.00	50.0	44.3	89	50.0	41.6	83	6	75-135	20	
1,1,1-Trichloroethane	<5.00	50.0	43.6	87	50.0	41.8	84	4	75-125	20	
1,1,2-Trichloroethane	<5.00	50.0	49.8	100	50.0	50.2	100	1	75-127	20	
Trichloroethene	<5.00	50.0	42.5	85	50.0	41.8	84	2	62-137	24	
Trichlorofluoromethane	<5.00	50.0	38.5	77	50.0	37.3	75	3	67-125	20	
1,2,3-Trichloropropane	<5.00	50.0	47.7	95	50.0	50.6	101	6	75-125	20	
1,2,4-Trimethylbenzene	<5.00	50.0	47.8	96	50.0	46.8	94	2	75-125	20	
1,3,5-Trimethylbenzene	<5.00	50.0	47.2	94	50.0	46.1	92	2	70-125	20	
o-Xylene	<5.00	50.0	45.4	91	50.0	44.8	90	1	75-125	20	
m,p-Xylenes	<10.0	100	87.4	87	100	87.1	87	0	75-125	20	
Vinyl Acetate	<50.0	100	85.1	85	100	86.3	86	1	60-140	20	
Vinyl Chloride	<2.00	50.0	35.7	71	50.0	33.5	67	6	75-125	20	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: 900 S Central Avenue

Work Order # : 395411 **Project ID:** Roxana-Route 111/21562291.00006

Lab Batch ID: 830354 **QC- Sample ID:** 395411-003 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/03/2010 **Date Prepared:** 11/03/2010 **Analyst:** EZB

Reporting Units: ug/L

VOAs by SW-846 8260B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Acetone	37.1	100	131	94	100	136	99	4	60-140	21	
Benzene	<5.00	50.0	46.7	93	50.0	46.6	93	0	66-142	21	
Bromobenzene	<5.00	50.0	49.8	100	50.0	50.6	101	2	75-125	20	
Bromochloromethane	<5.00	50.0	49.3	99	50.0	49.4	99	0	73-125	20	
Bromodichloromethane	<5.00	50.0	52.0	104	50.0	52.7	105	1	75-125	20	
Bromoform	<5.00	50.0	52.2	104	50.0	55.0	110	5	75-125	20	
Bromomethane	<5.00	50.0	44.3	89	50.0	42.2	84	5	70-130	20	
2-Butanone	<50.0	100	98.7	99	100	101	101	2	60-140	20	
MTBE	<5.00	50.0	57.6	115	50.0	56.5	113	2	65-135	20	
n-Butylbenzene	<5.00	50.0	47.8	96	50.0	47.5	95	1	75-125	20	
Sec-Butylbenzene	<5.00	50.0	49.8	100	50.0	49.8	100	0	75-125	20	
tert-Butylbenzene	<5.00	50.0	50.2	100	50.0	50.6	101	1	75-125	20	
Carbon Disulfide	<50.0	50.0	46.0	92	50.0	43.5	87	6	60-140	20	
Carbon Tetrachloride	<5.00	50.0	48.0	96	50.0	47.0	94	2	62-125	20	
Chlorobenzene	<5.00	50.0	46.6	93	50.0	47.4	95	2	60-133	21	
Chloroethane	<10.0	50.0	47.3	95	50.0	44.8	90	5	70-130	20	
Chloroform	<5.00	50.0	49.3	99	50.0	48.2	96	2	74-125	20	
Chloromethane	<10.0	50.0	44.6	89	50.0	43.4	87	3	70-130	20	
2-Chlorotoluene	<5.00	50.0	50.2	100	50.0	50.4	101	0	73-125	20	
4-Chlorotoluene	<5.00	50.0	49.8	100	50.0	50.7	101	2	74-125	20	
p-Cymene (p-Isopropyltoluene)	<5.00	50.0	50.3	101	50.0	50.5	101	0	75-125	20	
Dibromochloromethane	<5.00	50.0	51.6	103	50.0	53.7	107	4	73-125	20	
1,2-Dibromo-3-Chloropropane	<5.00	50.0	46.7	93	50.0	50.7	101	8	59-125	28	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: 900 S Central Avenue

Work Order # : 395411 **Project ID:** Roxana-Route 111/21562291.00006

Lab Batch ID: 830354 **QC- Sample ID:** 395411-003 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/03/2010 **Date Prepared:** 11/03/2010 **Analyst:** EZB

Reporting Units: ug/L

VOAs by SW-846 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Dibromomethane	<5.00	50.0	51.4	103	50.0	51.6	103	0	69-127	23	
1,2-Dichlorobenzene	<5.00	50.0	47.9	96	50.0	48.5	97	1	75-125	20	
1,3-Dichlorobenzene	<5.00	50.0	47.0	94	50.0	47.6	95	1	75-125	20	
1,4-Dichlorobenzene	<5.00	50.0	45.4	91	50.0	46.0	92	1	75-125	20	
Dichlorodifluoromethane	<5.00	50.0	50.2	100	50.0	48.5	97	3	70-130	23	
1,1-Dichloroethane	<5.00	50.0	50.3	101	50.0	49.2	98	2	72-125	20	
1,2-Dichloroethane	<5.00	50.0	50.4	101	50.0	51.0	102	1	68-127	20	
1,1-Dichloroethene	<5.00	50.0	45.4	91	50.0	44.8	90	1	59-172	22	
cis-1,2-Dichloroethene	<5.00	50.0	48.7	97	50.0	48.4	97	1	75-125	20	
trans-1,2-dichloroethene	<5.00	50.0	46.8	94	50.0	45.3	91	3	75-125	20	
1,2-Dichloropropane	<5.00	50.0	50.9	102	50.0	50.8	102	0	74-125	20	
1,3-Dichloropropane	<5.00	50.0	51.5	103	50.0	52.5	105	2	75-125	20	
2,2-Dichloropropane	<5.00	50.0	52.9	106	50.0	51.3	103	3	75-125	20	
1,1-Dichloropropene	<5.00	50.0	47.4	95	50.0	46.9	94	1	75-125	20	
cis-1,3-Dichloropropene	<5.00	50.0	54.4	109	50.0	55.3	111	2	74-125	20	
trans-1,3-dichloropropene	<5.00	50.0	58.7	117	50.0	60.2	120	3	66-125	20	
Ethylbenzene	<5.00	50.0	47.9	96	50.0	47.4	95	1	75-125	20	
Hexachlorobutadiene	<5.00	50.0	43.3	87	50.0	43.3	87	0	75-125	20	
isopropylbenzene	<5.00	50.0	50.7	101	50.0	51.2	102	1	75-125	20	
Methylene Chloride	<5.00	50.0	47.8	96	50.0	47.2	94	1	75-125	35	
n-Propylbenzene	<5.00	50.0	50.4	101	50.0	50.9	102	1	75-125	20	
Styrene	<5.00	50.0	48.9	98	50.0	48.6	97	1	75-125	51	
1,1,1,2-Tetrachloroethane	<5.00	50.0	48.2	96	50.0	47.9	96	1	72-125	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Form 3 - MS / MSD Recoveries

Project Name: 900 S Central Avenue

Work Order # : 395411 **Project ID:** Roxana-Route 111/21562291.00006

Lab Batch ID: 830354 **QC- Sample ID:** 395411-003 S **Batch #:** 1 **Matrix:** Water

Date Analyzed: 11/03/2010 **Date Prepared:** 11/03/2010 **Analyst:** EZB

Reporting Units: ug/L

VOAs by SW-846 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
1,1,2,2-Tetrachloroethane	<5.00	50.0	51.8	104	50.0	53.8	108	4	74-125	31	
Tetrachloroethylene	<5.00	50.0	44.0	88	50.0	44.6	89	1	71-125	20	
Toluene	<5.00	50.0	49.0	98	50.0	48.6	97	1	59-139	21	
1,2,3-Trichlorobenzene	<5.00	50.0	49.4	99	50.0	48.8	98	1	75-137	20	
1,2,4-Trichlorobenzene	<5.00	50.0	48.0	96	50.0	47.0	94	2	75-135	20	
1,1,1-Trichloroethane	<5.00	50.0	49.1	98	50.0	48.2	96	2	75-125	20	
1,1,2-Trichloroethane	<5.00	50.0	52.5	105	50.0	54.1	108	3	75-127	20	
Trichloroethene	<5.00	50.0	47.9	96	50.0	47.6	95	1	62-137	24	
Trichlorofluoromethane	<5.00	50.0	46.9	94	50.0	45.8	92	2	67-125	20	
1,2,3-Trichloropropane	<5.00	50.0	51.4	103	50.0	54.6	109	6	75-125	20	
1,2,4-Trimethylbenzene	<5.00	50.0	49.8	100	50.0	50.0	100	0	75-125	20	
1,3,5-Trimethylbenzene	<5.00	50.0	49.8	100	50.0	50.3	101	1	70-125	20	
o-Xylene	<5.00	50.0	48.7	97	50.0	47.8	96	2	75-125	20	
m,p-Xylenes	<10.0	100	95.4	95	100	93.7	94	2	75-125	20	
Vinyl Acetate	<50.0	100	106	106	100	104	104	2	60-140	20	
Vinyl Chloride	<2.00	50.0	47.8	96	50.0	46.6	93	3	75-125	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
4143 Greenbriar Dr.; Stafford, TX 77477
☑ XENCO (PH: 281-240-4200; FAX: 281-240-4280)
☐ CALSCIENCE ( )
☐ TEST AMERICA ( )
☐ SPL ( )
☐ OTHER ( )

Please Check Appropriate Box:
☑ ENV. SERVICES ☐ MOTIVA RETAIL ☐ SHELL RETAIL
☐ MOTIVA SD&CM ☐ CONSULTANT ☐ LUBES
☐ SHELL PIPELINE ☐ OTHER

Print Bill To Contact Name: Wendy Pennington

INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0 ☐ CHECK IF NO INCIDENT # APPLIES

DATE: 10/29/10

PO #

SAP #: 3 4 0 0 6 1

PAGE: 1 of 1

CONSULTANT COMPANY: URS CORPORATION
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300
CITY: ST. LOUIS, MISSOURI 63110
TELEPHONE: OFF: 314-743-4166 CELL: 314-452-8929
FAX: OFF: 314-743-4166 CELL: 314-452-8929
E-MAIL: wendy.pennington@urscorp.com

URS CORPORATION - FIELD OFFICE
170 E. RAND AVENUE
HARTFORD, ILLINOIS 62048

SOPUS SITE ADDRESS (Street, City and State): 900 S. CENTRAL AVENUE; ROXANA, ILLINOIS 62084
CONSULTANT PROJECT CONTACT (Report to): WENDY PENNINGTON
CONSULTANT PROJECT NAME / NO: Roxana-Route 111 / 21562291.00006
SAMPLER NAME(S) (Print): N. Salam
LAB USE ONLY: 395411-H

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

DELIVERABLES: ☐ LEVEL 1 ☑ LEVEL 2 ☐ LEVEL 3 ☐ LEVEL 4 ☑ OTHER (SPECIFY) EDD

TEMPERATURE ON RECEIPT C°: Cooler #1 | Cooler #2: 4.2 | Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
☑ SHELL CONTRACT RATE APPLIES
Please include "J" values on Level 2 Reports
Please provide sample receipt upon login.

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC	SVOC	PID (ppm)	Laboratory Notes
	GWP-27-28.5	10/29/2010	1415	Water	3			2		5	x	x		
	GWP-27-28.5EB	10/29/2010	1430	Water	3			2		5	x	x		
	GWP-27-36.5	10/29/2010	1550	Water	3			2		5	x	x		
	TB102910	10/29/2010		Water	3					3	x			
				Water										
				Water										
				Water										
				Water										
				Water										
				Water										

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
N. Salam	FED EX	10/29/10	1815
Fedex		10-30-10	9:30

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Final 1.001

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: URS

Date/ Time Received: 10/30/10 9:30

WO ID # : 395411

Initials of Sample Receipt Person: Q.M

Checklist completed by, date/time: Q.M 10/30/10

Checklist reviewed by, date/time: _____

Acceptable Temperature Range: 0-6° C

Acceptable pH Range(s):

<2 for samples preserved with HNO3, HCL, H2SO4

>10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH

Temperature Measuring device used: R-29 IR

Sample Receipt Checklist

Cooler Number: 295 / / / /

Weight of Cooler: 52 / / / /

#1	***Temperature of cooler(s)?**	4.0 / / / °C			
#2	***Shipping container in good condition?**	(YES)	No	None	
#3	***Samples received on ice?**	(YES)	No	N/A	Blue/Water
#4	***Custody Seals intact on shipping container/ cooler?**	(YES)	No	**N/A**	
#5	Custody Seals intact on sample bottles/ container?	Yes	(No)	**N/A**	
#6	***Custody Seals Signed and dated for Containers/coolers**	(YES)	No	**N/A**	
#7	***Chain of Custody present?**	(YES)	No		
#8	Sample instructions complete on Chain of Custody?	(YES)	No		
#9	Any missing/extra samples?	Yes	(NO)		
#10	Chain of Custody signed when relinquished/ received?	(YES)	No		
#11	Chain of Custody agrees with sample label(s)?	(YES)	No		
#12	Container label(s) legible and intact?	(YES)	No		
#13	Sample matrix/ properties agree with Chain of Custody?	(YES)	No		
#14	Samples in proper container/ bottle?	(YES)	No		
#15	Samples properly preserved?	(YES)	No	N/A	See Notes below
#16	Sample container(s) intact?	(YES)	No		
#17	Sufficient sample amount for indicated test(s)?	(YES)	No		
#18	All samples received within hold time?	(YES)	No		
#19	Subcontract of sample(s)?	Yes	**NO**		
#20	VOC samples have zero headspace (less than 1/4 inch bubble)?	(YES)	No	N/A	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Notes on pH check: PH OKAY

Nonconformance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken: _____

252

FedEx Express US Airbill

FedEx Tracking Number 8731 2046 4519

0215

Recipient's Copy

RECIPIENT: PEEL HERE

1 From This portion can be removed for Recipient's records.

Date 10/7/10 FedEx Tracking Number 873120464519

Sender's Name W. Pennington Phone 281 479 0100

Company UPS Corp

Address 1001 Highlands Plaza Dr W Ste 300

City Sugar Land State MO ZIP 63102 Dept./Floor/Suite/Room

2 Your Internal Billing Reference

3 To

Recipient's Name Phone 281 240-4200

Company XENCO LABORATORIES INC

Address 4143 GREENBRIAR DR

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City STAFFORD State TX ZIP 77477

HOLD Weekday FedEx location address REQUIRED. NOT available for FedEx First Overnight.

HOLD Saturday FedEx location address REQUIRED. Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

0423009527

8731 2046 4519

4a Express Package Service * To most locations. *Packages up to 150 lbs.*

- [X] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Standard Overnight — Next business afternoon.* Saturday Delivery NOT available.
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations.*
- [ ] FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

4b Express Freight Service ** To most locations. *Packages over 150 lbs.*

- [ ] FedEx 1Day Freight — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected. FedEx 1Day Freight Booking No.
- [ ] FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
- [ ] FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

5 Packaging * Declared value limit $500.

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak and FedEx Large Pak.
- [ ] FedEx Box
- [X] FedEx Tube
- [X] Other

6 Special Handling and Delivery Signature Options

- [X] SATURDAY Delivery — NOT available for FedEx Standard Overnight, FedEx Express Saver, or FedEx 3Day Freight.

Signature options:

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only. *Fee applies.*

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration.
- [ ] Yes — Shipper's Declaration not required.
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging or placed in a FedEx Express Drop Box.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. [ ]

- [ ] Sender — Acct. No. in Section 1 will be billed.
- [X] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

[redacted]0-75

Total Packages 1 Total Weight 53 lbs. Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

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fedex.com 1.800.GoFedEx 1.800.463.3339

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

Signature: [signature]

Date: 10/29/10