SOIL SAMPLE RESULTS:	SDG 303978	SDG 304253
	B-1-03	B-2-41
	B-2-04	B-1-27
	B-3-06	<b>SDG 304421</b>
	B-4-06	B-3-33
	GP-12(II)-04	B-5-27
	GP-7(II)-03	<b>SDG 304536</b>
	B-6-04	GP-12(II)-17
	B-5-04.5	GP-12(II)-17-Dup
	SDG 304173	B-4-35
	B-6-23	
	GP-7(II)-19	
	GP-7(II)-19-Dup	
SOIL VAPOR SAMPLE RESULTS:	<b>SDG 0806072</b>	SDG 0806099
	GP-12-A-060308	GP-13-A-060408
	GP-12-B-060308	GP-13-B-060408
	GP-12-C-060308	GP-13-C-060408
	GP-12-D-060308	GP-13-D-060408
	GP-11-A-060308	GP-9-A-060408
	GP-11-B-060308	GP-9-B-060408
	GP-11-B-060308-DUP	GP-9-C-060408
	GP-11-C-060308	GP-9-C-060408-DUP
	GP-11-D-060308	GP-9-D-060408
GROUNDWATER SAMPLE RESULTS:	SDG 305672	SDG 305871
	P58-060908	B1-061208
	P58-060908D	B2-061208
	P56-060908	B2-061208D
	P73-061008	B3-061208
	P75-061008	B4-061208
	P66-061008	B5-061308
	P54-061008	B6-061308
	P57-061108	SDG 308728

P54072508



# **Rand Avenue Data Review**

Laboratory SDG: 303978

**Reviewer: Tony Sedlacek** 

Date Reviewed: 7/22/2008

Guidance: National Functional Guidelines for Organic Data Review 1999.

Applicable Work Plan: Route 111/Rand Avenue Vicinity Investigation Work Plan.

Sample Identification #	Sample Identification #
B-1-03	B-2-04
B-3-06	B-4-06
GP-12(II)-04	GP-7(11)-03
B-6-04	B-5-04.5
TB051508	

### 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, although not indicated in the laboratory case narrative, VOCs were detected in the trip blank and method blank. The LCS recovery for methylene chloride and MS/MSD recoveries and MS/MSD RPDs were outside evaluation criteria. 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		·	1

### 4.0 Blank Contamination

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

Yes

Blank ID	Parameter	Analyte	Concentration	Units
TB051508	VOCs	Methylene chloride	5.83	µg/L
509839-1-BLK	VOCs	Acetone	21.4	µg/L
509839-1-BLK	VOCs	Bromomethane	1.09	μg/L
509839-1-BLK	VOCs	1,3-Dichlorobenzene	1.13	μg/L.
509839-1-BLK	VOCs	1,4-Dichlorobenzene	I.12	μg/L
509839-1-BLK	VOCs	Methylene chloride	8.59	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?

No

509839-1-BKS	VOCs	Methylene chloride	160	N/A	75-125
LCS ID	Parameter	Analyte	LCS Recovery	RPD	LCS Criteria

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	Analy	te (in the second s	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. Quality control data associated with surrogate recoveries outside evaluation criteria did not require evaluation or qualification.

Field ID	Parameter	Anal	yte	Qualification
N/A				

### 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, sample B-1-03 was spiked and analyzed for VOCs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
B-1-03	VOCs	Bromoform	143/140	2	75-125/20
B-1-03	VOCs	2-Butanone	91/59	43	50-150/20
B-1-03	VOCs	Methyl tert-butyl ether	108/87	22	75-125/20
B-1-03	VOCs	Chloroethane	105/85	21	65-135/20
B-1-03	VOCs	1,1-Dichloroethane	96/72	29	75-125/20
B-1-03	VOCs	trans-1,2-dichloroethene	97/78	22	75-125/20
B-1-03	VOCs	cis-1,2-dichloroethene	97/73	28	75-125/20
B-1-03	VOCs	2,2-dichloropropane	94/68	32	75-125/25

Analytical data that required qualification based on MS/MSD data are included in the table below. USEPA National Functional Guidelines for Organic Data Review indicates that organic data should not be qualified based on MS/MSD data alone and LCS recoveries were within evaluation criteria, therefore no qualification of the data was required.

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?

Samples did not require a dilution.

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 contaminants acetone and 2-butanone reported at concentrations less than two times (2X) the RL.

Field ID	Analyte	New RL	Qualification	Comments
B-2-04	Acetone	-	U	Professional Judgment
B-2-04	2-Butanone	-	U	Professional Judgment
B-4-06	Acetone	-	U	Professional Judgment

# Analytical Report 303978

for

# **URS Corporation-St. Louis**

**Project Manager: Wendy Pennington** 

900 S. Central Avenue Route 111 & Rand Avenue Vicinity / 21561979

04-JUN-08





E84880

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

Texas certification numbers: Houston, TX T104704215

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

> North Carolina certification numbers: Norcross(Atlanta), GA 483

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04-JUN-08



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

Reference: XENCO Report No: 303978 900 S. Central Avenue Project Address: Roxana, Illinois 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 303978. 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. 303978 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

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Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America





#### Project Name: 900 S. Central Avenue

Project Id:Route 111 & Rand Avenue Vicinity / 2156Contact:Wendy PenningtonProject Location:Roxana, Illinois 62084				Date Received in Lab:May-16-08 09:30Report Date:04-JUN-08Project Manager:Debbie Simmons					
	Lab Id:	303978-001 B-1-03		303978-002 B-2-04		303978-003 В-3-06		303978-004 В-4-06	
Analysis Requested	Field Id: Depth:								
	Matrix:	SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-14-08 (	00:00	May-14-08 00:00		May-14-08 00:00		May-15-08 09:45	
Percent Moisture	Extracted:								
1 creent moisture	Analyzed:	May-22-08 (	08:03	May-22-08 (	08:04	May-22-08 08:05		May-22-08 08:06	
	Units/RL:	%	RL	%	RL	%	RL.	%	RL
Percent Moisture		13,6	1.00	9.41	1.00	12,3	1.00	19.8	1.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our hiability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Carlos A. Castro, Ph.D., MBA

Managing Director, Texas

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Project Id:Route 111 & Rand Avenue Vicinity / 2156Contact:Wendy Pennington				Date	08 09:30 am 08				
Project Location: Roxana, Ill	linois 62084			F	roject	Manager:	Debbie S	Simmons	
	Lab Id:	303978-00	01	303978-00	2	303978-6	003	303978-0	04
Analysis Requested	Field Id:	B-1-03		B-2-04		B-3-06	5	B-4-06	
	Depth:								
	Matrix:	SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-14-08 0	0:00	May-14-08 0	0:00	May-14-08	00:00	May-15-08 (	)9:45
VOAs by SW-846 8260B	Extracted:	May-19-08 I	1:35	May-19-08 1	1:43	May-19-08	14:14	May-19-08 1	11:47
· • • • • • • • • • • • • • • • • • • •	Analyzed:	May-19-08 1	2:41	May-19-08 14	4:02	May-19-08	18:36	May-19-08	14:42
	Units/RL:	ug/kg	RL	ugke	RL	ug/kg	RL	ug/kg	RL
Acetone		U	78. <b>3</b>	,0 KO 40.4 J	<b>U</b> 103	U	100	D. ON 019.75	JA 95.8
Benzene		υ	3.94	V	5.17	U	5.00		4.79
Bromobenzene		υ	3.94	บ	5.17	U	5.00	υ	4.79
Bromochloromethane		U	3,94	U	5.17	U	5.00	U	4.79
Bromodichloromethane		U	3.94	U	5.17	U	5.00	U	4.79
Bromoform		υ	3.94	υ	5.17	υ	5.00	υ	4,79
Bromomethane		U	3.94	-th	5.17	U	5.00	υ	4.79
2-Butanone		U	39.4	0.000 14:2 J	51.7	U	50.0	υ	47.9
MTBE		U	3.94	U	5.17	υ	5.00	U	4.79
tert-Butylbenzene		U	3.94	υ	5.17	υ	5.00	U	4.79
Sec-Butylbenzene		υ	3.94	υ	5.17	U	5.00	U	4.79
n-Butylbenzene	······································	υ	3.94	U	5.17	υ	5.00	υ	4.79
Carbon Disulfide		υ	39.4	U	51.7	U	50.0	U	47.9
Carbon Tetrachloride		υ	3.94	U	5.17	U	5.00	U	4.79
Chlorobenzene		U	3.94	υ	5.17	U	5.00	U	4.79
Chloroethane		U	7.87	υ	10,3	U	10.0	U	9,58
Chloroform		U	3.94	υ	5.17	U	5.00	U	4.79
Chloromethane		U	7.87	υ	10.3	U	10.0	U	9.58
2-Chlorotoluene		U	3.94	υ	5.17	U	5.00	U	4.79
4-Chlorotoluene		U	3,94	υ	5.17	U	5,00	U	4,79
p-Cymene (p-Isopropyltoluene)		U	3.94	υ	5.17	υ	5.00	υ	4.79
1,2-Dibromo-3-Chloropropane		U	3.94	υ	5,17	υ	5.00	U	4.79
Dibromochloromethane		U	3.94	U	5,17	υ	5.00	U	4.79
1,2-Dibromoethane		υ	3,94	U	5.17	U	5.00	υ	4.79
Dibromomethane		U	3.94	U	5.17	U	5.00	υ	4.79
1,2-Dichlorobenzene		U	3.94	υ	5.17	U	5.00	U	4.79
1,3-Dichlorobenzene		υ	3.94	<u> </u>	5.17	U	5.00	Ŭ	4.79
1,4-Dichlorobenzene		U	3.94	υ	5.17	U	5.00	U	4.79
Dichlorodifluoromethane		U	3.94	U	5.17	U	5.00	U	4.79
1,2-Dichloroethane		υ	3.94	υ	5.17	υ	5.00	U	4.79
1,1-Dichloroethane		U	3.94	U	5.17	U	5.00	U	4.79
trans-1,2-dichloroethene		υ	3.94	U	5.17	U	5.00	U	4.79
cis-1,2-Dichloroethene		υ	3.94	U	5.17	υ	5.00	U	4.79
1,1-Dichloroethene		υ	3.94	υ	5.17	U	5.00	υ	4.79

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x 13 Carlos A. Castro, Ph.D., MBA

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Managing Director, Texas





### Project Name: 900 S. Central Avenue

Project Id: Route 111 & Rand Avenue Vicinity / 2156				Dat			-	08 09:30 am	
	endy Pennington					1	04-JUN-		
Project Location: Ro	oxana, Illinois 62084				Project	Manager:	Debbie S	Simmons	
	Lab Id:	303978-00	01	303978-002		303978-003		303978-004	
Analysis Requ	ested Field Id:	B-1-03		B-2-04		B-3-06	5	B-4-06	
	Depth:								
	Matrix:	SOIL	SOIL			SOIL		SOIL	
	Sampled:	May-14-08 0	00:00	May-14-08 (	00:00	May-14-08	00:00	May-15-08	09:45
VOAs by SW-846 8260	B Extracted:	May-19-08 1	J:35	May-19-08	1:43	May-19-08	14:14	May-19-08	11:47
	Analyzed:	May-19-08 1	2:41	May-19-08	4:02	May-19-08	18:36	May-19-08	14:42
	Units/RL:	ug/kg	RL	ug/kg	RL	ug/kg	RL	ug/kg	RL
2,2-Dichloropropane		U	3,94	U	5.17	υ	5.00	U	4.79
1,3-Dichloropropane	Annual Farman and a survey of called Address Address and a state of the survey of the	U	3.94	υ	5.17	U	5.00	υ	4.79
1,2-Dichloropropane		U	3.94	U	5.17	U	5.00	U	4.79
trans-1,3-dichloropropene		U	3.94	υ	5.17	υ	5.00	υ	4.79
1,1-Dichloropropene		υ	3.94	U	5.17	υ	5.00	U	4.79
cis-1,3-Dichloropropene		υ	3.94	ប	5.17	U	5.00	U	4.79
Ethylbenzene		υ	3.94	U	5.17	υ	5.00	ប	4.79
Hexachlorobutadiene		υ	3,94	U	5.17	Ŭ	5.00	υ	4.79
2-Hexanone	2-Hexanone		39.4	บ	51.7	U	50.0	U	47.9
Naphthalene		U	7.87	υ	10.3	ប	10.0	U	9.58
isopropylbenzene		U	3.94	U	5.17	υ	5.00	υ	4.79
Methylene Chloride		U	15.7	U	20.7	υ	20.0	υ	19.2
4 Methyl-2-Pentanone		U	39.4	U	51.7	υ	50,0	ប	47,9
pylbenzene		U	3.94	U	5.17	υ	5.00	U	4.79
Styrene		υ	3.94	U	5.17	U	5.00	υ	4.79
1,1,1,2-Tetrachloroethane		U	3.94	U	5,17	U	5.00	υ	4.79
1,1,2,2-Tetrachloroethane		υ	3.94	υ	5.17	U	5.00	U	4.79
Tetrachloroethylene		υ	3.94	υ	5,17	υ	5.00	υ	4.79
Toluene		υ	3.94	U	5.17	υ	5.00	υ	4.79
1,2,4-Trichlorobenzene		υ	3.94	υ	5.17	U	5.00	U	4.79
1,2,3-Trichlorobenzene		υ	3.94	U	5,17	U	5.00	U	4,79
1,1,2-Trichloroethane		U	3.94	U	5,17	U	5.00	U	4.79
1,1,1-Trichloroethane		U	3.94	U	5.17	U	5.00	U	4.79
Trichloroethene		υ	3.94	υ	5.17	U	5.00	U	4.79
Trichlorofluoromethane		U	3.94	U	5.17	U	5.00	υ	4.79
1,2,3-Trichloropropane		υ	3.94	U	5.17	υ	5.00	U	4.79
1,2,4-Trimethylbenzene		υ	3.94	υ	5.17	U	5.00	U	4.79
1,3,5-Trimethylbenzene		υ	3.94	υ	5.17	U	5.00	ບ	4.79
Vinyl Chloride		U	1.57	U	2.07	U	2.00	υ	1.92
o-Xylene		υ	3.94	U	5.17	U	5.00	υ	4.79
m,p-Xylenes		U	7.87	U	10.3	υ	10.0	Ų	9.58

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Carlos A. Castro, Ps.D., MBA

Managing Director, Texas

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### Project Name: 900 S. Central Avenue

Project Id:Route 111 & Rand Avenue Vicinity / 2156Contact:Wendy PenningtonProject Location:Roxana, Illinois 62084					e Receive Rep Project I	04-JUN-0	y-16-08 09:30 am IUN-08 obie Simmons		
	Lab Id:	303978-005		303978-006		303978-007		303978-0	008
Analysis Requested	Field Id:	GP-12(JI)-04		GP-7(II)-03		B-6-04		B-5-04.5	
	Depth:								
	Matrix:	SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-15-08 1	0:25	May-15-08 11:15		May-15-08 12:50		May-15-08 13:45	
Percent Moisture	Extracted:								
	Analyzed:	May-22-08 0	08:07	May-22-08 (	8:08	May-22-08 08:09		May-22-08 08:10	
	Units/RL:	%	RL	%	RL	%	RL	%	RL
Percent Moisture		24.7	1.00	5.04	1.00	18.3	1.00	20,9	1.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented Our Hability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Carlos A. Castro, Ph.D., MBA

Managing Director, Texas



## Certificate of Analysis Summary 303978 URS Corporation-St. Louis, St. Louis, MO



	'n	- Non	00	) S. Centra	LANON				
Project Id: Route 111 & R		v	IC: 900			ed in Lab:	Mav-16-	08 09:30 am	
Contact: Wendy Pennington				2			04-JUN-		
Project Location: Roxana, Illinoi	-			3				Simmons	
Troject Education. Roxana, minos		303978-0	05	303978-0	,	303978-0		303978-	000
	Lab Id:					303978-0 B-6-04		303978- B-5-04	
Analysis Requested	Field Id:	GP-12(II)-04		GP-7(II)-0	υ I	D-0-04		D-3-V4	
	Depth:	COB	SOIL			SOIL		SON.	
	Matrix:	SOIL May-15-08 1	0.25	SOIL May-15-08 I	1.15	May-15-08	1	SOIL May-15-08 13:45	
	Sampled:	May-15-08 1 May-19-08 1		May-13-08 1 May-19-08 1		May-13-08 May-19-08		May-13-08 May-19-08	
VOAs by SW-846 8260B	Extracted:	May-19-08 J		May-19-08 J	-	May-19-08 May-19-08	ł	May-19-08 May-19-08	
	Analyzed:	2	RL		9.38 RL	ug/kg	RL	ug/kg	20.19 RL
	Units/RL:	ug/kg U	кі 99.6	ug/kg U	100	Ug/kg U	78.2	Ug/kg U	99.6
Acetone							3.91	U	4,98
Benzene		U	4.98	<u>U</u>	5.01	<u>U</u>			
Bromobenzene		U	4.98	<u>υ</u>	5.01	U	3.91	U	4.98
Bromochloromethane		U	4.98	Ų	5.01	U 	3.91	U	4.98
Bromodichloromethane		U	4.98	<u> </u>	5.01	U U	3.91	U	4.98
Bromoform		<u> </u>	4,98	U	5.01			U	
Bromomethane		U	4.98	U	5.01	<u> </u>	3.91	U	4.98
2-Butanone		U	49.8	υ	50,1	U	39.1	U	49.8
MTBE		U	4.98	U	5.01	<u>υ</u>	3.91	U	4.98
tert-Butylbenzene		U	4.98	<u> </u>	5.01	U	3.91	U	4.98
Sec-Butylbenzene		<u>U</u>	4.98	U 	5.01	U	3.91	U	4.98
n-Butylbenzene		<u>U</u>	4.98	U	5.01	<u> </u>	3.91	<u> </u>	4.98
Carbon Disulfide		U	49.8	<u>U</u>	50.1	U	39.1	U	49.8
n Tetrachloride		U	4.98	U	5.01	U	3.91	U	4.98
Corobenzene		<u> </u>	4.98	<u>U</u>	5.01	U	3.91	U	4.98
Chloroethane		U	9.96	U	10.0	U	7.82	U	9.96
Chloroform		U	4.98	υυ	5.01	U	3.91	<u> </u>	4.98
Chloromethane		U	9.96	U	10.0	U	7.82	U	9.96
2-Chlorotoluene		U	4.98	<u> </u>	5.01	U	3.91	<u> </u>	4.98
4-Chlorotoluene		U	4.98	<u>υ</u>	5.01	U	3.91	<u>U</u>	4.98
p-Cymene (p-Isopropyltoluene)		<u> </u>	4.98	U	5.01	<u> </u>	3.91	U	4.98
1,2-Dibromo-3-Chloropropane		U	4.98	<u> </u>	5.01	<u> </u>	3.91	<u> </u>	4.98
Dibromochloromethane		U	4.98	<u>ບ</u>	5.01	U	3.91	<u>U</u>	4.98
1,2-Dibromoethane		<u> </u>	4.98	υ	5.01	U	3.91	U	4.98
Dibromomethane		U	4.98	U	5.01	<u> </u>	3.91	U	4.98
1,2-Dichlorobenzene	-,	U	4.98	U	5.0}	<u> </u>	3.91	<u> </u>	4.98
1,3-Dichlorobenzene		U	4.98	U	5.01	U	3.91	<u> </u>	4.98
1,4-Dichlorobenzene		U	4.98	U	5.01	U	3.91	U	4.98
DichlorodiAuoromethane		U	4.98	<u> </u>	5.01	U	3.91	Ŭ	4.98
1,2-Dichloroethane		U	4.98	υ	5.01	U	3.91	U	4.98
1,1-Dichloroethane		U	4.98	U	5.01	U	3.91	U	4.98
trans-1,2-dichloroethene		U	4,98	U	5.01	U	3.91	U	4,98
cis-1,2-Dichloroethene		U	4.98	U	5.01	υ	3.91	U	4.98
1,1-Dichloroethene		U	4.98	U	5.01	U	3.91	U	4.98

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Carlos A. Castro, P.D., MBA

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Managing Director, Texas





#### Project Name: 900 S. Central Avenue

Project Id: Route 111 &		0		Date			May-16-	08 09:30 am		
•					Rep	ort Date:	04-JUN-	08		
Project Location: Roxana, Illin	-			Project Manager: Debbie S				Simmons		
	Lab Id:	303978-00	)5	303978-006		303978-007		303978-008		
Analysis Requested	Field Id:	GP-12(II)-04		GP-7(11)-03	3	B-6-04	1	B-5-04.	5	
	Depth:									
	Matrix:	SOIL		SOIL		SOIL	,	SOIL		
	Sampled:	May-15-08 10:25		May-15-08 1	1:15	May-15-08	12:50	May-15-08	13:45	
VOAs by SW-846 8260B	Extracted:	May-19-08 1	4:18	May-19-08 1	4:20	May-19-08	11:55	May-19-08	14:24	
VUAS by SW-840 8200B	Analyzed:	May-19-08 1	9:17	May-19-08 1	9:38	May-19-08	16:03	May-19-08	20:19	
	Units/RL:	ug/kg	RL	ug/kg	RL.	ug/kg	RL	ug/kg	RL	
2,2-Dichloropropane		U	4.98	U	5.01	υ	3.91	U	4.98	
1,3-Dichloropropane		U	4.98	υ	5.01	U	3.91	U	4.98	
1,2-Dichloropropane		U	4.98	υ	5.01	U	3.91	U	4.98	
trans-1,3-dichloropropene		U	4.98	υ	5.01	U	3.91	U	4.98	
1,1-Dichloropropene		υ	4.98	U	5.01	U	3.91	U	4.98	
cis-1,3-Dichloropropene		U	4.98	υ	5.01	U	3.91	U	4.98	
Ethylbenzene		U	4.98	υ	5.01	U	3.91	U	4.98	
Hexachlorobutadiene		υ	4.98	U	5.01	υ	3.91	U	4.98	
2-Hexanone		U	49.8	U	50.1	υ	39.1	υ	49.8	
isopropylbenzene		υ	4.98	U	5.01	υ	3.91	U	4.98	
Naphthalene		U	9.96	U	10.0	υ	7.82	U	9.96	
Methylene Chloride		υ	19.9	U	20.0	υ	15.6	U	19.9	
4-Methyl-2-Pentanone		U	49.8	U	50.1	U	39.1	U	49.8	
opylbenzene		U	4.98	U	5.01	υ	3.91	U	4.98	
Styrene		U	4,98	U	5.01	U	3.91	U	4.98	
1,1,1,2-Tetrachloroethane		U	4.98	U	5.01	U	3.91	υ	4.98	
1,1,2,2-Tetrachloroethane		U	4,98	U	5.01	υ	3.91	U	4.98	
Tetrachloroethylene		U	4.98	U	5.01	U.	3.91	U	4.98	
Toluene .		U	4.98	U	5.01	υ	3.91	U	4.98	
1,2,4-Trichlorobenzene		υ	4.98	U	5.01	υ	3.91	U	4,98	
1,2,3-Trichlorobenzene		U	4.98	υ	5.01	υ	3.91	U	4.98	
1,1,2-Trichloroethane		U	4.98	U	5.01		3.91	U	4.98	
1,1,1-Trichloroethane		UU	4.98	U	5.01	υ	3.91	U	4.98	
Trichloroethene		υ	4.98	υ	5,01	υ	3.91	<u> </u>	4.98	
Trichlorofluoromethane		U	4.98	U	5.01	υ	3.91	U	4.98	
1,2,3-Trichloropropane		U	4.98	U	5.01	υ	3.91	U	4.98	
1,2,4-Trimethylbenzene		υ	4.98	υ	5.01	U	3.91	<u> </u>	4.98	
1,3,5-Trimethylbenzene		U	4.98	υ	5.01	U	3.91	U	4.98	
Vinyl Chloride		U	1.99	U	2,00	υ	1.56	U	1.99	
o-Xylene		U	4.98	U	5.01	U	3.91	<u> </u>	4.98	
m,p-Xylenes		U	9.96	υ	10.0	U	7.82	<u> </u>	9.96	

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Carlos A. Castro, Ph.D., MBA

Managing Director, Texas

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### Project Name: 900 S. Central Avenue

Project Id: Route 111 & Rand Contact: Wendy Pennington	Avenue Vicini	roject Name: 900 S. ity/2156	Date Received in Lab: Report Date:	May-16-08 09:30 am 04-JUN-08
Project Location: Roxana, Illinois 62			Project Manager:	Debbie Simmons
	Lab Id:	303978-009		
Analysis Requested	Field Id:	TB051508		
S x	Depth:			
	Matrix:	WATER		
	Sampled:	May-15-08 00:00		
VOAc by SW 946 9260P	Extracted:	May-29-08 13:03		
VOAs by SW-846 8260B	Analyzed:	May-29-08 14:40		
	Units/RL:	ug/L RL		
Acetone		U 100		
Benzene		U 5.00		
Bromobenzene		U 5.00	······································	
Bromochloromethane		U 5.00		
Bromodichloromethane		U 5.00		
Bromoform		U 5.00		
Bromomethane	1	U 5.00		
2-Butanone		U 50.0		
MTBE		U 5,00		
n-Butylbenzene		U 5.00		
Sec-Butylbenzene		U 5.00		
tert-Butylbenzene		U 5,00		
Carbon Disulfide		U 50.0		<b>IN THE PERFORMANCE AND A DESCRIPTION OF A</b>
m Tetrachloride		U 5,00		
Chlorobenzene		U 5.00		
Chloroethane		U 10.0		
Chloroform		U 5.00		
Chloromethane		U 10.0		
2-Chlorotoluene		U 5.00		
4-Chlorotoluene		U 5.00		
p-Cymene (p-lsopropyltoluene)		U 5.00		
Dibromochloromethane		U 5.00		
1,2-Dibromo-3-Chloropropane		U 5.00		
1,2-Dibromoethane		U 5.00		
Dibromomethane		U 5.00		
1,2-Dichlorobenzene		U 5.00		
1,3-Dichlorobenzene		U 5.00		
1,4-Dichlorobenzene		U 5.00		
Dichlorodifluoromethane		U 5.00		
1,1-Dichloroethane		U 5.00		
1,2-Dichloroethane		U 5.00		
1,1-Dichloroethene		U 5.00		
cis-1,2-Dichloroethene		U 5.00		
trans-1,2-dichloroethene		U 5.00		

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### Project Name: 900 S. Central Avenue

Project Id: Route 111 & Rand A		10 jet Hame.	200.51 0	Date Receiv		May-16-(	08 09:30 am
Contact: Wendy Pennington					ort Date:	- 04-JUN-(	
Project Location: Roxana, Illinois 6208	4			F	Manager:	Debbie S	immons
	Lab Id:	303978-009					
Analysis Requested	Field Id:	TB051508					
Απαιγδιό Κειμεδιευ	Depth:						
	Matrix:	WATER					
	Sampled:	May-15-08 00:00					
	Extracted:	May-29-08 13:03					
VOAs by SW-846 8260B	Analyzed:	May-29-08 14:40					
	Units/RL:	ug/L R					
1,2-Dichloropropane	J		.00				Anno an de anno el 1974 (relativa el 1977) el 9797979 de anno fastantes an la 1
1,3-Dichloropropane		U 5	.00				
2,2-Dichloropropane	andrauk da 9 kor 4 m a	U 5	.00				
1,1-Dichloropropene		U 5	.00				
cis-1,3-Dichloropropene		U 5	.00				
trans-1,3-dichloropropene		U 5	.00				
Ethylbenzene		U 5	.00				
Hexachlorobutadiene		U 5	.00				
2-Hexanone		U 5	0.0				
isopropylbenzene		υ 5	.00				
Methylene Chloride		5.83 B 5	.00				
4-Methyl-2-Pentanone		U 5	0.0				
Maphthalene		U ŀ	0.0				
opylbenzene		U 5	.00				
Styrene		U 5	.00				
1,1,1,2-Tetrachloroethane		U 5	,00				
1,1,2,2-Tetrachloroethane		U 5	.00				
Tetrachloroethylene		U 5	.00				
Toluene		U 5	.00				
1,2,3-Trichlorobenzene		U 5	.00				
1,2,4-Trichlorobenzene		U 5	.00				
1,1,1 - Trichloroethane			.00				
1,1,2-Trichloroethane			.00				
Trichloroethene		U 5	.00				
Trichlorofluoromethane			.00				
1,2,3-Trichloropropane		·····	.00				
1,2,4-Trimethylbenzene			.00				
1,3,5-Trimethylbenzene			.00				
o-Xylene			.00				
m,p-Xylenes			0.0				
Vinyl Chloride		U 2	.00				

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- 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. Falkenburg Rd., Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477



# Shell Oil Products Chain Of Custody Record

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LAB	(LOCATION)
	11361 Maxdowgien Ln: Sie L: Housian, TX



Shell Oil Products Chain Of Custody Record

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່ 🖸 🛛	1381 Maxdowgién Ln; Ste L; Housien, TX; NGO {	0.000.000				<u> </u>		<del>ر</del>	nie				100																			
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TELEPH	DFF: \$16763-4158 FAX: OFF: 214-743-4	ift	E-4421;	_	· · ·	_							- We	inc	iy F	en	ŵŋ	gte	n									12	USE ON	50	÷. 6	÷,
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					/																							-	01/	208 Revision	,	



Prelogin/Nonconformance Report- Sample Log-In

Client:	URS
Date/ Time:	5/16/8
Lab ID # :	3039,78-H
Initials:	

## Sample Receipt Checklist

		$\sim$			
#1	Temperature of container/ cooler?	(Yes)	No	N/A	2-3.cl
#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	MA	
#6	Chain of Custody present?	(Yes)	No		
#7	Sample instructions complete of Chain of Custody?	(Yes	No	1	
#8	Any missing/extra samples?	Yes	No		
#9	Chain of Custody signed when relinquished/ received?	Nes	No		·····
#10	Chain of Custody agrees with sample label(s)?	(tes	No		
•1	Container label(s) legible and intact?	Yes	No	1	
	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#13	Samples in proper container/ bottle?	Nes	No	1	
#14	Samples properly preserved?	Yes	No	N/A	
#15	Sample container intact?	(Yes)	No		
#16	Sufficient sample amount for indicated test(s)?	Ves	No		
#17	All samples received within sufficient hold time?	Xes	No		
#18	Subcontract of sample(s)?	Yes	No	N/A	
#19	VOC samples have zero headspace?	(Yes)	No	N/A	

## Nonconformance Documentation

Contact:		Contacted by:	Date/ <u>Time</u> :
Regarding: _			
Corrective Actic	n Taken:		
			······
Check all that A	pply:	Client understands and would like Cooling process had begun short	



# **Rand Avenue Data Review**

Laboratory SDG: 304173

**Reviewer: Tony Sedlacek** 

Date Reviewed: 7/22/2008

Guidance: National Functional Guidelines for Organic Data Review 1999.

Applicable Work Plan: Route 111/Rand Avenue Vicinity Investigation Work Plan.

Sample Identification #	Sample Identification #
B-6-23	GP-7(II)-19
GP-7(II)-19 DUP	TB051408

### 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 the benzene results in samples GP-7(II)-19 and GP-7(II)-19 DUP exceeded the calibration range of the instrument; therefore, professional judgment was used to qualify benzene in both samples. Although not indicated in the laboratory case narrative, VOCs were detected in the trip blank and method blank. LCS recoveries for 2,2-dichloropropane were outside evaluation criteria. 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	Analy	yte	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
TB051408	VOCs	Methylene chloride	2.34	μg/L
509456-1-BLK	VOCs	Methylene chloride	6.02	μg/L
509521-1-BLK	VOCs	Methylene chloride	4.42	μg/L
509526-1-BLK	VOCs	Methylene chloride	5.67	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?

No

LCS ID	Parameter	Analyte	LCS Recovery	RPD	LCS Criteria
509456-1-BKS	VOCs	2,2-Dichloropropane	70	N/A	75-125
509521-1-BKS	VOCs	2,2-Dichloropropane	72	N/A	75-125

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
B-6-23	VOCs	2,2-Dichloropropane	UJ
GP-7(11)-19	VOCs	2,2-Dichloropropane	UJ
GP-7(II)-19 DUP	VOCs	2,2-Dichloropropane	UJ

### 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	Analy	te 👘 👘	Qualification 👘
N/A				

### 9.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
GP-7(II)-19	GP-7(II)-19 DUP

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?

Samples did not require a dilution.

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 benzene in samples GP-7(II)-19 and GP-7(II)-19 DUP. Benzene exceeded the calibration range of the instrument in these samples. The benzene results will be reported as > 150 in both samples.

Field ID	Analyte	Qualification	Comments
GP-7(II)-19	Benzene	J	Professional Judgment
GP-7(II)-19 DUP	Benzene	J	Professional Judgment

# **Analytical Report 304173**

for

# **URS Corporation-St. Louis**

**Project Manager: Wendy Pennington** 

900 S. Central Avenue Route 111 & Rand Ave Vicinity / 21561979

05-JUN-08





E84880

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

Texas certification numbers: Houston, TX T104704215

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

> North Carolina certification numbers: Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta

Page 1 of 31



05-JUN-08



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

Reference: XENCO Report No: **304173 900 S. Central Avenue** Project Address: Roxana, Illinois 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 304173. 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. 304173 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

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994. Certified and approved by numerous States and Agencies. A Small Business and Minority Status Company that delivers SERVICE and QUALITY Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America



## CASE NARRATIVE SUMMARY



Client Name: URS Corporation-St. Louis Project Name: Rand Avenue Site

Project ID:	Route 111 & Rand Ave Vic
Work Order Number:	304173

Report Date: 05-JUN-08 Date Received: 20-MAY-08

Benzene was found at high levels on samples 002 and 003. These samples were analyzed at 1x (no dilutions). Benzene has been reported with E-flags (estimated values).

50x dilutions were run from both, the methanol vial and sample jar . These results were below calibration and could not be reported. Both samples were also re-analyzed at 1x with similar over-calibration results.

Carlos Castro Managing Director, Texas





#### Project Name: 900 S. Central Avenue

Project Id: Route 111 & Ra Contact: Wendy Penning	-	Date Received in Lab: May-20-08 09:45 am   Report Date: 05-JUN-08   Project Manager: Debbie Simmons							
Project Location: Roxana, Illinois									
	Lab Id:	304173-0	)]	304173-0	02	304173-0	03	304173-004	
Analysis Requested	Field Id:	B- 6- 23		GP-7 (ll)-	19	GP-7 (11) -9	-Dup	TB051408	
	Depth:								
	Matrix:	SOIL		SOIL		SOIL		WATER	
	Sampled:	May-19-08 1	2:05	May-19-08 1	6:35	May-19-08	16:35	May-19-08 00:00	
Percent Moisture	Extracted:								
e of cent monstare	Analyzed:	May-22-08 0	8:27	May-22-08 0	8:38	May-22-08	08:29		
	Units/RL:	%	RL	%a	RL	%	RL		
Percent Moisture		8.63	1.00	3.55	1.00	3,37	1.00		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Carlos A. Castro, Ph.D., MBA

Managing Director, Texas







Project Id: Route 111 & R	and Ave Vicinity /		ic. 90	Dat	e Recei	ved in Lab:	•		
Contact: Wendy Penning	=					port Date:	05-JUN-		
Project Location: Roxana, Illinoi	s 62084				Project	Manager:	Debbie S	immons	
	Lab Id:	304173-00	01	304173-0	02	304173	-003	304173-0	04
Analysis Requested	Field Id:	B- 6- 23		GP-7 (II)-	19	GP-7 (11) -	-9-Dup	TB05140	8
	Depth:								
	Matrix:	SOIL		SOIL		SOL	L	WATER	٤
	Sampled:	May-19-08 I	2:05	May-19-08	16:35	May-19-08	8 16:35	May-19-08 (	00:00
VOAs by SW-846 8260B	Extracted:	May-23-08 1	2:04	May-21-08	14:46	May-21-08	8 14:48	May-23-08 1	11:57
10A3 by 511-040 62002	Analyzed:	May-23-08 1	3:55	May-21-08	17:22	May-21-08	8 17:43	May-23-08 1	12:16
	Units/RL:	ug/kg	RL	ug/kg	RL	ug/kg	RL	ug/L	RL
Acetone		υ	103	U	106	-	102	U	100
Benzene		U	5.13	>150-344E	<b>J*</b> 5.29	7150 -795 E	₽ <b>₽'J'3</b> .10	υ	5.00
Bromobenzene		U	5.13	U	5.29	υ	5.10	U	5.00
Bromochloromethane		U	5.13	U	5.29	U	5.10	U	5.00
Bromodichloromethane		υ	5.13	U	5.29	υ	5.10	υ	5.00
Bromoform		U	5,13	υ	5.29	U	5.10	U	5.00
Bromomethane		U	5.13	U	5.29	U	5.10	U	5.00
2-Butanone		U	51.3	U	52.9	ບ	51.0	U	50.0
MTBE		υ	5.13	υ	5.29	υ	5.10	υ	5.00
tert-Butylbenzene		υ	5.13	υ	5.29	υ	5,10	υ	5.00
Sec-Butylbenzene	-	U	5.13	υ	5.29	υ	5.10	υ	5.00
n-Butylbenzene		U	5.13	U	5.29	บ 1	5.10	υ	5.00
Carbon Disulfide		U	51.3	Ŭ	52.9	U	51.0	U	50.0
'arbon Tetrachloride		U	5.13	U	5.29	υ	5.10	U	5.00
Chlorobenzene	l	υ	5.13	υ	5.29	U	5.10	υ	5.00
Chloroethane		U	10.3	υ	10.6	υ	10.2	U	10.0
Chloroform		U	5.13	บ	5,29	U	5.10	υ	5.00
Chloromethane	į	U	10.3	บ	10.6	ប	10.2	U	10.0
2-Chlorotoluene		U	5.13	U	5.29	U	5.10	U	5.00
4-Chlorotoluene		U	5,13	U	5.29	U	5.10	υ	5.00
p-Cymene (p-Isopropyltoluene)		υ	5.13	ບ	5.29	υ	5.10	υ	5.00
1,2-Dibromo-3-Chloropropane		υ	5.13	υ	5.29	υ	5.10	υ	5.00
Dibromochloromethane		U	5.13	υ	5,29	υ	5.10	U	5.00
1,2-Dibromoethane	1	U	5.13	U	5.29	U	5,10	U	5.00
Dibromomethane		U	5.13	<u> </u>	5.29	U	5.10	U	5.00
1,2-Dichlorobenzene		U	5.13	υ	5.29	υ	5.10	U	5,00
1,3-Dichlorobenzene		U	5.13	υ	5.29	υ	5.10	υ	5.00
1,4-Dichlorobenzene		Ð	5.13	υ	5,29	υ	5.10	U	5.00
Dichlorodifluoromethane		υ	5.13	υ	5.29	U	5.10	U	5.00
1,2-Dichloroethane		υ	5.13	U	5.29	υ	5,10	υ	5.00
1,1-Dichloroethane		υ	5.13	υ	5.29	U	5.10	υ	5.00
trans-1,2-dichloroethene		U	5,13	U	5.29	U	5.10	υ	5.00
cis-1,2-Dichloroethene		U	5.13	υ	5.29	υ	5.10	U	5,00
1,1-Dichloroethene		U	5.13	U	5.29	υ	5.10	U	5.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warrantly to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Carlos A. Castro, Ph.D., MBA

Managing Director, Texas





Project Name: 900 S. Central Avenue

•	toute 111 & Rand Ave	Vicinity	2156197		Dat		ed in Lab:			
Contact: V		-		05-JUN-						
Project Location: F	Roxana, Illinois 62084					Project	Manager:	Debbie S	Simmons	
		Lab Id:	304173-00	)i	304173-0	02	304173-4	003	304173-0	04
Analysis Requ	uested	Field Id:	B- 6- 23		GP-7 (II)-	19	GP-7 (ll) -9	)-Dup	TB05140	8
		Depth:								
		Matrix:	SOIL		SOIL		SOIL		WATER	2
		Sampled:	May-19-08 1	2:05	May-19-08	16:35	May-19-08	16:35	May-19-08 0	00:00
VOAs by SW-846 8260		Extracted:	May-23-08 1	2:04	May-21-08	14:46	May-21-08	14:48	May-23-08 1	1:57
1023 59 511 640 6200	/	Analyzed:	May-23-08 1	3:55	May-21-08	17:22	May-21-08	17:43	May-23-08 1	2:16
	1	Units/RL:	ug/kg	RL	ug/kg	RL	ug/kg	RL	ug/L	RL
2,2-Dichloropropane			۲۰۰۰	<b>J</b> 3.13	عجلر	WJ5.29	عميد	<b>UT</b> 5 10	U	5.00
1,3-Dichloropropane			Ŭ	5,13	υ	5.29	υ	5.10	υ	5,00
1,2-Dichloropropane			U	5.13	Ŭ	5.29	U	5.10	U	5.00
trans-1,3-dichloropropene			U	5.13	υ	5.29	υ	5,10	U	5.00
1,1-Dichloropropene			υ	5.13	υ	5.29	U	5.10	U	5.00
cis-1,3-Dichloropropene			υ	5.13	U	5.29	U	5.10	U	5.00
Ethylbenzene			υ	5.13	U	5.29	υ	5.10	υ	5.00
Hexachlorobutaciene			υ	5.13	U	5.29	U	5.10	υ	5.00
2-Hexanone			υ	51,3	υ	52.9	υ	51.0	ប	50.0
Naphthalene			U	10.3	υ	10.6	U	10.2	ν	10.0
isopropylbenzene			U	5.13	U	5.29	U	5.10	10	5.00
Methylene Chloride			υ	20,5	υ	21.2	U	20.4	2.34 JB	5.00
4-Methyl-2-Pentanone		Ì	ប	51.3	U	52.9	υ	51.0	U	50.0
Propylbenzene			U	5.13	U	5.29	υ	5.10	υ	5.00
Styrene			υ	5.13	υ	5.29	U	5,10	υ	5.00
1,1,1,2-Tetrachloroethane			υ	5.13	υ	5.29	υ	5.10	υ	5.00
1,1,2,2-Tetrachloroethane			U	5.13	υ	5.29	U	5.10	υ	5.00
Tetrachloroethylene			U	5,13	U	5.29	U	5.10	U	5.00
Tolucne			υ	5.13	1.15 J	5.29	1.09 J	5.10	U	5.00
1,2,4-Trichlorobenzene			U	5.13	υ	5.29	U	5.10	υ	5.00
1,2,3-Trichlorobenzene			U	5,13	U	5.29	U	5.10	υ	5.00
1,1,2-Trichloroethane			U	5.13	U	5.29	υ	5.10	υ	5.00
1,1,1-Trichloroethane			U	5.13	U	5.29	υ	5.10	υ	5.00
Trichloroethene			U	5.13	ប	5.29	υ	5.10	υ	5.00
Trichlorofluoromethane			U	5.13	U	5.29	υ	5,10	υ	5.00
1,2,3-Trichloropropane			U	5,13	υ	5.29	U	5.10	U	5.00
1,2,4-Trimethylbenzene			υ	5.13	υ	5.29	υ	5,10	U	5.00
1,3,5-Trimethylbenzene			U	5.13	U	5.29	U	5.10	U	5.00
Vinyl Chloride			U	2.05	U	2.12	U	2.04	U	2.00
o-Xylene		1	U	5,13	υ	5.29	U	5.10	U	5.00
m,p-Xylenes			U	10.3	U	10.6	υ	10.2	υ	10.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Carlos A. Castro, Ph.D., MBA

Managing Director, Texas



- 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. Falkenburg Rd., Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477

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CIAL INSTRUCTIONS OR NOTES :																							
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Field Sample Identification	SAM	PLING	MATRIX		PRESE	RVATIVE	1	NO. 01	8260B														
Field Sample Identification	DATE	TIME	MATRIA		HN03 H25			CONT.	NOC										-	PID			PID Reading: atory Notes
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Prelogin/Nonconformance Report- Sample Log-In

Client:	UNS
Date/ Time:	5/20/8
Lab ID # :	304173-67
Initials:	

### Sample Receipt Checklist

		0			
#1	Temperature of container/ cooler?	Yes	No	N/A	2-0°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	/111/A)	
#6	Chain of Custody present?	1 Ces	No		
#7	Sample instructions complete of Chain of Custody?	Cles	No		
#8	Any missing/extra samples?	Yes	(No)		
#9	Chain of Custody signed when relinquished/ received?	Yes)	No		
#10	Chain of Custody agrees with sample label(s)?	Nes	No		
۰.	Container label(s) legible and intact?	(Yes)	No	·····	
	Sample matrix/ properties agree with Chain of Custody?	Xes	No		
#13	Samples in proper container/ bottle?	(Yes)	No		
#14	Samples properly preserved?	Nes	No	N/A	
#15	Sample container intact?	Nes	No		
#16	Sufficient sample amount for indicated test(s)?	Kes	No		
#17	All samples received within sufficient hold time?	Nes	No		
#18	Subcontract of sample(s)?	Yes	No	N/A	
#19	VOC samples have zero headspace?	Cles	No	N/A	

### Nonconformance Documentation

Contact:		Contacted by:	Date/ Time:
Regarding:	·····	notinini 1974 - 1	
Corrective Action	n Taken:		
Check all that A	oply:	Client understands and would like to pro Cooling process had begun shortly after	•


## **Rand Avenue Data Review**

Laboratory SDG: 304253

**Reviewer: Tony Sedlacek** 

Date Reviewed: 7/22/2008

Guidance: National Functional Guidelines for Organic Data Review 1999.

Applicable Work Plan: Route 111/Rand Avenue Vicinity Investigation Work Plan.

Sample Identification #	Sample Identification #
B-2-41	B-1-27
TB052008	

#### 1.0 Data Package Completeness

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

No, sample B-1-27 was designated as an MS/MSD sample on the COC 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?

No, although not indicated in the laboratory case narrative, VOCs were detected in the trip blank and method blank. VOC LCS and surrogate recoveries for were outside evaluation criteria. Sample B-2-41 was analyzed at a dilution 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
TB052008	VOCs	Methylene chloride	3.03	μg/L
509521-1-BLK	VOCs	Methylene chloride	4.42	μg/L
509775-1-BLK	VOCs	Methylene chloride	30.4	μg/L
509839-1-BLK	VOCs	Acetone	21.4	μg/L
509839-1-BLK	VOCs	Bromomethane	1.09	μg/L
509839-1-BLK	VOCs	1,3-Dichlorobenzene	1.13	µg/L
509839-1-BLK	VOCs	1,4-Dichlorobenzene	1.12	µg/L
509839-1-BLK	VOCs	Methylene chloride	8.59	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
B-2-41	VOCs	Methylene chloride	-	U

#### 5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	RPD	LCS Criteria
509521-1-BKS	VOCs	2,2-Dichloropropane	72	N/A	75-125
509839-1-BKS	VOCs	Methylene chloride	160	N/A	75-125

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
B-1-27	VOCs	2,2-Dichlorop	ropane	UJ

#### 6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Field ID	Parameter	Surrogate	Recovery	Criteria
B-2-41	VOCs	4-Bromofluorobenzene	175	74-121
B-2-41	VOCs	1,2-Dichloroethane-d <sub>4</sub>	133	80-120
B-2-41	VOCs	Toluene-d <sub>8</sub>	171	81-117

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. Quality control data associated with surrogate recoveries outside evaluation criteria did not require evaluation or qualification.

Field ID	Parameter	Analyte	Qualification
B-2-41	VOCs	Benzene	J
B-2-41	VOCs	tert-Butylbenzene	J
B-2-41	VOCs	sec-Butylbenzene	J
B-2-41	VOCs	n-Butylbenzene	J
B-2-41	VOCs	p-Cymene	J
B-2-41	VOCs	Isopropylbenzene	J
B-2-41	VOCs	Naphthalene	J
B-2-41	VOCs	Toluene	J
B-2-41	VOCs	1,3,5-Trimethylbenzene	J
B-2-41	VOCs	o-Xylene	J

#### 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

No, sample B-1-27 was designated as an MS/MSD sample on the COC to be analyzed for VOCs. The VOC MS/MSD data 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			10

#### 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
B-2-41	VOCs	50

## 11.0 Additional Qualifications

Were additional qualifications applied?

No

# **Analytical Report 304253**

for

## **URS Corporation-St. Louis**

**Project Manager: Wendy Pennington** 

900 S. Central Avenue Route 111 & Rand Ave Vicinity / 21561979

05-JUN-08





E84880

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

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> South Carolina certification numbers: Norcross(Atlanta), GA 98015

> North Carolina certification numbers: Norcross(Atlanta), GA 483

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05-JUN-08



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

Reference: XENCO Report No: **304253 900 S. Central Avenue** Project Address: Roxana, Illinois 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 304253. 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. 304253 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

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## Certificate of Analysis Summary 304253 URS Corporation-St. Louis, St. Louis, MO



Project Name: 900 S. Central Avenue

Project Id: Route 111 & Contact: Wendy Penni Project Location: Roxana, Illin	ngton	2156197		port Date: 05-JUN	-08 10:00 am -08 Simmons
Analysis Requested	Lab Id: Field Id: Depth:	304253-001 B-2-41	304253-002 B-1-27	304253-003 TB052008	
	Matrix: Sampled:	SOIL May-20-08 10:00	SOIL May-20-08 14:45	WATER May-20-08 00:00	
Percent Moisture	Extracted: Analyzed: Units/RL:	May-22-08 08:48 % RL	May-22-08 08:49 % RL		
Percent Moisture		6.89 1.00	2.96 1.00		

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Managing Director, Texas



### Certificate of Analysis Summary 304253 URS Corporation-St. Louis, St. Louis, MO



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Project Name:	900 S.	Central	Avenue
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Project Id: Route 111 & Ra	nd Ave Vicinity /	2156197			e Receiv	ed in Lab:	•	
Contact: Wendy Penningt					-	•	05-JUN-	08
Project Location: Roxana, Illinois	62084			]	Project	Manager:	Debbie S	Simmons
	Lab Id:	304253-00	1	304253-00	)2	304253-0	003	
Analysis Requested	Field Id:	B-2-41		B-1-27		TB0520	08	
	Depth:							
	Matrix;	SOIL		SOIL		WATE	R	
	Sampled:	May-20-08 10	:00	May-20-08 1	4:45	May-20-08	00:00	
VOAs by SW-846 8260B	Extracted:	May-28-08 16	:08	May-23-08 1	4:38	May-29-08	14:20	
	Analyzed:	May-28-08 18	:46	May-23-08 1	6:30	May-29-08	15:20	
	Units/RL:	ug/kg	RL	ug/kg	RL.	ug/L	RL.	
Acetone		υ	125	υ	115	U	100	
Benzene		92.7 - <b>J</b>	6.26	υ	5.75	υ	5.00	
Bromobenzene		U	6.26	υ	5,75	υ	5.00	
Bromochloromethane		U	6.26	U	5.75	υ	5.00	
Bromodichloromethane		υ	6.26	U	5.75	U	5.00	
Bromoform		υ	6.26	U	5.75	υ	5.00	······
Bromomethane		U	6.26	U	5.75	υ	5,00	
2-Butanone		U	62.6	υ	57.5	υ	50.0	
MTBE		υ	6.26	U	5.75	υ	5.00	
tert-Butylbenzene		13.6	6.26	U	5.75	U	5.00	······································
Sec-Butylbenzene		41.3-"[	6.26	U	5.75	υ	5.00	
n-Butylbenzene		91.3 <b>-"`J</b>	6.26	υ	5.75	U	5.00	
Carbon Disulfide		υ	62,6	U	57.5	U	50.0	
arbon Tetrachloride		U	6.26	U	5.75	U	5.00	
Chlorobenzene		U	6.26	U	5.75	U	5.00	
Chloroethane		υ	12.5	U	11.5	U	10.0	
Chloroform		U	6.26	U	5.75	υ	5.00	
Chloromethane		υ	12.5	υ	11.5	U	10.0	
2-Chlorotoluene		υ	6.26	U	5.75	υ	5.00	····
4-Chlorotoluene		U	6.26	Ŭ	5.75	υ	5.00	
p-Cymene (p-Isopropyltoluene)		25.1 <b>- J</b>	6.26	υ	5.75	U	5.00	**************************************
1,2-Dibromo-3-Chloropropane		U	6.26	U	5.75	υ	5.00	
Dibromochloromethane		U	6.26	υ	5.75	U	5.00	
1,2-Dibromoethane		U	6,26	U	5.75	U	5.00	
Dibromomethane		υ	6.26	υ	5.75	U	5.00	
1,2-Dichlorobenzene		υ	6,26	U	5.75	υ	5.00	
1,3-Dichlorobenzene		υ	6.26	U	5.75	υ	5.00	
1,4-Dichlorobenzene		υ	6.26	υ	5.75	υ	5.00	· · · · · · · · · · · · · · · · · · ·
Dichlorodifluoromethanc		U	6.26	U	5.75	υ	5.00	
1,2-Dichloroethane		υ	6.26	υ	5.75	U	5.00	
1,1-Dichloroethane		υ	6.26	U	5.75	U	5.00	
trans-1,2-dichloroethene		υ	6.26	U	5.75	U	5.00	
cis-1,2-Dichloroethene		υ	6.26	U	5.75	U	5.00	
1,1-Dichloroethene		U	6.26	υ	5.75	U	5.00	

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Carlos A. Castro, Ph.D., MBA

Managing Director, Texas



Since 1990

## Certificate of Analysis Summary 304253 URS Corporation-St. Louis, St. Louis, MO



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Project Name:	900 S. Central Avenue
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Project Id: Route 111		/ 2156197	ac. 90			ed in Lab:	May-21-	08 10:00 am
Contact: Wendy Pennington					Re	port Date:	05-JUN-	08
Project Location: Roxana, II			i	Project	Manager:	Debbie S	Simmons	
	Lab Id:	304253-0	01	304253-0	02	304253-	003	·····
Analysis Requested	Field Id:	B-2-41		B-1-27		TB0520	808	
· · · · · · · · · · · · · · · · · · ·	Depth:							
	Matrix:	SOIL		SOIL		WATE	ER	
	Sampled:	May-20-08 1	10:00	May-20-08 3	4:45	May-20-08	00:00	
VOAs by SW-846 8260B	Extracted:	May-28-08 1	16:08	May-23-08 I	4:38	May-29-08	14:20	
	Analyzed:	May-28-08 1	8:46	May-23-08 1	6:30	May-29-08	15:20	
	Units/RL:	ug/kg	RL	ug/kg	RL	ug/L	RL.	
2,2-Dichloropropane		υ	6.26	ا جملر	UB:75	υ	5.00	
1,3-Dichloropropane		U	6.26	ບ	5,75	U	5.00	
1,2-Dichloropropane		U	6.26	υ	5.75	υ	5.00	
trans-1,3-dichloropropene		υ	6.26	U	5.75	U	5.00	
1,1-Dichloropropene		υ	6.26	υ	5.75	υ	5.00	
cis-1,3-Dichloropropene		U	6.26	U	5.75	υ	5.00	
Ethylbenzene		4390 D	328	2.08 )	5,75	U	5.00	
Hexachlorobutadiene		U	6.26	υ	5,75	υ	5.00	
2-Hexanone		υ	62.6	U	57.5	υ	50,0	
isopropylbenzene			<b>J"</b> 6.26	U	5.75	υ	5.00	
Naphthalene			<b>J</b> <sup>*</sup> 12.5	U	11.5		10.0	
Methylene Chloride	0,0	AD123 JDP	1 25.0	υ	23.0	3.03 JB	5.00	
4-Methyl-2-Pentanone			62.6	υ	57.5	W	50.0	
Propylbenzene		1730 D	328	υ	5.75	U	5.00	
yrene		Ų	6.26	U	5,75	υ	5.00	
1,1,1,2-Tetrachloroethane		υ	6.26	U	5.75	υ	5.00	
1,1,2,2-Tetrachloroethane		υ	6,26	υ	5.75	υ	5.00	• • • • • • • • • • • • • • • • • • •
Tetrachloroethylene		ប	6.26	υ	5.75	υ	5.00	
Toluene		13.6 2	<b>J ''</b> 6.26	2.04 J	5.75	U	5.00	
1,2,4-Trichlorobenzene		U	6.26	υ	5.75	υ	5.00	
1,2,3-Trichlorobenzene		υ	6.26	υ	5.75	υ	5.00	
1,1,2-Trichloroethane		U	6.26	U	5.75	U	5.00	
1,1,1-Trichloroethane		υ	6.26	υ	5,75	U	5.00	
Trichloroethene		υ	6.26	U	5.75	U	5.00	
Trichlorofluoromethane		υ	6.26	U	5,75	υ	5.00	
1,2,3-Trichloropropane		υ	6.26	U	5.75	ប	5.00	
1,2,4-Trimethylbenzene		5590 D	328	U	5.75	U	5.00	
1,3,5-Trimethylbenzene		184 -	<b>J</b> 6.26	U	5.75	U	5.00	
Vinyl Chloride		U	2.50	υ	2.30	U	2.00	
o-Xylene		24.6 -4	<b>] <sup>4</sup>6.2</b> 6	υ	5.75	υ	5.00	
m,p-Xylenes		2450 D	655	U	11.5	U	10.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranny to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Carlos A. Castro, Ph.D., MBA

Managing Director, Texas

- 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477
	(281) 589-0692 (214) 902 0300 (210) 509-3334 (813) 620-2000 (305) 823-8500

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LOUIS, MISSOURI 63110		ORD, ILLINOIS 62				VENDY P	ENNINGT	TON						T PROJECT NAME / H		
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STANDARD IME (CALENDAR DAYS):		wency penn	ington@ursco			_								14	$\frac{1}{2}$	21561979 ZSZ-f
LJ 3 DAYS	2 DAYS	24 HOURS	•	SULTS NEEDED ON WEEKEN	, ,					······				بنبنا		<u> 2507</u>
		OTHER (SPECIFY)				i				K	EQUES		ALYSIS			
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	SAMPLING DATE TIME DUAR (000 1445 1445 1445	MATRIX MATRIX SUITER SUITER SUITER SUITER WATER WATER WATER WATER WATER WATER WATER WATER		NO. COI	X X X X VOC 8260B									Pib (ppm) (92 4,7 4,7 4,7 4,7	or	ainer PID Readings Laboratory Notes
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hed by: (Signature)							<u> </u>					Date:	~0		1800	
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Prelogin/Nonconformance Report- Sample Log-In

Client:	NNS
Date/ Time:	5/21/8
Lab ID # :	30 4253-17
Initials:	

## Sample Receipt Checklist

\_\_\_\_

#1	Temperature of container/ cooler?	(Yes)	No	N/A	Z • S • c
#2	Shipping container in good condition?	Ves	No	None	
#3	Samples received on ice?	Ves	No	N/A	Blue/Water
#4	Custody Seals intact on shipping container/ cooler?	(Yès)	No	N/A	
#5	Custody Seals intact on sample bottles/ container?	Yes	No	(N/A)	
#6	Chain of Custody present?	Yes)	No		
#7	Sample instructions complete of Chain of Custody?	Yes	No	·	
#8	Any missing/extra samples?	Yes	NO)		<u> </u>
#9	Chain of Custody signed when relinquished/ received?	(Hes)	No		
#10	Chain of Custody agrees with sample label(s)?	Xes)	No		
	Container label(s) legible and intact?	Xes)	No		
	Sample matrix/ properties agree with Chain of Custody?	Yes	No		
#13	Samples in proper container/ bottle?	Yes)	No		
#14	Samples properly preserved?	Yes	No	N/A	
#15	Sample container intact?	Yes	No		
#16	Sufficient sample amount for indicated test(s)?	Res	No		
#17	All samples received within sufficient hold time?	Xes	No	·····	
#18	Subcontract of sample(s)?	Yes	No	N/A	
#19	VOC samples have zero headspace?	(Yes)/	No	N/A	
		استمر بينيسي مسيد			

## Nonconformance Documentation

Contact:	;	Contacted by:	Date/ <u>Time:</u>
Regarding:			
Corrective Action Taker	:		
Check all that Apply:		Client understands and would like to proceed with ar Cooling process had begun shortly after sampling ev	

Page 30 of 30



## **Rand Avenue Data Review**

Laboratory SDG: 304421

**Reviewer: Tony Sedlacek** 

Date Reviewed: 7/22/2008

Guidance: National Functional Guidelines for Organic Data Review 1999.

Applicable Work Plan: Route 111/Rand Avenue Vicinity Investigation Work Plan.

Sample Identification #	Sample Identification #
B-3-33	B-5-27
TB052108	

#### 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, although not indicated in the laboratory case narrative, VOCs were detected in the trip blank and method blank. VOC LCS and MSD recoveries and the surrogate recovery for 4-Bromofluorobenzene were outside evaluation criteria. 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	Analy	/te	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
TB052108	VOCs	Methylene chloride	2.90	μg/L
509521-1-BLK	VOCs	Methylene chloride	4.42	μg/L
509775-1-BLK	VOCs	Methylene chloride	30.4	µg/L
509839-1-BLK	VOCs	Acetone	21.4	μg/L
509839-1-BLK	VOCs	Bromomethane	1.09	μg/L
509839-1-BLK	VOCs	1,3-Dichlorobenzene	1.13	μg/L
509839-1-BLK	VOCs	1,4-Dichlorobenzene	1.12	μg/L
509839-1-BLK	VOCs	Methylene chloride	8.59	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
B-3-33	VOCs	Methylene chloride	-	U

#### 5.0 Laboratory Control Sample

Were LCS recoveries within evaluation criteria?

No

LCS ID	Parameter	Analyte	LCS Recovery	RPD	LCS Criteria
509521-1-BKS	VOCs	2,2-Dichloropropane	72	N/A	75-125
509839-1-BKS	VOCs	Methylene chloride	160	N/A	75-125

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
B-5-27	VOCs	2,2-Dichloropropane	UJ

#### 6.0 Surrogate Recoveries

Were surrogate recoveries within evaluation criteria?

No

Field ID	Parameter	Surrogate	Recovery	Criteria
B-3-33	VOCs	4-Bromofluorobenzene	126	74-121

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
B-3-33	VOCs	Toluene	J

#### 7.0 Matrix Spike and Matrix Spike Duplicate Recoveries

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

Yes, sample B-3-33 was spiked and analyzed for VOCs.

Were MS/MSD recoveries within evaluation criteria?

No

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
B-3-33	VOCs	Dichlorodifluoromethane	132/136	3	65-135/23
B-3-33	VOCs	1,2,4-Trichlorobenzene	83/73	13	75-135/25
B-3-33	VOCs	1,2,3-Trichlorobenzene	84/70	18	75-137/25

Analytical data that required qualification based on MS/MSD data are included in the table below. USEPA National Functional Guidelines for Organic Data Review indicates that organic data should not be qualified based on MS/MSD data alone and LCS recoveries were within evaluation criteria, therefore no qualification of the data was required.

1	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	Analy	te di and N	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?

Samples did not require a dilution.

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

## Analytical Report 304421

for

## **URS Corporation-St. Louis**

**Project Manager: Wendy Pennington** 

900 S. Central Avenue Route 111 & Rand Ave Vicinity / 21561979

04-JUN-08





E84880

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

Texas certification numbers: Houston, TX T104704215

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

> North Carolina certification numbers: Norcross(Atlanta), GA 483

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04-JUN-08



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

Reference: XENCO Report No: 304421 900 S. Central Avenue Project Address: Roxana, Illinois 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 304421. 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. 304421 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

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## Certificate of Analysis Summary 304421 URS Corporation-St. Louis, St. Louis, MO



#### Project Name: 900 S. Central Avenue

	· · · · ·			•						
Project Id: Route 111 & 1	Rand Ave Vicinity /	2156197		Date	e Receive	ed in Lab:	May-22-	08 10:00 am		
Contact: Wendy Pennis	igton				Rep	04-JUN-	JUN-08			
Project Location: Roxana, Illino	is 62084			]	Manager: Debbie Simmons					
	Lab Id:	304421-0	01	304421-0	02	304421	-003			
Analysis Requested	Field Id:	B-3-33		B-5-27		TB052108				
	Depth:									
	Matrix:	SOIL		SOIL		WAT	ER			
	Sampled:	May-21-08 1	1:00	May-21-08 1	4:00	May-21-0	8 00:00			
Percent Moisture	Extracted:									
i ci cent moistai c	Analyzed:	May-27-08 16:01		May-27-08 16:02						
	Units/RL:	%	RL	%	RL.					
Percent Moisture		2.68	1,00	7.72	1.00					

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Managing Director, Texas



# Certificate of Analysis Summary 304421 URS Corporation-St. Louis, St. Louis, MO



#### Project Name: 900 S. Central Avenue

Project Id: Route 111 & Rand		2156197			e Receiv	ed in Lab: 1	May-22- )4-JUN-			
Contact: Wendy Pennington	104		Report Date: 04-JUN-08 Project Manager: Debbie Simmons							
Project Location: Roxana, Illinois 620			r							
	Lab Id:	304421-00	1	304421-0	02	304421-0				
Analysis Requested	Field Id:	B-3-33		B-5-27		TB05210	8			
	Depth:									
	Matrix:	SOIL		SOIL		WATE				
	Sampled:	May-21-08 1	1:00	May-21-08 1		May-21-08 (				
VOAs by SW-846 8260B	Extracted:	May-28-08 1	5:47	May-23-08 1		May-29-08				
	Analyzed:	May-28-08 1	6:01	May-23-08 1	7:53	May-29-08	15:40			
	Units/RL:	ug/kg	RL	ug/kg	RL	ug/L	RL			
Acetone		U	113	U	107	υ	100			
Benzene		U	5,67	υ	5.33	U	5.00			
Bromobenzene		U	5.67	U	5,33	υ	5.00			
Bromochloromethane		υ	5.67	U	5.33	U	5.00			
Bromodichloromethane		U	5.67	U	5,33	<u> </u>	5.00			
Bromoform		U	5.67	U	5.33	U	5.00			
Bromomethane	.,,,	U	5.67	U	5,33	U	5,00			
2-Butanone		U	56.7	U	53,3	U	50.0			
MTBE		U	5,67	υ	5.33	U	5.00			
tert-Butylbenzene		U	5.67	υ	5,33	U	5.00			
Sec-Butylbenzene		υ	5.67	υ	5.33	U	5.00			
n-Butylbenzene		U	5.67	U	5.33	U	5.00			
bon Disulfide		U	56.7	U	53.3	U	50.0			
Jon Tetrachloride		U	5.67	U	5.33	U	5.00			
Chlorobenzene		U	5,67	UU	5.33	U	5.00			
Chloroethane		U	11.3	U	10.7	U	10.0			
Chloroform		U	5.67	<u> </u>	5.33	U	5.00			
Chloromethane		υ	11.3	U	10.7	U	10.0			
2-Chlorotoluene		U	5.67	U	5.33	U	5.00			
4-Chiorotoluene		U	5.67	υ	5,33	U	5.00			
p-Cymene (p-Isopropyltoluene)		U	5.67	U	5.33	U	5.00			
1,2-Dibromo-3-Chloropropane		U	5.67	U	5.33	U	5.00			
Dibromochloromethane		U	5.67	υ	5.33	U	5.00			
1,2-Dibromoethane		U	5,67	U	5.33	U	5.00			
Dibromomethane		U	5.67	υ	5.33	U	5.00			
1,2-Dichlorobenzene		U	5.67	υ	5,33	υ	5.00			
1,3-Dichlorobenzene		U	5.67	υ	5,33	U	5.00			
1,4-Dichlorobenzene		U	5.67	U	5.33	<u> </u>	5,00			
Dichlorodifluoromethane		U	5.67	υ	5.33	U	5.00			
1,2-Dichloroethane		U	5.67	υ	5.33	U	5,00			
1,1-Dichloroethane		U	5.67	U	5.33	υ	5.00			
trans-1,2-dichloroethene		U	5.67	υ	5,33	υ	5.00			
cis-1,2-Dichloroethene		U	5.67	U	5,33	υ	5.00			
1,1-Dichloroethene		U	5,67	υ	5.33	U	5,00			

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Managing Director, Texas



## Certificate of Analysis Summary 304421 URS Corporation-St. Louis, St. Louis, MO



Project Name:	900 S.	Central	Avenue
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Project Id: Route 111		/ 2156197		Dat		ved in Lab:	-	
Contact: Wendy Per	e e					•	04-JUN	
Project Location: Roxana, Ill	inois 62084				Project	Manager:	Debbie	Simmons
	Lab Id:	304421-00	51	304421-0	102	304421-0	003	
Analysis Requested	Field Id:	B-3-33		B-5-27		TB05210	08	
	Depth:							
	Matrix:	SOIL		SOIL		WATE	R	
······································	Sampled:	May-21-08 1	1:00	May-21-08	14:00	May-21-08	00:00	
VOAs by SW-846 8260B	Extracted:	May-28-08 I	5:47	May-23-08	14:46	May-29-08	14:22	
	Analyzed:	May-28-08 1	6:01	May-23-08	17:53	May-29-08	15:40	
	Units/RL:	ug/kg	RL	ug/kg	RL.	ug/L	RL	
2,2-Dichloropropane		υ	5.67	• *لي	<b>WB</b> .33	U	5.00	
1,3-Dichloropropane		U	5.67	U	5,33	U	5.00	
1,2-Dichloropropane		U	5.67	U	5.33	U	5.00	
trans-1,3-dichloropropene		U	5.67	υ	5.33	υ	5.00	
1,1-Dichloropropene		U	5.67	υ	5.33	υ	5.00	
cis-1,3-Dichloropropene		U	5.67	υ	5.33	U	5,00	
Ethylbenzene		U	5,67	U	5.33	υ	5.00	
Hexachlorobutadiene		U	5.67	U	5.33	U	5.00	
2-Hexanone		U	56.7	U	53,3	υ	50.0	
Naphthalene		U	11.3	U	10.7	<u>A</u>	10.0	
isopropylbenzene		- M	5,67	ប	5.33	U	5.00	
Methylene Chloride	<u>م</u>	0.09.22-350	<b>L'</b> 22.7	υ	21.3	( 2.90 JB	5.00	······
4-Methyl-2-Pentanone			56.7	U	53.3	<u> </u>	/ 50.0	
-Propylbenzene		U	5.67	U	5.33		5.00	
Styrene		υ	5,67	<u>U</u>	5.33	U	5.00	
1,1,1,2-Tetrachloroethane		υ	5.67	U	5.33	U	5.00	
1,1,2,2-Tetrachloroethane		υ	5.67	U	5,33	U	5.00	
Tetrachloroethylene		υ <u>.</u>	5.67	υ	5.33	U	5,00	
Toluene		1.37&"]	5.67	υ	5.33	U	5.00	
1,2,4-Trichlorobenzene		U	5.67	U	5.33	U	5.00	
1,2,3-Trichlorobenzene		U	5.67	U	5.33	U	5.00	
1,1,2-Trichloroethane		U	5.67	υ	5.33	υ	5.00	
1,1,1-Trichloroethane		U	5.67	<u> </u>	5.33	U	5.00	
Trichloroethene		U	5.67	υ	5,33	U	5.00	
Trichlorofluoromethane		U	5.67	U	5.33	U	5.00	
1,2,3-Trichloropropane		<u> </u>	5.67	υ	5.33	U	5.00	
1,2,4-Trimethylbenzene		U	5.67	υ	5.33	U	5.00	
1,3,5-Trimethylbenzene		U	5,67	U	5.33	U	5.00	
Vinyl Chloride		U	2.27	υ	2.13	U	2.00	
o-Xylene		U	5,67	U	5,33	υ	5.00	
m,p-Xylenes		υ	11.3	υ	10.7	ប	10.0	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Carlos A. Castro, Ph.D., MBA Managing Director, Texas



- 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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Phone	Fax
(281) 589-0692	(281) 589-0695
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(770) 449-8800	(770) 449-5477
	(281) 589-0692 (214) 902 0300 (210) 509-3334 (813) 620-2000 (305) 823-8500

EST AMERICA () PL () THER () ITANT COMPANY: CORPORATION ISS HIGHLANDS PLAZA DRIVE WEST - SUITE 300 OUIS, MISSOURI 63110 RONE: OFF: 314-743-4166 OFF: 314-743-4166 CELL: 314-452-829 CELL: 314-452-8 CELL: 314-		A SD&CM PIPELINE		MOTIVA F			) sheer a	L'IAIL	1								ŧ	- I -	1 . 1			4 0	D 4 7	r	1210	-
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CORPORATION           38           HIGHLANDS PLAZA DRIVE WEST - SUITE 300           OUIS, MISSOURI 63110           HONE:           OFF: 314-743-4166           OFF: 314-743-4166		·		OTHER				·									<u>       </u>	3 4	0	0 6	4		PAG	£:	o!	~~~}
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HONE: OFF: 314-743-4166 FAX: OFF: 314-743-41	· · · · ·	170 E. RAI	ND AVENU	ε					- <u>-</u> 	900 S.	CENT	RAL A	VENUI T (Rapport in	E; ROX	ANA, IL	LINO	S 6208	4	<sub>T</sub>	CONSULT	INT PROJE	CT NAME THO .:				
OFF: 314-743-4166 OFF: 314-743-41		HARTFOR	D, ILLINOI	S 62048	3	<u>.</u>							TON		·					Rout	<u>ə 111 ş</u>	Rand Ave	e Vicin Use on	ity / 2156	1979	
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SRATURE ON RECEIPT C* Cooler #1 Z-OC	Cooler #2			Cooler #	\$3				1														ł			
	SAM	PLING			PRESE	RVATIVE		1	8260B																	
Field Sample Identification	DATE	TIME	MATRIX	HCL H	NOJ HZSI			NO, OF CONT,														P(D (ppm)			er PID Read	
B-3-33	5/21/08	1100	Soll WATER			{	3	4	1										†. †			(ppm)				<u> </u>
B-5-27	5/01/08	1400	Soil HINTER			l	3	4	Ŵ					•												
TB052108			WATER	1				1	X																	
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	<u> </u>		WATER																							
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Prelogin/Nonconformance Report- Sample Log-In

Client:	URS
Date/ Time:	5/22/3
Lab ID # :	304421-4
Initials:	()

## Sample Receipt Checklist

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	· · · · · · · · · · · · · · · · · · ·	1			~
#1	Temperature of container/ cooler?	Yes	No	N/A	P. Oc
#2	Shipping container in good condition?	Rest	No	None	
#3	Samples received on ice?	Tes	No	N/A	Blue/Water
#4	Custody Seals intact on shipping container/ cooler?	Nes	No	N/A	
#5	Custody Seals intact on sample bottles/ container?	Yes	No	(N/A)	
#6	Chain of Custody present?	Xes	No		
#7	Sample instructions complete of Chain of Custody?	Ares	No		
#8	Any missing/extra samples?	Yes	NO		
#9	Chain of Custody signed when relinquished/ received?	Yes)	No		
#10	Chain of Custody agrees with sample label(s)?	Yes)	No		
	Container label(s) legible and intact?	Yes)	No		1
#12	Sample matrix/ properties agree with Chain of Custody?	Kee	No		1
#13	Samples in proper container/ bottle?	Yes	No		
#14	Samples properly preserved?	Nes	No	N/A	1
#15	Sample container intact?	Nes	No		
#16	Sufficient sample amount for indicated test(s)?	Nez	No		
#17	All samples received within sufficient hold time?	Xes)	No		
#18	Subcontract of sample(s)?	Yes	No	N/A	İ
	VOC samples have zero headspace?	Yes	No	N/A	
					<u> </u>

#### **Nonconformance Documentation**

Contact:		Contacted by:	Date/ <u>Time:</u>	
Regarding:				
Corrective Action Taker	):			
Cinck all that Apply:		Client understands and would like to proceed with anal Cooling process had begun shortly after sampling ever		



## **Rand Avenue Data Review**

Laboratory SDG: 304536

**Reviewer: Tony Sedlacek** 

Date Reviewed: 7/22/2008

Guidance: National Functional Guidelines for Organic Data Review 1999.

Applicable Work Plan: Route 111/Rand Avenue Vicinity Investigation Work Plan.

Sample Identification # Sample Identification #						
B-4-35	GP-12(II)-17					
GP-12(II)-17-DUP	TB052208					

#### 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, although not indicated in the laboratory case narrative, VOCs were detected in the trip blank and method blank. The LCS recovery for methylene chloride was outside evaluation criteria. 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
509775-1-BLK	VOCs	Methylene chloride	30.4	μg/L
509839-1-BLK	VOCs	Acetone	21.4	μg/L
509839-1-BLK	VOCs	Bromomethane	1.09	μg/L
509839-1-BLK	VOCs	1,3-Dichlorobenzene	1.13	µg/L
509839-1-BLK	VOCs	1,4-Dichlorobenzene	1.12	μg/L
509839-1-BLK	VOCs	Methylene chloride	8.59	μg/L
509898-1-BLK	VOCs	Methylene chloride	21.6	μg/L
TB052208	VOCs	Methylene chloride	2.36	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
B-4-35	VOCs	Methylene chloride	-	U
GP-12(II)-17	VOCs	Methylene chloride		U
GP-12(II)-17-DUP	VOCs	Methylene chloride	-	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
509839-1-BKS	VOCs	Methylene chloride	160	N/A	75-125

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	Surrog	ate	Recovery	Criteria
N/A	and the second second	the state of the s			

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				0.400	

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

Field ID	Parameter Analyte Qualification	Contractory of
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	Analy	'te	RPD	Criteria
N/A			1		

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

Field ID	Parameter Parameter	Analyt	e Q	ualification
N/A				

#### 9.0 Field Duplicate Results

Were field duplicate samples collected as part of this SDG?

Yes

Field ID	Field Duplicate ID
GP-12(II)-17	GP-12(11)-17-DUP

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?

Samples did not require a dilution.

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 acetone reported at concentrations less than two times (2X) the RL.

Field ID	Analyte	New RL	Qualification	Comments
GP-12(II)-17-DUP	Acetone	-	U	Professional Judgment

## Analytical Report 304536

for

## **URS Corporation-St. Louis**

**Project Manager: Wendy Pennington** 

900 S. Central Avenue Route 111 & Rand Ave Vicinity / 21561979

04-JUN-08





E84880

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

Texas certification numbers: Houston, TX T104704215

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

> North Carolina certification numbers: Norcross(Atlanta), GA 483

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04-JUN-08



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

Reference: XENCO Report No: 304536 900 S. Central Avenue Project Address: Roxana, Illinois 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 304536. 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. 304536 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

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## Certificate of Analysis Summary 304536 URS Corporation-St. Louis, St. Louis, MO



Project Name: 900 S. Central Avenue

	ļ	i ojeci i tan											
Project Id: Route 111 &	Rand Ave Vicinity /	2156197		Date Received in Lab: May-23-08 09:30 am									
Contact: Wendy Penn	ington		Report Date: 04-JUN-08										
Project Location: Roxana, Illir		Project Manager: Debbie Simmons											
	Lab Id:	304536-0	01	304536-0	02	304536-0	003	304536-004					
Analysis Requested	Field Id:	B-4-35		GP-12(11)-	17	GP-12(H)-1	7-Dup	TB052208					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		WATER					
	Sampled:	May-22-08 (	)9:35	May-22-08 I	4:25	May-22-08	14:25	May-22-08 00:00					
Percent Moisture	Extracted:												
rescent moisture	Analyzed:	May-29-08 I	13:04	May-29-08 I	3:05	May-29-08	13:06						
	Units/RL:	%	RL	%	RL	%	RL						
Percent Moisture		7,27	1.00	1.85	1,00	3.52	1.00						

This analytical report, and the entire data package if represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our hability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Carlos A. Castro, Ph.D., MBA

Managing Director, Texas



#### Certificate of Analysis Summary 304536 URS Corporation-St. Louis, St. Louis, MO



	P	roject Nan	2e• 90	0 S. Centra	I Aven	ne				
Project Id: Route 111 & R	and Ave Vicinity /	-	n., 70				May-23-0	08 09:30 am		
Contact: Wendy Penning	=						04-JUN-			
Project Location: Roxana, Illinoi	-			1			Debbie S			
r	Lab Id:	304536-0	01	304536-0		304536-4				
Averbasis Born estad	Field Id:	504550-0 B-4-35	01	GP-12(II)-		GP-12(II)-1		304536-004		
Analysis Requested	Depth:	<i>p</i> ++-35		01-12(11)-	17	Gr-12(1)-1	7-Dap	TB05220	/8	
	Matrix:	SOIL		SOIL		SOIL		WATE	n	
	Sampled:	May-22-08 (	10.25	May-22-08 1	4.25	May-22-08		May-22-08		
	Extracted:	May-22-08 ( May-28-08 )		May-22-08 1		May-22-08 May-30-08		May-22-08 May-29-08		
VOAs by SW-846 8260B	Analyzed:	May-28-08 1		May-28-08 1 May-28-08 2		May-30-08 May-30-08	ł	•		
	Units/RL:	•	RL	•	RL	•		May-29-08		
	Units KL.	ug/kg U	118	ug/kg U		10.632.3 JF	RL ""/4"110	ug/L	RL	
Acetone								U	100	
Benzene		<u>ບ</u>	5.91 5.91	<u></u> ບ	5,49 5,49	U U	5.50 5.50	<u> </u>	5.00	
Bromobenzene Bromochloromethane		ບ ບ	5.91	ບ ບ	5.49	ບ ບ	5,50	UU	5.00	
Bromochloromethane		U U	5.91	υ υ	5,49	ບ 	5.50		5.00	
Bromoform		<u></u>	5.91	U	5,49	ບ 	5.50	<u>U</u>	5.00	
Bromomethane		U	5.91	U	5,49	υ	5.50	<u> </u>	5.00	
2-Butanone		ບ	59.1	ບ	54.9	υ	55,0	ບ ບ	50.0	
MTBE		υ	5,91	υ	5.49	υ	5.50	U U	5.00	
tert-Butylbenzene		U	5.91	υ	5,49		5.50		5.00	
Sec-Butylbenzene		U	5.91	ບ 	5.49		5.50	ບ	5.00	
n-Butylbenzene		υ	5.91		5,49	U	5.50	υ	5.00	
Carbon Disulfide		Ŭ	59.1	U	54.9	υ	55.0	ບ	50.0	
Carbon Tetrachloride		U	5.91	ບ	5,49	U	5.50	Ŭ	5.00	
chlorobenzene		U	5.91	U	5.49	U	5,50	U	5.00	
Chloroethane		U	11.8	υ	11.0	U	11.0	ບ	10.0	
Chloroform		U	5.91	υ	5,49	U	5,50	υ	5.00	
Chloromethane		U	11.8	υ	11.0	U	11.0	U	10.0	
2-Chiorotoluene		υ	5.91	υ	5.49	U	5.50	υ	5.00	
4-Chlorotoluene		υ	5.91	υ	5.49	U	5.50	υ	5.00	
p-Cymene (p-Isopropyltoluene)		υ	5.91	U	5.49	υ	5.50	U	5.00	
1,2-Dibromo-3-Chloropropane		υ	5.91	υ	5.49	υ	5.50	U	5.00	
Dibromochloromethane		υ	5.91	υ	5.49	υ	5,50	U	5.00	
1,2-Dibromoethane		U	5.91	υ	5.49	υ	5.50	υ	5.00	
Dibromomethane		U	5.91	U	5.49	υ	5.50	υ	5.00	
1,2-Dichlorobenzene		υ	5.91	υ	5.49	U	5.50	U	5.00	
1,3-Dichlorobenzene		υ	5,91	U	5.49	υ	5,50	U	5.00	
1,4-Dichlorobenzene		U	5.91	U	5.49	υ	5.50	υ	5.00	
Dichlorodifluoromethane		υ	5.91	υ	5.49	υ	5.50	ប	5.00	
1,2-Dichloroethane		υ	5.91	U	5.49	υ	5,50	U	5.00	
1,1-Dichloroethane		U	5.91	υ	5.49	υ	5,50	υ	5.00	
trans-1,2-dichloroethene		υ	5.91	υ	5.49	U	5.50	U	5.00	
cis-1,2-Dichloroethene		U	5.91	υ	5.49	υ	5.50	U	5.00	
1,1-Dichloroethene		U	5.91	ប	5.49	υ	5.50	υ	5.00	

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Carlos A. Castro, Ph.D., MBA

Managing Director, Texas

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### Certificate of Analysis Summary 304536 URS Corporation-St. Louis, St. Louis, MO



Project Name:	900 S.	<b>Central Avenue</b>
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Project Id: Rou Contact: We	Date			May-23- 04-JUN-	08 09:30 am 08				
Project Location: Rox	ana, Illinois 62084			]	Project	Manager:	Debbie S	Simmons	
	Lab Id:	304536-00	01	304536-0	02	304536-0	003	304536-0	104
Analysis Reque	B-4-35		GP-12(ll)-	17	GP-12(II)-1	7-Dup	TB052208		
	Depth:								
	Matrix:	SOIL		SOIL		SOIL	.	WATE	R
	Sampled:	May-22-08 0	9:35	May-22-08 I	4:25	May-22-08	14:25	May-22-08	00:00
VOAs by SW-846 8260B	Extracted:	May-28-08 1	6:12	May-28-08 J	16:16	May-30-08	14:00	May-29-08	14:24
VOAS DY SW-040 0200D	Analyzed:	May-28-08 I	9:51	May-28-08 2	20:34	May-30-08	15:16	May-29-08	16:00
	Units/RL:	ug/kg	RL	ug/kg	RL	ug/kg	RL	ug/L	RL
2,2-Dichloropropane		U	5,91	υ	5.49	υ	5.50	U	5.00
1,3-Dichloropropane		U	5.91	υ	5.49	υ	5.50	υ	5.00
1,2-Dichloropropane		U	5.91	U	5.49	U	5.50	Ŭ	5.00
trans-1,3-dichloropropene		υ	5.91	U	5.49	υ	5.50	U	5.00
1,1-Dichloropropene		U	5,91	U	5.49	U	5.50	U	5.00
cis-1,3-Dichloropropene		U	5.91	υ	5,49	U	5.50	υ	5.00
Ethylbenzene		υ	5.91	1.32 J	5.49	<u> </u>	5.50	υ	5.00
Hexachlorobutadiene		υ	5.91	U	5.49	U	5.50	U	5.00
2-Hexanone		υ	59.1	υ	54.9	U	55.0	Ŭ	50.0
Naphthalene		U	11.8	υ	11.0	U	11.0	υ	10.0
isopropylbenzene		U	5.91	ប	5,49	U	5.50	- U	5.00
Methylene Chloride	A	00.013.6 115	<b>U<sup>1</sup>2</b> 3.6	P 0010.9-18	U 22.0	0 0 200.05 JB	22.0	( 2.36 JB	5.00
4-Methyl-2-Pentanone		V_V	59.1	U	54.9	<u> </u>	55.0	<u> </u>	50.0
-Propylbenzene		U	5.91	υ	5.49	υ	5.50	υ	5.00
Styrene		U	5.91	U	5,49	U	5.50	υ	5.00
1,1,1,2-Tetrachloroethane		υ	5.91	<u> </u>	5.49	υ	5.50	υ	5.00
1,1,2,2-Tetrachloroethane		U U	5.91	U	5.49	U	5.50	υ	5.00
Tetrachloroethylene		U	5.91	υ	5,49	υ	5.50	υ	5.00
Toluene		1.76 J	5.91	2.06 J	5.49	1.16 J	5.50	U	5.00
1,2,4-Trichlorobenzene		U	5,91	υ	5.49	U	5.50	Ű	5.00
1,2,3-Trichlorobenzene		υ	5.91	U	5.49	U	5,50	υ	5.00
1,1,2-Trichloroethane		U	5.91	U	5.49	υ	5.50	U	5.00
1,1,1-Trichloroethane		U	5.91	U	5.49	υ	5.50	U	5.00
Trichloroethene		U	5.91	U	5.49	υ	5.50	υ	5.00
Trichlorofluoromethane		U	5.91	U	5.49	υ	5.50	υ	5.00
1,2,3-Trichloropropane		U	5.91	U	5.49	υ	5.50	υ	5.00
1,2,4-Trimethylbenzene		U	5.91	υ	5,49	U	5.50	υ	5.00
1,3,5-Trimethylbenzene		υ	5.91	υ	5.49	υ	5.50	U	5.00
Vinyl Chloride		U	2.36	U	2.20	U	2.20	υ	2.00
o-Xylene		υ	5.91	υ	5.49	U	5,50	υ	5.00
m,p-Xylencs		U	11.8	ប	11.0	U	11.0	υ	10.0

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

753 Carlos A. Castro, Ph.D., MBA

Managing Director, Texas

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- 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(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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	Prelogin/N
Client:	URS
Date/ Time:	5/23/8

Jonconformance Report- Sample Log-In

Lab ID #:

Initials:

Sample Receipt Checklist

304536-1

r				····	
#1	Temperature of container/ cooler?	Xes)	No	N/A	24)°C
#2	Shipping container in good condition?	(res)	No	None	
#3	Samples received on ice?	Nes	No	N/A	Blue/Water
#4	Custody Seals intact on shipping container/ cooler?	1 Yes	No	N/A	
#5	Custody Seals Intact on sample bottles/ container?	Yes	No	INA	
#6	Chain of Custody present?	Yes	No	$r \sim -$	
#7	Sample instructions complete of Chain of Custody?	Les	No	······································	
#8	Any missing/extra samples?	Yes	/No)		
#9	Chain of Custody signed when relinquished/ received?	Yes)	No		
#10	Chain of Custody agrees with sample label(s)?	XES	No		
#11	Container label(s) legible and intact?	Yes	No		
Γ	Sample matrix/ properties agree with Chain of Custody?	Xe	No		
# ı ♂	Samples in proper container/ bottle?	(Xes)	No		
#14	Samples properly preserved?	Yes)	No	N/A	
#15	Sample container intact?	Xes	No		
#16	Sufficient sample amount for indicated test(s)?	Xez	No		
#17	All samples received within sufficient hold time?	Xes	No		
#18	Subcontract of sample(s)?	Yes	No	N/A	
#19	VOC samples have zero headspace?	Yes)	No	N/A	

## Nonconformance Documentation

Contact:		Contacted by:	Date/ <u>Time:</u>
Regarding:			
Corrective Action Taker	ו:		· · ·
Check all that Apply:		Client understands and would like to proceed with analy Cooling process had begun shortly after sampling even	