AECOM
1001 Highlands Plaza Drive West
Suite 300
St. Louis, MO 63110-1337
www.aecom.com

314 429 0100 tel
314 429 0462 fax

May 23, 2017

Ms. Joyce Munie, P.E.
Manager, Permit Section
Illinois Environmental Protection Agency
Bureau of Land
1021 North Grand Avenue East
Springfield, Illinois 62794

Submittal of Corrected Information
Soil Vapor Sampling and SVE Monitoring – 2nd Quarter 2015
Roxana, Illinois
1191150002 – Madison County
Equilon Enterprises LLC d/b/a Shell Oil Products US
Log No. B-43R

Dear Ms. Munie:

On behalf of Shell Oil Products US (SOPUS), AECOM Technical Services, Inc. (AECOM) hereby submits the enclosed addendum to the above-referenced report (the Report).

AECOM collects a variety of samples for SOPUS as part of the work performed in connection with the above-referenced site including the samples referenced and utilized in the Report. AECOM contracts with independent laboratories to analyze the samples collected. As noted in SOPUS' initial disclosure letter and our subsequent communications, Accutest Laboratories (Accutest) issued revised laboratory analyses in response to an internal evaluation performed of its process. Please note, the majority of the corrected analyses were issued only to include a revised footnote and the numeric value of the analytical results reported remained unchanged. If any numeric values of analytical results presented in the Report were updated by Accutest, the updated results are presented as part of the information included in the Report addendum. Moreover, based upon our evaluation of the Report and the revised information received from Accutest, the conclusion(s) of the Report as originally issued are unaffected.

The information provided within and the format of this addendum is as discussed during our meeting with IEPA on March 23, 2017. This addendum includes the following information:

- IEPA LPC form
- Data Review Addendum Table (summarizing changed information)
- Revised analytical results table
- Revised laboratory reports (on CD)

If you have any questions during your review, please contact Kevin Dyer, SOPUS Senior Principal Program Manager, at kevin.dyer@shell.com (618/288-7237), or Bob Billman at bob.billman@aecom.com (314/743-4108).

Sincerely,

AECOM, on behalf of Shell Oil Products US

Robert Billman, PG
Senior Project Manager

Robert E. Mooshegian, CHMM
Senior Program Manager

Enclosures: 2 copies

cc: Kevin Dyer, SOPUS
Eric Petersen, Phillips 66
Shannon Haney, Greensfelder, Hemker & Gale P.C.
Repositories – Village Hall, Roxana Public Library, website
Project File

Illinois Environmental Protection Agency

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

ILLINOIS EPA RCRA CORRECTIVE ACTION CERTIFICATION

This certification must accompany any document submitted to Illinois EPA in accordance with the corrective action requirements set forth in a facility's RCRA permit. The original and two copies of all documents submitted must be provided.

1.0 FACILITY IDENTIFICATION

Name: WRB Refining LP Wood River Refinery

County: Madison

Street Address: 900 South Central Ave.

Site No. (IEPA): 1191150002

City: Roxana

Site No. (USEPA): ILD 080 012 305

2.0 OWNER INFORMATION

Name: Not Applicable

Mailing Address:

3.0 OPERATOR INFORMATION

Equilon Enterprises LLC dba Shell Oil Products US (SOPUS)

17 Junction Drive, PMB #399

Glen Carbon, IL 62034

Contact Name: Kevin Dyer

Contact Title: Senior Principal Program Manager

Phone No.: 618-288-7237

4.0 TYPE OF SUBMISSION (check applicable item and provide requested information, as applicable)

☐ RFI Phase I Workplan/Report
☐ RFI Phase II Workplan/Report
☐ CMP Report; Phase _____
☒ Other (describe):
Multiple Document Addenda (see attached report list)
Date of Submittal May 2017

IEPA Permit Log No. B-43R
Date of Last IEPA Letter on Project January 18, 2017
Log No. of Last IEPA Letter on Project B-43R-CA-59, -60, -69
Does this submittal include groundwater information: ☒ Yes ☐ No

5.0 DESCRIPTION OF SUBMITTAL: (briefly describe what is being submitted and its purpose)

Addenda to multiple documents. List of documents is provided on the Attachment 1. Addenda being issued due to revised laboratory reports.

6.0 DOCUMENTS SUBMITTED (identify all documents in submittal, including cover letter; give dates of all documents)

Cover letter, RCRA Corrective Action Certification, Addenda to multiple documents identified on the attached list.

7.0 CERTIFICATION STATEMENT - ***(This statement is part of the overall certification being provided by the owner/operator, professional and laboratory in Items 7.1, 7.2 and 7.3 below).*** The activities described in the subject submittals have been carried out in accordance with procedures approved by Illinois EPA. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

7.1 OWNER/OPERATOR CERTIFICATION (Must be completed for all submittals. Certification and signature requirements are set forth in 35 IAC 702.126.) All submittals pertaining to the corrective action requirements set forth in a RCRA Permit must be signed by the person designated below (or by a duly authorized representative of that person):

1. For a Corporation, by a principal executive officer of at least the level of vice-president.
2. For a Partnership or Sole Proprietorship, by a general partner or the proprietor, respectively.
3. For a Governmental Entity, by either a principal executive officer or a ranking elected official.

A person is a duly authorized representative only if:

1. the authorization is made in writing by a person described above; and
2. the written authorization is provided with this submittal (a copy of a previously submitted authorization can be used).

Owner Signature: _____ _____ (Date)

Title: _____

Operator Signature: [signature] 5/17/18 (Date)

Title: Senior Principal Program Manager

7.2 PROFESSIONAL CERTIFICATION *(if necessary)* - Work carried out in this submittal or the regulations may also be subject to other laws governing professional services, such as the Illinois Professional Land Surveyor Act of 1989, the Professional Engineering Practice Act of 1989, the Professional Geologist Licensing Act, and the Structural Engineering Licensing Act of 1989. No one is relieved from compliance with these laws and the regulations adopted pursuant to these laws. All work that falls within the scope and definitions of these laws must be performed in compliance with them. The Illinois EPA may refer any discovered violation of these laws to the appropriate regulating authority.

Professional's Signature: [signature] 5/17/17 Date

Professional's Name: Robert B. Billman

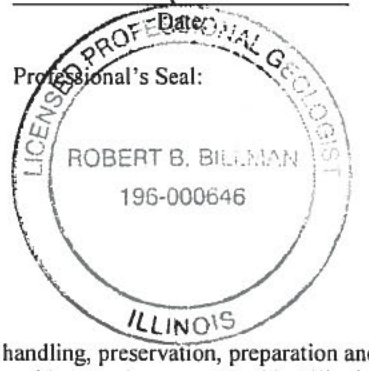
Professional's Address: AECOM Technical Services, Inc.

1001 Highlands Plaza Drive West, Suite 300

St. Louis, MO 63110

Professional's Phone No.: 314-429-0100

Professional's Seal:



7.3 LABORATORY CERTIFICATION *(if necessary)* - The sample collection, handling, preservation, preparation and analysis efforts for which this laboratory was responsible were carried out in accordance with procedures approved by Illinois EPA.

Name of Laboratory: See Attachment 2

_____ Signature of Laboratory Responsible Officer Date

Mailing Address of Laboratory:

_____ Name and Title of Laboratory Responsible Officer

_____

_____

_____

Attachment 1
List of Documents

Submittal	Date of Submittal
Roxana 3Q12 Groundwater Monitoring Report	10/15/2012
Roxana 4Q12 Groundwater Monitoring Report	1/15/2013
Roxana 4Q13 Soil Vapor Report	1/31/2014
Roxana 1Q14 Soil Vapor Report	4/30/2014
Roxana 2Q14 Soil Vapor Report	7/30/2014
Roxana 3Q14 Soil Vapor Report	10/30/2014
Roxana 2Q15 Soil Vapor Report	7/29/2015
GWP-28 Installation Plan	11/27/2012
Public Work Yard Soil Sampling Report	3/13/2013
GW Monitoring Well and Vapor Monitoring Point Installation Report	4/3/2013
April 30, 2013-Groundwater Profile Delineation Report	4/30/2013
Addendum to Monitoring Well & Vapor Monitoring Point Installation Report - Supplemental Investigation Activities	5/22/2013
SVE Expansion-Construction Completion Rpt Addendum 2	1/9/2014
SVE System Construction Completion Rpt Addendum 3	3/4/2015

Note: Highlighted row represents subject Addendum

ATTACHMENT 2

LABORATORY CERTIFICATION

Revisions to previously reported laboratory data were required following a laboratory quality review. These revisions were performed in accordance with industry standards for testing laboratories accredited by the National Environmental Laboratory Accreditation Conference (NELAC). I certify the information contained in the revised and reissued laboratory reports are, to the best of my knowledge and belief, true, accurate and complete.

Name of Laboratory: SGS Accutest

5.17.17

Signature of Laboratory Responsible Officer — Date

HOSSAIN (BABU) MADAJAN

Name and Title of Laboratory Responsible Officer

LAB Director

Mailing Address of Laboratory:

50 D'Angelo Drive

495 Technology Center West, Building I

Marlboro, MA 01752

LEGAL REVIEWED
BY: MD
DATE: 5.17.17

Laboratory Report (Sample Delivery Group[SDG])			
mc12669	mc23880	mc17144	mc18856
mc12784	mc26889	mc17324	mc18890
mc12833	mc27073	mc17401	mc18895
mc12905	mc23933	mc16336	mc18752
mc12941	mc32497	mc16445	mc24546
mc12942	mc32521	mc16475	mc32549
mc13051	mc38153	mc16587	mc32591
mc15232	mc38192	mc16644	mc32628
mc15892	mc14777	mc16798	mc32660
mc16960	mc14814	mc16889	mc32763
mc23682	mc16999	mc17501	mc33045

May 16, 2017

Analytical Method	Sample ID	Lab Sample ID	Sample Date	Analyte	Original Result	Corrected Result	Laboratory Qualifier	Units	Laboratory Footnote	AECOM Qualifier
SW846 8260C	VMP-43-042015(10-11)	MC38153-1	04/20/2015	Dichlorodifluoromethane	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-43-042015(10-11)	MC38153-1	04/20/2015	Methyl Tert Butyl Ether	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-43-042015(20-21)	MC38153-2	04/20/2015	Dichlorodifluoromethane	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-43-042015(20-21)	MC38153-2	04/20/2015	Methyl Tert Butyl Ether	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-43-042015(30-31)	MC38153-3	04/20/2015	Dichlorodifluoromethane	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-43-042015(30-31)	MC38153-3	04/20/2015	Methyl Tert Butyl Ether	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-34-042215 (20-22)	MC38192-1	04/22/2015	Bromomethane	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-34-042215 (20-22)	MC38192-1	04/22/2015	Dichlorodifluoromethane	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ

Analytical Method	Sample ID	Lab Sample ID	Sample Date	Analyte	Original Result	Corrected Result	Laboratory Qualifier	Units	Laboratory Footnote	AECOM Qualifier
SW846 8260C	VMP-34-042215 (20-22)	MC38192-1	04/22/2015	Methyl Tert Butyl Ether	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-34-042215 (20-22)	MC38192-1	04/22/2015	Vinyl chloride	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-34-042215 (20-22)-DUP	MC38192-2	04/22/2015	Bromomethane	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-34-042215 (20-22)-DUP	MC38192-2	04/22/2015	Dichlorodifluoromethane	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-34-042215 (20-22)-DUP	MC38192-2	04/22/2015	Methyl Tert Butyl Ether	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-34-042215 (20-22)-DUP	MC38192-2	04/22/2015	Vinyl chloride	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-34-042215 (30-32)	MC38192-4	04/22/2015	Bromomethane	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-34-042215 (30-32)	MC38192-4	04/22/2015	Dichlorodifluoromethane	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ
SW846 8260C	VMP-34-042215 (30-32)	MC38192-4	04/22/2015	Methyl Tert Butyl Ether	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ

Analytical Method	Sample ID	Lab Sample ID	Sample Date	Analyte	Original Result	Corrected Result	Laboratory Qualifier	Units	Laboratory Footnote	AECOM Qualifier
SW846 8260C	VMP-34-042215 (30-32)	MC38192-4	04/22/2015	Vinyl chloride	ND	ND		mg/kg	Ana: Continuing Calibration outside of acceptance criteria. Sample result may be biased low.	UJ

LABORATORY QUALIFIERS:

ND = Not detected.

AECOM QUALIFIERS:

UJ = Estimated nondetect.

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX A
SUMMARY OF SOIL ANALYTICAL DATA: VMP-34 and VMP-43 REPLACEMENTS

Location	Sample ID	Depth	Sample Date	VOCs																	
				1,1,1,2-Tetrachloroethane			1,1,1-Trichloroethane (Methyl chloroform)			1,1,2,2-Tetrachloroethane			1,1,2-Trichloroethane			1,1-Dichloroethane			1,1-Dichloroethene			1,1-Dichloropropene		
				3.4			2			0.0035			0.02			23			0.06					
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.0057	U		< 0.0023	U		< 0.0023	U		< 0.0023	U		< 0.0023	U		< 0.0023	U		< 0.0057	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.007	U		< 0.0028	U		< 0.0028	U		< 0.0028	U		< 0.0028	U		< 0.0028	U		< 0.007	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.0056	U		< 0.0023	U		< 0.0023	U		< 0.0023	U		< 0.0023	U		< 0.0023	U		< 0.0056	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.0066	U		< 0.0026	U		< 0.0026	U		< 0.0026	U		< 0.0026	U		< 0.0026	U		< 0.0066	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.0059	U		< 0.0024	U		< 0.0024	U		< 0.0024	U		< 0.0024	U		< 0.0024	U		< 0.0059	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.0056	U		< 0.0022	U		< 0.0022	U		< 0.0022	U		< 0.0022	U		< 0.0022	U		< 0.0056	U	

Location	Sample ID	Depth	Sample Date	VOCs																	
				1,2,3-Trichlorobenzene			1,2,3-Trichloropropane			1,2,4-Trichlorobenzene			1,2,4-Trimethylbenzene			1,2-Dibromo-3-chloropropane (DBCP)			1,2-Dibromoethane			1,2-Dichlorobenzene		
				0.46			0.000017			5			87			0.002			0.0004			17		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.0057	U		< 0.0057	U		< 0.0057	U		< 0.0057	U		< 0.0025	U		< 0.0025	U		< 0.0023	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.007	U		< 0.007	U		< 0.007	U		< 0.007	U		< 0.0026	U		< 0.0026	U		< 0.0028	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.0056	U		< 0.0056	U		< 0.0056	U		< 0.0056	U		< 0.0026	U		< 0.0026	U		< 0.0023	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.0066	U		< 0.0066	U		< 0.0066	U		< 0.0066	U		< 0.0029	U		< 0.0029	U		< 0.0026	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.0059	U		< 0.0059	U		< 0.0059	U		< 0.0059	U		< 0.0026	U		< 0.0026	U		< 0.0024	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.0056	U		< 0.0056	U		< 0.0056	U		< 0.0056	U		< 0.0026	U		< 0.0026	U		< 0.0022	U	

Location	Sample ID	Depth	Sample Date	VOCs																	
				1,2-Dichloroethane			1,2-Dichloropropane			1,3,5-Trimethylbenzene			1,3-Dichlorobenzene			1,3-Dichloropropane			1,4-Dichlorobenzene			1,4-Dioxane		
				0.02			0.03			2						0.83			2			0.031		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.0023	U		< 0.0023	U		< 0.0057	U		< 0.0023	U		< 0.0057	U		< 0.0023	U		< 0.028	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.0028	U		< 0.0028	U		< 0.007	U		< 0.0028	U		< 0.007	U		< 0.0028	U		< 0.035	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.0023	U		< 0.0023	U		< 0.0056	U		< 0.0023	U		< 0.0056	U		< 0.0023	U		< 0.028	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.0026	U		< 0.0026	U		< 0.0066	U		< 0.0026	U		< 0.0066	U		< 0.0026	U		< 0.033	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.0024	U		< 0.0024	U		< 0.0059	U		< 0.0024	U		< 0.0059	U		< 0.0024	U		< 0.029	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.0022	U		< 0.0022	U		< 0.0056	U		< 0.0022	U		< 0.0056	U		< 0.0022	U		< 0.028	U	

Location	Sample ID	Depth	Sample Date	VOCs																	
				2,2-Dichloropropane			2-Butanone			2-Chloroethyl vinyl ether			2-Chlorotoluene			2-Hexanone (Methyl N-Butyl Ketone)			4-Chlorotoluene			4-Methyl-2-pentanone (Methyl Isobutyl Ketone)		
							17						4			0.16						2.5		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.0057	U		< 0.011	U		< 0.57	U		< 0.0057	U		< 0.011	U		< 0.0057	U		< 0.0057	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.007	U		< 0.014	U		< 0.69	U		< 0.007	U		< 0.014	U		< 0.007	U		< 0.007	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.0056	U		< 0.011	U		< 0.61	U		< 0.0056	U		< 0.011	U		< 0.0056	U		< 0.0056	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.0066	U		< 0.013	U		< 0.36	U		< 0.0066	U		< 0.013	U		< 0.0066	U		< 0.0066	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.0059	U		< 0.012	U		< 0.8	U		< 0.0059	U		< 0.012	U		< 0.0059	U		< 0.0059	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.0056	U		< 0.011	U		< 0.67	U		< 0.0056	U		< 0.011	U		< 0.0056	U		< 0.0056	U	

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX A
SUMMARY OF SOIL ANALYTICAL DATA: VMP-34 and VMP-43 REPLACEMENTS

Location	Sample ID	Depth	Sample Date	VOCs																			
				Acetone			Acrolein			Acrylonitrile			Azetidine, 1-methyl-			Benzene			Bromobenzene			Bromochloromethane		
				25			0.014			0.0006						0.03			0.86					
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.011	U		< 0.028	U		< 0.028	U					0.0015			< 0.0057	U		< 0.0057	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.014	U		< 0.035	U		< 0.035	U					0.0013			< 0.007	U		< 0.007	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.011	U		< 0.028	U		< 0.028	U					0.0015			< 0.0056	U		< 0.0056	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.013	U		< 0.033	U		< 0.033	U		0.0054	JN		0.00058	J		< 0.0066	U		< 0.0066	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.012	U		< 0.029	U		< 0.029	U					< 0.00059	U		< 0.0059	U		< 0.0059	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.011	U		< 0.028	U		< 0.028	U					0.0011			< 0.0056	U		< 0.0056	U	

Location	Sample ID	Depth	Sample Date	VOCs																			
				Bromodichloromethane			Bromoform			Bromomethane			Butane			Butane, 2,3-dimethyl-			Carbon disulfide			Carbon tetrachloride		
				0.6			0.8			0.2									32			0.07		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.0023	U		< 0.0023	U		< 0.0023	U	UJ	0.068	JN		0.016	JN		< 0.0057	U		< 0.0023	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.0028	U		< 0.0028	U		< 0.0028	U	UJ	0.059	JN					0.00093	J		< 0.0028	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.0023	U		< 0.0023	U		< 0.0023	U	UJ	0.041	JN					< 0.0056	U		< 0.0023	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.0026	U		< 0.0026	U		< 0.0026	U		0.029	JN					0.0079			< 0.0026	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.0024	U		< 0.0024	U		< 0.0024	U								< 0.0059	U		< 0.0024	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.0022	U		< 0.0022	U		< 0.0022	U		0.036	JN					< 0.0056	U		< 0.0022	U	

Location	Sample ID	Depth	Sample Date	VOCs																			
				Chlorobenzene			Chlorodibromomethane			Chloroethane			Chloroform			Chloromethane			cis-1,2-Dichloroethene			cis-1,3-Dichloropropene		
				1			0.4			1500			0.3			110			0.4					
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.0023	U		< 0.0023	U		< 0.0057	U		< 0.0023	U		< 0.0057	U		< 0.0023	U		< 0.0023	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.0028	U		< 0.0028	U		< 0.007	U		< 0.0028	U		< 0.007	U		< 0.0028	U		< 0.0028	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.0023	U		< 0.0023	U		< 0.0056	U		< 0.0023	U		< 0.0056	U		< 0.0023	U		< 0.0023	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.0026	U		< 0.0026	U		< 0.0066	U		< 0.0026	U		< 0.0066	U		< 0.0026	U		< 0.0026	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.0024	U		< 0.0024	U		< 0.0059	U		< 0.0024	U		< 0.0059	U		< 0.0024	U		< 0.0024	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.0022	U		< 0.0022	U		< 0.0056	U		< 0.0022	U		< 0.0056	U		< 0.0022	U		< 0.0022	U	

Location	Sample ID	Depth	Sample Date	VOCs																			
				Cyclopentane, methyl-			Cyclotetrasiloxane, octamethyl-			Cyclotrisiloxane, hexamethyl-			Cymene (p-Isopropyltoluene)			Dibromomethane			Dichlorodifluoromethane			Dichloromethane (Methylene chloride)		
																28			43			0.02		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	0.0072	JN								< 0.0057	U		< 0.0057	U		< 0.0023	U	UJ	< 0.0023	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015										< 0.007	U		< 0.007	U		< 0.0028	U	UJ	< 0.0028	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015										< 0.0056	U		< 0.0056	U		< 0.0023	U	UJ	< 0.0023	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015										< 0.0066	U		< 0.0066	U		< 0.0026	U	UJ	< 0.0026	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015				0.01	JN		0.019	JN		< 0.0059	U		< 0.0059	U		< 0.0024	U	UJ	< 0.0024	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015										< 0.0056	U		< 0.0056	U		< 0.0022	U	UJ	< 0.0022	U	

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX A
SUMMARY OF SOIL ANALYTICAL DATA: VMP-34 and VMP-43 REPLACEMENTS

Location	Sample ID	Depth	Sample Date	VOCs																			
				Ethyl methacrylate			Ethylbenzene			Hexachlorobutadiene			Isopentane			Isopropylbenzene (Cumene)			m,p-Xylenes			Methyl tert-Butyl Ether (MTBE)		
							13			2.2						91								
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.0057	U		0.005			< 0.0057	U		0.058	JN		< 0.0057	U		0.001	J		< 0.0023	U	UJ
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.007	U		0.004			< 0.007	U		0.039	JN		< 0.007	U		0.0012	J		< 0.0028	U	UJ
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.0056	U		0.0013	J		< 0.0056	U		0.021	JN		< 0.0056	U		< 0.0023	U		< 0.0023	U	UJ
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.0066	U		0.00078	J		< 0.0066	U		0.011	JN		< 0.0066	U		< 0.0026	U		< 0.0026	U	UJ
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.0059	U		< 0.0024	U		< 0.0059	U					< 0.0059	U		< 0.0024	U		< 0.0024	U	UJ
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.0056	U		0.0019	J		< 0.0056	U		0.021	JN		< 0.0056	U		0.0011	J		< 0.0022	U	UJ

Location	Sample ID	Depth	Sample Date	VOCs																			
				Naphthalene			n-Butylbenzene			n-Propylbenzene			o-Xylenes			Pentane			Pentane, 2-methyl-			Pentane, 3-methyl-		
				12			52			31			190											
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.0057	U		< 0.0057	U		< 0.0057	U		0.00043	J		0.027	JN					0.0092	JN	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.007	U		< 0.007	U		< 0.007	U		< 0.0028	U		0.019	JN		0.012	JN		0.0073	JN	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.0056	U		< 0.0056	U		< 0.0056	U		< 0.0023	U		0.011	JN							
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.0066	U		< 0.0066	U		< 0.0066	U		< 0.0026	U		0.0089	JN							
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.0059	U		< 0.0059	U		< 0.0059	U		< 0.0024	U										
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.0056	U		< 0.0056	U		< 0.0056	U		0.00048	J		0.01	JN		0.0077	JN				

Location	Sample ID	Depth	Sample Date	VOCs																			
				sec-Butylbenzene			Styrene			tert-Butylbenzene			Tetrachloroethene			Toluene			trans-1,2-Dichloroethene			trans-1,3-Dichloropropene		
							4						0.06			12			0.7					
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.0057	U		< 0.0057	U		< 0.0057	U		< 0.0023	U		0.0046	J		< 0.0023	U		< 0.0023	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.007	U		< 0.007	U		< 0.007	U		< 0.0028	U		0.0039	J		< 0.0028	U		< 0.0028	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.0056	U		< 0.0056	U		< 0.0056	U		< 0.0023	U		0.0018	J		< 0.0023	U		< 0.0023	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.0066	U		< 0.0066	U		< 0.0066	U		< 0.0026	U		0.0012	J		< 0.0026	U		< 0.0026	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.0059	U		< 0.0059	U		< 0.0059	U		< 0.0024	U		< 0.0059	U		< 0.0024	U		< 0.0024	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.0056	U		< 0.0056	U		< 0.0056	U		< 0.0022	U		0.0026	J		< 0.0022	U		< 0.0022	U	

Location	Sample ID	Depth	Sample Date	VOCs														Hydrocarbons			SVOCs		
				Trichloroethene			Trichlorofluoromethane			Vinyl acetate			Vinyl chloride			Xylenes (total)			TPH-GRO (VOA)			1,2-Diphenylhydrazine		
				0.06			34			170			0.01			150								
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.0023	U		< 0.0023	U		< 0.0057	U		< 0.0023	U	UJ	0.0014	J		< 5.9	U		< 0.26	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.0028	U		< 0.0028	U		< 0.007	U		< 0.0028	U	UJ	0.0016	J		< 6.1	U		< 0.26	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.0023	U		< 0.0023	U		< 0.0056	U		< 0.0023	U	UJ	0.00078	J		< 6	U		< 0.26	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.0026	U		< 0.0026	U		< 0.0066	U		< 0.0026	U		< 0.0026	U		< 13	U		< 0.29	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.0024	U		< 0.0024	U		< 0.0059	U		< 0.0024	U		0.00051	J		< 6.4	U		< 0.26	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.0022	U		< 0.0022	U		< 0.0056	U		< 0.0022	U		0.0016	J		< 6	U		< 0.26	U	

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX A
SUMMARY OF SOIL ANALYTICAL DATA: VMP-34 and VMP-43 REPLACEMENTS

Location	Sample ID	Depth	Sample Date	SVOCs																	
				1-Methylnaphthalene			2,4,5-Trichlorophenol			2,4,6-Trichlorophenol			2,4-Dichlorophenol			2,4-Dimethylphenol			2,4-Dinitrophenol			2,4-Dinitrotoluene		
				130			270			0.2			1			9			0.2			0.0008		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.1	U		< 0.51	U		< 0.51	U		< 0.51	U		< 0.51	U		< 1	U		< 0.51	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.1	U		< 0.51	U		< 0.51	U		< 0.51	U		< 0.51	U		< 1	U		< 0.51	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.1	U		< 0.53	U		< 0.53	U		< 0.53	U		< 0.53	U		< 1.1	U		< 0.53	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.12	U		< 0.59	U		< 0.59	U		< 0.59	U		< 0.59	U		< 1.2	U		< 0.59	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.11	U		< 0.53	U		< 0.53	U		< 0.53	U		< 0.53	U		< 1.1	U		< 0.53	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.1	U		< 0.51	U		< 0.51	U		< 0.51	U		< 0.51	U		< 1	U		< 0.51	U	

Location	Sample ID	Depth	Sample Date	SVOCs																	
				2,6-Dinitrotoluene			2-Chloronaphthalene			2-Chlorophenol			2-Methylnaphthalene			2-Methylphenol (o-Cresol)			2-Nitroaniline			2-Nitrophenol		
				0.0007			49			4			1.9			15			0.7					
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.51	U		< 0.26	U		< 0.26	U		< 0.1	U		< 0.51	U		< 0.51	U		< 0.51	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.51	U		< 0.26	U		< 0.26	U		< 0.1	U		< 0.51	U		< 0.51	U		< 0.51	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.53	U		< 0.26	U		< 0.26	U		< 0.1	U		< 0.53	U		< 0.53	U		< 0.53	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.59	U		< 0.29	U		< 0.29	U		< 0.12	U		< 0.59	U		< 0.59	U		< 0.59	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.53	U		< 0.26	U		< 0.26	U		< 0.11	U		< 0.53	U		< 0.53	U		< 0.53	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.51	U		< 0.26	U		< 0.26	U		< 0.1	U		< 0.51	U		< 0.51	U		< 0.51	U	

Location	Sample ID	Depth	Sample Date	SVOCs																	
				3 & 4-Methylphenol (m & p-Cresol)			3,3'-Dichlorobenzidine			3-Nitroaniline			4,6-Dinitro-2-methylphenol (4,6-dinitro-o-cresol)			4-Bromophenyl phenyl ether			4-Chloro-3-methylphenol (p-Chloro-m-cresol)			4-Chlorophenyl phenyl ether		
							0.007																	
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.51	U		< 0.26	U		< 0.51	U		< 0.51	U		< 0.26	U		< 0.51	U		< 0.26	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.51	U		< 0.26	U		< 0.51	U		< 0.51	U		< 0.26	U		< 0.51	U		< 0.26	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.53	U		< 0.26	U		< 0.53	U		< 0.53	U		< 0.26	U		< 0.53	U		< 0.26	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.59	U		< 0.29	U		< 0.59	U		< 0.59	U		< 0.29	U		< 0.59	U		< 0.29	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.53	U		< 0.26	U		< 0.53	U		< 0.53	U		< 0.26	U		< 0.53	U		< 0.26	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.51	U		< 0.26	U		< 0.51	U		< 0.51	U		< 0.26	U		< 0.51	U		< 0.26	U	

Location	Sample ID	Depth	Sample Date	SVOCs																	
				4-Nitrophenol			4-Nitrophenylamine			Acenaphthene			Acenaphthylene			Aniline			Anthracene			Benzo(a)anthracene		
							0.14			570			85			0.064			12000			0.9		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 1	U		< 0.51	U		< 0.005	U		< 0.005	U		< 0.51	U		0.0037	J		0.0385		J
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 1	U		< 0.51	U		< 0.0051	U		< 0.0051	U		< 0.51	U		< 0.0051	U		< 0.0051	U	UJ
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 1.1	U		< 0.53	U		0.0023	J		< 0.0052	U		< 0.53	U		0.0049	J		< 0.0052	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 1.2	U		< 0.59	U		0.004	J		0.0029	J		< 0.59	U		0.0019	J		0.0038	J	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 1.1	U		< 0.53	U		< 0.0053	U		< 0.0053	U		< 0.53	U		< 0.0053	U		< 0.0053	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 1	U		< 0.51	U		< 0.0051	U		< 0.0051	U		< 0.51	U		0.0015	J		0.0095		

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX A
SUMMARY OF SOIL ANALYTICAL DATA: VMP-34 and VMP-43 REPLACEMENTS

				SVOCs																			
Location	Sample ID	Depth	Sample Date	Benzo(a)pyrene			Benzo(b)fluoranthene			Benzo(g,h,i)perylene			Benzo(k)fluoranthene			Benzoic Acid			Benzyl alcohol			bis(2-Chloroethoxy)methane		
				0.09			0.9			2300			9			400			3					
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	0.0389		J	0.0301		J	0.0263			0.0367		J	< 0.51	U		< 0.51	U		< 0.26	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	0.0023	J	J	0.0044	J	J	0.0026	J		0.0016	J	J	< 0.51	U		< 0.51	U		< 0.26	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.0052	U		< 0.0052	U		< 0.0052	U		< 0.0052	U		< 0.53	U		< 0.53	U		< 0.26	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	0.0031	J		0.0043	J		0.0027	J		< 0.0059	U		< 0.59	U		< 0.59	U		< 0.29	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.0053	U		< 0.0053	U		< 0.0053	U		< 0.0053	U		< 0.53	U		< 0.53	U		< 0.26	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	0.0061			0.0076			0.0038	J		0.0061			< 0.51	U		< 0.51	U		< 0.26	U	

				SVOCs																			
Location	Sample ID	Depth	Sample Date	bis(2-Chloroethyl)ether			Bis(2-chloroisopropyl)ether			bis(2-Ethylhexyl)phthalate			Butyl benzyl phthalate			Chrysene (1,2-Benzphenanthracene)			Dibenzo(a,h)anthracene			Dibenzofuran		
				0.0004						46			930			88			0.09			3		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U		0.0327		J	0.0153			< 0.1	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U		0.0026	J	J	< 0.0051	U		< 0.1	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U		< 0.0052	U		< 0.0052	U		< 0.11	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.29	U		< 0.29	U		< 0.0767	JB	U	< 0.0212	JB	U	0.0082			< 0.0059	U		< 0.12	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.26	U		< 0.26	U		< 0.031	JB	U	< 0.0136	JB	U	< 0.0053	U		< 0.0053	U		< 0.11	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.26	U		< 0.26	U		< 0.034	JB	U	< 0.0141	JB	U	0.0073			0.002	J		< 0.1	U	

				SVOCs																			
Location	Sample ID	Depth	Sample Date	Diethyl phthalate			Dimethyl phthalate			Di-n-butyl phthalate			Di-n-octyl phthalate			Fluoranthene			Fluorene			Hexachlorobenzene		
				470						2300			1600			3100			560			0.4		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U		0.0327		J	< 0.005	U		< 0.26	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U		0.0022	J	J	< 0.0051	U		< 0.26	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U		0.0037	J		0.0031	J		< 0.26	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.29	U		< 0.29	U		< 0.29	U		0.169	J		0.0043	J		0.0025	J		< 0.29	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U		< 0.0053	U		< 0.0053	U		< 0.26	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U		0.0188			< 0.0051	U		< 0.26	U	

				SVOCs																			
Location	Sample ID	Depth	Sample Date	Hexachlorocyclopentadiene			Hexachloroethane			Indeno(1,2,3-cd)pyrene			Isophorone (3,5,5-trimethyl-2-cyclohexene-1-one)			Nitrobenzene			N-Nitrosodimethylamine			N-Nitrosodi-n-propylamine		
				10			0.5			0.9			8			0.1			0.000007			0.00005		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.51	U		< 0.26	U		0.0241			< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.51	U		< 0.26	U		0.0016	J		< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.53	U		< 0.26	U		< 0.0052	U		< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.59	U		< 0.29	U		0.0015	J		< 0.29	U		< 0.29	U		< 0.29	U		< 0.29	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.53	U		< 0.26	U		< 0.0053	U		< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.51	U		< 0.26	U		0.0038	J		< 0.26	U		< 0.26	U		< 0.26	U		< 0.26	U	

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX A
SUMMARY OF SOIL ANALYTICAL DATA: VMP-34 and VMP-43 REPLACEMENTS

				SVOCs																	
Location	Sample ID	Depth	Sample Date	N-Nitrosodiphenylamine			p-Chloroaniline			Pentachlorophenol			Phenanthrene			Phenol			Pyrene			Pyridine		
				1			0.7			0.03			210			100			2300			78		
				Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals	Result (mg/kg)	Lab Quals	URS Quals
VMP-34	VMP-34-042215 (20-22)	30 - 31.5 ft	4/22/2015	< 0.26	U		< 0.51	U	UJ	< 0.51	U		0.0069			< 0.26	U		0.0325		J	< 0.51	U	
VMP-34	VMP-34-042215 (20-22)-DUP	30 - 31.5 ft	4/22/2015	< 0.26	U		< 0.51	U	UJ	< 0.51	U		0.0017	J		< 0.26	U		0.004	J	J	< 0.51	U	
VMP-34	VMP-34-042215 (30-32)	30 - 31.5 ft	4/22/2015	< 0.26	U		< 0.53	U	UJ	< 0.53	U		0.0128			< 0.26	U		0.0026	J		< 0.53	U	
VMP-43	VMP-43-042015(10-11)	10 - 11 ft	4/20/2015	< 0.29	U		< 0.59	U		< 0.59	U		0.0127			< 0.29	U		0.0134			< 0.59	U	
VMP-43	VMP-43-042015(20-21)	20 - 21 ft	4/20/2015	< 0.26	U		< 0.53	U		< 0.53	U		< 0.0053	U		< 0.26	U		< 0.0053	U		< 0.53	U	
VMP-43	VMP-43-042015(30-31)	30 - 31 ft	4/20/2015	< 0.26	U		< 0.51	U		< 0.51	U		0.0046	J		< 0.26	U		0.0142			< 0.51	U	

Notes

Lab Qualifiers

J = Estimated value; results between the MDL and RL

U = Compound analyzed for but not detected above the RL

URS Qualifiers

J = Estimated detection

UJ = Estimated non-detect

U = Non-detect due to blank contamination

ND, UJ = Non-detected compound associated with low bias in the continuing calibration verification

e-Hardcopy 2.0
Automated Report

Technical Report for

Shell Oil

URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

21563720.18000

SGS Accutest Job Number: MC38153

Sampling Date: 04/20/15

Report to:

AECOM, INC.

Melissa.mansker@aecom.com

ATTN: Melissa Mansker

Total number of pages in report: 107

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

H. (Brad) Madadian
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO (MA00136) MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

SGS ACCUTEST

October 28, 2016

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

RE: SGS Accutest Job # MC38153

Dear Elizabeth Kunkel

As you are aware, SGS Accutest Inc. - Marlborough has been conducting an extensive review of data associated with some historical Gas Chromatography-Mass Spectroscopy volatiles analyses. As a result of this review it was determined that some revisions of the original test report for this job were needed. These corrections have been incorporated into the revised report.

Please be assured that corrective actions have been put in place to address this matter and prevent a recurrence.

We apologize for any inconvenience that this issue may have caused. Please don't hesitate to contact us if we can be of further assistance.

Sincerely,

H. (Brad) Madadian

Regional Laboratory Director
SGS Accutest Inc. - Marlborough

Sections: 1 2 3 4 5 6 7 8 9

Table of Contents

-1-

Sample Summary

Shell Oil

Job No: MC38153

URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Project No: 21563720.18000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC38153-1	04/20/15	14:30	MPM	04/21/15	SO	Soil	VMP-43-042015(10-11)
MC38153-1D	04/20/15	14:30	MPM	04/21/15	SO	Soil Dup/MSD	VMP-43-042015(10-11)
MC38153-1S	04/20/15	14:30	MPM	04/21/15	SO	Soil Matrix Spike	VMP-43-042015(10-11)
MC38153-2	04/20/15	15:20	MPM	04/21/15	SO	Soil	VMP-43-042015(20-21)
MC38153-3	04/20/15	15:45	MPM	04/21/15	SO	Soil	VMP-43-042015(30-31)
MC38153-4	04/20/15	00:00	MPM	04/21/15	AQ	Trip Blank Water	TB-042015-HCL
MC38153-5	04/20/15	00:00	MPM	04/21/15	AQ	Trip Blank Water	TB-042015-ST

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: She O **Job No** MC38 53

Site: URSMOSTL:Roxana VMP So Samp e, 900 South Centra Avenue, **Report Date** 0/28/20 6 4:00:07 P

3 Samp e(s), 2 Tr p B ank(s) were co ected on 04/20/20 5 and were rece ved at SGS Accutest New Eng and on 04/2 /20 5 proper y preserved, at 2 2 Deg C and ntact These Samp es rece ved a job number of MC38 53 A st ng of the Laboratory Samp e ID, C ent Samp e ID and dates of co ect on are presented n the Resu ts Summary Sect on of th s report -Ch orohexane, Benzeneth o , D benz(a,h)acr d ne, Indene, Qu no ne were searched n the brary search and reported on y f detect ons were found

Except as noted be ow, a method spec f ed ca brat ons and qua ty contro performance cr ter a were met for th s job For more nformat on, p ease refer to QC summary pages

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** MSL4048

- A method b anks for th s batch meet method spec f c cr ter a
- A samp es were ana yzed w th n the recommended method ho d ng t me
- Acetone, , ,2,2-Tetrach oroethane: Cont nu ng Ca brat on Ver f cat on outs de of acceptance cr ter a Samp e resu t may be b ased ow
- RPD of MSL4048-BSD for Acetone: Outs de contro m ts B ank Sp ke meets program techn ca requ rements
- MSL4048-BS/BSD for V ny Acetate: Outs de contro m ts Assoc ated samp es are non-detect for th s compound

Matrix: SO **Batch ID:** MSK2728

- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC38 53- MS, MC38 53- MSD were used as the QC samp es nd cated
- A method b anks for th s batch meet method spec f c cr ter a

Matrix: SO **Batch ID:** MSM259

- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC38 53- MS, MC38 53- MSD were used as the QC samp es nd cated
- A method b anks for th s batch meet method spec f c cr ter a
- B ank Sp ke Recovery(s) for 2-Hexanone, 4-Methy -2-pentanone (MIBK), Acro e n, Acry on tr e, V ny Acetate are outs de contro m ts Assoc ated samp es are non-detect for th s compound
- Matr x Sp ke Dup cate Recove y(s) for ,4-D oxane, 4-Methy -2-pentanone (MIBK), Methy Tert Buty Ether are outs de contro m ts Outs de contro m ts due to poss b e matr x nterference
- RPD(s) for MSD for , , ,2-Tetrach oroethane, , , -Tr ch oroethane, , ,2,2-Tetrach oroethane, , ,2-Tr ch oroethane, , -D ch oroethane, , -D ch oroethene, , -D ch oropropene, ,2,3-Tr ch orobenzene, ,2,3-Tr ch oropropane, ,2,4-Tr ch orobenzene, ,2,4-Tr methy benzene, ,2-D ch orobenzene, ,2-D ch oroethane, ,2-D ch oropropane, ,3,5-Tr methy benzene, ,3-D ch orobenzene, ,3-D ch oropropane, ,4-D ch orobenzene, ,4-D oxane, 2,2-D ch oropropane, 2-Butanone (MEK), 2-Hexanone, 4-Methy -2-pentanone (MIBK), Acetone, Acro e n, Acry on tr e, Benzene, Bromobenzene, Bromoch oromethane, Bromod ch oromethane, Bromoform, Bromomethane, Carbon d su f de, Carbon tetrach or de, Ch orobenzene, Ch oroethane, Ch oroform, Ch oromethane, c s- ,2-D ch oroethene, c s- ,3-D ch oropropene, D bromoch oromethane, D ch orod f uoromethane, Ethy methacry ate, Ethy benzene, Hexach orobutad ene, Isopropy benzene, m,p-Xy ene, Methy Tert Buty Ether, Methy ene brom de, Methy ene ch or de, n-Buty benzene, n-Propy benzene, Naphtha ene, o-Ch oroto uene, o-Xy ene, p-Ch oroto uene, p-Isopropy to uene, sec-Buty benzene, Styrene, tert-Buty benzene, Tetrach oroethene, To uene, trans- ,2-D ch oroethene, trans- ,3-D ch oropropene, Tr ch oroethene, Tr ch orof uoromethane, V ny Acetate, V ny ch or de, Xy ene (tota) are outs de contro m ts for samp e MC38 53- MSD H gh RPD due to poss b e matr x nterference and/or samp e non-homogene ty
- D ch orod f uoromethane, Methy Tert Buty Ether: Cont nu ng Ca brat on outs de of acceptance cr ter a Samp e resu t may be b ased ow
- MC38 53- MSD for Acry on tr e are outs de contro m ts Assoc ated samp es are non-detect for th s compound
- MC38 53- MSD has nterna standard recovery(s) outs de contro m ts due to poss b e matr x nterference Conf rmed by MS/MSD

Extractables by GCMS By Method SW846 8270D

Matrix: SO **Batch ID:** OP42779

- A samp es were extracted w th n the recommended method ho d ng t me
- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC38 53- MS, MC38 53- MSD were used as the QC samp es nd cated
- In t a ca brat on ver f cat on MSW902-ICV902 for Hexach orocyc opentad ene exceeds 30% D fference Hexach orocyc opentad ene s w th n c r ter a n cont nu ng ca brat on check MSW933-CC902
- Samp e(s) MC38 53- , MC38 53-2, MC38 53-3 have compound(s) reported w th a "B" qua f er, nd cat ng ana yte s found n the assoc ated method b ank
- OP42779-MS/MSD Recovery(s) for Benzo c ac d are outs de contro m ts Outs de contro m ts due to poss b e matr x nterference Refer to B ank Sp ke
- RPD(s) for MSD for 2,4-D n tropheno are outs de contro m ts for samp e OP42779-MSD H gh RPD due to poss b e matr x nterference and/or samp e non-homogene ty

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: SO **Batch ID:** OP42780

- A samp es were extracted w th n the recommended method ho d ng t me
- A samp es were ana yzed w th n the recommended method ho d ng t me
- A method b anks for th s batch meet method spec f c cr ter a
- Samp e(s) MC38 53- MS, MC38 53- MSD were used as the QC samp es nd cated

Volatiles by GC By Method SW846 8011

Matrix: AQ **Batch ID:** OP428 2

- A samp es were extracted w th n the recommended method ho d ng t me
- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC38200-2MS, MC38200-2MSD were used as the QC samp es nd cated
- A method b anks for th s batch meet method spec f c cr ter a

Matrix: SO **Batch ID:** OP42837

- A samp es were extracted w th n the recommended method ho d ng t me
- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC38 53- MS, MC38 53- MSD were used as the QC samp es nd cated
- A method b anks for th s batch meet method spec f c cr ter a

Volatiles by GC By Method SW846 8015

Matrix: SO **Batch ID:** GBD3347

- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC38 53- MS, MC38 53- MSD were used as the QC samp es nd cated
- A method b anks for th s batch meet method spec f c cr ter a

Wet Chemistry By Method SM 2540G-97 MOD

Matrix: SO **Batch ID:** GN50425

- Samp e(s) MC38 53- DUP were used as the QC samp es for So ds, Percent

SGS Accutest New Eng and cert f es that a ana ys s were performed w th n method spec f cat on It s further recommended that th s report to be used n ts ent rety The Laborato y D rector for SGS Accutest New Eng and or ass gnee as ver f ed by the s gnature on the cover page has author zed the re ease of th s repo t(MC38 53)

Summary of Hits

Job Number: MC38153
Account: Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Collected: 04/20/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC38153-1	VMP-43-042015(10-11)					
Benzene		0.00058 J	0.00066	0.00049	mg/kg	SW846 8260C
Carbon disulfide		0.0079	0.0066	0.00054	mg/kg	SW846 8260C
Ethylbenzene		0.00078 J	0.0026	0.00050	mg/kg	SW846 8260C
Toluene		0.0012 J	0.0066	0.00052	mg/kg	SW846 8260C
Total TIC, Volatile		0.0543 J			mg/kg	
Butyl benzyl phthalate		0.0212 JB	0.29	0.012	mg/kg	SW846 8270D
Di-n-octyl phthalate		0.169 J	0.29	0.0092	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.0767 JB	0.29	0.011	mg/kg	SW846 8270D
Acenaphthene		0.0040 J	0.0059	0.0010	mg/kg	SW846 8270D BY SIM
Acenaphthylene		0.0029 J	0.0059	0.00089	mg/kg	SW846 8270D BY SIM
Anthracene		0.0019 J	0.0059	0.0013	mg/kg	SW846 8270D BY SIM
Benzo(a)anthracene		0.0038 J	0.0059	0.0027	mg/kg	SW846 8270D BY SIM
Benzo(a)pyrene		0.0031 J	0.0059	0.0023	mg/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene		0.0043 J	0.0059	0.0026	mg/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0.0027 J	0.0059	0.0016	mg/kg	SW846 8270D BY SIM
Chrysene		0.0082	0.0059	0.0016	mg/kg	SW846 8270D BY SIM
Fluoranthene		0.0043 J	0.0059	0.0017	mg/kg	SW846 8270D BY SIM
Fluorene		0.0025 J	0.0059	0.0012	mg/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.0015 J	0.0059	0.0015	mg/kg	SW846 8270D BY SIM
Phenanthrene		0.0127	0.0059	0.0012	mg/kg	SW846 8270D BY SIM
Pyrene		0.0134	0.0059	0.0018	mg/kg	SW846 8270D BY SIM
MC38153-2	VMP-43-042015(20-21)					
Xylene (total)		0.00051 J	0.0024	0.00041	mg/kg	SW846 8260C
Total TIC, Volatile		0.029 J			mg/kg	
Butyl benzyl phthalate		0.0136 JB	0.26	0.011	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.0310 JB	0.26	0.0097	mg/kg	SW846 8270D
MC38153-3	VMP-43-042015(30-31)					
Benzene		0.0011	0.00056	0.00042	mg/kg	SW846 8260C
Ethylbenzene		0.0019 J	0.0022	0.00043	mg/kg	SW846 8260C
Toluene		0.0026 J	0.0056	0.00045	mg/kg	SW846 8260C
m,p-Xylene		0.0011 J	0.0022	0.00088	mg/kg	SW846 8260C
o-Xylene		0.00048 J	0.0022	0.00039	mg/kg	SW846 8260C
Xylene (total)		0.0016 J	0.0022	0.00039	mg/kg	SW846 8260C
Total TIC, Volatile		0.0747 J			mg/kg	
Butyl benzyl phthalate		0.0141 JB	0.26	0.010	mg/kg	SW846 8270D
bis(2-Ethylhexyl)phthalate		0.0340 JB	0.26	0.0095	mg/kg	SW846 8270D
Anthracene		0.0015 J	0.0051	0.0011	mg/kg	SW846 8270D BY SIM
Benzo(a)anthracene		0.0095	0.0051	0.0024	mg/kg	SW846 8270D BY SIM
Benzo(a)pyrene		0.0061	0.0051	0.0020	mg/kg	SW846 8270D BY SIM

Summary of Hits

Job Number: MC38153
Account: Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Collected: 04/20/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Benzo(b)fluoranthene		0.0076	0.0051	0.0023	mg/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0.0038 J	0.0051	0.0014	mg/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene		0.0061	0.0051	0.0016	mg/kg	SW846 8270D BY SIM
Chrysene		0.0073	0.0051	0.0014	mg/kg	SW846 8270D BY SIM
Dibenzo(a,h)anthracene		0.0020 J	0.0051	0.0015	mg/kg	SW846 8270D BY SIM
Fluoranthene		0.0188	0.0051	0.0015	mg/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.0038 J	0.0051	0.0013	mg/kg	SW846 8270D BY SIM
Phenanthrene		0.0046 J	0.0051	0.0011	mg/kg	SW846 8270D BY SIM
Pyrene		0.0142	0.0051	0.0016	mg/kg	SW846 8270D BY SIM

MC38153-4 **TB-042015-HCL**

No hits reported in this sample.

MC38153-5 **TB-042015-ST**

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	VMP-43-042015(10-11)		
Lab Sample ID:	MC38153-1	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	83.4
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M72772.D	1	05/04/15	TT	n/a	n/a	MSM2591
Run #2	K87467.D	1	05/04/15	JM	n/a	n/a	MSK2728

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.57 g	5.0 ml	
Run #2	9.71 g	10.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.013	0.0043	mg/kg	
107-02-8	Acrolein	ND	0.033	0.012	mg/kg	
107-13-1	Acrylonitrile	ND	0.033	0.0025	mg/kg	
71-43-2	Benzene	0.00058	0.00066	0.00049	mg/kg	J
108-86-1	Bromobenzene	ND	0.0066	0.00059	mg/kg	
74-97-5	Bromochloromethane	ND	0.0066	0.00054	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0026	0.00056	mg/kg	
75-25-2	Bromoform	ND	0.0026	0.00063	mg/kg	
74-83-9	Bromomethane	ND	0.0026	0.00061	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.013	0.0044	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0066	0.00047	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0066	0.00050	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0066	0.00049	mg/kg	
75-15-0	Carbon disulfide	0.0079	0.0066	0.00054	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0026	0.00054	mg/kg	
108-90-7	Chlorobenzene	ND	0.0026	0.00029	mg/kg	
75-00-3	Chloroethane	ND	0.0066	0.00052	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND [a]	0.36	0.032	mg/kg	
67-66-3	Chloroform	ND	0.0026	0.00066	mg/kg	
74-87-3	Chloromethane	ND	0.0066	0.00098	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0066	0.00056	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0066	0.00058	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0026	0.00033	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0026	0.00048	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0026	0.00052	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0026	0.00059	mg/kg	
75-71-8	Dichlorodifluoromethane [b]	ND	0.0026	0.00053	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0026	0.00052	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0026	0.00048	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0026	0.00090	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0026	0.00047	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0026	0.00053	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(10-11)		
Lab Sample ID:	MC38153-1	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	83.4
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.0026	0.00057	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0066	0.00051	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0066	0.00054	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0066	0.00048	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0026	0.00049	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0026	0.00026	mg/kg	
123-91-1	1,4-Dioxane	ND	0.033	0.026	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0066	0.00066	mg/kg	
100-41-4	Ethylbenzene	0.00078	0.0026	0.00050	mg/kg	J
87-68-3	Hexachlorobutadiene	ND	0.0066	0.00074	mg/kg	
591-78-6	2-Hexanone	ND	0.013	0.00088	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0066	0.00058	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0066	0.00048	mg/kg	
1634-04-4	Methyl Tert Butyl Ether [b]	ND	0.0026	0.00086	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0066	0.00086	mg/kg	
74-95-3	Methylene bromide	ND	0.0066	0.00065	mg/kg	
75-09-2	Methylene chloride	ND	0.0026	0.00055	mg/kg	
91-20-3	Naphthalene	ND	0.0066	0.00079	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0066	0.00054	mg/kg	
100-42-5	Styrene	ND	0.0066	0.00041	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0066	0.00062	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0026	0.00027	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0026	0.00039	mg/kg	
108-88-3	Toluene	0.0012	0.0066	0.00052	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0066	0.00089	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0066	0.00058	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0026	0.00046	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0026	0.00057	mg/kg	
79-01-6	Trichloroethene	ND	0.0026	0.00040	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0026	0.00041	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0066	0.00074	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0066	0.00050	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0066	0.00041	mg/kg	
108-05-4	Vinyl Acetate	ND	0.0066	0.0010	mg/kg	
75-01-4	Vinyl chloride	ND	0.0026	0.00071	mg/kg	
	m,p-Xylene	ND	0.0026	0.0010	mg/kg	
95-47-6	o-Xylene	ND	0.0026	0.00046	mg/kg	
1330-20-7	Xylene (total)	ND	0.0026	0.00046	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(10-11)		
Lab Sample ID:	MC38153-1	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	83.4
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	121%	97%	65-141%
2037-26-5	Toluene-D8	91%	100%	65-129%
460-00-4	4-Bromofluorobenzene	88%	93%	63-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
106-97-8	Butane	5.09	.029	mg/kg	JN
78-78-4	Butane, 2-methyl-	6.08	.011	mg/kg	JN
109-66-0	Pentane	6.48	.0089	mg/kg	JN
4923-79-9	Azetidine, 1-methyl-	7.83	.0054	mg/kg	JN
	Total TIC, Volatile		.0543	mg/kg	J

(a) Result is from Run# 2
(b) Continuing Calibration outside of acceptance criteria. Sample result may be biased low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(10-11)		
Lab Sample ID:	MC38153-1	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	83.4
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W21853.D	1	05/05/15	KD	04/22/15	OP42779	MSW933
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	0.59	0.073	mg/kg	
95-57-8	2-Chlorophenol	ND	0.29	0.013	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.59	0.015	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.59	0.017	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.59	0.095	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	1.2	0.15	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.59	0.073	mg/kg	
95-48-7	2-Methylphenol	ND	0.59	0.023	mg/kg	
	3&4-Methylphenol	ND	0.59	0.028	mg/kg	
88-75-5	2-Nitrophenol	ND	0.59	0.016	mg/kg	
100-02-7	4-Nitrophenol	ND	1.2	0.11	mg/kg	
87-86-5	Pentachlorophenol	ND	0.59	0.041	mg/kg	
108-95-2	Phenol	ND	0.29	0.017	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.59	0.015	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.59	0.014	mg/kg	
62-53-3	Aniline	ND	0.59	0.029	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.29	0.015	mg/kg	
85-68-7	Butyl benzyl phthalate	0.0212	0.29	0.012	mg/kg	JB
100-51-6	Benzyl Alcohol	ND	0.59	0.029	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.29	0.016	mg/kg	
106-47-8	4-Chloroaniline	ND	0.59	0.015	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.29	0.014	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.29	0.018	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.29	0.021	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.29	0.018	mg/kg	
122-66-7	1,2-Diphenylhydrazine	ND	0.29	0.013	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.59	0.039	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.59	0.015	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.29	0.029	mg/kg	
132-64-9	Dibenzofuran	ND	0.12	0.016	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.29	0.031	mg/kg	
117-84-0	Di-n-octyl phthalate	0.169	0.29	0.0092	mg/kg	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(10-11)		
Lab Sample ID:	MC38153-1	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	83.4
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	0.29	0.015	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.29	0.017	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	0.0767	0.29	0.011	mg/kg	JB
118-74-1	Hexachlorobenzene	ND	0.29	0.018	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.59	0.15	mg/kg	
67-72-1	Hexachloroethane	ND	0.29	0.014	mg/kg	
78-59-1	Isophorone	ND	0.29	0.013	mg/kg	
88-74-4	2-Nitroaniline	ND	0.59	0.015	mg/kg	
99-09-2	3-Nitroaniline	ND	0.59	0.032	mg/kg	
100-01-6	4-Nitroaniline	ND	0.59	0.015	mg/kg	
98-95-3	Nitrobenzene	ND	0.29	0.016	mg/kg	
62-75-9	n-Nitrosodimethylamine	ND	0.29	0.014	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.29	0.017	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.29	0.018	mg/kg	
110-86-1	Pyridine	ND	0.59	0.029	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	58%		20-114%
4165-62-2	Phenol-d5	60%		22-117%
118-79-6	2,4,6-Tribromophenol	75%		15-145%
4165-60-0	Nitrobenzene-d5	59%		17-118%
321-60-8	2-Fluorobiphenyl	64%		27-121%
1718-51-0	Terphenyl-d14	79%		39-142%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(10-11)		
Lab Sample ID:	MC38153-1	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8270D BY SIM SW846 3546	**Percent Solids:**	83.4
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I95465.D	1	05/04/15	KD	04/22/15	OP42780	MSI3571
Run #2							

	Initial Weight	Final Volume
Run #1	20.5 g	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.0040	0.0059	0.0010	mg/kg	J
208-96-8	Acenaphthylene	0.0029	0.0059	0.00089	mg/kg	J
120-12-7	Anthracene	0.0019	0.0059	0.0013	mg/kg	J
56-55-3	Benzo(a)anthracene	0.0038	0.0059	0.0027	mg/kg	J
50-32-8	Benzo(a)pyrene	0.0031	0.0059	0.0023	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.0043	0.0059	0.0026	mg/kg	J
191-24-2	Benzo(g,h,i)perylene	0.0027	0.0059	0.0016	mg/kg	J
207-08-9	Benzo(k)fluoranthene	ND	0.0059	0.0018	mg/kg	
218-01-9	Chrysene	0.0082	0.0059	0.0016	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0059	0.0017	mg/kg	
206-44-0	Fluoranthene	0.0043	0.0059	0.0017	mg/kg	J
86-73-7	Fluorene	0.0025	0.0059	0.0012	mg/kg	J
193-39-5	Indeno(1,2,3-cd)pyrene	0.0015	0.0059	0.0015	mg/kg	J
90-12-0	1-Methylnaphthalene	ND	0.12	0.029	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.12	0.029	mg/kg	
85-01-8	Phenanthrene	0.0127	0.0059	0.0012	mg/kg	
129-00-0	Pyrene	0.0134	0.0059	0.0018	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		28-121%
321-60-8	2-Fluorobiphenyl	58%		36-110%
1718-51-0	Terphenyl-d14	78%		41-138%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(10-11)		
Lab Sample ID:	MC38153-1	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8011 SW846 3550B	**Percent Solids:**	83.4
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB62996.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427
Run #2							

	Initial Weight	Final Volume
Run #1	30.6 g	50.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0029	0.00066	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0029	0.00049	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	107%		70-170%
460-00-4	Bromofluorobenzene (S)	114%		70-170%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(10-11)		
Lab Sample ID:	MC38153-1	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8015	**Percent Solids:**	83.4
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BD69701.D	1	04/22/15	AF	n/a	n/a	GBD3347
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.14 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	13	1.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	99%		62-131%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(20-21)		
Lab Sample ID:	MC38153-2	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M72773.D	1	05/04/15	TT	n/a	n/a	MSM2591
Run #2	K87468.D	1	05/04/15	JM	n/a	n/a	MSK2728

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.53 g	5.0 ml	
Run #2	3.41 g	10.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.012	0.0039	mg/kg	
107-02-8	Acrolein	ND	0.029	0.011	mg/kg	
107-13-1	Acrylonitrile	ND	0.029	0.0023	mg/kg	
71-43-2	Benzene	ND	0.00059	0.00044	mg/kg	
108-86-1	Bromobenzene	ND	0.0059	0.00053	mg/kg	
74-97-5	Bromochloromethane	ND	0.0059	0.00049	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0024	0.00050	mg/kg	
75-25-2	Bromoform	ND	0.0024	0.00056	mg/kg	
74-83-9	Bromomethane	ND	0.0024	0.00055	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.012	0.0040	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0059	0.00042	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0059	0.00045	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0059	0.00044	mg/kg	
75-15-0	Carbon disulfide	ND	0.0059	0.00048	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0024	0.00048	mg/kg	
108-90-7	Chlorobenzene	ND	0.0024	0.00026	mg/kg	
75-00-3	Chloroethane	ND	0.0059	0.00046	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND [a]	0.80	0.072	mg/kg	
67-66-3	Chloroform	ND	0.0024	0.00059	mg/kg	
74-87-3	Chloromethane	ND	0.0059	0.00088	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0059	0.00050	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0059	0.00052	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0024	0.00029	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0024	0.00043	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0024	0.00047	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0024	0.00053	mg/kg	
75-71-8	Dichlorodifluoromethane [b]	ND	0.0024	0.00048	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0024	0.00047	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0024	0.00043	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0024	0.00081	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0024	0.00043	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0024	0.00048	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(20-21)		
Lab Sample ID:	MC38153-2	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.0024	0.00051	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0059	0.00046	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0059	0.00049	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0059	0.00043	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0024	0.00044	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0024	0.00023	mg/kg	
123-91-1	1,4-Dioxane	ND	0.029	0.024	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0059	0.00060	mg/kg	
100-41-4	Ethylbenzene	ND	0.0024	0.00045	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0059	0.00067	mg/kg	
591-78-6	2-Hexanone	ND	0.012	0.00079	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0059	0.00052	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0059	0.00043	mg/kg	
1634-04-4	Methyl Tert Butyl Ether [b]	ND	0.0024	0.00077	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0059	0.00077	mg/kg	
74-95-3	Methylene bromide	ND	0.0059	0.00058	mg/kg	
75-09-2	Methylene chloride	ND	0.0024	0.00049	mg/kg	
91-20-3	Naphthalene	ND	0.0059	0.00071	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0059	0.00049	mg/kg	
100-42-5	Styrene	ND	0.0059	0.00037	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0059	0.00055	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0024	0.00024	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0024	0.00035	mg/kg	
108-88-3	Toluene	ND	0.0059	0.00047	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0059	0.00080	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0059	0.00052	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0024	0.00041	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0024	0.00051	mg/kg	
79-01-6	Trichloroethene	ND	0.0024	0.00036	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0024	0.00037	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0059	0.00066	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0059	0.00045	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0059	0.00037	mg/kg	
108-05-4	Vinyl Acetate	ND	0.0059	0.00094	mg/kg	
75-01-4	Vinyl chloride	ND	0.0024	0.00064	mg/kg	
	m,p-Xylene	ND	0.0024	0.00093	mg/kg	
95-47-6	o-Xylene	ND	0.0024	0.00041	mg/kg	
1330-20-7	Xylene (total)	0.00051	0.0024	0.00041	mg/kg	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(20-21)		
Lab Sample ID:	MC38153-2	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	123%	99%	65-141%
2037-26-5	Toluene-D8	91%	99%	65-129%
460-00-4	4-Bromofluorobenzene	87%	93%	63-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
541-05-9	Cyclotrisiloxane, hexamethyl-	12.48	.019	mg/kg	JN
556-67-2	Cyclotetrasiloxane, octamethyl-	14.93	.01	mg/kg	JN
	Total TIC, Volatile		.029	mg/kg	J

(a) Result is from Run# 2
(b) Continuing Calibration outside of acceptance criteria. Sample result may be biased low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(20-21)		
Lab Sample ID:	MC38153-2	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W21854.D	1	05/05/15	KD	04/22/15	OP42779	MSW933
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	0.53	0.066	mg/kg	
95-57-8	2-Chlorophenol	ND	0.26	0.012	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.53	0.013	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.53	0.015	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.53	0.086	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	1.1	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.53	0.066	mg/kg	
95-48-7	2-Methylphenol	ND	0.53	0.021	mg/kg	
	3&4-Methylphenol	ND	0.53	0.026	mg/kg	
88-75-5	2-Nitrophenol	ND	0.53	0.014	mg/kg	
100-02-7	4-Nitrophenol	ND	1.1	0.099	mg/kg	
87-86-5	Pentachlorophenol	ND	0.53	0.037	mg/kg	
108-95-2	Phenol	ND	0.26	0.015	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.53	0.013	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.53	0.013	mg/kg	
62-53-3	Aniline	ND	0.53	0.026	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.26	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	0.0136	0.26	0.011	mg/kg	JB
100-51-6	Benzyl Alcohol	ND	0.53	0.026	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.26	0.014	mg/kg	
106-47-8	4-Chloroaniline	ND	0.53	0.013	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.26	0.012	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.26	0.016	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.26	0.019	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.26	0.016	mg/kg	
122-66-7	1,2-Diphenylhydrazine	ND	0.26	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.53	0.035	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.53	0.013	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.26	0.026	mg/kg	
132-64-9	Dibenzofuran	ND	0.11	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.26	0.028	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.26	0.0082	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(20-21)		
Lab Sample ID:	MC38153-2	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	0.26	0.013	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.26	0.015	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	0.0310	0.26	0.0097	mg/kg	JB
118-74-1	Hexachlorobenzene	ND	0.26	0.016	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.53	0.13	mg/kg	
67-72-1	Hexachloroethane	ND	0.26	0.013	mg/kg	
78-59-1	Isophorone	ND	0.26	0.012	mg/kg	
88-74-4	2-Nitroaniline	ND	0.53	0.013	mg/kg	
99-09-2	3-Nitroaniline	ND	0.53	0.029	mg/kg	
100-01-6	4-Nitroaniline	ND	0.53	0.013	mg/kg	
98-95-3	Nitrobenzene	ND	0.26	0.014	mg/kg	
62-75-9	n-Nitrosodimethylamine	ND	0.26	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.26	0.015	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.26	0.016	mg/kg	
110-86-1	Pyridine	ND	0.53	0.026	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	49%		20-114%
4165-62-2	Phenol-d5	51%		22-117%
118-79-6	2,4,6-Tribromophenol	75%		15-145%
4165-60-0	Nitrobenzene-d5	51%		17-118%
321-60-8	2-Fluorobiphenyl	55%		27-121%
1718-51-0	Terphenyl-d14	89%		39-142%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(20-21)		
Lab Sample ID:	MC38153-2	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8270D BY SIM SW846 3546	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I95484.D	1	05/05/15	KD	04/22/15	OP42780	MSI3572
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.0053	0.00091	mg/kg	
208-96-8	Acenaphthylene	ND	0.0053	0.00080	mg/kg	
120-12-7	Anthracene	ND	0.0053	0.0012	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.0053	0.0024	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.0053	0.0021	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.0053	0.0023	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.0053	0.0014	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.0053	0.0016	mg/kg	
218-01-9	Chrysene	ND	0.0053	0.0014	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0053	0.0015	mg/kg	
206-44-0	Fluoranthene	ND	0.0053	0.0016	mg/kg	
86-73-7	Fluorene	ND	0.0053	0.0010	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0053	0.0013	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.11	0.026	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.11	0.026	mg/kg	
85-01-8	Phenanthrene	ND	0.0053	0.0011	mg/kg	
129-00-0	Pyrene	ND	0.0053	0.0016	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	53%		28-121%
321-60-8	2-Fluorobiphenyl	50%		36-110%
1718-51-0	Terphenyl-d14	88%		41-138%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(20-21)		
Lab Sample ID:	MC38153-2	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8011 SW846 3550B	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB62997.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427
Run #2							

	Initial Weight	Final Volume
Run #1	30.5 g	50.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0026	0.00059	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0026	0.00044	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	103%		70-170%
460-00-4	Bromofluorobenzene (S)	109%		70-170%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(20-21)		
Lab Sample ID:	MC38153-2	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8015	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BD69700.D	1	04/22/15	AF	n/a	n/a	GBD3347
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	8.80 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.4	0.66	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	104%		62-131%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(30-31)		
Lab Sample ID:	MC38153-3	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	96.5
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M72774.D	1	05/04/15	TT	n/a	n/a	MSM2591
Run #2	K87469.D	1	05/04/15	JM	n/a	n/a	MSK2728

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.62 g	5.0 ml	
Run #2	3.90 g	10.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.011	0.0037	mg/kg	
107-02-8	Acrolein	ND	0.028	0.010	mg/kg	
107-13-1	Acrylonitrile	ND	0.028	0.0022	mg/kg	
71-43-2	Benzene	0.0011	0.00056	0.00042	mg/kg	
108-86-1	Bromobenzene	ND	0.0056	0.00050	mg/kg	
74-97-5	Bromochloromethane	ND	0.0056	0.00046	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0022	0.00048	mg/kg	
75-25-2	Bromoform	ND	0.0022	0.00053	mg/kg	
74-83-9	Bromomethane	ND	0.0022	0.00052	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.011	0.0038	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0056	0.00040	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0056	0.00043	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0056	0.00042	mg/kg	
75-15-0	Carbon disulfide	ND	0.0056	0.00046	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0022	0.00046	mg/kg	
108-90-7	Chlorobenzene	ND	0.0022	0.00025	mg/kg	
75-00-3	Chloroethane	ND	0.0056	0.00044	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND [a]	0.67	0.061	mg/kg	
67-66-3	Chloroform	ND	0.0022	0.00056	mg/kg	
74-87-3	Chloromethane	ND	0.0056	0.00084	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0056	0.00048	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0056	0.00050	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0022	0.00028	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0022	0.00041	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0022	0.00045	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0022	0.00050	mg/kg	
75-71-8	Dichlorodifluoromethane [b]	ND	0.0022	0.00045	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0022	0.00045	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0022	0.00041	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0022	0.00077	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0022	0.00040	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0022	0.00045	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(30-31)		
Lab Sample ID:	MC38153-3	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	96.5
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.0022	0.00049	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0056	0.00043	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0056	0.00046	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0056	0.00041	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0022	0.00042	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0022	0.00022	mg/kg	
123-91-1	1,4-Dioxane	ND	0.028	0.022	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0056	0.00057	mg/kg	
100-41-4	Ethylbenzene	0.0019	0.0022	0.00043	mg/kg	J
87-68-3	Hexachlorobutadiene	ND	0.0056	0.00064	mg/kg	
591-78-6	2-Hexanone	ND	0.011	0.00076	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0056	0.00050	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0056	0.00041	mg/kg	
1634-04-4	Methyl Tert Butyl Ether [b]	ND	0.0022	0.00073	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0056	0.00073	mg/kg	
74-95-3	Methylene bromide	ND	0.0056	0.00056	mg/kg	
75-09-2	Methylene chloride	ND	0.0022	0.00047	mg/kg	
91-20-3	Naphthalene	ND	0.0056	0.00068	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0056	0.00046	mg/kg	
100-42-5	Styrene	ND	0.0056	0.00035	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0056	0.00053	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0022	0.00023	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0022	0.00033	mg/kg	
108-88-3	Toluene	0.0026	0.0056	0.00045	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0056	0.00076	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0056	0.00050	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0022	0.00039	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0022	0.00048	mg/kg	
79-01-6	Trichloroethene	ND	0.0022	0.00035	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0022	0.00035	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0056	0.00063	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0056	0.00043	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0056	0.00035	mg/kg	
108-05-4	Vinyl Acetate	ND	0.0056	0.00089	mg/kg	
75-01-4	Vinyl chloride	ND	0.0022	0.00061	mg/kg	
	m,p-Xylene	0.0011	0.0022	0.00088	mg/kg	J
95-47-6	o-Xylene	0.00048	0.0022	0.00039	mg/kg	J
1330-20-7	Xylene (total)	0.0016	0.0022	0.00039	mg/kg	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(30-31)		
Lab Sample ID:	MC38153-3	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	96.5
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	121%	99%	65-141%
2037-26-5	Toluene-D8	93%	97%	65-129%
460-00-4	4-Bromofluorobenzene	86%	91%	63-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
106-97-8	Butane	5.09	.036	mg/kg	JN
78-78-4	Butane, 2-methyl-	6.08	.021	mg/kg	JN
109-66-0	Pentane	6.48	.01	mg/kg	JN
107-83-5	Pentane, 2-methyl-	7.82	.0077	mg/kg	JN
	Total TIC, Volatile		.0747	mg/kg	J

(a) Result is from Run# 2
(b) Continuing Calibration outside of acceptance criteria. Sample result may be biased low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(30-31)		
Lab Sample ID:	MC38153-3	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	96.5
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W21855.D	1	05/05/15	KD	04/22/15	OP42779	MSW933
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	0.51	0.064	mg/kg	
95-57-8	2-Chlorophenol	ND	0.26	0.012	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.51	0.013	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.51	0.015	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.51	0.084	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	1.0	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.51	0.064	mg/kg	
95-48-7	2-Methylphenol	ND	0.51	0.020	mg/kg	
	3&4-Methylphenol	ND	0.51	0.025	mg/kg	
88-75-5	2-Nitrophenol	ND	0.51	0.014	mg/kg	
100-02-7	4-Nitrophenol	ND	1.0	0.096	mg/kg	
87-86-5	Pentachlorophenol	ND	0.51	0.036	mg/kg	
108-95-2	Phenol	ND	0.26	0.015	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.51	0.013	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.51	0.013	mg/kg	
62-53-3	Aniline	ND	0.51	0.026	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.26	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	0.0141	0.26	0.010	mg/kg	JB
100-51-6	Benzyl Alcohol	ND	0.51	0.026	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.26	0.014	mg/kg	
106-47-8	4-Chloroaniline	ND	0.51	0.013	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.26	0.012	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.26	0.016	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.26	0.018	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.26	0.016	mg/kg	
122-66-7	1,2-Diphenylhydrazine	ND	0.26	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.51	0.034	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.51	0.013	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.26	0.026	mg/kg	
132-64-9	Dibenzofuran	ND	0.10	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.26	0.027	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.26	0.0080	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(30-31)		
Lab Sample ID:	MC38153-3	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	96.5
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	0.26	0.013	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.26	0.015	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	0.0340	0.26	0.0095	mg/kg	JB
118-74-1	Hexachlorobenzene	ND	0.26	0.016	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.51	0.13	mg/kg	
67-72-1	Hexachloroethane	ND	0.26	0.012	mg/kg	
78-59-1	Isophorone	ND	0.26	0.012	mg/kg	
88-74-4	2-Nitroaniline	ND	0.51	0.013	mg/kg	
99-09-2	3-Nitroaniline	ND	0.51	0.028	mg/kg	
100-01-6	4-Nitroaniline	ND	0.51	0.013	mg/kg	
98-95-3	Nitrobenzene	ND	0.26	0.014	mg/kg	
62-75-9	n-Nitrosodimethylamine	ND	0.26	0.012	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.26	0.015	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.26	0.016	mg/kg	
110-86-1	Pyridine	ND	0.51	0.026	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		20-114%
4165-62-2	Phenol-d5	56%		22-117%
118-79-6	2,4,6-Tribromophenol	64%		15-145%
4165-60-0	Nitrobenzene-d5	56%		17-118%
321-60-8	2-Fluorobiphenyl	58%		27-121%
1718-51-0	Terphenyl-d14	85%		39-142%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(30-31)		
Lab Sample ID:	MC38153-3	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8270D BY SIM SW846 3546	**Percent Solids:**	96.5
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I95472.D	1	05/05/15	KD	04/22/15	OP42780	MSI3572
Run #2							

	Initial Weight	Final Volume
Run #1	20.2 g	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.0051	0.00089	mg/kg	
208-96-8	Acenaphthylene	ND	0.0051	0.00078	mg/kg	
120-12-7	Anthracene	0.0015	0.0051	0.0011	mg/kg	J
56-55-3	Benzo(a)anthracene	0.0095	0.0051	0.0024	mg/kg	
50-32-8	Benzo(a)pyrene	0.0061	0.0051	0.0020	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.0076	0.0051	0.0023	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.0038	0.0051	0.0014	mg/kg	J
207-08-9	Benzo(k)fluoranthene	0.0061	0.0051	0.0016	mg/kg	
218-01-9	Chrysene	0.0073	0.0051	0.0014	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.0020	0.0051	0.0015	mg/kg	J
206-44-0	Fluoranthene	0.0188	0.0051	0.0015	mg/kg	
86-73-7	Fluorene	ND	0.0051	0.0010	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0038	0.0051	0.0013	mg/kg	J
90-12-0	1-Methylnaphthalene	ND	0.10	0.026	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.10	0.026	mg/kg	
85-01-8	Phenanthrene	0.0046	0.0051	0.0011	mg/kg	J
129-00-0	Pyrene	0.0142	0.0051	0.0016	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	58%		28-121%
321-60-8	2-Fluorobiphenyl	54%		36-110%
1718-51-0	Terphenyl-d14	83%		41-138%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(30-31)		
Lab Sample ID:	MC38153-3	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8011 SW846 3550B	**Percent Solids:**	96.5
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB62999.D	1	04/29/15	NK	04/27/15	OP42837	GBB3427
Run #2							

	Initial Weight	Final Volume
Run #1	30.3 g	50.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0026	0.00057	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0026	0.00043	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	111%		70-170%
460-00-4	Bromofluorobenzene (S)	114%		70-170%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-43-042015(30-31)		
Lab Sample ID:	MC38153-3	**Date Sampled:**	04/20/15
Matrix:	SO - Soil	**Date Received:**	04/21/15
Method:	SW846 8015	**Percent Solids:**	96.5
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BD69699.D	1	04/22/15	AF	n/a	n/a	GBD3347
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	8.92 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.0	0.62	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	103%		62-131%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-042015-HCL		
Lab Sample ID:	MC38153-4	**Date Sampled:**	04/20/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L91822.D	1	05/05/15	JM	n/a	n/a	MSL4048
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone [a]	ND	10	2.0	ug/l	
107-02-8	Acrolein	ND	25	11	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.3	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	0.79	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.57	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.19	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.49	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.48	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-042015-HCL		
Lab Sample ID:	MC38153-4	**Date Sampled:**	04/20/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.29	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.23	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.7	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.27	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.77	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.29	ug/l	
100-42-5	Styrene	ND	5.0	0.28	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane [a]	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.74	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.4	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-042015-HCL		
Lab Sample ID:	MC38153-4	**Date Sampled:**	04/20/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/21/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		72-133%
2037-26-5	Toluene-D8	95%		85-114%
460-00-4	4-Bromofluorobenzene	104%		70-134%

(a) Continuing Calibration outside of acceptance criteria. Result may be biased low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-042015-ST		
Lab Sample ID:	MC38153-5	**Date Sampled:**	04/20/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/21/15
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB62961.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425
Run #2							

	Initial Volume	Final Volume
Run #1	36.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	82%		60-140%
460-00-4	Bromofluorobenzene (S)	98%		60-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

CHAIN OF CUSTODY

ACCUTEST LABORATORIES

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: MC38153

Client / Reporting Information

Company Name: AECOM
Street Address: 1001 Highlands Plaza Dr West, Suite 300
City: St. Louis State: MO Zip: 63110
Project Contact: Elizabeth Kunkel E-mail: (elizabeth.kunkel@aecom.com)
Phone #: 314-429-0100 Fax #:
Sampler(s) Name(s): Michael M. Hicr Phone #: (314)566-3073

Project Information

Project Name: Roxana VMP Soil Samples : 21563720.18000
Street:
City: Roxana, IL
Project#:
Client PO#:
Project Manager:

Billing Information (If different from Report to)

Company Name:
Street Address:
City: State: Zip:
Attention: PO#:

Requested Analysis (see TEST CODE sheet)

Matrix Codes
DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB- Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	8260 VOCs + top 15 TICs	6270 SVOCs + TICs	6270 (LL) PAHs	8011 VOCs	TPH-GRO	LAB USE ONLY
-1	VMP-43-042015(10-11)		4/20/15	1430	MPM	SO	6					2		2		2	X	X	X	X	X	
-1S	VMP-43-042015(10-11)-MS			1430	MPM	SO	6					2		2		2	X	X	X	X	X	
-1SD	VMP-43-042015(10-11)-MSD			1430	MPM	SO	6					2		2		2	X	X	X	X	X	
-2	VMP-43-042015(20-21)			1520	MPM	SO	6					2		2		2	X	X	X	X	X	
-3	VMP-43-042015(30-31)			1545	MPM	SO	6					2		2		2	X	X	X	X	X	
-4	TB-042015-HCl MPM						2										X					
-5	TB-042015-MEOH						2													X		
																						4I4, 10B, 10K6

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] CT RCP
- [ ] MA MCP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Turnaround Time (Business days)

Approved By (Accutest PM): / Date:

- [x] Std. 10 Business Days
- [ ] Std. 5 Business Days (By Contract only)
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*

Emergency & Rush T/A data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		4/20/15 1500	(Sent FedEx)	FX	4/21/15 1700	
2						
3						
4						
5						

Custody Seal # | [ ] Intact [ ] Not Intact | Preserved where applicable | On Ice | Cooler Temp. 2.2°

5.1 5

MC38153: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC38153 **Client:** AECOM **Project:** ROX VMP SO L SAMPLESAECOM

Date / Time Received: 4/21/2015 5 00 00 PM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1 (2 2/2 2)

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Thermometer D:	G1;		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control_Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(508) 481-6200

495 Technology Center West, Bldg One
F: (508) 481-7753

Marlborough, MA 01752
www/accutest.com

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC38153

URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Project No: 21563720.18000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC38153-1 Collected: 20-APR-15 14:30 By: MPM Received: 21-APR-15 By: VMP-43-042015(10-11)						
MC38153-1	SW846 8015	22-APR-15 11:52	AF			V8015GRO
MC38153-1	SM 2540G-97 MOD	23-APR-15	HS			%SOL
MC38153-1	SW846 8011	28-APR-15 23:00	NK	27-APR-15	AW	V8011SL
MC38153-1	SW846 8260C	04-MAY-15 11:06	JM			V8260SL+
MC38153-1	SW846 8260C	04-MAY-15 12:40	TT			V8260SL+
MC38153-1	SW846 8270D BY SIM	04-MAY-15 19:38	KD	22-APR-15	PA	B8270SIMSL
MC38153-1	SW846 8270D	05-MAY-15 11:17	KD	22-APR-15	PA	AB8270SL+
MC38153-2 Collected: 20-APR-15 15:20 By: MPM Received: 21-APR-15 By: VMP-43-042015(20-21)						
MC38153-2	SW846 8015	22-APR-15 11:13	AF			V8015GRO
MC38153-2	SM 2540G-97 MOD	23-APR-15	HS			%SOL
MC38153-2	SW846 8011	28-APR-15 23:30	NK	27-APR-15	AW	V8011SL
MC38153-2	SW846 8260C	04-MAY-15 11:34	JM			V8260SL+
MC38153-2	SW846 8260C	04-MAY-15 13:09	TT			V8260SL+
MC38153-2	SW846 8270D	05-MAY-15 11:42	KD	22-APR-15	PA	AB8270SL+
MC38153-2	SW846 8270D BY SIM	05-MAY-15 13:52	KD	22-APR-15	PA	B8270SIMSL
MC38153-3 Collected: 20-APR-15 15:45 By: MPM Received: 21-APR-15 By: VMP-43-042015(30-31)						
MC38153-3	SW846 8015	22-APR-15 10:35	AF			V8015GRO
MC38153-3	SM 2540G-97 MOD	23-APR-15	HS			%SOL
MC38153-3	SW846 8011	29-APR-15 00:28	NK	27-APR-15	AW	V8011SL
MC38153-3	SW846 8260C	04-MAY-15 12:03	JM			V8260SL+
MC38153-3	SW846 8260C	04-MAY-15 13:39	TT			V8260SL+
MC38153-3	SW846 8270D BY SIM	05-MAY-15 09:05	KD	22-APR-15	PA	B8270SIMSL
MC38153-3	SW846 8270D	05-MAY-15 12:06	KD	22-APR-15	PA	AB8270SL+
MC38153-4 Collected: 20-APR-15 00:00 By: MPM Received: 21-APR-15 By: TB-042015-HCL						
MC38153-4	SW846 8260C	05-MAY-15 14:25	JM			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC38153

URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Project No: 21563720.18000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC38153-5 Collected: 20-APR-15 00:00 By: MPM Received: 21-APR-15 By: TB-042015-ST						
MC38153-5	SW846 8011	28-APR-15 04:22	NK	24-APR-15	AW	V8011SL

SGS Accutest Internal Chain of Custody

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Received: 04/21/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC38153-1.1	Walk In Ref #9	Nicole Estey	04/22/15 14:17	Retrieve from Storage
MC38153-1.1	Nicole Estey	Walk In Ref #9	04/22/15 22:10	Return to Storage
MC38153-1.1	Walk In Ref #9	Mehdi Abdolrahim	04/23/15 16:34	Retrieve from Storage
MC38153-1.1	Mehdi Abdolrahim	Walk In Ref #9	04/23/15 17:36	Return to Storage
MC38153-1.1	Scott Parsick		06/23/15 11:34	Disposed
MC38153-1.3	Walk In Ref #9	Nicole Estey	04/24/15 14:38	Retrieve from Storage
MC38153-1.3	Nicole Estey	Walk In Ref #9	04/27/15 21:44	Return to Storage
MC38153-1.3	Scott Parsick		06/23/15 11:34	Disposed
MC38153-1.7	VOC Ref #10	Tomasz Torski	05/04/15 10:17	Retrieve from Storage
MC38153-1.7	Tomasz Torski	GCMSM	05/04/15 10:17	Load on Instrument
MC38153-1.7	GCMSM	Krysten Dufort	06/04/15 12:28	Unload from Instrument
MC38153-1.7	Krysten Dufort	VOC Ref #10	06/04/15 12:46	Return to Storage
MC38153-1.7	Scott Parsick		06/23/15 11:34	Disposed
MC38153-1.8	VOC Ref #10	Tomasz Torski	05/04/15 10:17	Retrieve from Storage
MC38153-1.8	Tomasz Torski	GCMSM	05/04/15 10:17	Load on Instrument
MC38153-1.8	GCMSM	Krysten Dufort	06/04/15 12:28	Unload from Instrument
MC38153-1.8	Krysten Dufort	VOC Ref #10	06/04/15 12:46	Return to Storage
MC38153-1.8	Scott Parsick		06/23/15 11:34	Disposed
MC38153-1.10	VOC Ref #10	Tomasz Torski	05/04/15 10:17	Retrieve from Storage
MC38153-1.10	Tomasz Torski	GCMSM	05/04/15 10:17	Load on Instrument
MC38153-1.10	GCMSM	Krysten Dufort	06/04/15 12:28	Unload from Instrument
MC38153-1.10	Krysten Dufort	VOC Ref #10	06/04/15 12:46	Return to Storage
MC38153-1.10	Scott Parsick		06/23/15 11:34	Disposed
MC38153-1.13	VOC Ref #10	Jaime Maslowski	04/22/15 15:48	Retrieve from Storage
MC38153-1.13	Jaime Maslowski	VOC Ref #10	04/23/15 09:09	Return to Storage
MC38153-1.13	VOC Ref #10	Jaime Maslowski	05/04/15 10:11	Retrieve from Storage
MC38153-1.13	Jaime Maslowski	VOC Ref #10	05/05/15 09:23	Return to Storage
MC38153-1.13	Scott Parsick		06/23/15 11:34	Disposed
MC38153-1.14	VOC Ref #10	Anthony Franciosa	04/22/15 07:42	Retrieve from Storage
MC38153-1.14	Anthony Franciosa	GCBD	04/22/15 07:42	Load on Instrument
MC38153-1.14	GCBD	Anthony Franciosa	04/23/15 07:43	Unload from Instrument
MC38153-1.14	Anthony Franciosa	VOC Ref #10	04/23/15 07:43	Return to Storage
MC38153-1.14	Scott Parsick		06/23/15 11:34	Disposed
MC38153-2.1	Walk In Ref #9	Mehdi Abdolrahim	04/23/15 16:34	Retrieve from Storage
MC38153-2.1	Mehdi Abdolrahim	Walk In Ref #9	04/23/15 17:36	Return to Storage
MC38153-2.1	Walk In Ref #9	Nicole Estey	04/24/15 14:38	Retrieve from Storage
MC38153-2.1	Nicole Estey	Walk In Ref #9	04/27/15 21:44	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Received: 04/21/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC38153-2.1	Scott Parsick		06/23/15 11:34	Disposed
MC38153-2.2	Walk In Ref #9	Nicole Estey	04/22/15 14:17	Retrieve from Storage
MC38153-2.2	Nicole Estey	Walk In Ref #9	04/22/15 22:10	Return to Storage
MC38153-2.2	Scott Parsick		06/23/15 11:34	Disposed
MC38153-2.4	VOC Ref #10	Tomasz Torski	05/04/15 10:17	Retrieve from Storage
MC38153-2.4	Tomasz Torski	GCMSM	05/04/15 10:17	Load on Instrument
MC38153-2.4	GCMSM	Krysten Dufort	06/04/15 12:28	Unload from Instrument
MC38153-2.4	Krysten Dufort	VOC Ref #10	06/04/15 12:46	Return to Storage
MC38153-2.4	Scott Parsick		06/23/15 11:34	Disposed
MC38153-2.5	VOC Ref #10	Jaime Maslowski	04/22/15 15:48	Retrieve from Storage
MC38153-2.5	Jaime Maslowski	VOC Ref #10	04/23/15 09:09	Return to Storage
MC38153-2.5	VOC Ref #10	Jaime Maslowski	05/04/15 10:11	Retrieve from Storage
MC38153-2.5	Jaime Maslowski	VOC Ref #10	05/05/15 09:23	Return to Storage
MC38153-2.5	Scott Parsick		06/23/15 11:34	Disposed
MC38153-2.6	VOC Ref #10	Anthony Franciosa	04/22/15 07:42	Retrieve from Storage
MC38153-2.6	Anthony Franciosa	GCBD	04/22/15 07:42	Load on Instrument
MC38153-2.6	GCBD	Anthony Franciosa	04/23/15 07:43	Unload from Instrument
MC38153-2.6	Anthony Franciosa	VOC Ref #10	04/23/15 07:43	Return to Storage
MC38153-2.6	Scott Parsick		06/23/15 11:34	Disposed
MC38153-3.1	Walk In Ref #9	Mehdi Abdolrahim	04/23/15 16:34	Retrieve from Storage
MC38153-3.1	Mehdi Abdolrahim	Walk In Ref #9	04/23/15 17:36	Return to Storage
MC38153-3.1	Scott Parsick		06/23/15 11:34	Disposed
MC38153-3.2	Walk In Ref #9	Nicole Estey	04/22/15 14:17	Retrieve from Storage
MC38153-3.2	Nicole Estey	Walk In Ref #9	04/22/15 22:10	Return to Storage
MC38153-3.2	Walk In Ref #9	Nicole Estey	04/24/15 14:38	Retrieve from Storage
MC38153-3.2	Nicole Estey	Walk In Ref #9	04/27/15 21:44	Return to Storage
MC38153-3.2	Scott Parsick		06/23/15 11:34	Disposed
MC38153-3.3	VOC Ref #10	Tomasz Torski	05/04/15 10:17	Retrieve from Storage
MC38153-3.3	Tomasz Torski	GCMSM	05/04/15 10:17	Load on Instrument
MC38153-3.3	GCMSM	Krysten Dufort	06/04/15 12:28	Unload from Instrument
MC38153-3.3	Krysten Dufort	VOC Ref #10	06/04/15 12:46	Return to Storage
MC38153-3.3	Scott Parsick		06/23/15 11:34	Disposed
MC38153-3.5	VOC Ref #10	Jaime Maslowski	04/22/15 15:48	Retrieve from Storage
MC38153-3.5	Jaime Maslowski	VOC Ref #10	04/23/15 09:09	Return to Storage
MC38153-3.5	VOC Ref #10	Jaime Maslowski	05/04/15 10:11	Retrieve from Storage
MC38153-3.5	Jaime Maslowski	VOC Ref #10	05/05/15 09:23	Return to Storage

SGS Accutest Internal Chain of Custody

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Received: 04/21/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC38153-3.5	Scott Parsick		06/23/15 11:34	Disposed
MC38153-3.6	VOC Ref #10	Anthony Franciosa	04/22/15 07:42	Retrieve from Storage
MC38153-3.6	Anthony Franciosa	GCBD	04/22/15 07:42	Load on Instrument
MC38153-3.6	GCBD	Anthony Franciosa	04/23/15 07:43	Unload from Instrument
MC38153-3.6	Anthony Franciosa	VOC Ref #10	04/23/15 07:43	Return to Storage
MC38153-3.6	Scott Parsick		06/23/15 11:34	Disposed
MC38153-4.2	VOC Ref #4	Jaime Maslowski	05/05/15 12:27	Retrieve from Storage
MC38153-4.2	Jaime Maslowski	GCMSL	05/05/15 12:27	Load on Instrument
MC38153-4.2	GCMSL	Jaime Maslowski	05/06/15 07:46	Unload from Instrument
MC38153-4.2	Jaime Maslowski	VOC Ref #4	05/06/15 07:46	Return to Storage
MC38153-4.2	Scott Parsick		06/23/15 11:34	Disposed
MC38153-5.1	VOC Ref #4	Nicole Estey	04/24/15 14:33	Retrieve from Storage
MC38153-5.1	Nicole Estey		04/27/15 21:48	Depleted

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSK2728-MB	K87466.D	1	05/04/15	JM	n/a	n/a	MSK2728

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Result	RL	MDL	Units	Q
110-75-8	2-Chloroethyl vinyl ether	ND	250	22	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	65-141%
2037-26-5	Toluene-D8	101%	65-129%
460-00-4	4-Bromofluorobenzene	91%	63-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2591-MB	M72768.D	1	05/04/15	TT	n/a	n/a	MSM2591

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/kg	
107-02-8	Acrolein	ND	25	9.2	ug/kg	
107-13-1	Acrylonitrile	ND	25	1.9	ug/kg	
71-43-2	Benzene	ND	0.50	0.37	ug/kg	
108-86-1	Bromobenzene	ND	5.0	0.45	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.41	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.43	ug/kg	
75-25-2	Bromoform	ND	2.0	0.48	ug/kg	
74-83-9	Bromomethane	ND	2.0	0.47	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	3.4	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	0.36	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	0.38	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	0.38	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	0.41	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.41	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.22	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.39	ug/kg	
67-66-3	Chloroform	ND	2.0	0.50	ug/kg	
74-87-3	Chloromethane	ND	5.0	0.75	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	0.43	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	0.44	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.25	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.37	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.40	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.45	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.40	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.0	0.40	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.0	0.37	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.0	0.68	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	0.36	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	0.40	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.44	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	0.39	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	0.41	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	0.37	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.38	ug/kg	

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2591-MB	M72768.D	1	05/04/15	TT	n/a	n/a	MSM2591

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.20	ug/kg	
123-91-1	1,4-Dioxane	ND	25	20	ug/kg	
97-63-2	Ethyl methacrylate	ND	5.0	0.51	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.38	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	0.57	ug/kg	
591-78-6	2-Hexanone	ND	10	0.67	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.44	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	0.65	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.65	ug/kg	
74-95-3	Methylene bromide	ND	5.0	0.50	ug/kg	
75-09-2	Methylene chloride	ND	2.0	0.42	ug/kg	
91-20-3	Naphthalene	ND	5.0	0.60	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	0.41	ug/kg	
100-42-5	Styrene	ND	5.0	0.31	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.47	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.20	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.30	ug/kg	
108-88-3	Toluene	ND	5.0	0.40	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.44	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.35	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.43	ug/kg	
79-01-6	Trichloroethene	ND	2.0	0.31	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.0	0.31	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.56	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.38	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.32	ug/kg	
108-05-4	Vinyl Acetate	ND	5.0	0.79	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.54	ug/kg	
	m,p-Xylene	ND	2.0	0.79	ug/kg	
95-47-6	o-Xylene	ND	2.0	0.35	ug/kg	
1330-20-7	Xylene (total)	ND	2.0	0.35	ug/kg	

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2591-MB	M72768.D	1	05/04/15	TT	n/a	n/a	MSM2591

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	116%	65-141%
2037-26-5	Toluene-D8	94%	65-129%
460-00-4	4-Bromofluorobenzene	88%	63-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4048-MB	L91819.D	1	05/05/15	JM	n/a	n/a	MSL4048

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
107-02-8	Acrolein	ND	25	11	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.3	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	0.79	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.57	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.19	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.49	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.48	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.29	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.23	ug/l	

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4048-MB	L91819.D	1	05/05/15	JM	n/a	n/a	MSL4048

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.7	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.27	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.77	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.29	ug/l	
100-42-5	Styrene	ND	5.0	0.28	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.74	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.4	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4048-MB	L91819.D	1	05/05/15	JM	n/a	n/a	MSL4048

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	72-133%
2037-26-5	Toluene-D8	99%	85-114%
460-00-4	4-Bromofluorobenzene	102%	70-134%

Blank Spike Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSK2728-BS	K87463.D	1	05/04/15	JM	n/a	n/a	MSK2728

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
110-75-8	2-Chloroethyl vinyl ether	2500	2340	94	29-158

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	65-141%
2037-26-5	Toluene-D8	106%	65-129%
460-00-4	4-Bromofluorobenzene	96%	63-137%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2591-BS	M72766.D	1	05/04/15	TT	n/a	n/a	MSM2591

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	50	65.0	130	18-185
107-02-8	Acrolein	250	490	196* [a]	10-186
107-13-1	Acrylonitrile	50	80.0	160* [a]	56-138
71-43-2	Benzene	50	52.9	106	67-124
108-86-1	Bromobenzene	50	52.1	104	78-121
74-97-5	Bromochloromethane	50	61.9	124	78-128
75-27-4	Bromodichloromethane	50	57.0	114	75-136
75-25-2	Bromoform	50	67.5	135	64-154
74-83-9	Bromomethane	50	42.3	85	55-141
78-93-3	2-Butanone (MEK)	50	51.8	104	24-181
104-51-8	n-Butylbenzene	50	48.1	96	68-129
135-98-8	sec-Butylbenzene	50	47.4	95	71-128
98-06-6	tert-Butylbenzene	50	47.5	95	67-128
75-15-0	Carbon disulfide	50	53.5	107	46-150
56-23-5	Carbon tetrachloride	50	55.1	110	60-146
108-90-7	Chlorobenzene	50	52.9	106	79-122
75-00-3	Chloroethane	50	53.2	106	53-165
67-66-3	Chloroform	50	56.5	113	68-130
74-87-3	Chloromethane	50	51.0	102	44-154
95-49-8	o-Chlorotoluene	50	45.1	90	71-122
106-43-4	p-Chlorotoluene	50	45.5	91	72-119
124-48-1	Dibromochloromethane	50	65.6	131	73-143
95-50-1	1,2-Dichlorobenzene	50	51.5	103	77-123
541-73-1	1,3-Dichlorobenzene	50	51.0	102	76-120
106-46-7	1,4-Dichlorobenzene	50	48.1	96	75-122
75-71-8	Dichlorodifluoromethane	50	37.7	75	25-168
75-34-3	1,1-Dichloroethane	50	59.5	119	67-134
107-06-2	1,2-Dichloroethane	50	61.9	124	66-134
75-35-4	1,1-Dichloroethene	50	61.6	123	57-141
156-59-2	cis-1,2-Dichloroethene	50	61.9	124	68-129
156-60-5	trans-1,2-Dichloroethene	50	61.4	123	66-132
78-87-5	1,2-Dichloropropane	50	59.3	119	68-132
142-28-9	1,3-Dichloropropane	50	57.7	115	78-119
594-20-7	2,2-Dichloropropane	50	50.7	101	52-153
563-58-6	1,1-Dichloropropene	50	54.8	110	73-129
10061-01-5	cis-1,3-Dichloropropene	50	58.6	117	80-125

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2591-BS	M72766.D	1	05/04/15	TT	n/a	n/a	MSM2591

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	57.3	115	80-134
123-91-1	1,4-Dioxane	250	326	130	38-176
97-63-2	Ethyl methacrylate	50	51.9	104	66-127
100-41-4	Ethylbenzene	50	51.5	103	75-120
87-68-3	Hexachlorobutadiene	50	55.6	111	68-137
591-78-6	2-Hexanone	50	77.2	154* [a]	38-152
98-82-8	Isopropylbenzene	50	46.7	93	70-129
99-87-6	p-Isopropyltoluene	50	49.0	98	73-126
1634-04-4	Methyl Tert Butyl Ether	50	35.4	71	64-126
108-10-1	4-Methyl-2-pentanone (MIBK)	50	81.3	163* [a]	63-126
74-95-3	Methylene bromide	50	59.2	118	81-123
75-09-2	Methylene chloride	50	57.4	115	52-144
91-20-3	Naphthalene	50	60.2	120	51-164
103-65-1	n-Propylbenzene	50	45.8	92	68-129
100-42-5	Styrene	50	52.6	105	77-126
630-20-6	1,1,1,2-Tetrachloroethane	50	61.9	124	72-141
79-34-5	1,1,2,2-Tetrachloroethane	50	58.5	117	65-130
127-18-4	Tetrachloroethene	50	55.7	111	71-128
108-88-3	Toluene	50	52.1	104	76-122
87-61-6	1,2,3-Trichlorobenzene	50	54.1	108	44-162
120-82-1	1,2,4-Trichlorobenzene	50	52.0	104	60-147
71-55-6	1,1,1-Trichloroethane	50	53.2	106	64-138
79-00-5	1,1,2-Trichloroethane	50	56.2	112	76-122
79-01-6	Trichloroethene	50	60.2	120	73-123
75-69-4	Trichlorofluoromethane	50	46.8	94	57-141
96-18-4	1,2,3-Trichloropropane	50	59.1	118	69-124
95-63-6	1,2,4-Trimethylbenzene	50	48.0	96	73-124
108-67-8	1,3,5-Trimethylbenzene	50	48.3	97	69-122
108-05-4	Vinyl Acetate	50	93.3	187* [a]	10-186
75-01-4	Vinyl chloride	50	42.1	84	31-170
	m,p-Xylene	100	104	104	77-121
95-47-6	o-Xylene	50	52.3	105	78-122
1330-20-7	Xylene (total)	150	156	104	78-121

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2591-BS	M72766.D	1	05/04/15	TT	n/a	n/a	MSM2591

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	117%	65-141%
2037-26-5	Toluene-D8	94%	65-129%
460-00-4	4-Bromofluorobenzene	89%	63-137%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4048-BS	L91816.D	1	05/05/15	JM	n/a	n/a	MSL4048
MSL4048-BSD	L91817.D	1	05/05/15	JM	n/a	n/a	MSL4048

The QC reported here applies to the following samples: Method: SW846 8260C

MC38153-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	31.5	63	42.3	85	29* [a]	14-172/25
107-02-8	Acrolein	250	221	88	273	109	21	10-168/25
107-13-1	Acrylonitrile	50	43.3	87	49.0	98	12	41-158/25
71-43-2	Benzene	50	46.7	93	47.0	94	1	68-127/25
108-86-1	Bromobenzene	50	45.5	91	46.7	93	3	74-124/25
74-97-5	Bromochloromethane	50	46.4	93	46.3	93	0	68-135/25
75-27-4	Bromodichloromethane	50	48.6	97	46.8	94	4	72-144/25
75-25-2	Bromoform	50	45.2	90	47.8	96	6	59-147/25
74-83-9	Bromomethane	50	57.5	115	52.9	106	8	34-175/25
78-93-3	2-Butanone (MEK)	50	46.7	93	54.2	108	15	43-147/25
104-51-8	n-Butylbenzene	50	48.7	97	50.1	100	3	77-136/25
135-98-8	sec-Butylbenzene	50	46.6	93	46.6	93	0	75-134/25
98-06-6	tert-Butylbenzene	50	46.9	94	47.6	95	1	74-132/25
75-15-0	Carbon disulfide	50	42.7	85	43.0	86	1	34-171/25
56-23-5	Carbon tetrachloride	50	50.0	100	47.2	94	6	55-153/25
108-90-7	Chlorobenzene	50	43.4	87	43.4	87	0	71-123/25
75-00-3	Chloroethane	50	54.2	108	52.6	105	3	58-175/25
110-75-8	2-Chloroethyl vinyl ether	50	41.2	82	42.0	84	2	44-169/25
67-66-3	Chloroform	50	47.5	95	47.0	94	1	67-136/25
74-87-3	Chloromethane	50	54.2	108	51.8	104	5	25-182/25
95-49-8	o-Chlorotoluene	50	44.9	90	45.0	90	0	72-130/25
106-43-4	p-Chlorotoluene	50	45.5	91	46.3	93	2	73-127/25
124-48-1	Dibromochloromethane	50	45.6	91	46.8	94	3	73-139/25
95-50-1	1,2-Dichlorobenzene	50	45.2	90	45.0	90	0	77-125/25
541-73-1	1,3-Dichlorobenzene	50	42.8	86	43.3	87	1	77-124/25
106-46-7	1,4-Dichlorobenzene	50	43.3	87	44.0	88	2	73-128/25
75-71-8	Dichlorodifluoromethane	50	54.2	108	53.2	106	2	23-157/25
75-34-3	1,1-Dichloroethane	50	43.1	86	43.1	86	0	63-145/25
107-06-2	1,2-Dichloroethane	50	47.3	95	49.2	98	4	58-145/25
75-35-4	1,1-Dichloroethene	50	43.4	87	44.5	89	3	56-158/25
156-59-2	cis-1,2-Dichloroethene	50	49.4	99	50.3	101	2	67-133/25
156-60-5	trans-1,2-Dichloroethene	50	47.7	95	48.1	96	1	66-136/25
78-87-5	1,2-Dichloropropane	50	45.1	90	45.4	91	1	75-133/25
142-28-9	1,3-Dichloropropane	50	49.1	98	52.8	106	7	70-127/25
594-20-7	2,2-Dichloropropane	50	43.3	87	37.0	74	16	52-163/25
563-58-6	1,1-Dichloropropene	50	43.9	88	45.1	90	3	77-140/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4048-BS	L91816.D	1	05/05/15	JM	n/a	n/a	MSL4048
MSL4048-BSD	L91817.D	1	05/05/15	JM	n/a	n/a	MSL4048

The QC reported here applies to the following samples: Method: SW846 8260C

MC38153-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	54.9	110	57.0	114	4	74-141/25
10061-02-6	trans-1,3-Dichloropropene	50	46.7	93	52.3	105	11	77-143/25
123-91-1	1,4-Dioxane	250	209	84	259	104	21	30-182/25
97-63-2	Ethyl methacrylate	50	47.7	95	54.7	109	14	64-131/25
100-41-4	Ethylbenzene	50	48.4	97	48.4	97	0	71-129/25
87-68-3	Hexachlorobutadiene	50	49.1	98	51.0	102	4	64-146/25
591-78-6	2-Hexanone	50	42.6	85	51.8	104	19	22-163/25
98-82-8	Isopropylbenzene	50	45.8	92	45.8	92	0	72-133/25
99-87-6	p-Isopropyltoluene	50	48.2	96	49.0	98	2	77-134/25
1634-04-4	Methyl Tert Butyl Ether	50	54.3	109	59.7	119	9	46-151/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	43.5	87	51.1	102	16	47-145/25
74-95-3	Methylene bromide	50	44.5	89	44.9	90	1	70-132/25
75-09-2	Methylene chloride	50	47.3	95	47.7	95	1	55-146/25
91-20-3	Naphthalene	50	41.4	83	48.6	97	16	39-176/25
103-65-1	n-Propylbenzene	50	44.5	89	44.4	89	0	74-134/25
100-42-5	Styrene	50	48.4	97	48.8	98	1	71-134/25
630-20-6	1,1,1,2-Tetrachloroethane	50	49.4	99	49.2	98	0	70-137/25
79-34-5	1,1,2,2-Tetrachloroethane	50	39.8	80	43.3	87	8	58-145/25
127-18-4	Tetrachloroethene	50	46.3	93	45.1	90	3	63-137/25
108-88-3	Toluene	50	45.6	91	46.7	93	2	75-126/25
87-61-6	1,2,3-Trichlorobenzene	50	44.6	89	48.5	97	8	27-181/25
120-82-1	1,2,4-Trichlorobenzene	50	43.9	88	48.1	96	9	40-176/25
71-55-6	1,1,1-Trichloroethane	50	48.3	97	46.4	93	4	68-144/25
79-00-5	1,1,2-Trichloroethane	50	45.6	91	47.6	95	4	72-133/25
79-01-6	Trichloroethene	50	45.8	92	44.8	90	2	73-126/25
75-69-4	Trichlorofluoromethane	50	49.6	99	48.6	97	2	43-152/25
96-18-4	1,2,3-Trichloropropane	50	46.3	93	51.6	103	11	58-141/25
95-63-6	1,2,4-Trimethylbenzene	50	46.8	94	47.6	95	2	76-129/25
108-67-8	1,3,5-Trimethylbenzene	50	48.2	96	48.4	97	0	71-127/25
108-05-4	Vinyl Acetate	50	101	202* b	111	222* b	9	10-170/25
75-01-4	Vinyl chloride	50	49.9	100	50.7	101	2	36-167/25
	m,p-Xylene	100	91.6	92	91.6	92	0	68-130/25
95-47-6	o-Xylene	50	46.0	92	44.7	89	3	69-126/25
1330-20-7	Xylene (total)	150	138	92	136	91	1	67-129/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4048-BS	L91816.D	1	05/05/15	JM	n/a	n/a	MSL4048
MSL4048-BSD	L91817.D	1	05/05/15	JM	n/a	n/a	MSL4048

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	95%	72-133%
2037-26-5	Toluene-D8	98%	100%	85-114%
460-00-4	4-Bromofluorobenzene	95%	97%	70-134%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC38153-1MS	K87470.D	1	05/04/15	JM	n/a	n/a	MSK2728
MC38153-1MSD	K87471.D	1	05/04/15	JM	n/a	n/a	MSK2728
MC38153-1	K87467.D	1	05/04/15	JM	n/a	n/a	MSK2728

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	MC38153-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
110-75-8	2-Chloroethyl vinyl ether	ND		3580	3290	92	3580	3250	91	1	35-154/30

CAS No.	Surrogate Recoveries	MS	MSD	MC38153-1	Limits
1868-53-7	Dibromofluoromethane	97%	96%	97%	65-141%
2037-26-5	Toluene-D8	102%	105%	100%	65-129%
460-00-4	4-Bromofluorobenzene	98%	95%	93%	63-137%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC38153-1MS	M72789.D	1	05/04/15	TT	n/a	n/a	MSM2591
MC38153-1MSD	M72790.D	1	05/04/15	TT	n/a	n/a	MSM2591
MC38153-1	M72772.D	1	05/04/15	TT	n/a	n/a	MSM2591

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	MC38153-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		55.3	63.0	114	124	121	97	63* [a]	10-200/30
107-02-8	Acrolein	ND		277	242	88	622	590	95	84* [a]	10-185/30
107-13-1	Acrylonitrile	ND		55.3	74.9	135	124	195	157* [b]	89* [a]	36-156/30
71-43-2	Benzene	0.58	J	55.3	37.4	67	124	130	104	111* [a]	34-139/30
108-86-1	Bromobenzene	ND		55.3	23.9	43	124	92.6	74	118* [a]	10-157/30
74-97-5	Bromochloromethane	ND		55.3	47.1	85	124	144	116	101* [a]	46-143/30
75-27-4	Bromodichloromethane	ND		55.3	41.5	75	124	144	116	111* [a]	37-153/30
75-25-2	Bromoform	ND		55.3	47.0	85	124	148	119	104* [a]	20-168/30
74-83-9	Bromomethane	ND		55.3	36.2	65	124	126	101	111* [a]	31-147/30
78-93-3	2-Butanone (MEK)	ND		55.3	43.1	78	124	76.8	62	56* [a]	10-200/30
104-51-8	n-Butylbenzene	ND		55.3	10.8	20	124	41.9	34	118* [a]	10-164/30
135-98-8	sec-Butylbenzene	ND		55.3	11.7	21	124	47.6	38	121* [a]	15-160/30
98-06-6	tert-Butylbenzene	ND		55.3	12.4	22	124	52.2	42	123* [a]	16-158/30
75-15-0	Carbon disulfide	7.9		55.3	40.8	59	124	147	112	113* [a]	21-159/30
56-23-5	Carbon tetrachloride	ND		55.3	35.8	65	124	139	112	118* [a]	37-154/30
108-90-7	Chlorobenzene	ND		55.3	29.3	53	124	103	83	111* [a]	20-150/30
75-00-3	Chloroethane	ND		55.3	46.9	85	124	165	133	111* [a]	30-173/30
67-66-3	Chloroform	ND		55.3	41.1	74	124	137	110	108* [a]	44-138/30
74-87-3	Chloromethane	ND		55.3	44.6	81	124	152	122	109* [a]	25-157/30
95-49-8	o-Chlorotoluene	ND		55.3	17.7	32	124	69.5	56	119* [a]	10-160/30
106-43-4	p-Chlorotoluene	ND		55.3	17.7	32	124	69.2	56	119* [a]	10-153/30
124-48-1	Dibromochloromethane	ND		55.3	46.1	83	124	138	111	100* [a]	32-157/30
95-50-1	1,2-Dichlorobenzene	ND		55.3	17.9	32	124	70.3	57	119* [a]	10-160/30
541-73-1	1,3-Dichlorobenzene	ND		55.3	17.3	31	124	69.9	56	121* [a]	10-156/30
106-46-7	1,4-Dichlorobenzene	ND		55.3	16.4	30	124	67.3	54	122* [a]	10-159/30
75-71-8	Dichlorodifluoromethane	ND		55.3	33.1	60	124	119	96	113* [a]	10-169/30
75-34-3	1,1-Dichloroethane	ND		55.3	43.9	79	124	149	120	109* [a]	45-145/30
107-06-2	1,2-Dichloroethane	ND		55.3	49.1	89	124	149	120	101* [a]	40-144/30
75-35-4	1,1-Dichloroethene	ND		55.3	45.5	82	124	166	133	114* [a]	35-153/30
156-59-2	cis-1,2-Dichloroethene	ND		55.3	44.3	80	124	152	122	110* [a]	33-146/30
156-60-5	trans-1,2-Dichloroethene	ND		55.3	44.5	80	124	164	132	115* [a]	35-147/30
78-87-5	1,2-Dichloropropane	ND		55.3	42.9	78	124	145	117	109* [a]	38-146/30
142-28-9	1,3-Dichloropropane	ND		55.3	43.1	78	124	127	102	99* [a]	31-146/30
594-20-7	2,2-Dichloropropane	ND		55.3	34.1	62	124	133	107	118* [a]	26-159/30
563-58-6	1,1-Dichloropropene	ND		55.3	36.3	66	124	134	108	115* [a]	40-146/30
10061-01-5	cis-1,3-Dichloropropene	ND		55.3	39.3	71	124	137	110	111* [a]	29-150/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC38153-1MS	M72789.D	1	05/04/15	TT	n/a	n/a	MSM2591
MC38153-1MSD	M72790.D	1	05/04/15	TT	n/a	n/a	MSM2591
MC38153-1	M72772.D	1	05/04/15	TT	n/a	n/a	MSM2591

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	MC38153-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		55.3	37.8	68	124	134	108	112* [a]	22-163/30
123-91-1	1,4-Dioxane	ND		277	451	163	622	1370	220* [c]	101* [a]	18-200/30
97-63-2	Ethyl methacrylate	ND		55.3	40.7	74	124	143	115	111* [a]	21-162/30
100-41-4	Ethylbenzene	0.78	J	55.3	26.4	46	124	96.4	77	114* [a]	24-146/30
87-68-3	Hexachlorobutadiene	ND		55.3	10.3	19	124	34.1	27	107* [a]	10-167/30
591-78-6	2-Hexanone	ND		55.3	54.6	99	124	121	97	76* [a]	10-177/30
98-82-8	Isopropylbenzene	ND		55.3	16.7	30	124	67.6	54	121* [a]	20-158/30
99-87-6	p-Isopropyltoluene	ND		55.3	12.0	22	124	49.3	40	122* [a]	12-161/30
1634-04-4	Methyl Tert Butyl Ether	ND		55.3	26.9	49	124	40.0	32* [c]	39* [a]	47-138/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		55.3	82.9	150	124	216	174* [c]	89* [a]	34-166/30
74-95-3	Methylene bromide	ND		55.3	48.5	88	124	151	121	103* [a]	39-147/30
75-09-2	Methylene chloride	ND		55.3	42.9	78	124	143	115	108* [a]	36-147/30
91-20-3	Naphthalene	ND		55.3	18.3	33	124	69.6	56	117* [a]	10-188/30
103-65-1	n-Propylbenzene	ND		55.3	15.0	27	124	61.2	49	121* [a]	10-167/30
100-42-5	Styrene	ND		55.3	25.2	46	124	87.0	70	110* [a]	10-165/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		55.3	37.3	67	124	126	101	109* [a]	32-154/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		55.3	41.1	74	124	130	105	104* [a]	16-161/30
127-18-4	Tetrachloroethene	ND		55.3	28.3	51	124	98.1	79	110* [a]	30-148/30
108-88-3	Toluene	1.2	J	55.3	32.4	56	124	124	99	117* [a]	30-147/30
87-61-6	1,2,3-Trichlorobenzene	ND		55.3	10.7	19	124	41.8	34	118* [a]	10-169/30
120-82-1	1,2,4-Trichlorobenzene	ND		55.3	10.2	18	124	40.3	32	119* [a]	10-170/30
71-55-6	1,1,1-Trichloroethane	ND		55.3	36.0	65	124	139	112	118* [a]	42-148/30
79-00-5	1,1,2-Trichloroethane	ND		55.3	42.6	77	124	143	115	108* [a]	35-150/30
79-01-6	Trichloroethene	ND		55.3	39.3	71	124	151	121	117* [a]	22-163/30
75-69-4	Trichlorofluoromethane	ND		55.3	39.5	71	124	128	103	106* [a]	32-146/30
96-18-4	1,2,3-Trichloropropane	ND		55.3	42.2	76	124	129	104	101* [a]	23-154/30
95-63-6	1,2,4-Trimethylbenzene	ND		55.3	15.2	27	124	61.1	49	120* [a]	10-173/30
108-67-8	1,3,5-Trimethylbenzene	ND		55.3	14.8	27	124	59.9	48	121* [a]	10-161/30
108-05-4	Vinyl Acetate	ND		55.3	45.3	82	124	133	107	98* [a]	10-187/30
75-01-4	Vinyl chloride	ND		55.3	37.6	68	124	136	109	113* [a]	10-182/30
	m,p-Xylene	ND		111	51.1	46	249	185	74	113* [a]	25-147/30
95-47-6	o-Xylene	ND		55.3	25.7	46	124	89.7	72	111* [a]	24-147/30
1330-20-7	Xylene (total)	ND		166	76.7	46	373	275	74	113* [a]	25-147/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC38153-1MS	M72789.D	1	05/04/15	TT	n/a	n/a	MSM2591
MC38153-1MSD	M72790.D	1	05/04/15	TT	n/a	n/a	MSM2591
MC38153-1	M72772.D	1	05/04/15	TT	n/a	n/a	MSM2591

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38153-1, MC38153-2, MC38153-3

CAS No.	Surrogate Recoveries	MS	MSD	MC38153-1	Limits
1868-53-7	Dibromofluoromethane	119%	117%	121%	65-141%
2037-26-5	Toluene-D8	94%	98%	91%	65-129%
460-00-4	4-Bromofluorobenzene	89%	93%	88%	63-137%

(a) High RPD due to possible matrix interference and/or sample non-homogeneity.
(b) Outside control limits. Associated samples are non-detect for this compound.
(c) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSK2728-CC2686	**Injection Date:**	05/04/15
Lab File ID:	K87463.D	**Injection Time:**	09:14
Instrument ID:	GCMSK	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	170753	8.77	232753	9.61	98319	12.87	128035	15.43	75009	6.41
Upper Limit [a]	341506	9.27	465506	10.11	196638	13.37	256070	15.93	150018	6.91
Lower Limit [b]	85377	8.27	116377	9.11	49160	12.37	64018	14.93	37505	5.91

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSK2728-BS	170753	8.77	232753	9.61	98319	12.87	128035	15.43	75009	6.41
MSK2728-MB	162013	8.77	221178	9.61	87276	12.87	137808	15.43	74584	6.38
MC38153-1	171417	8.77	233537	9.61	89686	12.87	139738	15.43	75177	6.41
MC38153-2	167696	8.76	233789	9.61	88813	12.87	138143	15.43	78792	6.42
MC38153-3	168136	8.77	229997	9.61	82703	12.87	127618	15.43	73358	6.41
MC38153-1MS	152609	8.76	209644	9.61	83871	12.87	108144	15.43	71937	6.40
MC38153-1MSD	156703	8.76	221042	9.61	92798	12.87	124867	15.43	72168	6.41
ZZZZZZ	175844	8.77	243744	9.62	91327	12.87	129995	15.43	79041	6.39
ZZZZZZ	167149	8.77	230514	9.61	88020	12.87	128217	15.43	82296	6.41
ZZZZZZ	170540	8.77	245276	9.61	90941	12.87	135354	15.43	89587	6.42
ZZZZZZ	160766	8.76	231531	9.61	88307	12.87	131100	15.43	79647	6.41
ZZZZZZ	154843	8.77	216011	9.61	83429	12.87	130912	15.43	76474	6.41
ZZZZZZ	177677	8.77	247134	9.61	95569	12.87	149110	15.43	81419	6.42
ZZZZZZ	167112	8.77	237813	9.61	87634	12.87	130005	15.43	85258	6.41
ZZZZZZ	171170	8.77	242508	9.61	88126	12.87	129334	15.43	80273	6.41
ZZZZZZ	160891	8.77	229246	9.61	88466	12.87	137208	15.43	73849	6.41
ZZZZZZ	152367	8.76	212972	9.61	86858	12.87	133925	15.43	97886	6.44
ZZZZZZ	173495	8.77	245000	9.61	93222	12.87	137136	15.43	83743	6.42
ZZZZZZ	173804	8.77	247935	9.61	91460	12.87	137088	15.43	77990	6.40
ZZZZZZ	174820	8.77	243251	9.62	92494	12.87	141531	15.43	74596	6.41
ZZZZZZ	161721	8.77	224590	9.61	86974	12.87	135088	15.43	80750	6.41
ZZZZZZ	165517	8.77	235355	9.61	86246	12.87	133828	15.43	83283	6.40
ZZZZZZ	185846	8.77	262219	9.62	98119	12.87	152117	15.43	88949	6.41
ZZZZZZ	185511	8.77	262119	9.61	96614	12.87	150328	15.43	90864	6.41

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSL4048-CC4030	**Injection Date:**	05/05/15
Lab File ID:	L91816.D	**Injection Time:**	11:19
Instrument ID:	GCMSL	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	210796	8.10	283024	8.91	178715	12.10	158885	14.64	27041	5.86
Upper Limit [a]	421592	8.60	566048	9.41	357430	12.60	317770	15.14	54082	6.36
Lower Limit [b]	105398	7.60	141512	8.41	89358	11.60	79443	14.14	13521	5.36

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL4048-BS	210796	8.10	283024	8.91	178715	12.10	158885	14.64	27041	5.86
MSL4048-BSD	215477	8.10	285579	8.91	184759	12.10	162198	14.64	32390	5.86
MSL4048-MB	205709	8.10	269520	8.91	158503	12.11	121731	14.65	39780	5.90
ZZZZZZ	208312	8.10	274597	8.91	160103	12.11	123175	14.65	41144	5.90
ZZZZZZ	205072	8.10	268937	8.91	150848	12.11	115592	14.65	35219	5.92
MC38153-4	200454	8.10	270752	8.92	147951	12.11	115303	14.65	34808	5.91
ZZZZZZ	199605	8.10	266446	8.91	152594	12.11	116072	14.65	44615	5.92
ZZZZZZ	195657	8.10	255097	8.91	150828	12.11	115810	14.65	34366	5.90
ZZZZZZ	197412	8.10	264065	8.91	149230	12.10	138521	14.64	43496	5.90
ZZZZZZ	210805	8.10	277398	8.91	162628	12.11	132291	14.64	41352	5.91
ZZZZZZ	228558	8.10	301163	8.91	174383	12.11	132178	14.65	45761	5.91
ZZZZZZ	228041	8.10	297611	8.91	173741	12.11	129815	14.65	47877	5.91
ZZZZZZ	226451	8.10	300333	8.91	175857	12.11	132177	14.65	42626	5.90
ZZZZZZ	216083	8.10	290410	8.91	165882	12.11	129359	14.65	46668	5.91
ZZZZZZ	221925	8.10	290190	8.91	160415	12.11	127632	14.65	44391	5.90
ZZZZZZ	211203	8.10	278307	8.91	164728	12.11	133612	14.64	45859	5.90
ZZZZZZ	234024	8.10	320595	8.91	195387	12.11	160797	14.64	48297	5.89
ZZZZZZ	240209	8.10	322735	8.91	186082	12.11	147535	14.65	36783	5.92
ZZZZZZ	219023	8.10	298396	8.91	181839	12.10	151248	14.64	34662	5.90
ZZZZZZ	223944	8.10	305876	8.91	176672	12.11	143388	14.64	41768	5.91
ZZZZZZ	269414	8.09	368351	8.91	219407	12.10	184717	14.64	42796	5.89
ZZZZZZ	279159	8.10	375659	8.91	213951	12.11	177333	14.64	50189	5.91
ZZZZZZ	273999	8.10	369556	8.91	212948	12.11	172293	14.64	46290	5.91

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSM2591-CC2495	**Injection Date:**	05/04/15
Lab File ID:	M72766.D	**Injection Time:**	09:40
Instrument ID:	GCMSM	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	169939	9.34	278095	10.22	128510	13.50	158208	16.06	58434	6.86
Upper Limit [a]	339878	9.84	556190	10.72	257020	14.00	316416	16.56	116868	7.36
Lower Limit [b]	84970	8.84	139048	9.72	64255	13.00	79104	15.56	29217	6.36

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSM2591-BS	169939	9.34	278095	10.22	128510	13.50	158208	16.06	58434	6.86
MSM2591-MB	159032	9.34	250650	10.22	112759	13.50	147684	16.06	52554	6.86
ZZZZZZ	150540	9.34	237421	10.22	106351	13.50	144358	16.06	55517	6.87
ZZZZZZ	146657	9.34	226066	10.22	98789	13.50	125576	16.06	47151	6.86
ZZZZZZ	67183[c]	9.34	104936[c]	10.22	47436[c]	13.50	60638[c]	16.06	14752[c]	6.84
MC38153-1	157877	9.34	258190	10.22	112884	13.50	151103	16.06	104652	6.85
MC38153-2	160081	9.34	264455	10.22	115457	13.50	157374	16.06	90290	6.86
MC38153-3	154939	9.34	249096	10.22	109817	13.50	154761	16.06	98383	6.86
ZZZZZZ	163993	9.34	262330	10.22	117217	13.50	154796	16.06	71773	6.86
ZZZZZZ	160759	9.34	250750	10.22	112238	13.50	149645	16.06	59097	6.85
ZZZZZZ	158023	9.34	247712	10.22	108353	13.50	137154	16.06	57583	6.86
ZZZZZZ	164195	9.34	260445	10.22	112197	13.50	144536	16.06	68589	6.85
ZZZZZZ	39280[c]	9.34	61884[c]	10.22	29354[c]	13.50	39181[c]	16.06	5899[c]	6.84
ZZZZZZ	104731	9.34	166942	10.22	73739	13.50	98545	16.06	33144	6.84
ZZZZZZ	161712	9.34	250778	10.22	112002	13.50	148857	16.06	58841	6.86
ZZZZZZ	155089	9.34	244457	10.22	109791	13.50	147531	16.06	64801	6.85
ZZZZZZ	168705	9.34	268050	10.22	116763	13.50	152329	16.06	66137	6.86
ZZZZZZ	160094	9.34	254521	10.22	110599	13.50	144946	16.06	58909	6.86
ZZZZZZ	156307	9.34	246209	10.22	108602	13.50	144561	16.06	54799	6.86
ZZZZZZ	158054	9.34	251529	10.22	110554	13.50	147199	16.06	57170	6.86
ZZZZZZ	162922	9.34	260589	10.22	109867	13.50	135433	16.06	61898	6.87
ZZZZZZ	162946	9.34	258853	10.22	114209	13.50	146244	16.06	77604	6.86
MC38153-1MS	163867	9.34	262841	10.22	120018	13.50	154505	16.06	91425	6.86
MC38153-1MSD	46393[d]	9.34	74312[d]	10.22	39506[d]	13.50	48633[d]	16.06	16305[d]	6.83

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.
(d) Outside control limits due to possible matrix interference. Confirmed by MS/MSD.

Volatile Surrogate Recovery Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC38153-4	L91822.D	95	95	104
MSL4048-BS	L91816.D	99	98	95
MSL4048-BSD	L91817.D	95	100	97
MSL4048-MB	L91819.D	93	99	102

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	72-133%
S2 = Toluene-D8	85-114%
S3 = 4-Bromofluorobenzene	70-134%

Volatile Surrogate Recovery Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8260C **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC38153-1	M72772.D	121	91	88
MC38153-1	K87467.D	97	100	93
MC38153-2	M72773.D	123	91	87
MC38153-2	K87468.D	99	99	93
MC38153-3	M72774.D	121	93	86
MC38153-3	K87469.D	99	97	91
MC38153-1MS	K87470.D	97	102	98
MC38153-1MS	M72789.D	119	94	89
MC38153-1MSD	K87471.D	96	105	95
MC38153-1MSD	M72790.D	117	98	93
MSK2728-BS	K87463.D	95	106	96
MSK2728-MB	K87466.D	97	101	91
MSM2591-BS	M72766.D	117	94	89
MSM2591-MB	M72768.D	116	94	88

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	65-141%
S2 = Toluene-D8	65-129%
S3 = 4-Bromofluorobenzene	63-137%

GC/MS Semi-volatiles

7

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42779-MB	W21849.D	1	05/05/15	KD	04/22/15	OP42779	MSW933

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	500	62	ug/kg	
95-57-8	2-Chlorophenol	ND	250	11	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	500	13	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	500	14	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	500	81	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	1000	120	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	500	62	ug/kg	
95-48-7	2-Methylphenol	ND	500	20	ug/kg	
	3&4-Methylphenol	ND	500	24	ug/kg	
88-75-5	2-Nitrophenol	ND	500	13	ug/kg	
100-02-7	4-Nitrophenol	ND	1000	94	ug/kg	
87-86-5	Pentachlorophenol	ND	500	35	ug/kg	
108-95-2	Phenol	ND	250	14	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	500	12	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	500	12	ug/kg	
62-53-3	Aniline	ND	500	25	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	250	13	ug/kg	
85-68-7	Butyl benzyl phthalate	12.6	250	10	ug/kg	J
100-51-6	Benzyl Alcohol	ND	500	25	ug/kg	
91-58-7	2-Chloronaphthalene	ND	250	14	ug/kg	
106-47-8	4-Chloroaniline	ND	500	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	250	12	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	250	15	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	250	18	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	250	15	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	250	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	500	33	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	500	12	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	250	25	ug/kg	
132-64-9	Dibenzofuran	ND	100	14	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	250	26	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	250	7.8	ug/kg	
84-66-2	Diethyl phthalate	ND	250	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	250	14	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	28.7	250	9.2	ug/kg	J
118-74-1	Hexachlorobenzene	ND	250	16	ug/kg	

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42779-MB	W21849.D	1	05/05/15	KD	04/22/15	OP42779	MSW933

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	500	120	ug/kg	
67-72-1	Hexachloroethane	ND	250	12	ug/kg	
78-59-1	Isophorone	ND	250	11	ug/kg	
88-74-4	2-Nitroaniline	ND	500	12	ug/kg	
99-09-2	3-Nitroaniline	ND	500	27	ug/kg	
100-01-6	4-Nitroaniline	ND	500	12	ug/kg	
98-95-3	Nitrobenzene	ND	250	13	ug/kg	
62-75-9	n-Nitrosodimethylamine	ND	250	12	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	250	14	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	250	15	ug/kg	
110-86-1	Pyridine	ND	500	25	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	54%	20-114%
4165-62-2	Phenol-d5	56%	22-117%
118-79-6	2,4,6-Tribromophenol	72%	15-145%
4165-60-0	Nitrobenzene-d5	55%	17-118%
321-60-8	2-Fluorobiphenyl	55%	27-121%
1718-51-0	Terphenyl-d14	82%	39-142%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/kg	

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42780-MB	I95461.D	1	05/04/15	KD	04/22/15	OP42780	MSI3571

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	0.86	ug/kg	
208-96-8	Acenaphthylene	ND	5.0	0.76	ug/kg	
120-12-7	Anthracene	ND	5.0	1.1	ug/kg	
56-55-3	Benzo(a)anthracene	ND	5.0	2.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	5.0	2.0	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	5.0	2.2	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	1.4	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.5	ug/kg	
218-01-9	Chrysene	ND	5.0	1.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	1.4	ug/kg	
206-44-0	Fluoranthene	ND	5.0	1.5	ug/kg	
86-73-7	Fluorene	ND	5.0	0.98	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.2	ug/kg	
90-12-0	1-Methylnaphthalene	ND	100	25	ug/kg	
91-57-6	2-Methylnaphthalene	ND	100	25	ug/kg	
85-01-8	Phenanthrene	ND	5.0	1.0	ug/kg	
129-00-0	Pyrene	ND	5.0	1.5	ug/kg	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	56%	28-121%
321-60-8	2-Fluorobiphenyl	52%	36-110%
1718-51-0	Terphenyl-d14	85%	41-138%

Blank Spike Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42779-BS	W21850.D	1	05/05/15	KD	04/22/15	OP42779	MSW933

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic acid	2420	920	38	10-133
95-57-8	2-Chlorophenol	2420	1270	52	39-112
59-50-7	4-Chloro-3-methyl phenol	2420	1590	66	43-114
120-83-2	2,4-Dichlorophenol	2420	1520	63	42-118
105-67-9	2,4-Dimethylphenol	2420	1370	57	37-112
51-28-5	2,4-Dinitrophenol	2420	1230	51	10-137
534-52-1	4,6-Dinitro-o-cresol	2420	1610	67	10-149
95-48-7	2-Methylphenol	2420	1260	52	39-109
	3&4-Methylphenol	4840	2820	58	40-113
88-75-5	2-Nitrophenol	2420	1430	59	37-116
100-02-7	4-Nitrophenol	2420	1580	65	18-126
87-86-5	Pentachlorophenol	2420	1380	57	28-122
108-95-2	Phenol	2420	1240	51	38-114
95-95-4	2,4,5-Trichlorophenol	2420	1720	71	42-122
88-06-2	2,4,6-Trichlorophenol	2420	1690	70	42-120
62-53-3	Aniline	2420	924	38	24-86
101-55-3	4-Bromophenyl phenyl ether	2420	2150	89	53-130
85-68-7	Butyl benzyl phthalate	2420	2170	90	60-131
100-51-6	Benzyl Alcohol	2420	1620	67	10-125
91-58-7	2-Chloronaphthalene	2420	1920	79	50-124
106-47-8	4-Chloroaniline	2420	1240	51	33-97
111-91-1	bis(2-Chloroethoxy)methane	2420	1640	68	32-112
111-44-4	bis(2-Chloroethyl)ether	2420	1430	59	28-115
108-60-1	bis(2-Chloroisopropyl)ether	2420	1540	64	24-159
7005-72-3	4-Chlorophenyl phenyl ether	2420	2080	86	46-121
122-66-7	1,2-Diphenylhydrazine	2420	1980	82	48-126
121-14-2	2,4-Dinitrotoluene	2420	2270	94	50-125
606-20-2	2,6-Dinitrotoluene	2420	2200	91	46-131
91-94-1	3,3'-Dichlorobenzidine	2420	1760	73	41-146
132-64-9	Dibenzofuran	2420	1980	82	48-110
84-74-2	Di-n-butyl phthalate	2420	2060	85	57-118
117-84-0	Di-n-octyl phthalate	2420	2250	93	55-136
84-66-2	Diethyl phthalate	2420	2100	87	54-118
131-11-3	Dimethyl phthalate	2420	2080	86	54-118
117-81-7	bis(2-Ethylhexyl)phthalate	2420	2310	95	60-133
118-74-1	Hexachlorobenzene	2420	2180	90	51-133

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42779-BS	W21850.D	1	05/05/15	KD	04/22/15	OP42779	MSW933

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	2420	664	27	10-89
67-72-1	Hexachloroethane	2420	1450	60	33-109
78-59-1	Isophorone	2420	1460	60	36-103
88-74-4	2-Nitroaniline	2420	2240	93	52-121
99-09-2	3-Nitroaniline	2420	1630	67	45-110
100-01-6	4-Nitroaniline	2420	2040	84	47-113
98-95-3	Nitrobenzene	2420	1490	62	21-129
62-75-9	n-Nitrosodimethylamine	2420	1550	64	31-103
621-64-7	N-Nitroso-di-n-propylamine	2420	1540	64	36-118
86-30-6	N-Nitrosodiphenylamine	2420	1860	77	50-115
110-86-1	Pyridine	2420	1060	44	22-85

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	54%	20-114%
4165-62-2	Phenol-d5	59%	22-117%
118-79-6	2,4,6-Tribromophenol	76%	15-145%
4165-60-0	Nitrobenzene-d5	57%	17-118%
321-60-8	2-Fluorobiphenyl	66%	27-121%
1718-51-0	Terphenyl-d14	81%	39-142%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42780-BS	I95462.D	1	05/04/15	KD	04/22/15	OP42780	MSI3571

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	2420	1770	73	43-112
208-96-8	Acenaphthylene	2420	1650	68	43-96
120-12-7	Anthracene	2420	1850	76	52-108
56-55-3	Benzo(a)anthracene	2420	2260	93	28-153
50-32-8	Benzo(a)pyrene	2420	2370	98	50-123
205-99-2	Benzo(b)fluoranthene	2420	2250	93	27-156
191-24-2	Benzo(g,h,i)perylene	2420	2180	90	33-139
207-08-9	Benzo(k)fluoranthene	2420	2110	87	27-139
218-01-9	Chrysene	2420	2050	85	28-137
53-70-3	Dibenzo(a,h)anthracene	2420	2220	92	37-144
206-44-0	Fluoranthene	2420	2040	84	32-138
86-73-7	Fluorene	2420	1870	77	31-129
193-39-5	Indeno(1,2,3-cd)pyrene	2420	2250	93	55-126
90-12-0	1-Methylnaphthalene	2420	1600	66	47-102
91-57-6	2-Methylnaphthalene	2420	1610	67	47-104
85-01-8	Phenanthrene	2420	1840	76	27-129
129-00-0	Pyrene	2420	2030	84	43-128

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	58%	28-121%
321-60-8	2-Fluorobiphenyl	60%	36-110%
1718-51-0	Terphenyl-d14	83%	41-138%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42779-MS	W21851.D	1	05/05/15	KD	04/22/15	OP42779	MSW933
OP42779-MSD	W21852.D	1	05/05/15	KD	04/22/15	OP42779	MSW933
MC38153-1	W21853.D	1	05/05/15	KD	04/22/15	OP42779	MSW933

The QC reported here applies to the following samples: Method: SW846 8270D

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	MC38153-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic acid	ND		2950	244	8* [a]	2980	184	6* [a]	28	10-170/30
95-57-8	2-Chlorophenol	ND		2950	1640	56	2980	1510	51	8	19-127/30
59-50-7	4-Chloro-3-methyl phenol	ND		2950	2100	71	2980	1900	64	10	29-124/30
120-83-2	2,4-Dichlorophenol	ND		2950	1990	67	2980	1790	60	11	23-133/30
105-67-9	2,4-Dimethylphenol	ND		2950	1880	64	2980	1690	57	11	10-133/30
51-28-5	2,4-Dinitrophenol	ND		2950	705	24	2980	1180	40	50* [b]	10-124/30
534-52-1	4,6-Dinitro-o-cresol	ND		2950	1840	62	2980	2050	69	11	10-147/30
95-48-7	2-Methylphenol	ND		2950	1650	56	2980	1490	50	10	18-128/30
	3&4-Methylphenol	ND		5900	3640	62	5970	3300	55	10	16-131/30
88-75-5	2-Nitrophenol	ND		2950	1890	64	2980	1700	57	11	10-132/30
100-02-7	4-Nitrophenol	ND		2950	1950	66	2980	1850	62	5	13-126/30
87-86-5	Pentachlorophenol	ND		2950	1900	64	2980	1840	62	3	10-150/30
108-95-2	Phenol	ND		2950	1610	55	2980	1410	47	13	20-128/30
95-95-4	2,4,5-Trichlorophenol	ND		2950	2260	77	2980	2030	68	11	29-128/30
88-06-2	2,4,6-Trichlorophenol	ND		2950	2260	77	2980	2000	67	12	20-138/30
62-53-3	Aniline	ND		2950	932	32	2980	846	28	10	10-98/30
101-55-3	4-Bromophenyl phenyl ether	ND		2950	2870	97	2980	2650	89	8	37-144/30
85-68-7	Butyl benzyl phthalate	21.2	JB	2950	2930	99	2980	2960	99	1	44-144/30
100-51-6	Benzyl Alcohol	ND		2950	2060	70	2980	1880	63	9	10-127/30
91-58-7	2-Chloronaphthalene	ND		2950	2560	87	2980	2350	79	9	37-137/30
106-47-8	4-Chloroaniline	ND		2950	1320	45	2980	1210	41	9	10-121/30
111-91-1	bis(2-Chloroethoxy)methane	ND		2950	2160	73	2980	1930	65	11	19-122/30
111-44-4	bis(2-Chloroethyl)ether	ND		2950	1830	62	2980	1720	58	6	20-119/30
108-60-1	bis(2-Chloroisopropyl)ether	ND		2950	1990	67	2980	1870	63	6	17-163/30
7005-72-3	4-Chlorophenyl phenyl ether	ND		2950	2730	92	2980	2540	85	7	31-137/30
122-66-7	1,2-Diphenylhydrazine	ND		2950	2630	89	2980	2460	82	7	33-137/30
121-14-2	2,4-Dinitrotoluene	ND		2950	3040	103	2980	2870	96	6	37-129/30
606-20-2	2,6-Dinitrotoluene	ND		2950	2950	100	2980	2680	90	10	32-140/30
91-94-1	3,3'-Dichlorobenzidine	ND		2950	1750	59	2980	1810	61	3	10-165/30
132-64-9	Dibenzofuran	ND		2950	2600	88	2980	2380	80	9	28-131/30
84-74-2	Di-n-butyl phthalate	ND		2950	2770	94	2980	2760	93	0	33-143/30
117-84-0	Di-n-octyl phthalate	169	J	2950	3160	101	2980	3170	101	0	41-141/30
84-66-2	Diethyl phthalate	ND		2950	2750	93	2980	2610	88	5	35-136/30
131-11-3	Dimethyl phthalate	ND		2950	2750	93	2980	2490	83	10	37-134/30
117-81-7	bis(2-Ethylhexyl)phthalate	76.7	JB	2950	3100	102	2980	3090	101	0	36-153/30
118-74-1	Hexachlorobenzene	ND		2950	2940	100	2980	2790	94	5	37-145/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42779-MS	W21851.D	1	05/05/15	KD	04/22/15	OP42779	MSW933
OP42779-MSD	W21852.D	1	05/05/15	KD	04/22/15	OP42779	MSW933
MC38153-1	W21853.D	1	05/05/15	KD	04/22/15	OP42779	MSW933

The QC reported here applies to the following samples: Method: SW846 8270D

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	MC38153-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		2950	881	30	2980	764	26	14	10-84/30
67-72-1	Hexachloroethane	ND		2950	1890	64	2980	1830	61	3	10-137/30
78-59-1	Isophorone	ND		2950	1910	65	2980	1750	59	9	26-111/30
88-74-4	2-Nitroaniline	ND		2950	2950	100	2980	2650	89	11	31-136/30
99-09-2	3-Nitroaniline	ND		2950	2060	70	2980	1980	66	4	18-133/30
100-01-6	4-Nitroaniline	ND		2950	2580	87	2980	2460	82	5	19-127/30
98-95-3	Nitrobenzene	ND		2950	1970	67	2980	1820	61	8	12-136/30
62-75-9	n-Nitrosodimethylamine	ND		2950	1920	65	2980	1920	64	0	17-105/30
621-64-7	N-Nitroso-di-n-propylamine	ND		2950	2000	68	2980	1830	61	9	24-131/30
86-30-6	N-Nitrosodiphenylamine	ND		2950	2520	85	2980	2390	80	5	16-156/30
110-86-1	Pyridine	ND		2950	1370	46	2980	1450	49	6	10-99/30

CAS No.	Surrogate Recoveries	MS	MSD	MC38153-1	Limits
367-12-4	2-Fluorophenol	56%	51%	58%	20-114%
4165-62-2	Phenol-d5	61%	55%	60%	22-117%
118-79-6	2,4,6-Tribromophenol	84%	77%	75%	15-145%
4165-60-0	Nitrobenzene-d5	59%	54%	59%	17-118%
321-60-8	2-Fluorobiphenyl	69%	62%	64%	27-121%
1718-51-0	Terphenyl-d14	87%	86%	79%	39-142%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
(b) High RPD due to possible matrix interference and/or sample non-homogeneity.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42780-MS	I95463.D	1	05/04/15	KD	04/22/15	OP42780	MSI3571
OP42780-MSD	I95464.D	1	05/04/15	KD	04/22/15	OP42780	MSI3571
MC38153-1	I95465.D	1	05/04/15	KD	04/22/15	OP42780	MSI3571

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	MC38153-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	4.0	J	2950	2300	78	2980	2140	72	7	42-113/30
208-96-8	Acenaphthylene	2.9	J	2950	2170	73	2980	1990	67	9	33-102/30
120-12-7	Anthracene	1.9	J	2950	2500	85	2980	2380	80	5	45-112/30
56-55-3	Benzo(a)anthracene	3.8	J	2950	3040	103	2980	3020	101	1	43-136/30
50-32-8	Benzo(a)pyrene	3.1	J	2950	3180	108	2980	3170	106	0	39-125/30
205-99-2	Benzo(b)fluoranthene	4.3	J	2950	3140	106	2980	3020	101	4	35-143/30
191-24-2	Benzo(g,h,i)perylene	2.7	J	2950	2850	96	2980	2890	97	1	38-128/30
207-08-9	Benzo(k)fluoranthene	ND		2950	2700	91	2980	2740	92	1	42-123/30
218-01-9	Chrysene	8.2		2950	2720	92	2980	2720	91	0	44-119/30
53-70-3	Dibenzo(a,h)anthracene	ND		2950	2900	98	2980	2910	98	0	43-133/30
206-44-0	Fluoranthene	4.3	J	2950	2750	93	2980	2660	89	3	30-137/30
86-73-7	Fluorene	2.5	J	2950	2450	83	2980	2300	77	6	45-118/30
193-39-5	Indeno(1,2,3-cd)pyrene	1.5	J	2950	2950	100	2980	2990	100	1	35-133/30
90-12-0	1-Methylnaphthalene	ND		2950	2130	72	2980	2010	67	6	33-110/30
91-57-6	2-Methylnaphthalene	ND		2950	2150	73	2980	2030	68	6	36-109/30
85-01-8	Phenanthrene	12.7		2950	2450	83	2980	2380	79	3	41-115/30
129-00-0	Pyrene	13.4		2950	2700	91	2980	2630	88	3	36-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC38153-1	Limits
367-12-4	2-Fluorophenol	60%	55%		10-76%
4165-62-2	Phenol-d5	65%	60%		10-81%
118-79-6	2,4,6-Tribromophenol	78%	74%		10-92%
4165-60-0	Nitrobenzene-d5	61%	56%	61%	28-121%
321-60-8	2-Fluorobiphenyl	63%	56%	58%	36-110%
1718-51-0	Terphenyl-d14	89%	84%	78%	41-138%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSI3571-CC3561	**Injection Date:**	05/04/15
Lab File ID:	I95436.D	**Injection Time:**	08:24
Instrument ID:	GCMSI	**Method:**	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	215306	3.55	464171	4.59	274445	6.10	503389	7.42	415785	10.18	1089849	11.61
Upper Limit [a]	430612	4.05	928342	5.09	548890	6.60	1006778	7.92	831570	10.68	2179698	12.11
Lower Limit [b]	107653	3.05	232086	4.09	137223	5.60	251695	6.92	207893	9.68	544925	11.11

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP42870-MB	249017	3.55	526838	4.59	306349	6.10	531272	7.42	414526	10.18	1041589	11.61
OP42870-BS	273140	3.55	596477	4.59	344316	6.11	633453	7.42	495854	10.19	1246617	11.62
OP42870-MS	274246	3.55	595489	4.59	343952	6.11	619693	7.42	488340	10.19	1258003	11.62
OP42870-MSD	259939	3.55	580787	4.59	336553	6.11	609743	7.42	487241	10.19	1255843	11.62
MC38317-5	249991	3.55	545988	4.59	326337	6.10	576378	7.42	469209	10.18	1240110	11.61
ZZZZZZ	203879	3.55	452056	4.59	272092	6.10	498827	7.42	422218	10.18	1127896	11.61
ZZZZZZ	190281	3.55	419537	4.59	249894	6.10	453970	7.42	393620	10.18	1070346	11.61
ZZZZZZ	271900	3.55	583457	4.59	342220	6.10	603023	7.42	479118	10.18	1208823	11.61
ZZZZZZ	249031	3.55	530833	4.59	313974	6.10	569237	7.42	451605	10.18	1163231	11.61
ZZZZZZ	244610	3.55	532487	4.59	314242	6.10	559796	7.42	453251	10.18	1197947	11.61
ZZZZZZ	269179	3.55	578216	4.59	333020	6.10	570240	7.42	434383	10.18	1084866	11.61
ZZZZZZ	242558	3.55	521107	4.59	305806	6.10	551501	7.42	447298	10.18	1193022	11.61
ZZZZZZ	229419	3.55	500370	4.59	290765	6.10	530580	7.42	456850	10.18	1191142	11.61
ZZZZZZ	144416	3.55	324515	4.59	197887	6.10	370621	7.41	324553	10.18	894342	11.61
ZZZZZZ	139727	3.55	313883	4.59	189704	6.10	355306	7.41	302554	10.18	828008	11.60
ZZZZZZ	218952	3.55	479809	4.59	285098	6.10	525879	7.42	432808	10.18	1147012	11.61
ZZZZZZ	235353	3.55	506188	4.59	296875	6.10	534579	7.42	431501	10.18	1124277	11.61
OP42917-MB	261771	3.55	567037	4.59	333279	6.10	600185	7.42	486305	10.18	1246064	11.61
OP42917-BS	254028	3.55	552721	4.59	319738	6.11	591198	7.42	482376	10.19	1217918	11.62
OP42917-BSD	215722	3.55	486334	4.59	287365	6.11	540487	7.42	438078	10.19	1130416	11.61
ZZZZZZ	258823	3.55	566738	4.59	333535	6.11	602278	7.42	502185	10.18	1293554	11.61
ZZZZZZ	247313	3.55	524949	4.59	314114	6.11	572556	7.42	470338	10.18	1243465	11.61
ZZZZZZ	262977	3.55	569367	4.59	338451	6.10	603776	7.42	483978	10.18	1240507	11.61
OP42780-MB	272697	3.55	592738	4.59	342468	6.10	601865	7.42	451930	10.18	1086744	11.61
OP42780-BS	275412	3.56	607630	4.59	344671	6.11	624333	7.42	455847	10.19	1061331	11.61
OP42780-MS	284558	3.56	628133	4.59	355237	6.11	631433	7.42	449066	10.19	1035646	11.61
OP42780-MSD	260229	3.55	585520	4.59	338728	6.11	606100	7.42	451322	10.19	1077670	11.62
MC38153-1	266156	3.55	585921	4.59	350589	6.10	613788	7.42	458587	10.18	1114032	11.61

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

Semivolatile Internal Standard Area Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSI3571-CC3561	**Injection Date:**	05/04/15
Lab File ID:	I95436.D	**Injection Time:**	08:24
Instrument ID:	GCMSI	**Method:**	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSI3572-CC3561	**Injection Date:**	05/05/15
Lab File ID:	I95470.D	**Injection Time:**	08:17
Instrument ID:	GCMSI	**Method:**	SW846 8270D BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	165683	3.55	370402	4.59	224860	6.10	413790	7.41	335675	10.18	894436	11.60
Upper Limit [a]	331366	4.05	740804	5.09	449720	6.60	827580	7.91	671350	10.68	1788872	12.10
Lower Limit [b]	82842	3.05	185201	4.09	112430	5.60	206895	6.91	167838	9.68	447218	11.10

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
MC38153-3	228225	3.55	499287	4.59	294568	6.10	522892	7.41	417606	10.18	1056643	11.61
OP42912-MB	161247	3.55	360332	4.59	219620	6.10	424812	7.41	359239	10.18	952304	11.60
OP42912-BS	107408	3.55	259929	4.59	166132	6.10	325013	7.42	282796	10.18	739933	11.60
OP42912-MS1	130807	3.55	309916	4.59	190136	6.10	366481	7.42	302357	10.18	774611	11.61
OP42912-MSD1	164167	3.55	380720	4.59	230848	6.10	436523	7.42	353013	10.18	898298	11.61
MC38392-3A	247333	3.55	535878	4.59	317714	6.10	574893	7.41	435511	10.18	1070284	11.60
ZZZZZZ	237264	3.55	519785	4.59	307262	6.10	549417	7.42	448247	10.18	1124703	11.61
ZZZZZZ	235758	3.55	525255	4.59	314438	6.10	556312	7.41	420122	10.18	1020991	11.61
ZZZZZZ	261808	3.55	579257	4.59	337561	6.10	600889	7.41	432841	10.18	1019869	11.61
ZZZZZZ	233557	3.55	516984	4.59	309369	6.10	555856	7.41	423639	10.18	1061547	11.61
OP42887-MB	135747	3.55	312209	4.59	192203	6.10	363031	7.41	310713	10.18	843768	11.60
MC38153-2	239918	3.55	530227	4.59	313984	6.10	565135	7.41	428827	10.18	1060407	11.61
OP42887-BS	106151	3.55	253416	4.59	154678	6.10	304969	7.41	280934	10.18	769590	11.61
OP42887-BSD	107108	3.55	253181	4.59	150796	6.10	292779	7.41	261713	10.18	721864	11.61
ZZZZZZ	126297	3.55	281719	4.59	171468	6.10	329781	7.41	286765	10.17	790392	11.60
ZZZZZZ	99324	3.55	229504	4.59	139954	6.10	262949	7.41	233540	10.17	676733	11.60
ZZZZZZ	107620	3.55	249199	4.59	153438	6.10	285140	7.41	253165	10.17	722786	11.60
ZZZZZZ	89140	3.55	208674	4.59	130113	6.10	247422	7.41	230199	10.17	675423	11.60
OP42789-MB	88717	3.55	214825	4.59	137697	6.10	271715	7.41	258400	10.18	749732	11.60
OP42789-BS	99843	3.55	231619	4.59	139030	6.10	275422	7.41	257950	10.18	712037	11.61
OP42789-MS	92386	3.55	213005	4.59	128319	6.10	261319	7.41	258790	10.18	737501	11.61
OP42789-MSD	78295[c]	3.55	182892[c]	4.59	110515[c]	6.10	225967	7.41	225281	10.18	650011	11.60
MC38000-33	113795	3.55	259494	4.59	158350	6.10	308759	7.41	270837	10.18	765590	11.60
ZZZZZZ	170918	3.55	372737	4.59	218622	6.10	393518	7.41	312450	10.18	814258	11.61
ZZZZZZ	109128	3.55	250240	4.59	154542	6.10	295509	7.41	263203	10.18	750492	11.61
ZZZZZZ	126339	3.55	281080	4.59	170877	6.10	319756	7.41	271056	10.18	726546	11.61

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSI3572-CC3561	**Injection Date:**	05/05/15
Lab File ID:	I95470.D	**Injection Time:**	08:17
Instrument ID:	GCMSI	**Method:**	SW846 8270D BY SIM

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Outside control limits due to possible matrix interference.

Semivolatile Internal Standard Area Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSW933-CC902	**Injection Date:**	05/05/15
Lab File ID:	W21848.D	**Injection Time:**	09:07
Instrument ID:	GCMSW	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	276511	4.92	1034129	6.02	592230	7.56	1071680	8.85	1114544	11.34	1141222	12.98
Upper Limit [a]	553022	5.42	2068258	6.52	1184460	8.06	2143360	9.35	2229088	11.84	2282444	13.48
Lower Limit [b]	138256	4.42	517065	5.52	296115	7.06	535840	8.35	557272	10.84	570611	12.48

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP42779-MB	326609	4.91	1211226	6.02	720673	7.56	1232958	8.84	1319546	11.33	1301856	12.98
OP42779-BS	323489	4.91	1188570	6.02	686485	7.56	1193205	8.85	1213238	11.33	1192800	12.98
OP42779-MS	329369	4.92	1192015	6.02	687179	7.56	1180454	8.85	1191969	11.33	1159220	12.98
OP42779-MSD	315601	4.92	1150003	6.02	664374	7.56	1137987	8.85	1147170	11.34	1114148	12.98
MC38153-1	337853	4.91	1241914	6.02	724071	7.56	1195067	8.84	1202660	11.33	1152042	12.98
MC38153-2	322792	4.91	1187756	6.02	705415	7.56	1192080	8.84	1204294	11.33	1158774	12.98
MC38153-3	323977	4.91	1199866	6.02	710424	7.56	1190844	8.84	1214353	11.33	1146324	12.98
OP42788-MB	287147	4.91	1058101	6.02	623816	7.56	1078524	8.84	1164326	11.33	1173695	12.98
OP42788-BS	249361	4.91	909002	6.02	522241	7.56	922013	8.84	959590	11.33	971382	12.97
OP42788-MS	285871	4.91	1064666	6.02	611372	7.56	1058014	8.84	1104269	11.33	1120893	12.98
OP42788-MSD	239090	4.91	884964	6.02	516472	7.56	910809	8.84	954194	11.33	975799	12.98
MC38000-32	259783	4.91	957935	6.02	569945	7.56	966397	8.84	997955	11.33	1001379	12.97
ZZZZZZ	251782	4.91	922962	6.02	549898	7.56	927537	8.84	963385	11.33	973726	12.97
ZZZZZZ	290739	4.91	1060302	6.02	630953	7.56	1070757	8.84	1102211	11.33	1114676	12.98
ZZZZZZ	255023	4.91	959400	6.02	549825	7.56	903932	8.84	920832	11.33	948246	12.98
ZZZZZZ	277369	4.91	1001867	6.02	596148	7.56	1008058	8.84	1025988	11.33	1027123	12.98
ZZZZZZ	240799	4.91	889049	6.02	528153	7.56	892655	8.84	934721	11.33	926912	12.98
OP42804-MB	340593	4.91	1238554	6.02	738999	7.56	1259207	8.84	1321872	11.33	1332183	12.98
OP42804-BS	298343	4.91	1107412	6.02	644672	7.56	1137534	8.84	1201465	11.33	1228209	12.98
OP42804-MS	306523	4.91	1112636	6.02	643449	7.56	1116982	8.84	1140152	11.33	1157227	12.98
OP42804-MSD	300835	4.91	1107024	6.02	636346	7.56	1115074	8.84	1154206	11.33	1159166	12.98
MC38190-12	311140	4.91	1145865	6.02	686063	7.56	1153440	8.84	1222413	11.33	1228937	12.98
ZZZZZZ	337085	4.91	1219285	6.02	716008	7.56	1207878	8.84	1245973	11.33	1254039	12.98
ZZZZZZ	301049	4.91	1092719	6.02	658283	7.56	1116037	8.84	1168339	11.33	1168828	12.97
ZZZZZZ	337212	4.91	1219857	6.02	734765	7.56	1235174	8.84	1310386	11.33	1330090	12.98
ZZZZZZ	316819	4.91	1161680	6.02	689026	7.56	1174335	8.84	1257050	11.33	1278022	12.98
ZZZZZZ	337822	4.91	1223983	6.02	713777	7.56	1220903	8.84	1278213	11.33	1292629	12.98

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

Semivolatile Internal Standard Area Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSW933-CC902	**Injection Date:**	05/05/15
Lab File ID:	W21848.D	**Injection Time:**	09:07
Instrument ID:	GCMSW	**Method:**	SW846 8270D

Lab	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Surrogate Recovery Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC38153-1	W21853.D	58	60	75	59	64	79
MC38153-2	W21854.D	49	51	75	51	55	89
MC38153-3	W21855.D	50	56	64	56	58	85
OP42779-BS	W21850.D	54	59	76	57	66	81
OP42779-MB	W21849.D	54	56	72	55	55	82
OP42779-MS	W21851.D	56	61	84	59	69	87
OP42779-MSD	W21852.D	51	55	77	54	62	86

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	20-114%
S2 = Phenol-d5	22-117%
S3 = 2,4,6-Tribromophenol	15-145%
S4 = Nitrobenzene-d5	17-118%
S5 = 2-Fluorobiphenyl	27-121%
S6 = Terphenyl-d14	39-142%

Semivolatile Surrogate Recovery Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC38153-1	I95465.D	61	58	78
MC38153-2	I95484.D	53	50	88
MC38153-3	I95472.D	58	54	83
OP42780-BS	I95462.D	58	60	83
OP42780-MB	I95461.D	56	52	85
OP42780-MS	I95463.D	61	63	89
OP42780-MSD	I95464.D	56	56	84

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	28-121%
S2 = 2-Fluorobiphenyl	36-110%
S3 = Terphenyl-d14	41-138%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42812-MB	BB62956.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425

The QC reported here applies to the following samples: **Method:** SW846 8011

MC38153-5

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	85%	60-140%
460-00-4	Bromofluorobenzene (S)	103%	60-140%

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42837-MB	BB62988.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427

The QC reported here applies to the following samples: **Method:** SW846 8011

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.55	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.5	0.41	ug/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	101%	70-170%
460-00-4	Bromofluorobenzene (S)	108%	70-170%

Method Blank Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBD3347-MB	BD69696.D	1	04/22/15	AF	n/a	n/a	GBD3347

The QC reported here applies to the following samples: **Method:** SW846 8015

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	5.0	0.52	mg/kg	

CAS No.	Surrogate Recoveries		Limits
	2,3,4-Trifluorotoluene	104%	62-131%

Blank Spike Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42812-BS	BB62957.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425

The QC reported here applies to the following samples: **Method:** SW846 8011

MC38153-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.077	108	45-149
106-93-4	1,2-Dibromoethane	0.071	0.065	92	51-149

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	78%	60-140%
460-00-4	Bromofluorobenzene (S)	99%	60-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42837-BS	BB62989.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427
OP42837-BSD	BB62990.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427

The QC reported here applies to the following samples: **Method:** SW846 8011

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	32.9	32.3	98	31.6	95	2	56-140/30
106-93-4	1,2-Dibromoethane	32.9	33.2	101	32.6	98	2	59-133/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	Bromofluorobenzene (S)	100%	99%	70-170%
460-00-4	Bromofluorobenzene (S)	101%	100%	70-170%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBD3347-BSP	BD69697.D	1	04/22/15	AF	n/a	n/a	GBD3347
GBD3347-BSD	BD69698.D	1	04/22/15	AF	n/a	n/a	GBD3347

The QC reported here applies to the following samples: **Method:** SW846 8015

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	32.5	30.3	93	30.6	94	1	84-112/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	2,3,4-Trifluorotoluene	104%	101%	62-131%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42812-MS	BB62958.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425
OP42812-MSD	BB62959.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425
MC38200-2	BB62960.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425

The QC reported here applies to the following samples: **Method:** SW846 8011

MC38153-5

CAS No.	Compound	MC38200-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.079	111	0.071	0.082	115	4	31-169/30
106-93-4	1,2-Dibromoethane	ND		0.071	0.068	96	0.071	0.072	101	6	34-175/30

CAS No.	Surrogate Recoveries	MS	MSD	MC38200-2	Limits
460-00-4	Bromofluorobenzene (S)	80%	86%	85%	60-140%
460-00-4	Bromofluorobenzene (S)	99%	107%	99%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42837-MS	BB62994.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427
OP42837-MSD	BB62995.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427
MC38153-1	BB62996.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427

The QC reported here applies to the following samples: Method: SW846 8011

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	MC38153-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		39.2	45.9	117	39.4	47.3	120	3	50-181/30
106-93-4	1,2-Dibromoethane	ND		39.2	41.3	105	39.4	41.5	106	0	74-147/30

CAS No.	Surrogate Recoveries	MS	MSD	MC38153-1	Limits
460-00-4	Bromofluorobenzene (S)	113%	95%	107%	70-170%
460-00-4	Bromofluorobenzene (S)	113%	99%	114%	70-170%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC38153-1MS	BD69702.D	1	04/22/15	AF	n/a	n/a	GBD3347
MC38153-1MSD	BD69703.D	1	04/22/15	AF	n/a	n/a	GBD3347
MC38153-1	BD69701.D	1	04/22/15	AF	n/a	n/a	GBD3347

The QC reported here applies to the following samples: **Method:** SW846 8015

MC38153-1, MC38153-2, MC38153-3

CAS No.	Compound	MC38153-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	ND		82.3	76.8	93	82.3	81.0	98	5	63-134/20

CAS No.	Surrogate Recoveries	MS	MSD	MC38153-1	Limits
	2,3,4-Trifluorotoluene	100%	103%	99%	62-131%

8.4.3

8

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8011 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC38153-5	BB62961.D	82	98
OP42812-BS	BB62957.D	78	99
OP42812-MB	BB62956.D	85	103
OP42812-MS	BB62958.D	80	99
OP42812-MSD	BB62959.D	86	107

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	60-140%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

Volatile Surrogate Recovery Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8011 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC38153-1	BB62996.D	107	114
MC38153-2	BB62997.D	103	109
MC38153-3	BB62999.D	111	114
OP42837-BS	BB62989.D	100	101
OP42837-BSD	BB62990.D	99	100
OP42837-MB	BB62988.D	101	108
OP42837-MS	BB62994.D	113	113
OP42837-MSD	BB62995.D	95	99

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	70-170%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

Volatile Surrogate Recovery Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8015	**Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
MC38153-1	BD69701.D	99
MC38153-2	BD69700.D	104
MC38153-3	BD69699.D	103
GBD3347-BSD	BD69698.D	101
GBD3347-BSP	BD69697.D	104
GBD3347-MB	BD69696.D	104
MC38153-1MS	BD69702.D	100
MC38153-1MSD	BD69703.D	103

Surrogate Compounds	Recovery Limits
S1 = 2,3,4-Trifluorotoluene	62-131%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBB3425-ICC3425	**Injection Date:**	04/27/15
Lab File ID:	BB62952.D	**Injection Time:**	23:58
Instrument ID:	GCBB	**Method:**	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	6.87	7.23

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP42812-MB	BB62956.D	04/28/15	01:55	6.87	7.22
OP42812-BS	BB62957.D	04/28/15	02:25	6.87	7.22
OP42812-MS	BB62958.D	04/28/15	02:54	6.87	7.22
OP42812-MSD	BB62959.D	04/28/15	03:24	6.87	7.22
MC38200-2	BB62960.D	04/28/15	03:53	6.87	7.22
MC38153-5	BB62961.D	04/28/15	04:22	6.87	7.22
ZZZZZZ	BB62962.D	04/28/15	04:51	6.87	7.22
ZZZZZZ	BB62963.D	04/28/15	05:20	6.87	7.22
ZZZZZZ	BB62964.D	04/28/15	05:49	6.87	7.22
ZZZZZZ	BB62965.D	04/28/15	06:17	6.87	7.22

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBB3427-ICC3427	**Injection Date:**	04/28/15
Lab File ID:	BB62984.D	**Injection Time:**	17:10
Instrument ID:	GCBB	**Method:**	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	6.87	7.22

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP42837-MB	BB62988.D	04/28/15	19:06	6.87	7.22
OP42837-BS	BB62989.D	04/28/15	19:35	6.87	7.22
OP42837-BSD	BB62990.D	04/28/15	20:04	6.86	7.22
OP42847-MB	BB62991.D	04/28/15	20:33	6.87	7.22
OP42847-BS	BB62992.D	04/28/15	21:02	6.87	7.22
OP42847-BSD	BB62993.D	04/28/15	21:32	6.87	7.22
OP42837-MS	BB62994.D	04/28/15	22:02	6.86	7.21
OP42837-MSD	BB62995.D	04/28/15	22:31	6.87	7.22
MC38153-1	BB62996.D	04/28/15	23:00	6.87	7.22
MC38153-2	BB62997.D	04/28/15	23:30	6.87	7.21

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBB3427-CC3427	**Injection Date:**	04/28/15
Lab File ID:	BB62998.D	**Injection Time:**	23:58
Instrument ID:	GCBB	**Method:**	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	6.87	7.22

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
MC38153-3	BB62999.D	04/29/15	00:28	6.87	7.21
ZZZZZZ	BB63000.D	04/29/15	00:57	6.87	7.22
ZZZZZZ	BB63001.D	04/29/15	01:27	6.86	7.21
ZZZZZZ	BB63002.D	04/29/15	01:57	6.87	7.21
ZZZZZZ	BB63003.D	04/29/15	02:26	6.87	7.21
ZZZZZZ	BB63004.D	04/29/15	02:55	6.87	7.21
ZZZZZZ	BB63005.D	04/29/15	03:25	6.87	7.21
ZZZZZZ	BB63006.D	04/29/15	03:55	6.86	7.21
OP42847-MS	BB63007.D	04/29/15	04:25	6.86	7.21
OP42847-MSD	BB63008.D	04/29/15	04:54	6.87	7.21

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBD3347-CC3249	**Injection Date:**	04/22/15
Lab File ID:	BD69695.D	**Injection Time:**	08:00
Instrument ID:	GCBD	**Method:**	SW846 8015

	S1 [a] RT
Check Std	21.23

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
GBD3347-MB	BD69696.D	04/22/15	08:39	21.23
GBD3347-BSP	BD69697.D	04/22/15	09:17	21.23
GBD3347-BSD	BD69698.D	04/22/15	09:56	21.23
MC38153-3	BD69699.D	04/22/15	10:35	21.23
MC38153-2	BD69700.D	04/22/15	11:13	21.23
MC38153-1	BD69701.D	04/22/15	11:52	21.23
MC38153-1MS	BD69702.D	04/22/15	12:32	21.23
MC38153-1MSD	BD69703.D	04/22/15	13:11	21.23

Surrogate Compounds

S1 = 2,3,4-Trifluorotoluene

(a) Retention time from GC signal #1

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: MC38153
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample: MC38153-1 **Analyzed:** 23-APR-15 by HS **Method:** SM 2540G-97 MOD
ClientID: VMP-43-042015(10-11)

Wet Weight (Total)	34.249	g
Tare Weight	24.001	g
Dry Weight (Total)	32.545	g
Solids, Percent	83.4	%

Sample: MC38153-2 **Analyzed:** 23-APR-15 by HS **Method:** SM 2540G-97 MOD
ClientID: VMP-43-042015(20-21)

Wet Weight (Total)	29.48	g
Tare Weight	19.428	g
Dry Weight (Total)	28.841	g
Solids, Percent	93.6	%

Sample: MC38153-3 **Analyzed:** 23-APR-15 by HS **Method:** SM 2540G-97 MOD
ClientID: VMP-43-042015(30-31)

Wet Weight (Total)	32.005	g
Tare Weight	18.419	g
Dry Weight (Total)	31.535	g
Solids, Percent	96.5	%

e-Hardcopy 2.0
Automated Report

Technical Report for

Shell Oil

URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

21563720.18000

SGS Accutest Job Number: MC38192

Sampling Date: 04/22/15

Report to:

AECOM, INC.

elizabeth.kunkel@aecom.com

ATTN: Elizabeth Kunkel

Total number of pages in report: 138

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

H. (Brad) Madadian
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO (MA00136) MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

SGS ACCUTEST

October 28, 2016

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

RE: SGS Accutest Job # MC38192

Dear Elizabeth Kunkel

As you are aware, SGS Accutest Inc. - Marlborough has been conducting an extensive review of data associated with some historical Gas Chromatography-Mass Spectroscopy volatiles analyses. As a result of this review it was determined that some revisions of the original test report for this job were needed. These corrections have been incorporated into the revised report.

Please be assured that corrective actions have been put in place to address this matter and prevent a recurrence.

We apologize for any inconvenience that this issue may have caused. Please don't hesitate to contact us if we can be of further assistance.

Sincerely,

H. (Brad) Madadian

Regional Laboratory Director
SGS Accutest Inc. - Marlborough

Sections: 1 2 3 4 5 6 7 8 9

Table of Contents

Sample Summary

Shell Oil

Job No: MC38192

URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Project No: 21563720.18000

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC38192-1	04/22/15	10:15	MPM	04/23/15	SO	Soil	VMP-34-042215 (20-22)
MC38192-2	04/22/15	10:15	MPM	04/23/15	SO	Soil	VMP-34-042215 (20-22)-DUP
MC38192-3	04/22/15	10:45	MPM	04/23/15	AQ	Equipment Blank	VMP-34-042215 (30-32)-EB
MC38192-4	04/22/15	11:10	MPM	04/23/15	SO	Soil	VMP-34-042215 (30-32)
MC38192-5	04/22/15	09:30	MPM	04/23/15	AQ	Trip Blank Water	TB-042215-HCL
MC38192-6	04/22/15	09:30	MPM	04/23/15	AQ	Trip Blank Water	TB-042215-ST

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: She O **Job No** MC38 92

Site: URSMOSTL:Roxana VMP So Samp e, 900 South Centra Avenue, **Report Date** 0/28/20 6 4:37: 9 P

4 Samp e(s), 2 Tr p B ank(s) were co ected on 04/22/20 5 and were rece ved at SGS Accutest New Eng and on 04/23/20 5 proper y preserved, at 0 4 Deg C and ntact These Samp es rece ved a job number of MC38 92 A st ng of the Laboratory Samp e ID, C ent Samp e ID and dates of co ect on are presented n the Resu ts Summary Sect on of th s report -Ch orohexane, Benzeneth o , D benz(a,h)acr d ne, Indene, Qu no ne were searched n the brary search and reported on y f detect ons were found

Except as noted be ow, a method spec f ed ca brat ons and qua ty contro performance cr ter a were met for th s job For more nformat on, p ease refer to QC summary pages

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** MSL405

- A method b anks for th s batch meet method spec f c cr ter a
- Samp e(s) MC38 92-5 have compounds reported w th "D" qua f ers nd cat ng resu ts from the d uted ana ys s
- A samp es were ana yzed w th n the recommended method ho d ng t me
- 2,2-D ch oropropane: Cont nu ng Ca brat on Ver f cat on outs de of acceptance cr ter a Samp e resu t may be b ased ow
- MSL405 -BS/BSD for V ny Acetate: Outs de contro m ts Assoc ated samp es are non-detect for th s compound
- RPD of MSL405 -BSD for Acetone: Outs de contro m ts B ank Sp ke meets program techn ca requ rements

Matrix: AQ **Batch ID:** MSL4053

- A method b anks for th s batch meet method spec f c cr ter a
- The fo ow ng samp es were run outs de of ho d ng t me for method SW846 8260C: MC38 92-3 Equ pment B ank ana yzed past recommended ho d t me
- MC38 92-3: Equ pment B ank ana yzed past recommended ho d t me
- MSL4053-BS/BSD for V ny Acetate: Outs de contro m ts Assoc ated samp es are non-detect for th s compound
- 2,2-D ch oropropane: Cont nu ng Ca brat on Ver f cat on outs de of acceptance cr ter a Samp e resu t may be b ased ow

Matrix: SO **Batch ID:** MSK2730

- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) D70296- MS, D70296- MSD were used as the QC samp es nd cated
- A method b anks for th s batch meet method spec f c cr ter a

Matrix: SO **Batch ID:** MSM2594

- A samp es were ana yzed w th n the recommended method ho d ng t me
- A method b anks for th s batch meet method spec f c cr ter a
- MSM2594-BS for 2-Hexanone, 4-Methy -2-pentanone (MIBK), Acry on tr e are outs de contro m ts Assoc ated samp es are non-detect for th s compound
- MSM2594-BSD for Acro e n, 4-Methy -2-pentanone (MIBK), Acry on tr e are outs de contro m ts Assoc ated samp es are nondetect for th s compound
- Bromomethane, D ch orod f uoromethane, Methy Tert Buty Ether, V ny ch or de: Cont nu ng Ca brat on outs de of acceptance cr ter a Samp e resu t may be b ased ow
- RPD(s) for MSM2594-BSD for Tr ch orof uoromethane, D ch orod f uoromethane: Outs de contro m ts B ank Sp ke meets program techn ca requ rements

Extractables by GCMS By Method SW846 8270D

Matrix: AQ **Batch ID:** OP42845

- A samp es were extracted w th n the recommended method ho d ng t me
- A samp es were ana yzed w th n the recommended method ho d ng t me
- A method b anks for th s batch meet method spec f c cr ter a
- Samp e(s) MC382 8-2MS, MC382 8-2MSD were used as the QC samp es nd cated

Matrix: SO **Batch ID:** OP42878

- A samp es were extracted w th n the recommended method ho d ng t me
- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC38 92-4MS, MC38 92-4MSD were used as the QC samp es nd cated
- A method b anks for th s batch meet method spec f c cr ter a
- In t a ca brat on ver f cat on MSW902-ICV902 for acetone exceeds 30% D fference Acetone s w th n cr ter a n cont nu ng ca brat on check MSW929-CC902, MSW935-CC902
- Instrument run batch MSW934-CC900 and In t a Ca brat on MSW900-ICC900 are not assoc ated w th th s job
- OP42878-BS for 4-Ch oroan ne: Outs de contro m ts Refer to MS/MSD

Extractables by GCMS By Method SW846 8270D BY SIM

Matrix: AQ **Batch ID:** OP42798

- A samp es were extracted w th n the recommended method ho d ng t me
- A samp es were ana yzed w th n the recommended method ho d ng t me
- A method b anks for th s batch meet method spec f c cr ter a

Matrix: AQ **Batch ID:** OP42846

- A samp es were extracted w th n the recommended method ho d ng t me
- A samp es were ana yzed w th n the recommended method ho d ng t me
- A method b anks for th s batch meet method spec f c cr ter a
- Samp e(s) MC38200- 4MS, MC38200- 4MSD were used as the QC samp es nd cated

Matrix: SO **Batch ID:** OP42798

- Samp e(s) MC38 92- MS, MC38 92- MSD were used as the QC samp es nd cated

Volatiles by GC By Method SW846 8011

Matrix: AQ **Batch ID:** OP428 2

- A samp es were extracted w th n the recommended method ho d ng t me
- A samp es were ana yzed w th n the recommended method ho d ng t me
- A method b anks for th s batch meet method spec f c cr ter a
- Samp e(s) MC38200-2MS, MC38200-2MSD were used as the QC samp es nd cated

Matrix: SO **Batch ID:** OP42837

- A samp es were extracted w th n the recommended method ho d ng t me
- A samp es were ana yzed w th n the recommended method ho d ng t me
- A method b anks for th s batch meet method spec f c cr ter a
- Samp e(s) MC38 53- MS, MC38 53- MSD were used as the QC samp es nd cated

Volatiles by GC By Method SW846 8015

Matrix: AQ	Batch ID: GBD3350

- A samp es were ana yzed w th n the recommended method ho d ng t me
- A method b anks for th s batch meet method spec f c cr ter a
- Samp e(s) MC382 9- MS, MC382 9- MSD were used as the QC samp es nd cated

Matrix: SO	Batch ID: GBD3349

- A samp es were ana yzed w th n the recommended method ho d ng t me
- A method b anks for th s batch meet method spec f c cr ter a
- Samp e(s) MC38 92- MS, MC38 92- MSD were used as the QC samp es nd cated

Wet Chemistry By Method SM 2540G-97 MOD

Matrix: SO	Batch ID: GN50425

- Samp e(s) MC38 53- DUP were used as the QC samp es for So ds, Percent

SGS Accutest New Eng and cert f es that a ana ys s were performed w th n method spec f cat on It s further recommended that th s report to be used n ts ent rety The Laborato y D rector for SGS Accutest New Eng and or ass gnee as ver f ed by the s gnature on the cover page has author zed the re ease of th s repo t(MC38 92)

Summary of Hits

Job Number: MC38192
Account: Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Collected: 04/22/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC38192-1	VMP-34-042215 (20-22)					
Benzene		0.0015	0.00057	0.00042	mg/kg	SW846 8260C
Ethylbenzene		0.0050	0.0023	0.00043	mg/kg	SW846 8260C
Toluene		0.0046 J	0.0057	0.00045	mg/kg	SW846 8260C
m,p-Xylene		0.0010 J	0.0023	0.00089	mg/kg	SW846 8260C
o-Xylene		0.00043 J	0.0023	0.00040	mg/kg	SW846 8260C
Xylene (total)		0.0014 J	0.0023	0.00040	mg/kg	SW846 8260C
Total TIC, Volatile		0.1854 J			mg/kg	
Anthracene		0.0037 J	0.0050	0.0011	mg/kg	SW846 8270D BY SIM
Benzo(a)anthracene		0.0385	0.0050	0.0023	mg/kg	SW846 8270D BY SIM
Benzo(a)pyrene		0.0389	0.0050	0.0020	mg/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene		0.0301	0.0050	0.0022	mg/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0.0263	0.0050	0.0014	mg/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene		0.0367	0.0050	0.0015	mg/kg	SW846 8270D BY SIM
Chrysene		0.0327	0.0050	0.0014	mg/kg	SW846 8270D BY SIM
Dibenzo(a,h)anthracene		0.0153	0.0050	0.0014	mg/kg	SW846 8270D BY SIM
Fluoranthene		0.0327	0.0050	0.0015	mg/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.0241	0.0050	0.0012	mg/kg	SW846 8270D BY SIM
Phenanthrene		0.0069	0.0050	0.0010	mg/kg	SW846 8270D BY SIM
Pyrene		0.0325	0.0050	0.0016	mg/kg	SW846 8270D BY SIM
MC38192-2	VMP-34-042215 (20-22)-DUP					
Benzene		0.0013	0.00070	0.00052	mg/kg	SW846 8260C
Carbon disulfide		0.00093 J	0.0070	0.00057	mg/kg	SW846 8260C
Ethylbenzene		0.0040	0.0028	0.00053	mg/kg	SW846 8260C
Toluene		0.0039 J	0.0070	0.00056	mg/kg	SW846 8260C
m,p-Xylene		0.0012 J	0.0028	0.0011	mg/kg	SW846 8260C
Xylene (total)		0.0016 J	0.0028	0.00049	mg/kg	SW846 8260C
Total TIC, Volatile		0.1363 J			mg/kg	
Benzo(a)pyrene		0.0023 J	0.0051	0.0020	mg/kg	SW846 8270D BY SIM
Benzo(b)fluoranthene		0.0044 J	0.0051	0.0023	mg/kg	SW846 8270D BY SIM
Benzo(g,h,i)perylene		0.0026 J	0.0051	0.0014	mg/kg	SW846 8270D BY SIM
Benzo(k)fluoranthene		0.0016 J	0.0051	0.0016	mg/kg	SW846 8270D BY SIM
Chrysene		0.0026 J	0.0051	0.0014	mg/kg	SW846 8270D BY SIM
Fluoranthene		0.0022 J	0.0051	0.0015	mg/kg	SW846 8270D BY SIM
Indeno(1,2,3-cd)pyrene		0.0016 J	0.0051	0.0013	mg/kg	SW846 8270D BY SIM
Phenanthrene		0.0017 J	0.0051	0.0011	mg/kg	SW846 8270D BY SIM
Pyrene		0.0040 J	0.0051	0.0016	mg/kg	SW846 8270D BY SIM
MC38192-3	VMP-34-042215 (30-32)-EB					

No hits reported in this sample.

Summary of Hits

Job Number: MC38192
Account: Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Collected: 04/22/15

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC38192-4	VMP-34-042215 (30-32)					
Benzene		0.0015	0.00056	0.00042	mg/kg	SW846 8260C
Ethylbenzene		0.0013 J	0.0023	0.00043	mg/kg	SW846 8260C
Toluene		0.0018 J	0.0056	0.00045	mg/kg	SW846 8260C
Xylene (total)		0.00078 J	0.0023	0.00039	mg/kg	SW846 8260C
Total TIC, Volatile		0.073 J			mg/kg	
Acenaphthene		0.0023 J	0.0052	0.00090	mg/kg	SW846 8270D BY SIM
Anthracene		0.0049 J	0.0052	0.0011	mg/kg	SW846 8270D BY SIM
Fluoranthene		0.0037 J	0.0052	0.0015	mg/kg	SW846 8270D BY SIM
Fluorene		0.0031 J	0.0052	0.0010	mg/kg	SW846 8270D BY SIM
Phenanthrene		0.0128	0.0052	0.0011	mg/kg	SW846 8270D BY SIM
Pyrene		0.0026 J	0.0052	0.0016	mg/kg	SW846 8270D BY SIM
MC38192-5	TB-042215-HCL					
No hits reported in this sample.						
MC38192-6	TB-042215-ST					
No hits reported in this sample.						

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)		
Lab Sample ID:	MC38192-1	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	95.3
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M72853.D	1	05/06/15	TT	n/a	n/a	MSM2594
Run #2	K87550.D	1	05/06/15	JM	n/a	n/a	MSK2730

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.62 g	5.0 ml	
Run #2	4.74 g	10.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.011	0.0037	mg/kg	
107-02-8	Acrolein	ND	0.028	0.010	mg/kg	
107-13-1	Acrylonitrile	ND	0.028	0.0022	mg/kg	
71-43-2	Benzene	0.0015	0.00057	0.00042	mg/kg	
108-86-1	Bromobenzene	ND	0.0057	0.00051	mg/kg	
74-97-5	Bromochloromethane	ND	0.0057	0.00047	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0023	0.00049	mg/kg	
75-25-2	Bromoform	ND	0.0023	0.00054	mg/kg	
74-83-9	Bromomethane [a]	ND	0.0023	0.00053	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.011	0.0038	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0057	0.00041	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0057	0.00043	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0057	0.00043	mg/kg	
75-15-0	Carbon disulfide	ND	0.0057	0.00046	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0023	0.00047	mg/kg	
108-90-7	Chlorobenzene	ND	0.0023	0.00025	mg/kg	
75-00-3	Chloroethane	ND	0.0057	0.00045	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND [b]	0.57	0.051	mg/kg	
67-66-3	Chloroform	ND	0.0023	0.00057	mg/kg	
74-87-3	Chloromethane	ND	0.0057	0.00085	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0057	0.00048	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0057	0.00050	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0023	0.00028	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0023	0.00042	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0023	0.00045	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0023	0.00051	mg/kg	
75-71-8	Dichlorodifluoromethane [a]	ND	0.0023	0.00046	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0023	0.00045	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0023	0.00042	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0023	0.00078	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0023	0.00041	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0023	0.00046	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)		
Lab Sample ID:	MC38192-1	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	95.3
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.0023	0.00050	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0057	0.00044	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0057	0.00047	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0057	0.00042	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0023	0.00043	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0023	0.00022	mg/kg	
123-91-1	1,4-Dioxane	ND	0.028	0.023	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0057	0.00057	mg/kg	
100-41-4	Ethylbenzene	0.0050	0.0023	0.00043	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0057	0.00064	mg/kg	
591-78-6	2-Hexanone	ND	0.011	0.00077	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0057	0.00050	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0057	0.00042	mg/kg	
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.0023	0.00074	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0057	0.00074	mg/kg	
74-95-3	Methylene bromide	ND	0.0057	0.00056	mg/kg	
75-09-2	Methylene chloride	ND	0.0023	0.00047	mg/kg	
91-20-3	Naphthalene	ND	0.0057	0.00069	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0057	0.00047	mg/kg	
100-42-5	Styrene	ND	0.0057	0.00035	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0057	0.00053	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0023	0.00023	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0023	0.00034	mg/kg	
108-88-3	Toluene	0.0046	0.0057	0.00045	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0057	0.00077	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0057	0.00050	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0023	0.00040	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0023	0.00049	mg/kg	
79-01-6	Trichloroethene	ND	0.0023	0.00035	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0023	0.00036	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0057	0.00064	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0057	0.00043	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0057	0.00036	mg/kg	
108-05-4	Vinyl Acetate	ND	0.0057	0.00090	mg/kg	
75-01-4	Vinyl chloride [a]	ND	0.0023	0.00062	mg/kg	
	m,p-Xylene	0.0010	0.0023	0.00089	mg/kg	J
95-47-6	o-Xylene	0.00043	0.0023	0.00040	mg/kg	J
1330-20-7	Xylene (total)	0.0014	0.0023	0.00040	mg/kg	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)		
Lab Sample ID:	MC38192-1	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	95.3
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	121%	101%	65-141%
2037-26-5	Toluene-D8	93%	97%	65-129%
460-00-4	4-Bromofluorobenzene	89%	92%	63-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
106-97-8	Butane	5.09	.068	mg/kg	JN
78-78-4	Butane, 2-methyl-	6.08	.058	mg/kg	JN
109-66-0	Pentane	6.48	.027	mg/kg	JN
79-29-8	Butane, 2,3-dimethyl-	7.83	.016	mg/kg	JN
96-14-0	Pentane, 3-methyl-	8.14	.0092	mg/kg	JN
96-37-7	Cyclopentane, methyl-	9.15	.0072	mg/kg	JN
	Total TIC, Volatile		.1854	mg/kg	J

(a) Continuing Calibration outside of acceptance criteria. Sample result may be biased low.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)		
Lab Sample ID:	MC38192-1	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	95.3
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W21746.D	1	04/30/15	KD	04/29/15	OP42878	MSW929
Run #2							

	Initial Weight	Final Volume
Run #1	20.4 g	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	0.51	0.064	mg/kg	
95-57-8	2-Chlorophenol	ND	0.26	0.012	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.51	0.013	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.51	0.015	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.51	0.084	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	1.0	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.51	0.064	mg/kg	
95-48-7	2-Methylphenol	ND	0.51	0.020	mg/kg	
	3&4-Methylphenol	ND	0.51	0.025	mg/kg	
88-75-5	2-Nitrophenol	ND	0.51	0.014	mg/kg	
100-02-7	4-Nitrophenol	ND	1.0	0.096	mg/kg	
87-86-5	Pentachlorophenol	ND	0.51	0.036	mg/kg	
108-95-2	Phenol	ND	0.26	0.015	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.51	0.013	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.51	0.013	mg/kg	
62-53-3	Aniline	ND	0.51	0.026	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.26	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.26	0.011	mg/kg	
100-51-6	Benzyl Alcohol	ND	0.51	0.026	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.26	0.014	mg/kg	
106-47-8	4-Chloroaniline	ND	0.51	0.013	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.26	0.012	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.26	0.016	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.26	0.018	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.26	0.016	mg/kg	
122-66-7	1,2-Diphenylhydrazine	ND	0.26	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.51	0.034	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.51	0.013	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.26	0.026	mg/kg	
132-64-9	Dibenzofuran	ND	0.10	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.26	0.027	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.26	0.0080	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)		
Lab Sample ID:	MC38192-1	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	95.3
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	0.26	0.013	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.26	0.015	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.26	0.0095	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.26	0.016	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.51	0.13	mg/kg	
67-72-1	Hexachloroethane	ND	0.26	0.012	mg/kg	
78-59-1	Isophorone	ND	0.26	0.012	mg/kg	
88-74-4	2-Nitroaniline	ND	0.51	0.013	mg/kg	
99-09-2	3-Nitroaniline	ND	0.51	0.028	mg/kg	
100-01-6	4-Nitroaniline	ND	0.51	0.013	mg/kg	
98-95-3	Nitrobenzene	ND	0.26	0.014	mg/kg	
62-75-9	n-Nitrosodimethylamine	ND	0.26	0.012	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.26	0.015	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.26	0.016	mg/kg	
110-86-1	Pyridine	ND	0.51	0.026	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	58%		20-114%
4165-62-2	Phenol-d5	62%		22-117%
118-79-6	2,4,6-Tribromophenol	88%		15-145%
4165-60-0	Nitrobenzene-d5	60%		17-118%
321-60-8	2-Fluorobiphenyl	63%		27-121%
1718-51-0	Terphenyl-d14	95%		39-142%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)		
Lab Sample ID:	MC38192-1	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8270D BY SIM SW846 3546	**Percent Solids:**	95.3
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I95346.D	1	04/28/15	MR	04/23/15	OP42798	MSI3567
Run #2							

	Initial Weight	Final Volume
Run #1	20.9 g	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.0050	0.00087	mg/kg	
208-96-8	Acenaphthylene	ND	0.0050	0.00076	mg/kg	
120-12-7	Anthracene	0.0037	0.0050	0.0011	mg/kg	J
56-55-3	Benzo(a)anthracene	0.0385	0.0050	0.0023	mg/kg	
50-32-8	Benzo(a)pyrene	0.0389	0.0050	0.0020	mg/kg	
205-99-2	Benzo(b)fluoranthene	0.0301	0.0050	0.0022	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.0263	0.0050	0.0014	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.0367	0.0050	0.0015	mg/kg	
218-01-9	Chrysene	0.0327	0.0050	0.0014	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.0153	0.0050	0.0014	mg/kg	
206-44-0	Fluoranthene	0.0327	0.0050	0.0015	mg/kg	
86-73-7	Fluorene	ND	0.0050	0.00099	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0241	0.0050	0.0012	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.10	0.025	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.10	0.025	mg/kg	
85-01-8	Phenanthrene	0.0069	0.0050	0.0010	mg/kg	
129-00-0	Pyrene	0.0325	0.0050	0.0016	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	88%		28-121%
321-60-8	2-Fluorobiphenyl	85%		36-110%
1718-51-0	Terphenyl-d14	113%		41-138%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)		
Lab Sample ID:	MC38192-1	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8011 SW846 3550B	**Percent Solids:**	95.3
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB63004.D	1	04/29/15	NK	04/27/15	OP42837	GBB3427
Run #2							

	Initial Weight	Final Volume
Run #1	30.9 g	50.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0025	0.00057	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0025	0.00042	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	100%		70-170%
460-00-4	Bromofluorobenzene (S)	116%		70-170%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)		
Lab Sample ID:	MC38192-1	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8015	**Percent Solids:**	95.3
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BD69732.D	1	04/24/15	AF	n/a	n/a	GBD3349
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.30 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	5.9	0.61	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	103%		62-131%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)-DUP		
Lab Sample ID:	MC38192-2	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	95.0
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M72854.D	1	05/06/15	TT	n/a	n/a	MSM2594
Run #2	K87551.D	1	05/06/15	JM	n/a	n/a	MSK2730

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	3.77 g	5.0 ml	
Run #2	3.87 g	10.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.014	0.0046	mg/kg	
107-02-8	Acrolein	ND	0.035	0.013	mg/kg	
107-13-1	Acrylonitrile	ND	0.035	0.0027	mg/kg	
71-43-2	Benzene	0.0013	0.00070	0.00052	mg/kg	
108-86-1	Bromobenzene	ND	0.0070	0.00062	mg/kg	
74-97-5	Bromochloromethane	ND	0.0070	0.00057	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0028	0.00060	mg/kg	
75-25-2	Bromoform	ND	0.0028	0.00067	mg/kg	
74-83-9	Bromomethane [a]	ND	0.0028	0.00065	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.014	0.0047	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0070	0.00050	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0070	0.00053	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0070	0.00053	mg/kg	
75-15-0	Carbon disulfide	0.00093	0.0070	0.00057	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0028	0.00057	mg/kg	
108-90-7	Chlorobenzene	ND	0.0028	0.00031	mg/kg	
75-00-3	Chloroethane	ND	0.0070	0.00055	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND [b]	0.69	0.062	mg/kg	
67-66-3	Chloroform	ND	0.0028	0.00070	mg/kg	
74-87-3	Chloromethane	ND	0.0070	0.0010	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0070	0.00060	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0070	0.00062	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0028	0.00035	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0028	0.00051	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0028	0.00056	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0028	0.00062	mg/kg	
75-71-8	Dichlorodifluoromethane [a]	ND	0.0028	0.00056	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0028	0.00056	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0028	0.00051	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0028	0.00095	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0028	0.00050	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0028	0.00056	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)-DUP		
Lab Sample ID:	MC38192-2	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	95.0
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.0028	0.00061	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0070	0.00054	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0070	0.00058	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0070	0.00051	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0028	0.00053	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0028	0.00027	mg/kg	
123-91-1	1,4-Dioxane	ND	0.035	0.028	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0070	0.00071	mg/kg	
100-41-4	Ethylbenzene	0.0040	0.0028	0.00053	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0070	0.00079	mg/kg	
591-78-6	2-Hexanone	ND	0.014	0.00094	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0070	0.00062	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0070	0.00051	mg/kg	
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.0028	0.00091	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0070	0.00091	mg/kg	
74-95-3	Methylene bromide	ND	0.0070	0.00069	mg/kg	
75-09-2	Methylene chloride	ND	0.0028	0.00058	mg/kg	
91-20-3	Naphthalene	ND	0.0070	0.00084	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0070	0.00058	mg/kg	
100-42-5	Styrene	ND	0.0070	0.00044	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0070	0.00066	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0028	0.00028	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0028	0.00041	mg/kg	
108-88-3	Toluene	0.0039	0.0070	0.00056	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0070	0.00094	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0070	0.00062	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0028	0.00049	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0028	0.00060	mg/kg	
79-01-6	Trichloroethene	ND	0.0028	0.00043	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0028	0.00044	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0070	0.00079	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0070	0.00053	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0070	0.00044	mg/kg	
108-05-4	Vinyl Acetate	ND	0.0070	0.0011	mg/kg	
75-01-4	Vinyl chloride [a]	ND	0.0028	0.00076	mg/kg	
	m,p-Xylene	0.0012	0.0028	0.0011	mg/kg	J
95-47-6	o-Xylene	ND	0.0028	0.00049	mg/kg	
1330-20-7	Xylene (total)	0.0016	0.0028	0.00049	mg/kg	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)-DUP		
Lab Sample ID:	MC38192-2	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	95.0
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	121%	101%	65-141%
2037-26-5	Toluene-D8	93%	97%	65-129%
460-00-4	4-Bromofluorobenzene	89%	94%	63-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
106-97-8	Butane	5.09	.059	mg/kg	JN
78-78-4	Butane, 2-methyl-	6.08	.039	mg/kg	JN
109-66-0	Pentane	6.48	.019	mg/kg	JN
107-83-5	Pentane, 2-methyl-	7.82	.012	mg/kg	JN
96-14-0	Pentane, 3-methyl-	8.14	.0073	mg/kg	JN
	Total TIC, Volatile		.1363	mg/kg	J

(a) Continuing Calibration outside of acceptance criteria. Sample result may be biased low.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)-DUP		
Lab Sample ID:	MC38192-2	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	95.0
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W21747.D	1	04/30/15	KD	04/29/15	OP42878	MSW929
Run #2							

	Initial Weight	Final Volume
Run #1	20.6 g	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	0.51	0.064	mg/kg	
95-57-8	2-Chlorophenol	ND	0.26	0.012	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.51	0.013	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.51	0.015	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.51	0.083	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	1.0	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.51	0.064	mg/kg	
95-48-7	2-Methylphenol	ND	0.51	0.020	mg/kg	
	3&4-Methylphenol	ND	0.51	0.025	mg/kg	
88-75-5	2-Nitrophenol	ND	0.51	0.014	mg/kg	
100-02-7	4-Nitrophenol	ND	1.0	0.096	mg/kg	
87-86-5	Pentachlorophenol	ND	0.51	0.036	mg/kg	
108-95-2	Phenol	ND	0.26	0.015	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.51	0.013	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.51	0.013	mg/kg	
62-53-3	Aniline	ND	0.51	0.026	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.26	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.26	0.010	mg/kg	
100-51-6	Benzyl Alcohol	ND	0.51	0.026	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.26	0.014	mg/kg	
106-47-8	4-Chloroaniline	ND	0.51	0.013	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.26	0.012	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.26	0.016	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.26	0.018	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.26	0.016	mg/kg	
122-66-7	1,2-Diphenylhydrazine	ND	0.26	0.011	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.51	0.034	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.51	0.013	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.26	0.026	mg/kg	
132-64-9	Dibenzofuran	ND	0.10	0.014	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.26	0.027	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.26	0.0080	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)-DUP		
Lab Sample ID:	MC38192-2	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	95.0
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	0.26	0.013	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.26	0.015	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.26	0.0094	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.26	0.016	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.51	0.13	mg/kg	
67-72-1	Hexachloroethane	ND	0.26	0.012	mg/kg	
78-59-1	Isophorone	ND	0.26	0.012	mg/kg	
88-74-4	2-Nitroaniline	ND	0.51	0.013	mg/kg	
99-09-2	3-Nitroaniline	ND	0.51	0.028	mg/kg	
100-01-6	4-Nitroaniline	ND	0.51	0.013	mg/kg	
98-95-3	Nitrobenzene	ND	0.26	0.014	mg/kg	
62-75-9	n-Nitrosodimethylamine	ND	0.26	0.012	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.26	0.015	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.26	0.015	mg/kg	
110-86-1	Pyridine	ND	0.51	0.026	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	63%		20-114%
4165-62-2	Phenol-d5	66%		22-117%
118-79-6	2,4,6-Tribromophenol	87%		15-145%
4165-60-0	Nitrobenzene-d5	64%		17-118%
321-60-8	2-Fluorobiphenyl	66%		27-121%
1718-51-0	Terphenyl-d14	94%		39-142%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)-DUP		
Lab Sample ID:	MC38192-2	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8270D BY SIM SW846 3546	**Percent Solids:**	95.0
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I95347.D	1	04/28/15	MR	04/23/15	OP42798	MSI3567
Run #2							

	Initial Weight	Final Volume
Run #1	20.6 g	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.0051	0.00089	mg/kg	
208-96-8	Acenaphthylene	ND	0.0051	0.00078	mg/kg	
120-12-7	Anthracene	ND	0.0051	0.0011	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.0051	0.0024	mg/kg	
50-32-8	Benzo(a)pyrene	0.0023	0.0051	0.0020	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.0044	0.0051	0.0023	mg/kg	J
191-24-2	Benzo(g,h,i)perylene	0.0026	0.0051	0.0014	mg/kg	J
207-08-9	Benzo(k)fluoranthene	0.0016	0.0051	0.0016	mg/kg	J
218-01-9	Chrysene	0.0026	0.0051	0.0014	mg/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.0051	0.0015	mg/kg	
206-44-0	Fluoranthene	0.0022	0.0051	0.0015	mg/kg	J
86-73-7	Fluorene	ND	0.0051	0.0010	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0016	0.0051	0.0013	mg/kg	J
90-12-0	1-Methylnaphthalene	ND	0.10	0.026	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.10	0.026	mg/kg	
85-01-8	Phenanthrene	0.0017	0.0051	0.0011	mg/kg	J
129-00-0	Pyrene	0.0040	0.0051	0.0016	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		28-121%
321-60-8	2-Fluorobiphenyl	80%		36-110%
1718-51-0	Terphenyl-d14	104%		41-138%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)-DUP		
Lab Sample ID:	MC38192-2	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8011 SW846 3550B	**Percent Solids:**	95.0
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB63005.D	1	04/29/15	NK	04/27/15	OP42837	GBB3427
Run #2							

	Initial Weight	Final Volume
Run #1	30.7 g	50.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0026	0.00058	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0026	0.00043	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	106%		70-170%
460-00-4	Bromofluorobenzene (S)	116%		70-170%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (20-22)-DUP		
Lab Sample ID:	MC38192-2	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8015	**Percent Solids:**	95.0
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BD69739.D	1	04/24/15	AF	n/a	n/a	GBD3349
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	8.96 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.1	0.63	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	98%		62-131%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)-EB		
Lab Sample ID:	MC38192-3	**Date Sampled:**	04/22/15
Matrix:	AQ - Equipment Blank	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	L91954.D	1	05/08/15	JM	n/a	n/a	MSL4053
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
107-02-8	Acrolein	ND	25	11	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.3	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	0.79	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.57	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.19	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.49	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.48	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)-EB		
Lab Sample ID:	MC38192-3	**Date Sampled:**	04/22/15
Matrix:	AQ - Equipment Blank	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.29	ug/l	
594-20-7	2,2-Dichloropropane [b]	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.23	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.7	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.27	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.77	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.29	ug/l	
100-42-5	Styrene	ND	5.0	0.28	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.74	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.4	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)-EB		
Lab Sample ID:	MC38192-3	**Date Sampled:**	04/22/15
Matrix:	AQ - Equipment Blank	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		72-133%
2037-26-5	Toluene-D8	98%		85-114%
460-00-4	4-Bromofluorobenzene	107%		70-134%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Equipment Blank analyzed past recommended hold time.
(b) Continuing Calibration outside of acceptance criteria. Result may be biased low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)-EB		
Lab Sample ID:	MC38192-3	**Date Sampled:**	04/22/15
Matrix:	AQ - Equipment Blank	**Date Received:**	04/23/15
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W21903.D	1	05/06/15	KD	04/27/15	OP42845	MSW935
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.6	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	0.30	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.52	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.48	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.34	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.6	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	0.60	ug/l	
95-48-7	2-Methylphenol	ND	10	0.31	ug/l	
	3&4-Methylphenol	ND	10	0.45	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.47	ug/l	
100-02-7	4-Nitrophenol	ND	20	1.3	ug/l	
87-86-5	Pentachlorophenol	ND	10	0.35	ug/l	
108-95-2	Phenol	ND	5.1	0.33	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.46	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.46	ug/l	
62-53-3	Aniline	ND	10	0.47	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	0.26	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	0.25	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.33	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	0.35	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.36	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	0.50	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	0.43	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	0.43	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.1	0.30	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.38	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.38	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.1	0.54	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.25	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.1	0.28	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.1	0.29	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)-EB		
Lab Sample ID:	MC38192-3	**Date Sampled:**	04/22/15
Matrix:	AQ - Equipment Blank	**Date Received:**	04/23/15
Method:	SW846 8270D SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	5.1	0.27	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	0.25	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.32	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	0.25	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.1	0.29	ug/l	
78-59-1	Isophorone	ND	5.1	0.48	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.36	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.41	ug/l	
100-01-6	4-Nitroaniline	ND	10	0.52	ug/l	
98-95-3	Nitrobenzene	ND	5.1	0.49	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.1	0.26	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	0.26	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	0.26	ug/l	
110-86-1	Pyridine	ND	10	0.37	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	32%		10-79%
4165-62-2	Phenol-d5	24%		10-72%
118-79-6	2,4,6-Tribromophenol	98%		35-138%
4165-60-0	Nitrobenzene-d5	61%		30-116%
321-60-8	2-Fluorobiphenyl	66%		35-107%
1718-51-0	Terphenyl-d14	101%		43-135%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)-EB		
Lab Sample ID:	MC38192-3	**Date Sampled:**	04/22/15
Matrix:	AQ - Equipment Blank	**Date Received:**	04/23/15
Method:	SW846 8270D BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I95524.D	1	05/06/15	KD	04/27/15	OP42846	MSI3573
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.0077	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.0086	ug/l	
120-12-7	Anthracene	ND	0.10	0.010	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.051	0.024	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.016	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.051	0.019	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.013	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.010	ug/l	
218-01-9	Chrysene	ND	0.10	0.013	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.015	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.0076	ug/l	
86-73-7	Fluorene	ND	0.10	0.015	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.021	ug/l	
90-12-0	1-Methylnaphthalene	ND	2.0	0.013	ug/l	
91-57-6	2-Methylnaphthalene	ND	2.0	0.011	ug/l	
85-01-8	Phenanthrene	ND	0.051	0.011	ug/l	
129-00-0	Pyrene	ND	0.10	0.0087	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	62%		26-121%
321-60-8	2-Fluorobiphenyl	62%		28-107%
1718-51-0	Terphenyl-d14	103%		29-129%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)-EB		
Lab Sample ID:	MC38192-3	**Date Sampled:**	04/22/15
Matrix:	AQ - Equipment Blank	**Date Received:**	04/23/15
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB62973.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425
Run #2							

	Initial Volume	Final Volume
Run #1	36.1 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0059	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0059	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	84%		60-140%
460-00-4	Bromofluorobenzene (S)	109%		60-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)-EB		
Lab Sample ID:	MC38192-3	**Date Sampled:**	04/22/15
Matrix:	AQ - Equipment Blank	**Date Received:**	04/23/15
Method:	SW846 8015	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BD69738.D	1	04/24/15	AF	n/a	n/a	GBD3350
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	0.10	0.013	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	101%		66-126%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)		
Lab Sample ID:	MC38192-4	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M72855.D	1	05/06/15	TT	n/a	n/a	MSM2594
Run #2	K87552.D	1	05/06/15	JM	n/a	n/a	MSK2730

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.73 g	5.0 ml	
Run #2	4.51 g	10.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.011	0.0037	mg/kg	
107-02-8	Acrolein	ND	0.028	0.010	mg/kg	
107-13-1	Acrylonitrile	ND	0.028	0.0022	mg/kg	
71-43-2	Benzene	0.0015	0.00056	0.00042	mg/kg	
108-86-1	Bromobenzene	ND	0.0056	0.00050	mg/kg	
74-97-5	Bromochloromethane	ND	0.0056	0.00046	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0023	0.00048	mg/kg	
75-25-2	Bromoform	ND	0.0023	0.00054	mg/kg	
74-83-9	Bromomethane [a]	ND	0.0023	0.00053	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.011	0.0038	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0056	0.00040	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0056	0.00043	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0056	0.00043	mg/kg	
75-15-0	Carbon disulfide	ND	0.0056	0.00046	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0023	0.00046	mg/kg	
108-90-7	Chlorobenzene	ND	0.0023	0.00025	mg/kg	
75-00-3	Chloroethane	ND	0.0056	0.00044	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND [b]	0.61	0.055	mg/kg	
67-66-3	Chloroform	ND	0.0023	0.00057	mg/kg	
74-87-3	Chloromethane	ND	0.0056	0.00085	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0056	0.00048	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0056	0.00050	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0023	0.00028	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0023	0.00041	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0023	0.00045	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0023	0.00050	mg/kg	
75-71-8	Dichlorodifluoromethane [a]	ND	0.0023	0.00046	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0023	0.00045	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0023	0.00042	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0023	0.00077	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0023	0.00041	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0023	0.00046	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)		
Lab Sample ID:	MC38192-4	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.0023	0.00049	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0056	0.00044	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0056	0.00047	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0056	0.00042	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0023	0.00042	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0023	0.00022	mg/kg	
123-91-1	1,4-Dioxane	ND	0.028	0.023	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0056	0.00057	mg/kg	
100-41-4	Ethylbenzene	0.0013	0.0023	0.00043	mg/kg	J
87-68-3	Hexachlorobutadiene	ND	0.0056	0.00064	mg/kg	
591-78-6	2-Hexanone	ND	0.011	0.00076	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0056	0.00050	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0056	0.00041	mg/kg	
1634-04-4	Methyl Tert Butyl Ether [a]	ND	0.0023	0.00074	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0056	0.00074	mg/kg	
74-95-3	Methylene bromide	ND	0.0056	0.00056	mg/kg	
75-09-2	Methylene chloride	ND	0.0023	0.00047	mg/kg	
91-20-3	Naphthalene	ND	0.0056	0.00068	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0056	0.00047	mg/kg	
100-42-5	Styrene	ND	0.0056	0.00035	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0056	0.00053	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0023	0.00023	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0023	0.00033	mg/kg	
108-88-3	Toluene	0.0018	0.0056	0.00045	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0056	0.00076	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0056	0.00050	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0023	0.00039	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0023	0.00049	mg/kg	
79-01-6	Trichloroethene	ND	0.0023	0.00035	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0023	0.00035	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0056	0.00064	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0056	0.00043	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0056	0.00036	mg/kg	
108-05-4	Vinyl Acetate	ND	0.0056	0.00090	mg/kg	
75-01-4	Vinyl chloride [a]	ND	0.0023	0.00061	mg/kg	
	m,p-Xylene	ND	0.0023	0.00089	mg/kg	
95-47-6	o-Xylene	ND	0.0023	0.00039	mg/kg	
1330-20-7	Xylene (total)	0.00078	0.0023	0.00039	mg/kg	J

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)		
Lab Sample ID:	MC38192-4	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	122%	101%	65-141%
2037-26-5	Toluene-D8	94%	98%	65-129%
460-00-4	4-Bromofluorobenzene	88%	92%	63-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
106-97-8	Butane	5.08	.041	mg/kg	JN
78-78-4	Butane, 2-methyl-	6.08	.021	mg/kg	JN
109-66-0	Pentane	6.47	.011	mg/kg	JN
	Total TIC, Volatile		.073	mg/kg	J

(a) Continuing Calibration outside of acceptance criteria. Sample result may be biased low.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)		
Lab Sample ID:	MC38192-4	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W21741.D	1	04/30/15	KD	04/29/15	OP42878	MSW929
Run #2							

	Initial Weight	Final Volume
Run #1	20.3 g	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	0.53	0.066	mg/kg	
95-57-8	2-Chlorophenol	ND	0.26	0.012	mg/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	0.53	0.013	mg/kg	
120-83-2	2,4-Dichlorophenol	ND	0.53	0.015	mg/kg	
105-67-9	2,4-Dimethylphenol	ND	0.53	0.086	mg/kg	
51-28-5	2,4-Dinitrophenol	ND	1.1	0.13	mg/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	0.53	0.066	mg/kg	
95-48-7	2-Methylphenol	ND	0.53	0.021	mg/kg	
	3&4-Methylphenol	ND	0.53	0.026	mg/kg	
88-75-5	2-Nitrophenol	ND	0.53	0.014	mg/kg	
100-02-7	4-Nitrophenol	ND	1.1	0.099	mg/kg	
87-86-5	Pentachlorophenol	ND	0.53	0.037	mg/kg	
108-95-2	Phenol	ND	0.26	0.015	mg/kg	
95-95-4	2,4,5-Trichlorophenol	ND	0.53	0.013	mg/kg	
88-06-2	2,4,6-Trichlorophenol	ND	0.53	0.013	mg/kg	
62-53-3	Aniline	ND	0.53	0.026	mg/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	0.26	0.013	mg/kg	
85-68-7	Butyl benzyl phthalate	ND	0.26	0.011	mg/kg	
100-51-6	Benzyl Alcohol	ND	0.53	0.026	mg/kg	
91-58-7	2-Chloronaphthalene	ND	0.26	0.014	mg/kg	
106-47-8	4-Chloroaniline	ND	0.53	0.013	mg/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	0.26	0.012	mg/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	0.26	0.016	mg/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	0.26	0.019	mg/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	0.26	0.016	mg/kg	
122-66-7	1,2-Diphenylhydrazine	ND	0.26	0.012	mg/kg	
121-14-2	2,4-Dinitrotoluene	ND	0.53	0.035	mg/kg	
606-20-2	2,6-Dinitrotoluene	ND	0.53	0.013	mg/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	0.26	0.026	mg/kg	
132-64-9	Dibenzofuran	ND	0.11	0.015	mg/kg	
84-74-2	Di-n-butyl phthalate	ND	0.26	0.028	mg/kg	
117-84-0	Di-n-octyl phthalate	ND	0.26	0.0082	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)		
Lab Sample ID:	MC38192-4	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8270D SW846 3546	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
84-66-2	Diethyl phthalate	ND	0.26	0.013	mg/kg	
131-11-3	Dimethyl phthalate	ND	0.26	0.015	mg/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	0.26	0.0097	mg/kg	
118-74-1	Hexachlorobenzene	ND	0.26	0.016	mg/kg	
77-47-4	Hexachlorocyclopentadiene	ND	0.53	0.13	mg/kg	
67-72-1	Hexachloroethane	ND	0.26	0.013	mg/kg	
78-59-1	Isophorone	ND	0.26	0.012	mg/kg	
88-74-4	2-Nitroaniline	ND	0.53	0.013	mg/kg	
99-09-2	3-Nitroaniline	ND	0.53	0.029	mg/kg	
100-01-6	4-Nitroaniline	ND	0.53	0.013	mg/kg	
98-95-3	Nitrobenzene	ND	0.26	0.014	mg/kg	
62-75-9	n-Nitrosodimethylamine	ND	0.26	0.013	mg/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	0.26	0.015	mg/kg	
86-30-6	N-Nitrosodiphenylamine	ND	0.26	0.016	mg/kg	
110-86-1	Pyridine	ND	0.53	0.026	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	66%		20-114%
4165-62-2	Phenol-d5	70%		22-117%
118-79-6	2,4,6-Tribromophenol	94%		15-145%
4165-60-0	Nitrobenzene-d5	67%		17-118%
321-60-8	2-Fluorobiphenyl	71%		27-121%
1718-51-0	Terphenyl-d14	97%		39-142%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	mg/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)		
Lab Sample ID:	MC38192-4	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8270D BY SIM SW846 3546	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	I95348.D	1	04/28/15	MR	04/23/15	OP42798	MSI3567
Run #2							

	Initial Weight	Final Volume
Run #1	20.6 g	1.0 ml
Run #2		

BN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.0023	0.0052	0.00090	mg/kg	J
208-96-8	Acenaphthylene	ND	0.0052	0.00079	mg/kg	
120-12-7	Anthracene	0.0049	0.0052	0.0011	mg/kg	J
56-55-3	Benzo(a)anthracene	ND	0.0052	0.0024	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.0052	0.0021	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.0052	0.0023	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.0052	0.0014	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.0052	0.0016	mg/kg	
218-01-9	Chrysene	ND	0.0052	0.0014	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0052	0.0015	mg/kg	
206-44-0	Fluoranthene	0.0037	0.0052	0.0015	mg/kg	J
86-73-7	Fluorene	0.0031	0.0052	0.0010	mg/kg	J
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0052	0.0013	mg/kg	
90-12-0	1-Methylnaphthalene	ND	0.10	0.026	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.10	0.026	mg/kg	
85-01-8	Phenanthrene	0.0128	0.0052	0.0011	mg/kg	
129-00-0	Pyrene	0.0026	0.0052	0.0016	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	84%		28-121%
321-60-8	2-Fluorobiphenyl	81%		36-110%
1718-51-0	Terphenyl-d14	104%		41-138%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)		
Lab Sample ID:	MC38192-4	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8011 SW846 3550B	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB63006.D	1	04/29/15	NK	04/27/15	OP42837	GBB3427
Run #2							

	Initial Weight	Final Volume
Run #1	30.4 g	50.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0026	0.00059	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0026	0.00044	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	103%		70-170%
460-00-4	Bromofluorobenzene (S)	116%		70-170%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VMP-34-042215 (30-32)		
Lab Sample ID:	MC38192-4	**Date Sampled:**	04/22/15
Matrix:	SO - Soil	**Date Received:**	04/23/15
Method:	SW846 8015	**Percent Solids:**	93.6
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BD69740.D	1	04/24/15	AF	n/a	n/a	GBD3349
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.37 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	6.0	0.62	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	102%		62-131%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-042215-HCL		
Lab Sample ID:	MC38192-5	**Date Sampled:**	04/22/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L91901.D	1	05/07/15	JM	n/a	n/a	MSL4051
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
107-02-8	Acrolein	ND	25	11	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.3	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	0.79	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.57	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.19	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.49	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.48	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-042215-HCL		
Lab Sample ID:	MC38192-5	**Date Sampled:**	04/22/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.29	ug/l	
594-20-7	2,2-Dichloropropane [a]	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.23	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.7	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.27	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.77	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.29	ug/l	
100-42-5	Styrene	ND	5.0	0.28	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.74	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.4	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-042215-HCL		
Lab Sample ID:	MC38192-5	**Date Sampled:**	04/22/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/23/15
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		72-133%
2037-26-5	Toluene-D8	98%		85-114%
460-00-4	4-Bromofluorobenzene	107%		70-134%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

(a) Continuing Calibration outside of acceptance criteria. Result may be biased low.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TB-042215-ST		
Lab Sample ID:	MC38192-6	**Date Sampled:**	04/22/15
Matrix:	AQ - Trip Blank Water	**Date Received:**	04/23/15
Method:	SW846 8011 SW846 8011	**Percent Solids:**	n/a
Project:	URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BB62974.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425
Run #2							

	Initial Volume	Final Volume
Run #1	37.4 ml	2.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.014	0.0057	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.014	0.0057	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	Bromofluorobenzene (S)	83%		60-140%
460-00-4	Bromofluorobenzene (S)	107%		60-140%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

ACCUTEST LABORATORIES

CHAIN OF CUSTODY

Accutest Laboratories of New England
495 Technology Center West, Building One
TEL. 508-481-6200 FAX: 508-481-7753
www.accutest.com

PAGE 1 OF 1

FED-EX Tracking # | Bottle Order Control # | Accutest Quote # | Accutest Job # MC38192

Client / Reporting Information

Company Name: AECOM
Street Address: 1001 Highlands Plaza Drive, Suite 300
City: St. Louis State: MO Zip: 63110
Project Contact: Elizabeth Kunkel E-mail: elizabeth.kunkel@aecom.com
Phone #: 314-429-0100 Fax #
Sampler(s) Name(s): Michael Miller Phone #: 314-566-3073

Project Information

Project Name: Roxana VMP Remediation 21563720.16000
Street:
City: Roxana, IL
Project#:
Client PO#:
Project Manager:

Billing Information (If different from Report to): Company Name / Street Address / City / State / Zip / Attention: / PO#

Requested Analysis (see TEST CODE sheet): 8260 VOCs + Top 15 TICs; 8270 SVOCs + TICs; 8270 (LL) PAHs; 8011 VOCs; TPH-GRO

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Date	Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	8260 VOCs + Top 15 TICs	8270 SVOCs + TICs	8270 (LL) PAHs	8011 VOCs	TPH-GRO	LAB USE ONLY
-1	VMP-34-042215(20-22)		4/22/15	1015	MPM	SO	7					2		3		2	X	X	X	X	X	
-2	VMP-34-042215(20-22)-Dup			1015	MPM	SO	7					2		3		2	X	X	X	X	X	
-3	VMP-34-042215(30-32)-EB			1045	MPM	EB	8	4				2	2				X	X	X	X	X	
-4	VMP-34-042215(30-32)			1110	MPM	SO	7					2		3		2	X	X	X	X	X	
-5	TB-042215-HCl			0930	MPM	TB	2	2														
-6	TB-042215-ST			0930	MPM	TB	2						2									4L1, 16A, 10D, 10L3

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

Turnaround Time (Business days)
- ☐ Std. 10 Business Days
- ☐ Std. 5 Business Days (By Contract only)
- ☐ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information
- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ CT RCP
- ☐ MA MCP
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format ____
- ☐ Other ____

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary

Comments / Special Instructions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1 [signature]	4/22/15 1700	1 sent by FedEx	2		2
Relinquished by Sampler: 3 FedEx	4-23-15 1030	3 [signature]	4		4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	☐ Intact ☐ Not intact	Preserved where applicable ☐ On Ice ☑ Cooler Temp. 0.4°C

5.1

5

MC38192: Chain of Custody
Page 1 of 3

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC38192 **Client:** AECOM **Immediate Client Services Action Required:** No

Date / Time Received: 4/23/2015 10:30:00 AM **Delivery Method:**

Project: ROXANA VMP REINS **No. Coolers:** 1 **Airbill #'s:**

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	Infared Gun	
3. Cooler media:	Ice (Bag)	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☑	☐	
2. Trip Blank listed on COC:	☑	☐	
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☑	☐	☐

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample rec'd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☐	☑	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

-5 and -6 have no analysis checked off on the coc. Both are sets of trip blanks.

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

5.1
5

Sample Receipt Summary - Problem Resolution

Accutest Job Number: MC38192

CSR: mattm **Response Date:** 4/23/2015

Response: Client advised to run Trip Blank (TB) samples. See scanned email.

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www/accutest.com

MC38192: Chain of Custody
Page 3 of 3

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC38192

URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Project No: 21563720.18000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC38192-1 Collected: 22-APR-15 10:15 By: MPM Received: 23-APR-15 By: VMP-34-042215 (20-22)						
MC38192-1	SM 2540G-97 MOD	23-APR-15	HS			%SOL
MC38192-1	SW846 8015	24-APR-15 11:49	AF			V8015GRO
MC38192-1	SW846 8270D BY SIM	28-APR-15 09:44	MR	23-APR-15	FC	B8270SIMSL
MC38192-1	SW846 8011	29-APR-15 02:55	NK	27-APR-15	AW	V8011SL
MC38192-1	SW846 8270D	30-APR-15 12:24	KD	29-APR-15	PA	AB8270SL+
MC38192-1	SW846 8260C	06-MAY-15 13:14	JM			V8260SL+
MC38192-1	SW846 8260C	06-MAY-15 13:45	TT			V8260SL+
MC38192-2 Collected: 22-APR-15 10:15 By: MPM Received: 23-APR-15 By: VMP-34-042215 (20-22)-DUP						
MC38192-2	SM 2540G-97 MOD	23-APR-15	HS			%SOL
MC38192-2	SW846 8015	24-APR-15 16:16	AF			V8015GRO
MC38192-2	SW846 8270D BY SIM	28-APR-15 10:08	MR	23-APR-15	FC	B8270SIMSL
MC38192-2	SW846 8011	29-APR-15 03:25	NK	27-APR-15	AW	V8011SL
MC38192-2	SW846 8270D	30-APR-15 12:49	KD	29-APR-15	PA	AB8270SL+
MC38192-2	SW846 8260C	06-MAY-15 13:42	JM			V8260SL+
MC38192-2	SW846 8260C	06-MAY-15 14:15	TT			V8260SL+
MC38192-3 Collected: 22-APR-15 10:45 By: MPM Received: 23-APR-15 By: VMP-34-042215 (30-32)-EB						
MC38192-3	SW846 8015	24-APR-15 15:37	AF			V8015GRO
MC38192-3	SW846 8011	28-APR-15 10:02	NK	24-APR-15	AW	V8011SL
MC38192-3	SW846 8270D BY SIM	06-MAY-15 16:32	KD	27-APR-15	AJ	B8270SIMSL
MC38192-3	SW846 8270D	06-MAY-15 18:25	KD	27-APR-15	AJ	AB8270SL+
MC38192-3	SW846 8260C	08-MAY-15 14:41	JM			V8260SL+
MC38192-4 Collected: 22-APR-15 11:10 By: MPM Received: 23-APR-15 By: VMP-34-042215 (30-32)						
MC38192-4	SM 2540G-97 MOD	23-APR-15	HS			%SOL
MC38192-4	SW846 8015	24-APR-15 16:55	AF			V8015GRO
MC38192-4	SW846 8270D BY SIM	28-APR-15 10:32	MR	23-APR-15	FC	B8270SIMSL
MC38192-4	SW846 8011	29-APR-15 03:55	NK	27-APR-15	AW	V8011SL
MC38192-4	SW846 8270D	30-APR-15 10:19	KD	29-APR-15	PA	AB8270SL+
MC38192-4	SW846 8260C	06-MAY-15 14:10	JM			V8260SL+

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC38192

URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Project No: 21563720.18000

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC38192-4	SW846 8260C	06-MAY-15 14:44	TT			V8260SL+
MC38192-5 Collected: 22-APR-15 09:30 By: MPM Received: 23-APR-15 By: TB-042215-HCL						
MC38192-5	SW846 8260C	07-MAY-15 11:25	JM			V8260SL+
MC38192-6 Collected: 22-APR-15 09:30 By: MPM Received: 23-APR-15 By: TB-042215-ST						
MC38192-6	SW846 8011	28-APR-15 10:30	NK	24-APR-15	AW	V8011SL

SGS Accutest Internal Chain of Custody

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Received: 04/23/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC38192-1.1	Walk In Ref #9	Mehdi Abdolrahim	04/23/15 16:34	Retrieve from Storage
MC38192-1.1	Mehdi Abdolrahim	Walk In Ref #9	04/23/15 17:36	Return to Storage
MC38192-1.1	Walk In Ref #9	Aysia Wood	04/29/15 15:10	Retrieve from Storage
MC38192-1.1	Aysia Wood	Walk In Ref #9	04/29/15 22:14	Return to Storage
MC38192-1.1	Scott Parsick		06/23/15 11:34	Disposed
MC38192-1.2	Walk In Ref #9	Aysia Wood	04/23/15 16:54	Retrieve from Storage
MC38192-1.2	Aysia Wood	Walk In Ref #9	04/23/15 21:58	Return to Storage
MC38192-1.2	Walk In Ref #9	Nicole Estey	04/24/15 14:38	Retrieve from Storage
MC38192-1.2	Nicole Estey	Walk In Ref #9	04/27/15 21:44	Return to Storage
MC38192-1.2	Scott Parsick		06/23/15 11:34	Disposed
MC38192-1.4	VOC Ref #10	Tomasz Torski	05/06/15 11:26	Retrieve from Storage
MC38192-1.4	Tomasz Torski	GCMSM	05/06/15 11:27	Load on Instrument
MC38192-1.4	GCMSM	Krysten Dufort	06/04/15 12:28	Unload from Instrument
MC38192-1.4	Krysten Dufort	VOC Ref #10	06/04/15 12:46	Return to Storage
MC38192-1.4	Scott Parsick		06/23/15 11:34	Disposed
MC38192-1.5	VOC Ref #10	Jaime Maslowski	04/23/15 15:27	Retrieve from Storage
MC38192-1.5	Jaime Maslowski	VOC Ref #10	04/24/15 09:23	Return to Storage
MC38192-1.5	VOC Ref #10	Jaime Maslowski	05/06/15 09:41	Retrieve from Storage
MC38192-1.5	Jaime Maslowski	VOC Ref #10	05/07/15 08:44	Return to Storage
MC38192-1.5	Scott Parsick		06/23/15 11:34	Disposed
MC38192-1.6	VOC Ref #10	Anthony Franciosa	04/24/15 08:44	Retrieve from Storage
MC38192-1.6	Anthony Franciosa	GCBD	04/24/15 08:44	Load on Instrument
MC38192-1.6	GCBD	Anthony Franciosa	04/27/15 09:17	Unload from Instrument
MC38192-1.6	Anthony Franciosa	VOC Ref #10	04/27/15 09:17	Return to Storage
MC38192-1.6	Scott Parsick		06/23/15 11:34	Disposed
MC38192-2.1	Walk In Ref #9	Mehdi Abdolrahim	04/23/15 16:34	Retrieve from Storage
MC38192-2.1	Mehdi Abdolrahim	Walk In Ref #9	04/23/15 17:36	Return to Storage
MC38192-2.1	Walk In Ref #9	Nicole Estey	04/24/15 14:38	Retrieve from Storage
MC38192-2.1	Nicole Estey	Walk In Ref #9	04/27/15 21:44	Return to Storage
MC38192-2.1	Walk In Ref #9	Aysia Wood	04/29/15 15:10	Retrieve from Storage
MC38192-2.1	Aysia Wood	Walk In Ref #9	04/29/15 22:14	Return to Storage
MC38192-2.1	Scott Parsick		06/23/15 11:34	Disposed
MC38192-2.2	Walk In Ref #9	Aysia Wood	04/23/15 16:54	Retrieve from Storage
MC38192-2.2	Aysia Wood	Walk In Ref #9	04/23/15 21:58	Return to Storage
MC38192-2.2	Scott Parsick		06/23/15 11:34	Disposed
MC38192-2.4	VOC Ref #10	Tomasz Torski	05/06/15 11:26	Retrieve from Storage
MC38192-2.4	Tomasz Torski	GCMSM	05/06/15 11:27	Load on Instrument

SGS Accutest Internal Chain of Custody

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Received: 04/23/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC38192-2.4	GCMSM	Krysten Dufort	06/04/15 12:28	Unload from Instrument
MC38192-2.4	Krysten Dufort	VOC Ref #10	06/04/15 12:46	Return to Storage
MC38192-2.4	Scott Parsick		06/23/15 11:34	Disposed
MC38192-2.5	VOC Ref #10	Jaime Maslowski	04/23/15 15:27	Retrieve from Storage
MC38192-2.5	Jaime Maslowski	VOC Ref #10	04/24/15 09:23	Return to Storage
MC38192-2.5	VOC Ref #10	Jaime Maslowski	05/06/15 09:41	Retrieve from Storage
MC38192-2.5	Jaime Maslowski	VOC Ref #10	05/07/15 08:44	Return to Storage
MC38192-2.5	Scott Parsick		06/23/15 11:34	Disposed
MC38192-2.6	VOC Ref #10	Anthony Franciosa	04/24/15 08:44	Retrieve from Storage
MC38192-2.6	Anthony Franciosa	GCBD	04/24/15 08:44	Load on Instrument
MC38192-2.6	GCBD	Anthony Franciosa	04/27/15 09:17	Unload from Instrument
MC38192-2.6	Anthony Franciosa	VOC Ref #10	04/27/15 09:17	Return to Storage
MC38192-2.6	Scott Parsick		06/23/15 11:34	Disposed
MC38192-3.1	Walk In Ref #22	Forrest Thompson	04/23/15 16:36	Retrieve from Storage
MC38192-3.1	Forrest Thompson	Walk In Ref #22	04/23/15 19:53	Return to Storage
MC38192-3.1	Scott Parsick		06/23/15 11:34	Disposed
MC38192-3.2	Walk In Ref #22	Forrest Thompson	04/26/15 15:05	Retrieve from Storage
MC38192-3.2	Forrest Thompson	Walk In Ref #22	04/26/15 21:54	Return to Storage
MC38192-3.2	Walk In Ref #22	Forrest Thompson	04/27/15 15:47	Retrieve from Storage
MC38192-3.2	Forrest Thompson		05/03/15 16:58	Depleted
MC38192-3.3	VOC Ref #4	Anthony Franciosa	04/24/15 08:45	Retrieve from Storage
MC38192-3.3	Anthony Franciosa	GCBD	04/24/15 08:45	Load on Instrument
MC38192-3.3	GCBD	Anthony Franciosa	04/27/15 09:17	Unload from Instrument
MC38192-3.3	Anthony Franciosa	VOC Ref #4	04/27/15 09:18	Return to Storage
MC38192-3.3	Scott Parsick		06/23/15 11:34	Disposed
MC38192-3.4	VOC Ref #5	Jaime Maslowski	05/07/15 10:15	Retrieve from Storage
MC38192-3.4	Jaime Maslowski	GCMSL	05/07/15 10:16	Load on Instrument
MC38192-3.4	GCMSL	Jaime Maslowski	05/08/15 10:14	Unload from Instrument
MC38192-3.4	Jaime Maslowski	VOC Ref #5	05/08/15 10:14	Return to Storage
MC38192-3.4	Scott Parsick		06/23/15 11:34	Disposed
MC38192-3.5	VOC Ref #1	Jaime Maslowski	05/08/15 13:47	Retrieve from Storage
MC38192-3.5	Jaime Maslowski	GCMSL	05/08/15 13:47	Load on Instrument
MC38192-3.5	GCMSL	Jaime Maslowski	05/11/15 09:05	Unload from Instrument
MC38192-3.5	Jaime Maslowski	VOC Ref #1	05/11/15 09:05	Return to Storage
MC38192-3.5	Scott Parsick		06/23/15 11:34	Disposed
MC38192-3.8	VOC Ref #4	Nicole Estey	04/24/15 14:33	Retrieve from Storage

SGS Accutest Internal Chain of Custody

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL
Received: 04/23/15

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC38192-3.8	Nicole Estey		04/27/15 21:48	Depleted
MC38192-4.1	Walk In Ref #9	Mehdi Abdolrahim	04/23/15 16:34	Retrieve from Storage
MC38192-4.1	Mehdi Abdolrahim	Walk In Ref #9	04/23/15 17:36	Return to Storage
MC38192-4.1	Walk In Ref #9	Nicole Estey	04/27/15 14:27	Retrieve from Storage
MC38192-4.1	Nicole Estey	Walk In Ref #9	04/27/15 21:44	Return to Storage
MC38192-4.1	Walk In Ref #9	Aysia Wood	04/29/15 15:10	Retrieve from Storage
MC38192-4.1	Aysia Wood	Walk In Ref #9	04/29/15 22:14	Return to Storage
MC38192-4.1	Scott Parsick		06/23/15 11:34	Disposed
MC38192-4.2	Walk In Ref #9	Aysia Wood	04/23/15 16:54	Retrieve from Storage
MC38192-4.2	Aysia Wood	Walk In Ref #9	04/23/15 21:58	Return to Storage
MC38192-4.2	Walk In Ref #9	Nicole Estey	04/24/15 14:38	Retrieve from Storage
MC38192-4.2	Nicole Estey	Walk In Ref #9	04/27/15 21:44	Return to Storage
MC38192-4.2	Scott Parsick		06/23/15 11:34	Disposed
MC38192-4.3	VOC Ref #10	Tomasz Torski	05/06/15 11:26	Retrieve from Storage
MC38192-4.3	Tomasz Torski	GCMSM	05/06/15 11:27	Load on Instrument
MC38192-4.3	GCMSM	Krysten Dufort	06/04/15 12:28	Unload from Instrument
MC38192-4.3	Krysten Dufort	VOC Ref #10	06/04/15 12:46	Return to Storage
MC38192-4.3	Scott Parsick		06/23/15 11:34	Disposed
MC38192-4.5	VOC Ref #10	Anthony Franciosa	04/24/15 08:44	Retrieve from Storage
MC38192-4.5	Anthony Franciosa	GCBD	04/24/15 08:44	Load on Instrument
MC38192-4.5	GCBD	Anthony Franciosa	04/27/15 09:17	Unload from Instrument
MC38192-4.5	Anthony Franciosa	VOC Ref #10	04/27/15 09:17	Return to Storage
MC38192-4.5	Scott Parsick		06/23/15 11:34	Disposed
MC38192-4.6	VOC Ref #10	Jaime Maslowski	04/23/15 15:27	Retrieve from Storage
MC38192-4.6	Jaime Maslowski	VOC Ref #10	04/24/15 09:23	Return to Storage
MC38192-4.6	VOC Ref #10	Jaime Maslowski	05/06/15 09:41	Retrieve from Storage
MC38192-4.6	Jaime Maslowski	VOC Ref #10	05/07/15 08:44	Return to Storage
MC38192-4.6	Scott Parsick		06/23/15 11:34	Disposed
MC38192-5.2	VOC Ref #5	Jaime Maslowski	05/07/15 10:15	Retrieve from Storage
MC38192-5.2	Jaime Maslowski	GCMSL	05/07/15 10:16	Load on Instrument
MC38192-5.2	GCMSL	Jaime Maslowski	05/08/15 10:14	Unload from Instrument
MC38192-5.2	Jaime Maslowski	VOC Ref #5	05/08/15 10:14	Return to Storage
MC38192-5.2	Scott Parsick		06/23/15 11:34	Disposed
MC38192-6.2	VOC Ref #4	Nicole Estey	04/24/15 14:33	Retrieve from Storage
MC38192-6.2	Nicole Estey		04/27/15 21:48	Depleted

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSK2730-MB	K87544.D	1	05/06/15	JM	n/a	n/a	MSK2730

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Result	RL	MDL	Units	Q
110-75-8	2-Chloroethyl vinyl ether	ND	250	22	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	65-141%
2037-26-5	Toluene-D8	96%	65-129%
460-00-4	4-Bromofluorobenzene	93%	63-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2594-MB	M72848.D	1	05/06/15	TT	n/a	n/a	MSM2594

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.3	ug/kg	
107-02-8	Acrolein	ND	25	9.2	ug/kg	
107-13-1	Acrylonitrile	ND	25	1.9	ug/kg	
71-43-2	Benzene	ND	0.50	0.37	ug/kg	
108-86-1	Bromobenzene	ND	5.0	0.45	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.41	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.43	ug/kg	
75-25-2	Bromoform	ND	2.0	0.48	ug/kg	
74-83-9	Bromomethane	ND	2.0	0.47	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	3.4	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	0.36	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	0.38	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	0.38	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	0.41	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.41	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.22	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.39	ug/kg	
67-66-3	Chloroform	ND	2.0	0.50	ug/kg	
74-87-3	Chloromethane	ND	5.0	0.75	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	0.43	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	0.44	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.25	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.37	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.40	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.45	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.40	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.0	0.40	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.0	0.37	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.0	0.68	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	0.36	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	0.40	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.44	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	0.39	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	0.41	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	0.37	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.38	ug/kg	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2594-MB	M72848.D	1	05/06/15	TT	n/a	n/a	MSM2594

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.20	ug/kg	
123-91-1	1,4-Dioxane	ND	25	20	ug/kg	
97-63-2	Ethyl methacrylate	ND	5.0	0.51	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.38	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	0.57	ug/kg	
591-78-6	2-Hexanone	ND	10	0.67	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.44	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	0.37	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	0.65	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.65	ug/kg	
74-95-3	Methylene bromide	ND	5.0	0.50	ug/kg	
75-09-2	Methylene chloride	ND	2.0	0.42	ug/kg	
91-20-3	Naphthalene	ND	5.0	0.60	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	0.41	ug/kg	
100-42-5	Styrene	ND	5.0	0.31	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.47	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.20	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.30	ug/kg	
108-88-3	Toluene	ND	5.0	0.40	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.68	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.44	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.35	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.43	ug/kg	
79-01-6	Trichloroethene	ND	2.0	0.31	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.0	0.31	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.56	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.38	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.32	ug/kg	
108-05-4	Vinyl Acetate	ND	5.0	0.79	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.54	ug/kg	
	m,p-Xylene	ND	2.0	0.79	ug/kg	
95-47-6	o-Xylene	ND	2.0	0.35	ug/kg	
1330-20-7	Xylene (total)	ND	2.0	0.35	ug/kg	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2594-MB	M72848.D	1	05/06/15	TT	n/a	n/a	MSM2594

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-1, MC38192-2, MC38192-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	117%	65-141%
2037-26-5	Toluene-D8	94%	65-129%
460-00-4	4-Bromofluorobenzene	89%	63-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4051-MB	L91900.D	1	05/07/15	JM	n/a	n/a	MSL4051

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
107-02-8	Acrolein	ND	25	11	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.3	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	0.79	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.57	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.19	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.49	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.48	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.29	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.23	ug/l	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4051-MB	L91900.D	1	05/07/15	JM	n/a	n/a	MSL4051

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.7	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.27	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.77	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.29	ug/l	
100-42-5	Styrene	ND	5.0	0.28	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.74	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.4	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4051-MB	L91900.D	1	05/07/15	JM	n/a	n/a	MSL4051

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	72-133%
2037-26-5	Toluene-D8	97%	85-114%
460-00-4	4-Bromofluorobenzene	107%	70-134%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4053-MB	L91952.D	1	05/08/15	JM	n/a	n/a	MSL4053

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.0	ug/l	
107-02-8	Acrolein	ND	25	11	ug/l	
107-13-1	Acrylonitrile	ND	5.0	2.3	ug/l	
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.26	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.37	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.18	ug/l	
75-25-2	Bromoform	ND	1.0	0.39	ug/l	
74-83-9	Bromomethane	ND	2.0	0.79	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	3.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.57	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.19	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.34	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.24	ug/l	
75-00-3	Chloroethane	ND	2.0	0.49	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.3	ug/l	
67-66-3	Chloroform	ND	1.0	0.40	ug/l	
74-87-3	Chloromethane	ND	2.0	0.49	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.60	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.46	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.24	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.24	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.37	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	0.53	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.28	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.31	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.28	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.48	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.21	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.29	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.7	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.23	ug/l	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4053-MB	L91952.D	1	05/08/15	JM	n/a	n/a	MSL4053

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.27	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.43	ug/l	
123-91-1	1,4-Dioxane	ND	25	20	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.45	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.7	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.27	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.32	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	0.77	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.30	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.27	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.29	ug/l	
100-42-5	Styrene	ND	5.0	0.28	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.25	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.29	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.21	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.78	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.74	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.42	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.32	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.25	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.47	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.4	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.45	ug/l	
	m,p-Xylene	ND	1.0	0.47	ug/l	
95-47-6	o-Xylene	ND	1.0	0.22	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4053-MB	L91952.D	1	05/08/15	JM	n/a	n/a	MSL4053

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	93%	72-133%
2037-26-5	Toluene-D8	100%	85-114%
460-00-4	4-Bromofluorobenzene	107%	70-134%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSK2730-BS	K87542.D	1	05/06/15	JM	n/a	n/a	MSK2730

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
110-75-8	2-Chloroethyl vinyl ether	2500	2280	91	29-158

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	65-141%
2037-26-5	Toluene-D8	104%	65-129%
460-00-4	4-Bromofluorobenzene	95%	63-137%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2594-BS	M72845.D	1	05/06/15	TT	n/a	n/a	MSM2594
MSM2594-BSD	M72846.D	1	05/06/15	TT	n/a	n/a	MSM2594

The QC reported here applies to the following samples: Method: SW846 8260C

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	69.3	139	61.9	124	11	18-185/25
107-02-8	Acrolein	250	456	182	483	193* [a]	6	10-186/25
107-13-1	Acrylonitrile	50	78.1	156* [a]	78.3	157* [a]	0	56-138/25
71-43-2	Benzene	50	47.1	94	48.2	96	2	67-124/25
108-86-1	Bromobenzene	50	47.2	94	48.1	96	2	78-121/25
74-97-5	Bromochloromethane	50	56.9	114	58.5	117	3	78-128/25
75-27-4	Bromodichloromethane	50	52.8	106	53.6	107	2	75-136/25
75-25-2	Bromoform	50	63.7	127	65.7	131	3	64-154/25
74-83-9	Bromomethane	50	37.9	76	47.6	95	23	55-141/25
78-93-3	2-Butanone (MEK)	50	67.1	134	62.3	125	7	24-181/25
104-51-8	n-Butylbenzene	50	44.4	89	44.4	89	0	68-129/25
135-98-8	sec-Butylbenzene	50	43.1	86	44.2	88	3	71-128/25
98-06-6	tert-Butylbenzene	50	42.9	86	43.5	87	1	67-128/25
75-15-0	Carbon disulfide	50	47.5	95	49.1	98	3	46-150/25
56-23-5	Carbon tetrachloride	50	49.3	99	50.8	102	3	60-146/25
108-90-7	Chlorobenzene	50	47.7	95	49.3	99	3	79-122/25
75-00-3	Chloroethane	50	48.0	96	60.9	122	24	53-165/25
67-66-3	Chloroform	50	50.4	101	50.6	101	0	68-130/25
74-87-3	Chloromethane	50	46.5	93	59.4	119	24	44-154/25
95-49-8	o-Chlorotoluene	50	41.3	83	42.2	84	2	71-122/25
106-43-4	p-Chlorotoluene	50	41.1	82	41.6	83	1	72-119/25
124-48-1	Dibromochloromethane	50	60.1	120	62.4	125	4	73-143/25
95-50-1	1,2-Dichlorobenzene	50	47.5	95	48.3	97	2	77-123/25
541-73-1	1,3-Dichlorobenzene	50	45.5	91	47.2	94	4	76-120/25
106-46-7	1,4-Dichlorobenzene	50	45.3	91	44.7	89	1	75-122/25
75-71-8	Dichlorodifluoromethane	50	37.0	74	48.6	97	27* [b]	25-168/25
75-34-3	1,1-Dichloroethane	50	52.4	105	53.4	107	2	67-134/25
107-06-2	1,2-Dichloroethane	50	57.5	115	57.8	116	1	66-134/25
75-35-4	1,1-Dichloroethene	50	53.6	107	55.8	112	4	57-141/25
156-59-2	cis-1,2-Dichloroethene	50	55.2	110	55.5	111	1	68-129/25
156-60-5	trans-1,2-Dichloroethene	50	55.5	111	54.9	110	1	66-132/25
78-87-5	1,2-Dichloropropane	50	53.4	107	55.4	111	4	68-132/25
142-28-9	1,3-Dichloropropane	50	55.0	110	55.9	112	2	78-119/25
594-20-7	2,2-Dichloropropane	50	45.0	90	46.3	93	3	52-153/25
563-58-6	1,1-Dichloropropene	50	48.5	97	49.2	98	1	73-129/25
10061-01-5	cis-1,3-Dichloropropene	50	52.8	106	54.0	108	2	80-125/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2594-BS	M72845.D	1	05/06/15	TT	n/a	n/a	MSM2594
MSM2594-BSD	M72846.D	1	05/06/15	TT	n/a	n/a	MSM2594

The QC reported here applies to the following samples: Method: SW846 8260C

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	53.7	107	52.9	106	2	80-134/25
123-91-1	1,4-Dioxane	250	339	136	331	132	2	38-176/25
97-63-2	Ethyl methacrylate	50	49.5	99	48.5	97	2	66-127/25
100-41-4	Ethylbenzene	50	46.6	93	48.0	96	3	75-120/25
87-68-3	Hexachlorobutadiene	50	52.0	104	52.1	104	0	68-137/25
591-78-6	2-Hexanone	50	77.0	154* [a]	73.1	146	5	38-152/25
98-82-8	Isopropylbenzene	50	42.2	84	43.0	86	2	70-129/25
99-87-6	p-Isopropyltoluene	50	44.1	88	45.3	91	3	73-126/25
1634-04-4	Methyl Tert Butyl Ether	50	32.9	66	33.6	67	2	64-126/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	80.3	161* [a]	78.5	157* [a]	2	63-126/25
74-95-3	Methylene bromide	50	56.3	113	57.5	115	2	81-123/25
75-09-2	Methylene chloride	50	51.4	103	53.3	107	4	52-144/25
91-20-3	Naphthalene	50	58.6	117	59.8	120	2	51-164/25
103-65-1	n-Propylbenzene	50	41.3	83	42.0	84	2	68-129/25
100-42-5	Styrene	50	47.0	94	49.0	98	4	77-126/25
630-20-6	1,1,1,2-Tetrachloroethane	50	56.2	112	59.0	118	5	72-141/25
79-34-5	1,1,2,2-Tetrachloroethane	50	56.0	112	55.4	111	1	65-130/25
127-18-4	Tetrachloroethene	50	49.0	98	51.1	102	4	71-128/25
108-88-3	Toluene	50	46.4	93	47.4	95	2	76-122/25
87-61-6	1,2,3-Trichlorobenzene	50	52.0	104	53.7	107	3	44-162/25
120-82-1	1,2,4-Trichlorobenzene	50	50.2	100	51.3	103	2	60-147/25
71-55-6	1,1,1-Trichloroethane	50	47.5	95	48.3	97	2	64-138/25
79-00-5	1,1,2-Trichloroethane	50	52.3	105	53.2	106	2	76-122/25
79-01-6	Trichloroethene	50	55.6	111	56.5	113	2	73-123/25
75-69-4	Trichlorofluoromethane	50	40.8	82	53.1	106	26* [b]	57-141/25
96-18-4	1,2,3-Trichloropropane	50	56.3	113	56.2	112	0	69-124/25
95-63-6	1,2,4-Trimethylbenzene	50	43.7	87	44.6	89	2	73-124/25
108-67-8	1,3,5-Trimethylbenzene	50	43.2	86	44.4	89	3	69-122/25
108-05-4	Vinyl Acetate	50	86.5	173	82.7	165	4	10-186/25
75-01-4	Vinyl chloride	50	37.9	76	48.8	98	25	31-170/25
	m,p-Xylene	100	93.1	93	97.2	97	4	77-121/25
95-47-6	o-Xylene	50	47.7	95	49.6	99	4	78-122/25
1330-20-7	Xylene (total)	150	141	94	147	98	4	78-121/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2594-BS	M72845.D	1	05/06/15	TT	n/a	n/a	MSM2594
MSM2594-BSD	M72846.D	1	05/06/15	TT	n/a	n/a	MSM2594

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-1, MC38192-2, MC38192-4

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	116%	113%	65-141%
2037-26-5	Toluene-D8	96%	95%	65-129%
460-00-4	4-Bromofluorobenzene	88%	87%	63-137%

(a) Outside control limits. Associated samples are non-detect for this compound.
(b) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4051-BS	L91896.D	1	05/07/15	JM	n/a	n/a	MSL4051
MSL4051-BSD	L91897.D	1	05/07/15	JM	n/a	n/a	MSL4051

The QC reported here applies to the following samples: Method: SW846 8260C

MC38192-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	41.2	82	55.0	110	29* [a]	14-172/25
107-02-8	Acrolein	250	262	105	304	122	15	10-168/25
107-13-1	Acrylonitrile	50	42.8	86	54.8	110	25	41-158/25
71-43-2	Benzene	50	48.6	97	51.0	102	5	68-127/25
108-86-1	Bromobenzene	50	47.9	96	49.7	99	4	74-124/25
74-97-5	Bromochloromethane	50	46.9	94	50.6	101	8	68-135/25
75-27-4	Bromodichloromethane	50	47.3	95	48.2	96	2	72-144/25
75-25-2	Bromoform	50	46.9	94	51.5	103	9	59-147/25
74-83-9	Bromomethane	50	53.4	107	52.4	105	2	34-175/25
78-93-3	2-Butanone (MEK)	50	55.2	110	55.9	112	1	43-147/25
104-51-8	n-Butylbenzene	50	50.7	101	53.7	107	6	77-136/25
135-98-8	sec-Butylbenzene	50	49.0	98	50.6	101	3	75-134/25
98-06-6	tert-Butylbenzene	50	49.0	98	49.7	99	1	74-132/25
75-15-0	Carbon disulfide	50	46.4	93	49.2	98	6	34-171/25
56-23-5	Carbon tetrachloride	50	45.3	91	41.6	83	9	55-153/25
108-90-7	Chlorobenzene	50	44.3	89	46.0	92	4	71-123/25
75-00-3	Chloroethane	50	60.0	120	59.8	120	0	58-175/25
110-75-8	2-Chloroethyl vinyl ether	50	52.1	104	57.1	114	9	44-169/25
67-66-3	Chloroform	50	49.3	99	50.2	100	2	67-136/25
74-87-3	Chloromethane	50	60.0	120	57.9	116	4	25-182/25
95-49-8	o-Chlorotoluene	50	46.7	93	47.4	95	1	72-130/25
106-43-4	p-Chlorotoluene	50	47.8	96	48.2	96	1	73-127/25
124-48-1	Dibromochloromethane	50	47.7	95	51.1	102	7	73-139/25
95-50-1	1,2-Dichlorobenzene	50	45.9	92	47.3	95	3	77-125/25
541-73-1	1,3-Dichlorobenzene	50	45.1	90	46.1	92	2	77-124/25
106-46-7	1,4-Dichlorobenzene	50	44.4	89	46.3	93	4	73-128/25
75-71-8	Dichlorodifluoromethane	50	57.4	115	57.5	115	0	23-157/25
75-34-3	1,1-Dichloroethane	50	48.0	96	48.6	97	1	63-145/25
107-06-2	1,2-Dichloroethane	50	47.7	95	48.0	96	1	58-145/25
75-35-4	1,1-Dichloroethene	50	46.7	93	48.5	97	4	56-158/25
156-59-2	cis-1,2-Dichloroethene	50	52.0	104	53.9	108	4	67-133/25
156-60-5	trans-1,2-Dichloroethene	50	49.6	99	54.6	109	10	66-136/25
78-87-5	1,2-Dichloropropane	50	48.8	98	52.5	105	7	75-133/25
142-28-9	1,3-Dichloropropane	50	54.7	109	57.7	115	5	70-127/25
594-20-7	2,2-Dichloropropane	50	39.4	79	33.9	68	15	52-163/25
563-58-6	1,1-Dichloropropene	50	46.2	92	48.3	97	4	77-140/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4051-BS	L91896.D	1	05/07/15	JM	n/a	n/a	MSL4051
MSL4051-BSD	L91897.D	1	05/07/15	JM	n/a	n/a	MSL4051

The QC reported here applies to the following samples: Method: SW846 8260C

MC38192-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	58.8	118	62.4	125	6	74-141/25
10061-02-6	trans-1,3-Dichloropropene	50	51.1	102	55.8	112	9	77-143/25
123-91-1	1,4-Dioxane	250	238	95	238	95	0	30-182/25
97-63-2	Ethyl methacrylate	50	55.9	112	63.7	127	13	64-131/25
100-41-4	Ethylbenzene	50	49.8	100	50.5	101	1	71-129/25
87-68-3	Hexachlorobutadiene	50	50.1	100	53.0	106	6	64-146/25
591-78-6	2-Hexanone	50	52.5	105	63.4	127	19	22-163/25
98-82-8	Isopropylbenzene	50	47.7	95	48.3	97	1	72-133/25
99-87-6	p-Isopropyltoluene	50	48.8	98	50.5	101	3	77-134/25
1634-04-4	Methyl Tert Butyl Ether	50	62.9	126	69.1	138	9	46-151/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	50.8	102	65.6	131	25	47-145/25
74-95-3	Methylene bromide	50	45.2	90	47.6	95	5	70-132/25
75-09-2	Methylene chloride	50	49.9	100	52.6	105	5	55-146/25
91-20-3	Naphthalene	50	50.1	100	59.6	119	17	39-176/25
103-65-1	n-Propylbenzene	50	47.0	94	47.5	95	1	74-134/25
100-42-5	Styrene	50	49.5	99	51.8	104	5	71-134/25
630-20-6	1,1,1,2-Tetrachloroethane	50	48.9	98	51.5	103	5	70-137/25
79-34-5	1,1,2,2-Tetrachloroethane	50	45.4	91	51.0	102	12	58-145/25
127-18-4	Tetrachloroethene	50	46.8	94	48.3	97	3	63-137/25
108-88-3	Toluene	50	48.0	96	50.6	101	5	75-126/25
87-61-6	1,2,3-Trichlorobenzene	50	47.9	96	56.1	112	16	27-181/25
120-82-1	1,2,4-Trichlorobenzene	50	47.6	95	52.6	105	10	40-176/25
71-55-6	1,1,1-Trichloroethane	50	47.6	95	46.4	93	3	68-144/25
79-00-5	1,1,2-Trichloroethane	50	48.2	96	52.9	106	9	72-133/25
79-01-6	Trichloroethene	50	46.7	93	49.5	99	6	73-126/25
75-69-4	Trichlorofluoromethane	50	52.4	105	53.3	107	2	43-152/25
96-18-4	1,2,3-Trichloropropane	50	53.0	106	60.5	121	13	58-141/25
95-63-6	1,2,4-Trimethylbenzene	50	47.4	95	50.1	100	6	76-129/25
108-67-8	1,3,5-Trimethylbenzene	50	50.3	101	51.0	102	1	71-127/25
108-05-4	Vinyl Acetate	50	121	242* [b]	129	258* [b]	6	10-170/25
75-01-4	Vinyl chloride	50	57.0	114	60.3	121	6	36-167/25
	m,p-Xylene	100	95.1	95	97.0	97	2	68-130/25
95-47-6	o-Xylene	50	46.9	94	48.2	96	3	69-126/25
1330-20-7	Xylene (total)	150	142	95	145	97	2	67-129/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4051-BS	L91896.D	1	05/07/15	JM	n/a	n/a	MSL4051
MSL4051-BSD	L91897.D	1	05/07/15	JM	n/a	n/a	MSL4051

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-5

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	99%	72-133%
2037-26-5	Toluene-D8	99%	100%	85-114%
460-00-4	4-Bromofluorobenzene	98%	96%	70-134%

(a) Outside control limits. Blank Spike meets program technical requirements.
(b) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4053-BS	L91949.D	1	05/08/15	JM	n/a	n/a	MSL4053
MSL4053-BSD	L91950.D	1	05/08/15	JM	n/a	n/a	MSL4053

The QC reported here applies to the following samples: Method: SW846 8260C

MC38192-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	55.9	112	59.6	119	6	14-172/25
107-02-8	Acrolein	250	293	117	331	132	12	10-168/25
107-13-1	Acrylonitrile	50	54.3	109	58.0	116	7	41-158/25
71-43-2	Benzene	50	47.4	95	46.3	93	2	68-127/25
108-86-1	Bromobenzene	50	47.3	95	47.6	95	1	74-124/25
74-97-5	Bromochloromethane	50	48.7	97	48.0	96	1	68-135/25
75-27-4	Bromodichloromethane	50	45.2	90	44.9	90	1	72-144/25
75-25-2	Bromoform	50	47.7	95	50.3	101	5	59-147/25
74-83-9	Bromomethane	50	50.8	102	48.6	97	4	34-175/25
78-93-3	2-Butanone (MEK)	50	60.0	120	59.2	118	1	43-147/25
104-51-8	n-Butylbenzene	50	52.3	105	50.5	101	4	77-136/25
135-98-8	sec-Butylbenzene	50	48.3	97	47.1	94	3	75-134/25
98-06-6	tert-Butylbenzene	50	47.8	96	46.8	94	2	74-132/25
75-15-0	Carbon disulfide	50	44.9	90	43.3	87	4	34-171/25
56-23-5	Carbon tetrachloride	50	43.4	87	40.1	80	8	55-153/25
108-90-7	Chlorobenzene	50	44.0	88	43.1	86	2	71-123/25
75-00-3	Chloroethane	50	54.3	109	53.8	108	1	58-175/25
110-75-8	2-Chloroethyl vinyl ether	50	46.5	93	53.8	108	15	44-169/25
67-66-3	Chloroform	50	48.5	97	46.5	93	4	67-136/25
74-87-3	Chloromethane	50	50.8	102	50.6	101	0	25-182/25
95-49-8	o-Chlorotoluene	50	45.2	90	44.9	90	1	72-130/25
106-43-4	p-Chlorotoluene	50	47.1	94	46.0	92	2	73-127/25
124-48-1	Dibromochloromethane	50	46.7	93	47.9	96	3	73-139/25
95-50-1	1,2-Dichlorobenzene	50	46.3	93	44.9	90	3	77-125/25
541-73-1	1,3-Dichlorobenzene	50	44.2	88	44.0	88	0	77-124/25
106-46-7	1,4-Dichlorobenzene	50	44.8	90	42.9	86	4	73-128/25
75-71-8	Dichlorodifluoromethane	50	51.9	104	49.6	99	5	23-157/25
75-34-3	1,1-Dichloroethane	50	45.7	91	44.3	89	3	63-145/25
107-06-2	1,2-Dichloroethane	50	47.0	94	47.3	95	1	58-145/25
75-35-4	1,1-Dichloroethene	50	45.7	91	44.2	88	3	56-158/25
156-59-2	cis-1,2-Dichloroethene	50	51.5	103	49.8	100	3	67-133/25
156-60-5	trans-1,2-Dichloroethene	50	50.6	101	49.2	98	3	66-136/25
78-87-5	1,2-Dichloropropane	50	46.2	92	46.2	92	0	75-133/25
142-28-9	1,3-Dichloropropane	50	51.5	103	54.6	109	6	70-127/25
594-20-7	2,2-Dichloropropane	50	36.3	73	33.9	68	7	52-163/25
563-58-6	1,1-Dichloropropene	50	44.3	89	43.6	87	2	77-140/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4053-BS	L91949.D	1	05/08/15	JM	n/a	n/a	MSL4053
MSL4053-BSD	L91950.D	1	05/08/15	JM	n/a	n/a	MSL4053

The QC reported here applies to the following samples: Method: SW846 8260C

MC38192-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	50	58.5	117	58.0	116	1	74-141/25
10061-02-6	trans-1,3-Dichloropropene	50	52.2	104	54.3	109	4	77-143/25
123-91-1	1,4-Dioxane	250	226	90	234	94	3	30-182/25
97-63-2	Ethyl methacrylate	50	53.9	108	59.3	119	10	64-131/25
100-41-4	Ethylbenzene	50	48.7	97	48.9	98	0	71-129/25
87-68-3	Hexachlorobutadiene	50	52.4	105	48.4	97	8	64-146/25
591-78-6	2-Hexanone	50	53.8	108	57.4	115	6	22-163/25
98-82-8	Isopropylbenzene	50	46.8	94	45.6	91	3	72-133/25
99-87-6	p-Isopropyltoluene	50	49.3	99	47.4	95	4	77-134/25
1634-04-4	Methyl Tert Butyl Ether	50	64.5	129	66.4	133	3	46-151/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	54.1	108	57.5	115	6	47-145/25
74-95-3	Methylene bromide	50	46.1	92	46.8	94	2	70-132/25
75-09-2	Methylene chloride	50	49.4	99	47.2	94	5	55-146/25
91-20-3	Naphthalene	50	54.8	110	56.1	112	2	39-176/25
103-65-1	n-Propylbenzene	50	45.8	92	44.5	89	3	74-134/25
100-42-5	Styrene	50	50.8	102	50.9	102	0	71-134/25
630-20-6	1,1,1,2-Tetrachloroethane	50	48.6	97	49.0	98	1	70-137/25
79-34-5	1,1,2,2-Tetrachloroethane	50	44.0	88	47.7	95	8	58-145/25
127-18-4	Tetrachloroethene	50	45.8	92	44.8	90	2	63-137/25
108-88-3	Toluene	50	48.2	96	46.5	93	4	75-126/25
87-61-6	1,2,3-Trichlorobenzene	50	52.7	105	51.9	104	2	27-181/25
120-82-1	1,2,4-Trichlorobenzene	50	50.3	101	49.6	99	1	40-176/25
71-55-6	1,1,1-Trichloroethane	50	44.9	90	42.2	84	6	68-144/25
79-00-5	1,1,2-Trichloroethane	50	47.1	94	50.0	100	6	72-133/25
79-01-6	Trichloroethene	50	44.4	89	44.7	89	1	73-126/25
75-69-4	Trichlorofluoromethane	50	49.6	99	48.2	96	3	43-152/25
96-18-4	1,2,3-Trichloropropane	50	52.5	105	56.0	112	6	58-141/25
95-63-6	1,2,4-Trimethylbenzene	50	48.2	96	47.0	94	3	76-129/25
108-67-8	1,3,5-Trimethylbenzene	50	48.9	98	47.1	94	4	71-127/25
108-05-4	Vinyl Acetate	50	126	252* [a]	130	260* [a]	3	10-170/25
75-01-4	Vinyl chloride	50	54.9	110	52.7	105	4	36-167/25
	m,p-Xylene	100	92.7	93	93.1	93	0	68-130/25
95-47-6	o-Xylene	50	47.1	94	46.4	93	1	69-126/25
1330-20-7	Xylene (total)	150	140	93	139	93	1	67-129/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSL4053-BS	L91949.D	1	05/08/15	JM	n/a	n/a	MSL4053
MSL4053-BSD	L91950.D	1	05/08/15	JM	n/a	n/a	MSL4053

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-3

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	99%	72-133%
2037-26-5	Toluene-D8	99%	102%	85-114%
460-00-4	4-Bromofluorobenzene	96%	98%	70-134%

(a) Outside control limits. Associated samples are non-detect for this compound.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D70296-1MS	K87547.D	1	05/06/15	JM	n/a	n/a	MSK2730
D70296-1MSD	K87548.D	1	05/06/15	JM	n/a	n/a	MSK2730
D70296-1	K87546.D	1	05/06/15	JM	n/a	n/a	MSK2730

The QC reported here applies to the following samples: **Method:** SW846 8260C

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	D70296-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
110-75-8	2-Chloroethyl vinyl ether	ND		3480	3540	102	3480	3430	99	3	35-154/30

CAS No.	Surrogate Recoveries	MS	MSD	D70296-1	Limits
1868-53-7	Dibromofluoromethane	99%	98%	103%	65-141%
2037-26-5	Toluene-D8	104%	104%	98%	65-129%
460-00-4	4-Bromofluorobenzene	99%	98%	97%	63-137%

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSK2730-CC2686	**Injection Date:**	05/06/15
Lab File ID:	K87541.D	**Injection Time:**	08:57
Instrument ID:	GCMSK	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	157968	8.76	219894	9.61	94407	12.87	126695	15.43	76734	6.42
Upper Limit [a]	315936	9.26	439788	10.11	188814	13.37	253390	15.93	153468	6.92
Lower Limit [b]	78984	8.26	109947	9.11	47204	12.37	63348	14.93	38367	5.92

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSK2730-BS	166722	8.77	234512	9.61	98558	12.87	133880	15.43	78527	6.42
MSK2730-MB	173226	8.77	242462	9.62	89229	12.87	135515	15.43	81945	6.38
ZZZZZZ	164745	8.77	231639	9.61	90352	12.87	127941	15.43	80506	6.41
D70296-1	185446	8.77	261766	9.61	97723	12.87	142672	15.43	91650	6.42
D70296-1MS	171380	8.77	243397	9.62	102628	12.87	129812	15.43	88294	6.41
D70296-1MSD	169265	8.77	236679	9.61	101576	12.87	128726	15.43	92824	6.41
MC38192-1	183928	8.77	257991	9.61	97931	12.87	145741	15.43	97926	6.42
MC38192-2	191065	8.77	266708	9.61	101539	12.87	149325	15.43	94444	6.42
MC38192-4	172899	8.76	242795	9.61	93722	12.87	139818	15.43	92297	6.42
ZZZZZZ	179411	8.77	252121	9.61	92725	12.87	139545	15.43	95296	6.41
ZZZZZZ	175881	8.77	250333	9.61	92124	12.87	136602	15.43	95784	6.41
ZZZZZZ	169192	8.76	238892	9.61	89091	12.87	132434	15.43	90871	6.41
ZZZZZZ	176689	8.77	250128	9.61	96490	12.87	144940	15.43	93504	6.42
ZZZZZZ	169895	8.77	241851	9.61	91192	12.87	139599	15.43	91959	6.42
ZZZZZZ	162841	8.77	232601	9.61	89320	12.87	135834	15.43	90558	6.41
ZZZZZZ	175398	8.77	245090	9.61	95237	12.87	146702	15.43	85413	6.42
ZZZZZZ	177176	8.77	251495	9.61	95254	12.87	145334	15.43	87414	6.42
ZZZZZZ	164559	8.76	234110	9.61	88936	12.87	137832	15.43	83350	6.41
ZZZZZZ	159025	8.76	231712	9.61	86084	12.87	129421	15.43	86721	6.41
ZZZZZZ	190752	8.77	271755	9.62	103170	12.87	147545	15.43	105813	6.41
ZZZZZZ	175942	8.77	243960	9.61	93063	12.87	142344	15.43	87684	6.40

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSL4051-CC4030	**Injection Date:**	05/07/15
Lab File ID:	L91895.D	**Injection Time:**	08:22
Instrument ID:	GCMSL	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	223706	8.10	306747	8.91	191289	12.10	172767	14.65	36421	5.86
Upper Limit [a]	447412	8.60	613494	9.41	382578	12.60	345534	15.15	72842	6.36
Lower Limit [b]	111853	7.60	153374	8.41	95645	11.60	86384	14.15	18211	5.36
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**
MSL4051-BS	242462	8.10	336035	8.91	209420	12.10	180801	14.64	38166	5.84
MSL4051-BSD	242347	8.10	332383	8.91	211313	12.10	182402	14.64	41674	5.85
MSL4051-MB	238490	8.10	323001	8.91	183217	12.11	138475	14.65	42830	5.91
MC38192-5	235229	8.10	321818	8.91	184445	12.11	134189	14.65	39491	5.92
ZZZZZZ	231917	8.10	314585	8.91	180573	12.11	131217	14.65	37472	5.91
ZZZZZZ	227927	8.10	301379	8.91	173768	12.11	126646	14.65	45209	5.93
ZZZZZZ	234117	8.10	308828	8.92	180043	12.11	127375	14.65	42764	5.92
ZZZZZZ	216845	8.10	296518	8.91	171590	12.11	127909	14.65	50541	5.91
ZZZZZZ	214553	8.10	296162	8.91	168959	12.11	127939	14.65	52299	5.91
ZZZZZZ	218024	8.10	287994	8.91	167938	12.11	124732	14.65	41795	5.91
ZZZZZZ	211460	8.09	286022	8.91	169652	12.11	123021	14.65	46122	5.90
ZZZZZZ	211582	8.09	283270	8.91	167258	12.11	119876	14.65	37966	5.92
ZZZZZZ	214349	8.10	284900	8.91	165065	12.11	125437	14.65	43417	5.91
ZZZZZZ	216738	8.10	292554	8.91	170173	12.11	126156	14.65	40994	5.91
ZZZZZZ	204011	8.10	276898	8.91	160331	12.11	126616	14.65	50180	5.90
ZZZZZZ	204301	8.10	279268	8.91	159756	12.10	126963	14.65	56036	5.90
ZZZZZZ	207539	8.10	286053	8.91	169521	12.11	131530	14.65	45732	5.90
ZZZZZZ	214875	8.10	287112	8.91	169407	12.11	130186	14.65	67669	5.90
ZZZZZZ	204570	8.10	282108	8.91	160370	12.11	120184	14.65	35833	5.90
ZZZZZZ	212379	8.10	278382	8.91	162201	12.11	121451	14.65	46194	5.91
ZZZZZZ	196864	8.10	266296	8.91	157827	12.11	130367	14.64	44435	5.89

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Internal Standard Area Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSL4053-CC4030	**Injection Date:**	05/08/15
Lab File ID:	L91949.D	**Injection Time:**	12:07
Instrument ID:	GCMSL	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	244886	8.09	337105	8.91	218025	12.10	190339	14.64	42849	5.83
Upper Limit [a]	489772	8.59	674210	9.41	436050	12.60	380678	15.14	85698	6.33
Lower Limit [b]	122443	7.59	168553	8.41	109013	11.60	95170	14.14	21425	5.33

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSL4053-BS	244886	8.09	337105	8.91	218025	12.10	190339	14.64	42849	5.83
MSL4053-BSD	251037	8.09	341758	8.91	217833	12.10	193818	14.64	53596	5.83
MSL4053-MB	239960	8.10	317763	8.91	189072	12.10	147719	14.65	48314	5.89
ZZZZZZ	236538	8.10	324830	8.91	187917	12.11	143295	14.65	49823	5.88
MC38192-3 [c]	231161	8.10	312981	8.91	179649	12.11	137690	14.65	44254	5.88
ZZZZZZ	228584	8.10	307884	8.91	183291	12.10	149425	14.64	61300	5.84
ZZZZZZ	227300	8.10	312352	8.91	178685	12.11	142204	14.64	49603	5.87
ZZZZZZ	240335	8.10	326940	8.91	187268	12.10	143704	14.65	50482	5.87
ZZZZZZ	241542	8.10	332321	8.91	194483	12.11	149307	14.65	46928	5.87
ZZZZZZ	240711	8.10	325604	8.91	187996	12.11	142838	14.65	48891	5.87
ZZZZZZ	234641	8.10	321232	8.91	189271	12.11	141796	14.65	51730	5.87
ZZZZZZ	231635	8.10	323230	8.91	189409	12.11	135158	14.65	44143	5.89
ZZZZZZ	225235	8.10	313159	8.91	179175	12.11	134422	14.65	46722	5.89
ZZZZZZ	227132	8.10	307513	8.91	176404	12.11	132691	14.65	38498	5.88
ZZZZZZ	217136	8.10	296311	8.91	169896	12.11	124921	14.65	34133	5.88
ZZZZZZ	221679	8.10	309641	8.91	182594	12.11	137025	14.65	36352	5.86
ZZZZZZ	214407	8.10	293538	8.91	184903	12.10	157082	14.64	43486	5.84
ZZZZZZ	230429	8.10	320104	8.91	183866	12.11	139027	14.65	48479	5.89
ZZZZZZ	234962	8.10	322358	8.91	181818	12.11	138722	14.65	46567	5.88
ZZZZZZ	210332	8.10	290852	8.91	170532	12.11	132444	14.65	39051	5.88
ZZZZZZ	238127	8.10	322614	8.91	196562	12.10	185651	14.64	45363	5.87
ZZZZZZ	245064	8.10	338756	8.91	199372	12.10	156366	14.64	48078	5.83
ZZZZZZ	236442	8.10	342362	8.91	210426	12.10	180827	14.64	41538	5.83

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Equipment Blank analyzed past recommended hold time.

Volatile Internal Standard Area Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSM2594-CC2495	**Injection Date:**	05/06/15
Lab File ID:	M72845.D	**Injection Time:**	09:43
Instrument ID:	GCMSM	**Method:**	SW846 8260C

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	167600	9.34	272679	10.22	126964	13.50	155810	16.06	59837	6.86
Upper Limit [a]	335200	9.84	545358	10.72	253928	14.00	311620	16.56	119674	7.36
Lower Limit [b]	83800	8.84	136340	9.72	63482	13.00	77905	15.56	29919	6.36

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSM2594-BS	167600	9.34	272679	10.22	126964	13.50	155810	16.06	59837	6.86
MSM2594-BSD	163104	9.34	264892	10.22	121043	13.50	152320	16.06	55889	6.86
MSM2594-MB	158910	9.34	256680	10.22	110181	13.50	144837	16.06	52579	6.86
ZZZZZZ	155533	9.34	251720	10.22	111847	13.50	146484	16.06	105367	6.86
ZZZZZZ	158730	9.34	256521	10.22	113022	13.50	148955	16.06	105689	6.85
ZZZZZZ	166085	9.34	270497	10.22	118408	13.50	155111	16.06	94505	6.86
ZZZZZZ	166295	9.34	271345	10.22	119294	13.50	152606	16.06	96939	6.86
MC38192-1	158288	9.34	257077	10.22	115897	13.50	151925	16.06	107831	6.86
MC38192-2	155887	9.34	253080	10.22	113432	13.50	151545	16.06	109038	6.86
MC38192-4	155310	9.34	252028	10.22	113270	13.50	153733	16.06	102245	6.85
ZZZZZZ	139862	9.34	222999	10.22	98720	13.50	130981	16.06	90612	6.87
ZZZZZZ	156253	9.34	251524	10.22	109744	13.50	140996	16.06	95854	6.86
ZZZZZZ	156326	9.34	252047	10.22	110729	13.50	148299	16.06	106842	6.86
ZZZZZZ	146915	9.34	240283	10.22	106262	13.50	143238	16.06	109477	6.86
ZZZZZZ	157551	9.34	251230	10.22	113024	13.50	151889	16.06	102311	6.86
ZZZZZZ	166478	9.34	267356	10.22	117068	13.50	155828	16.06	101178	6.86
ZZZZZZ	155990	9.34	249775	10.22	110230	13.50	142650	16.06	92749	6.85
ZZZZZZ	160305	9.34	256752	10.22	111013	13.50	149659	16.06	93501	6.85
ZZZZZZ	159862	9.34	258926	10.22	112093	13.50	145746	16.06	93270	6.86
ZZZZZZ	162634	9.34	259937	10.22	113934	13.50	151301	16.06	97240	6.85
ZZZZZZ	157882	9.34	251190	10.22	109606	13.50	146234	16.06	58973	6.86
ZZZZZZ	160614	9.34	258405	10.22	114450	13.50	143211	16.06	65214	6.86
ZZZZZZ	150931	9.34	239338	10.22	107699	13.50	141332	16.06	55801	6.86
ZZZZZZ	156313	9.34	244564	10.22	110883	13.50	143915	16.06	54165	6.86

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8260C **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC38192-3	L91954.D	94	98	107
MC38192-5	L91901.D	96	98	107
MSL4051-BS	L91896.D	100	99	98
MSL4051-BSD	L91897.D	99	100	96
MSL4051-MB	L91900.D	96	97	107
MSL4053-BS	L91949.D	100	99	96
MSL4053-BSD	L91950.D	99	102	98
MSL4053-MB	L91952.D	93	100	107

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	72-133%
S2 = Toluene-D8	85-114%
S3 = 4-Bromofluorobenzene	70-134%

Volatile Surrogate Recovery Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8260C **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC38192-1	M72853.D	121	93	89
MC38192-1	K87550.D	101	97	92
MC38192-2	K87551.D	101	97	94
MC38192-2	M72854.D	121	93	89
MC38192-4	M72855.D	122	94	88
MC38192-4	K87552.D	101	98	92
D70296-1MS	K87547.D	99	104	99
D70296-1MSD	K87548.D	98	104	98
MSK2730-BS	K87542.D	97	104	95
MSK2730-MB	K87544.D	103	96	93
MSM2594-BS	M72845.D	116	96	88
MSM2594-BSD	M72846.D	113	95	87
MSM2594-MB	M72848.D	117	94	89

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	65-141%
S2 = Toluene-D8	65-129%
S3 = 4-Bromofluorobenzene	63-137%

GC/MS Semi-volatiles

7

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42845-MB	W21899.D	1	05/06/15	KD	04/27/15	OP42845	MSW935

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	10	2.5	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	0.29	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	10	0.51	ug/l	
120-83-2	2,4-Dichlorophenol	ND	10	0.47	ug/l	
105-67-9	2,4-Dimethylphenol	ND	10	0.34	ug/l	
51-28-5	2,4-Dinitrophenol	ND	20	2.5	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	0.59	ug/l	
95-48-7	2-Methylphenol	ND	10	0.30	ug/l	
	3&4-Methylphenol	ND	10	0.44	ug/l	
88-75-5	2-Nitrophenol	ND	10	0.47	ug/l	
100-02-7	4-Nitrophenol	ND	20	1.3	ug/l	
87-86-5	Pentachlorophenol	ND	10	0.35	ug/l	
108-95-2	Phenol	ND	5.0	0.32	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	10	0.45	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	10	0.45	ug/l	
62-53-3	Aniline	ND	10	0.46	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	0.25	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	0.24	ug/l	
100-51-6	Benzyl Alcohol	ND	10	0.32	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	0.34	ug/l	
106-47-8	4-Chloroaniline	ND	10	0.36	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	0.49	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	0.42	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	0.42	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	0.26	ug/l	
122-66-7	1,2-Diphenylhydrazine	ND	5.0	0.30	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	10	0.37	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	10	0.38	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.53	ug/l	
132-64-9	Dibenzofuran	ND	2.0	0.25	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	0.27	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	0.29	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	0.27	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	0.24	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	2.0	0.32	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	0.24	ug/l	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42845-MB	W21899.D	1	05/06/15	KD	04/27/15	OP42845	MSW935

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	10	1.3	ug/l	
67-72-1	Hexachloroethane	ND	5.0	0.28	ug/l	
78-59-1	Isophorone	ND	5.0	0.47	ug/l	
88-74-4	2-Nitroaniline	ND	10	0.36	ug/l	
99-09-2	3-Nitroaniline	ND	10	0.40	ug/l	
100-01-6	4-Nitroaniline	ND	10	0.51	ug/l	
98-95-3	Nitrobenzene	ND	5.0	0.48	ug/l	
62-75-9	n-Nitrosodimethylamine	ND	5.0	0.25	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	0.26	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	0.25	ug/l	
110-86-1	Pyridine	ND	10	0.36	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	41%	10-79%
4165-62-2	Phenol-d5	30%	10-72%
118-79-6	2,4,6-Tribromophenol	100%	35-138%
4165-60-0	Nitrobenzene-d5	69%	30-116%
321-60-8	2-Fluorobiphenyl	71%	35-107%
1718-51-0	Terphenyl-d14	101%	43-135%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/l	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42878-MB	W21737.D	1	04/30/15	KD	04/29/15	OP42878	MSW929

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic acid	ND	480	61	ug/kg	
95-57-8	2-Chlorophenol	ND	240	11	ug/kg	
59-50-7	4-Chloro-3-methyl phenol	ND	480	12	ug/kg	
120-83-2	2,4-Dichlorophenol	ND	480	14	ug/kg	
105-67-9	2,4-Dimethylphenol	ND	480	79	ug/kg	
51-28-5	2,4-Dinitrophenol	ND	970	120	ug/kg	
534-52-1	4,6-Dinitro-o-cresol	ND	480	61	ug/kg	
95-48-7	2-Methylphenol	ND	480	19	ug/kg	
	3&4-Methylphenol	ND	480	24	ug/kg	
88-75-5	2-Nitrophenol	ND	480	13	ug/kg	
100-02-7	4-Nitrophenol	ND	970	91	ug/kg	
87-86-5	Pentachlorophenol	ND	480	34	ug/kg	
108-95-2	Phenol	ND	240	14	ug/kg	
95-95-4	2,4,5-Trichlorophenol	ND	480	12	ug/kg	
88-06-2	2,4,6-Trichlorophenol	ND	480	12	ug/kg	
62-53-3	Aniline	ND	480	24	ug/kg	
101-55-3	4-Bromophenyl phenyl ether	ND	240	12	ug/kg	
85-68-7	Butyl benzyl phthalate	ND	240	9.9	ug/kg	
100-51-6	Benzyl Alcohol	ND	480	24	ug/kg	
91-58-7	2-Chloronaphthalene	ND	240	13	ug/kg	
106-47-8	4-Chloroaniline	ND	480	12	ug/kg	
111-91-1	bis(2-Chloroethoxy)methane	ND	240	11	ug/kg	
111-44-4	bis(2-Chloroethyl)ether	ND	240	15	ug/kg	
108-60-1	bis(2-Chloroisopropyl)ether	ND	240	17	ug/kg	
7005-72-3	4-Chlorophenyl phenyl ether	ND	240	15	ug/kg	
122-66-7	1,2-Diphenylhydrazine	ND	240	11	ug/kg	
121-14-2	2,4-Dinitrotoluene	ND	480	32	ug/kg	
606-20-2	2,6-Dinitrotoluene	ND	480	12	ug/kg	
91-94-1	3,3'-Dichlorobenzidine	ND	240	24	ug/kg	
132-64-9	Dibenzofuran	ND	97	13	ug/kg	
84-74-2	Di-n-butyl phthalate	ND	240	26	ug/kg	
117-84-0	Di-n-octyl phthalate	ND	240	7.6	ug/kg	
84-66-2	Diethyl phthalate	ND	240	12	ug/kg	
131-11-3	Dimethyl phthalate	ND	240	14	ug/kg	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	240	8.9	ug/kg	
118-74-1	Hexachlorobenzene	ND	240	15	ug/kg	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42878-MB	W21737.D	1	04/30/15	KD	04/29/15	OP42878	MSW929

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Result	RL	MDL	Units	Q
77-47-4	Hexachlorocyclopentadiene	ND	480	120	ug/kg	
67-72-1	Hexachloroethane	ND	240	12	ug/kg	
78-59-1	Isophorone	ND	240	11	ug/kg	
88-74-4	2-Nitroaniline	ND	480	12	ug/kg	
99-09-2	3-Nitroaniline	ND	480	26	ug/kg	
100-01-6	4-Nitroaniline	ND	480	12	ug/kg	
98-95-3	Nitrobenzene	ND	240	13	ug/kg	
62-75-9	n-Nitrosodimethylamine	ND	240	12	ug/kg	
621-64-7	N-Nitroso-di-n-propylamine	ND	240	14	ug/kg	
86-30-6	N-Nitrosodiphenylamine	ND	240	15	ug/kg	
110-86-1	Pyridine	ND	480	24	ug/kg	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	73%	20-114%
4165-62-2	Phenol-d5	77%	22-117%
118-79-6	2,4,6-Tribromophenol	92%	15-145%
4165-60-0	Nitrobenzene-d5	74%	17-118%
321-60-8	2-Fluorobiphenyl	73%	27-121%
1718-51-0	Terphenyl-d14	94%	39-142%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Semi-Volatile		0	ug/kg	

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42798-MB	I95342.D	1	04/28/15	MR	04/23/15	OP42798	MSI3567

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	4.9	0.37	ug/l	
208-96-8	Acenaphthylene	ND	4.9	0.41	ug/l	
120-12-7	Anthracene	ND	4.9	0.48	ug/l	
56-55-3	Benzo(a)anthracene	ND	2.4	1.2	ug/l	
50-32-8	Benzo(a)pyrene	ND	4.9	0.74	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	2.4	0.93	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	4.9	0.61	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	4.9	0.49	ug/l	
218-01-9	Chrysene	ND	4.9	0.64	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	4.9	0.73	ug/l	
206-44-0	Fluoranthene	ND	4.9	0.36	ug/l	
86-73-7	Fluorene	ND	4.9	0.74	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	4.9	1.0	ug/l	
90-12-0	1-Methylnaphthalene	ND	98	0.60	ug/l	
91-57-6	2-Methylnaphthalene	ND	98	0.54	ug/l	
85-01-8	Phenanthrene	ND	2.4	0.53	ug/l	
129-00-0	Pyrene	ND	4.9	0.42	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	79%	26-121%
321-60-8	2-Fluorobiphenyl	75%	28-107%
1718-51-0	Terphenyl-d14	98%	29-129%

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42846-MB	I95504.D	1	05/06/15	KD	04/27/15	OP42846	MSI3573

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC38192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.0075	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.0084	ug/l	
120-12-7	Anthracene	ND	0.10	0.0098	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.024	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.10	0.015	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.019	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.013	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.010	ug/l	
218-01-9	Chrysene	0.016	0.10	0.013	ug/l	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.015	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.0074	ug/l	
86-73-7	Fluorene	ND	0.10	0.015	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.020	ug/l	
90-12-0	1-Methylnaphthalene	0.037	2.0	0.012	ug/l	J
91-57-6	2-Methylnaphthalene	0.042	2.0	0.011	ug/l	J
85-01-8	Phenanthrene	ND	0.050	0.011	ug/l	
129-00-0	Pyrene	ND	0.10	0.0085	ug/l	

CAS No.	Surrogate Recoveries		Limits
4165-60-0	Nitrobenzene-d5	70%	26-121%
321-60-8	2-Fluorobiphenyl	66%	28-107%
1718-51-0	Terphenyl-d14	104%	29-129%

Blank Spike Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42845-BS	W21900.D	1	05/06/15	KD	04/27/15	OP42845	MSW935

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38192-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
65-85-0	Benzoic Acid	50	18.7	37	10-73
95-57-8	2-Chlorophenol	50	34.9	70	47-106
59-50-7	4-Chloro-3-methyl phenol	50	43.7	87	50-111
120-83-2	2,4-Dichlorophenol	50	42.6	85	53-114
105-67-9	2,4-Dimethylphenol	50	37.0	74	23-110
51-28-5	2,4-Dinitrophenol	50	36.3	73	10-156
534-52-1	4,6-Dinitro-o-cresol	50	44.0	88	17-159
95-48-7	2-Methylphenol	50	31.9	64	40-92
	3&4-Methylphenol	100	65.8	66	38-86
88-75-5	2-Nitrophenol	50	43.0	86	53-115
100-02-7	4-Nitrophenol	50	21.3	43	10-83
87-86-5	Pentachlorophenol	50	41.5	83	41-122
108-95-2	Phenol	50	17.6	35	15-55
95-95-4	2,4,5-Trichlorophenol	50	48.5	97	52-120
88-06-2	2,4,6-Trichlorophenol	50	48.0	96	53-119
62-53-3	Aniline	50	32.3	65	26-87
101-55-3	4-Bromophenyl phenyl ether	50	47.3	95	65-127
85-68-7	Butyl benzyl phthalate	50	45.7	91	68-128
100-51-6	Benzyl Alcohol	50	34.5	69	13-108
91-58-7	2-Chloronaphthalene	50	43.7	87	58-120
106-47-8	4-Chloroaniline	50	40.8	82	48-106
111-91-1	bis(2-Chloroethoxy)methane	50	40.4	81	42-118
111-44-4	bis(2-Chloroethyl)ether	50	34.3	69	35-123
108-60-1	bis(2-Chloroisopropyl)ether	50	38.3	77	37-160
7005-72-3	4-Chlorophenyl phenyl ether	50	46.3	93	57-121
122-66-7	1,2-Diphenylhydrazine	50	43.9	88	54-128
121-14-2	2,4-Dinitrotoluene	50	50.1	100	64-127
606-20-2	2,6-Dinitrotoluene	50	49.2	98	55-135
91-94-1	3,3'-Dichlorobenzidine	50	55.0	110	49-141
132-64-9	Dibenzofuran	50	45.4	91	60-107
84-74-2	Di-n-butyl phthalate	50	44.6	89	68-117
117-84-0	Di-n-octyl phthalate	50	45.9	92	60-139
84-66-2	Diethyl phthalate	50	46.2	92	51-127
131-11-3	Dimethyl phthalate	50	46.3	93	22-147
117-81-7	bis(2-Ethylhexyl)phthalate	50	47.9	96	69-133
118-74-1	Hexachlorobenzene	50	48.4	97	62-131

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42845-BS	W21900.D	1	05/06/15	KD	04/27/15	OP42845	MSW935

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38192-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	50	6.6	13	10-74
67-72-1	Hexachloroethane	50	22.7	45	15-104
78-59-1	Isophorone	50	35.9	72	44-110
88-74-4	2-Nitroaniline	50	49.7	99	63-123
99-09-2	3-Nitroaniline	50	42.8	86	63-112
100-01-6	4-Nitroaniline	50	45.8	92	58-114
98-95-3	Nitrobenzene	50	36.3	73	37-130
62-75-9	n-Nitrosodimethylamine	50	27.0	54	18-80
621-64-7	N-Nitroso-di-n-propylamine	50	39.7	79	44-128
86-30-6	N-Nitrosodiphenylamine	50	41.3	83	62-107
110-86-1	Pyridine	50	22.4	45	10-77

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	48%	10-79%
4165-62-2	Phenol-d5	37%	10-72%
118-79-6	2,4,6-Tribromophenol	112%	35-138%
4165-60-0	Nitrobenzene-d5	84%	30-116%
321-60-8	2-Fluorobiphenyl	86%	35-107%
1718-51-0	Terphenyl-d14	108%	43-135%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42878-BS	W21738.D	1	04/30/15	KD	04/29/15	OP42878	MSW929

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
65-85-0	Benzoic acid	2410	1540	64	10-133
95-57-8	2-Chlorophenol	2410	1680	70	39-112
59-50-7	4-Chloro-3-methyl phenol	2410	2110	88	43-114
120-83-2	2,4-Dichlorophenol	2410	1920	80	42-118
105-67-9	2,4-Dimethylphenol	2410	1800	75	37-112
51-28-5	2,4-Dinitrophenol	2410	2150	89	10-137
534-52-1	4,6-Dinitro-o-cresol	2410	2490	103	10-149
95-48-7	2-Methylphenol	2410	1620	67	39-109
	3&4-Methylphenol	4810	3570	74	40-113
88-75-5	2-Nitrophenol	2410	1850	77	37-116
100-02-7	4-Nitrophenol	2410	2200	91	18-126
87-86-5	Pentachlorophenol	2410	1950	81	28-122
108-95-2	Phenol	2410	1730	72	38-114
95-95-4	2,4,5-Trichlorophenol	2410	2220	92	42-122
88-06-2	2,4,6-Trichlorophenol	2410	2190	91	42-120
62-53-3	Aniline	2410	1000	42	24-86
101-55-3	4-Bromophenyl phenyl ether	2410	2280	95	53-130
85-68-7	Butyl benzyl phthalate	2410	2310	96	60-131
100-51-6	Benzyl Alcohol	2410	1680	70	10-125
91-58-7	2-Chloronaphthalene	2410	1960	81	50-124
106-47-8	4-Chloroaniline	2410	777	32* [a]	33-97
111-91-1	bis(2-Chloroethoxy)methane	2410	1720	71	32-112
111-44-4	bis(2-Chloroethyl)ether	2410	1590	66	28-115
108-60-1	bis(2-Chloroisopropyl)ether	2410	1760	73	24-159
7005-72-3	4-Chlorophenyl phenyl ether	2410	2190	91	46-121
122-66-7	1,2-Diphenylhydrazine	2410	1950	81	48-126
121-14-2	2,4-Dinitrotoluene	2410	2430	101	50-125
606-20-2	2,6-Dinitrotoluene	2410	2260	94	46-131
91-94-1	3,3'-Dichlorobenzidine	2410	1560	65	41-146
132-64-9	Dibenzofuran	2410	2020	84	48-110
84-74-2	Di-n-butyl phthalate	2410	2230	93	57-118
117-84-0	Di-n-octyl phthalate	2410	2260	94	55-136
84-66-2	Diethyl phthalate	2410	2250	94	54-118
131-11-3	Dimethyl phthalate	2410	2190	91	54-118
117-81-7	bis(2-Ethylhexyl)phthalate	2410	2420	101	60-133
118-74-1	Hexachlorobenzene	2410	2310	96	51-133

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42878-BS	W21738.D	1	04/30/15	KD	04/29/15	OP42878	MSW929

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
77-47-4	Hexachlorocyclopentadiene	2410	651	27	10-89
67-72-1	Hexachloroethane	2410	1650	69	33-109
78-59-1	Isophorone	2410	1500	62	36-103
88-74-4	2-Nitroaniline	2410	2330	97	52-121
99-09-2	3-Nitroaniline	2410	1240	52	45-110
100-01-6	4-Nitroaniline	2410	2150	89	47-113
98-95-3	Nitrobenzene	2410	1660	69	21-129
62-75-9	n-Nitrosodimethylamine	2410	1770	74	31-103
621-64-7	N-Nitroso-di-n-propylamine	2410	1590	66	36-118
86-30-6	N-Nitrosodiphenylamine	2410	2000	83	50-115
110-86-1	Pyridine	2410	1310	54	22-85

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	69%	20-114%
4165-62-2	Phenol-d5	71%	22-117%
118-79-6	2,4,6-Tribromophenol	99%	15-145%
4165-60-0	Nitrobenzene-d5	72%	17-118%
321-60-8	2-Fluorobiphenyl	77%	27-121%
1718-51-0	Terphenyl-d14	102%	39-142%

(a) Outside control limits.Refer to MS/MSD.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42798-BS	I95343.D	1	04/28/15	MR	04/23/15	OP42798	MSI3567

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	2460	1860	76	45-116
208-96-8	Acenaphthylene	2460	1740	71	34-110
120-12-7	Anthracene	2460	1940	79	50-117
56-55-3	Benzo(a)anthracene	2460	2220	90	55-139
50-32-8	Benzo(a)pyrene	2460	2370	97	48-131
205-99-2	Benzo(b)fluoranthene	2460	2190	89	49-141
191-24-2	Benzo(g,h,i)perylene	2460	2280	93	60-130
207-08-9	Benzo(k)fluoranthene	2460	2050	83	49-133
218-01-9	Chrysene	2460	2050	83	52-128
53-70-3	Dibenzo(a,h)anthracene	2460	2280	93	60-136
206-44-0	Fluoranthene	2460	2060	84	46-132
86-73-7	Fluorene	2460	1900	77	53-120
193-39-5	Indeno(1,2,3-cd)pyrene	2460	2320	94	57-134
90-12-0	1-Methylnaphthalene	2460	1810	74	41-105
91-57-6	2-Methylnaphthalene	2460	1790	73	36-111
85-01-8	Phenanthrene	2460	1900	77	50-120
129-00-0	Pyrene	2460	2030	83	48-127

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	80%	26-121%
321-60-8	2-Fluorobiphenyl	76%	28-107%
1718-51-0	Terphenyl-d14	98%	29-129%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42846-BS	I95505.D	1	05/06/15	KD	04/27/15	OP42846	MSI3573

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC38192-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	39.7	79	45-116
208-96-8	Acenaphthylene	50	36.9	74	34-110
120-12-7	Anthracene	50	41.2	82	50-117
56-55-3	Benzo(a)anthracene	50	47.6	95	55-139
50-32-8	Benzo(a)pyrene	50	50.2	100	48-131
205-99-2	Benzo(b)fluoranthene	50	43.7	87	49-141
191-24-2	Benzo(g,h,i)perylene	50	47.5	95	60-130
207-08-9	Benzo(k)fluoranthene	50	47.4	95	49-133
218-01-9	Chrysene	50	43.3	87	52-128
53-70-3	Dibenzo(a,h)anthracene	50	47.9	96	60-136
206-44-0	Fluoranthene	50	43.4	87	46-132
86-73-7	Fluorene	50	41.7	83	53-120
193-39-5	Indeno(1,2,3-cd)pyrene	50	48.6	97	57-134
90-12-0	1-Methylnaphthalene	50	36.8	74	41-105
91-57-6	2-Methylnaphthalene	50	37.4	75	36-111
85-01-8	Phenanthrene	50	40.3	81	50-120
129-00-0	Pyrene	50	43.0	86	48-127

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	86%	26-121%
321-60-8	2-Fluorobiphenyl	79%	28-107%
1718-51-0	Terphenyl-d14	112%	29-129%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42845-MS	W21901.D	1	05/06/15	KD	04/27/15	OP42845	MSW935
OP42845-MSD	W21902.D	1	05/06/15	KD	04/27/15	OP42845	MSW935
MC38218-2	W21905.D	1	05/06/15	KD	04/27/15	OP42845	MSW935

The QC reported here applies to the following samples: Method: SW846 8270D

MC38192-3

CAS No.	Compound	MC38218-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic Acid	ND		51	17.0	33	52.6	18.3	35	7	10-76/20
95-57-8	2-Chlorophenol	ND		51	35.0	69	52.6	38.9	74	11	37-112/20
59-50-7	4-Chloro-3-methyl phenol	ND		51	40.4	79	52.6	44.0	84	9	43-115/20
120-83-2	2,4-Dichlorophenol	ND		51	41.1	81	52.6	45.0	86	9	47-119/20
105-67-9	2,4-Dimethylphenol	ND		51	35.1	69	52.6	38.4	73	9	15-118/20
51-28-5	2,4-Dinitrophenol	ND		51	37.7	74	52.6	40.8	78	8	10-165/20
534-52-1	4,6-Dinitro-o-cresol	ND		51	43.3	85	52.6	47.7	91	10	13-165/20
95-48-7	2-Methylphenol	ND		51	31.2	61	52.6	34.2	65	9	30-99/20
	3&4-Methylphenol	ND		102	62.2	61	105	69.1	66	11	32-89/20
88-75-5	2-Nitrophenol	ND		51	43.7	86	52.6	47.6	90	9	44-120/20
100-02-7	4-Nitrophenol	ND		51	18.9	37	52.6	21.0	40	11	10-93/20
87-86-5	Pentachlorophenol	ND		51	40.9	80	52.6	44.8	85	9	33-131/20
108-95-2	Phenol	ND		51	16.4	32	52.6	18.4	35	11	15-53/20
95-95-4	2,4,5-Trichlorophenol	ND		51	45.6	89	52.6	49.9	95	9	45-126/20
88-06-2	2,4,6-Trichlorophenol	ND		51	45.8	90	52.6	50.0	95	9	45-124/20
62-53-3	Aniline	ND		51	31.9	63	52.6	35.9	68	12	18-91/20
101-55-3	4-Bromophenyl phenyl ether	ND		51	44.4	87	52.6	49.4	94	11	57-131/20
85-68-7	Butyl benzyl phthalate	ND		51	43.7	86	52.6	48.8	93	11	58-135/20
100-51-6	Benzyl Alcohol	ND		51	34.1	67	52.6	37.3	71	9	10-109/20
91-58-7	2-Chloronaphthalene	ND		51	42.2	83	52.6	46.7	89	10	51-123/20
106-47-8	4-Chloroaniline	ND		51	40.2	79	52.6	44.8	85	11	39-109/20
111-91-1	bis(2-Chloroethoxy)methane	ND		51	39.0	76	52.6	43.5	83	11	36-120/20
111-44-4	bis(2-Chloroethyl)ether	ND		51	35.7	70	52.6	42.1	80	16	30-124/20
108-60-1	bis(2-Chloroisopropyl)ether	ND		51	40.1	79	52.6	44.3	84	10	25-171/20
7005-72-3	4-Chlorophenyl phenyl ether	ND		51	43.9	86	52.6	49.4	94	12	51-122/20
122-66-7	1,2-Diphenylhydrazine	ND		51	41.4	81	52.6	46.3	88	11	47-130/20
121-14-2	2,4-Dinitrotoluene	ND		51	47.8	94	52.6	52.1	99	9	57-131/20
606-20-2	2,6-Dinitrotoluene	ND		51	46.1	90	52.6	51.3	97	11	52-135/20
91-94-1	3,3'-Dichlorobenzidine	ND		51	54.2	106	52.6	62.6	119	14	25-157/20
132-64-9	Dibenzofuran	ND		51	43.1	84	52.6	48.0	91	11	54-110/20
84-74-2	Di-n-butyl phthalate	ND		51	42.4	83	52.6	47.5	90	11	60-122/20
117-84-0	Di-n-octyl phthalate	ND		51	43.1	84	52.6	49.0	93	13	54-142/20
84-66-2	Diethyl phthalate	ND		51	43.9	86	52.6	49.0	93	11	40-132/20
131-11-3	Dimethyl phthalate	ND		51	43.9	86	52.6	48.9	93	11	13-149/20
117-81-7	bis(2-Ethylhexyl)phthalate	ND		51	45.7	90	52.6	51.1	97	11	59-139/20
118-74-1	Hexachlorobenzene	ND		51	45.3	89	52.6	50.1	95	10	56-135/20

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42845-MS	W21901.D	1	05/06/15	KD	04/27/15	OP42845	MSW935
OP42845-MSD	W21902.D	1	05/06/15	KD	04/27/15	OP42845	MSW935
MC38218-2	W21905.D	1	05/06/15	KD	04/27/15	OP42845	MSW935

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38192-3

CAS No.	Compound	MC38218-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		51	7.2	14	52.6	7.6	14	5	10-73/20
67-72-1	Hexachloroethane	ND		51	24.7	48	52.6	22.2	42	11	13-103/20
78-59-1	Isophorone	ND		51	34.1	67	52.6	37.9	72	11	41-110/20
88-74-4	2-Nitroaniline	ND		51	47.2	93	52.6	51.9	99	9	57-126/20
99-09-2	3-Nitroaniline	ND		51	41.4	81	52.6	46.5	88	12	53-118/20
100-01-6	4-Nitroaniline	ND		51	42.9	84	52.6	47.0	89	9	50-119/20
98-95-3	Nitrobenzene	ND		51	37.2	73	52.6	40.8	78	9	35-127/20
62-75-9	n-Nitrosodimethylamine	ND		51	26.3	52	52.6	29.5	56	11	11-82/20
621-64-7	N-Nitroso-di-n-propylamine	ND		51	38.7	76	52.6	42.5	81	9	39-129/20
86-30-6	N-Nitrosodiphenylamine	ND		51	39.0	76	52.6	43.0	82	10	55-112/20
110-86-1	Pyridine	ND		51	21.1	41	52.6	24.6	47	15	15-71/20

CAS No.	Surrogate Recoveries	MS	MSD	MC38218-2	Limits
367-12-4	2-Fluorophenol	44%	48%	46%	10-79%
4165-62-2	Phenol-d5	33%	36%	34%	10-72%
118-79-6	2,4,6-Tribromophenol	103%	110%	111%	35-138%
4165-60-0	Nitrobenzene-d5	84%	88%	86%	30-116%
321-60-8	2-Fluorobiphenyl	82%	81%	82%	35-107%
1718-51-0	Terphenyl-d14	100%	107%	106%	43-135%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42878-MS	W21739.D	1	04/30/15	KD	04/29/15	OP42878	MSW929
OP42878-MSD	W21740.D	1	04/30/15	KD	04/29/15	OP42878	MSW929
MC38192-4	W21741.D	1	04/30/15	KD	04/29/15	OP42878	MSW929

The QC reported here applies to the following samples: Method: SW846 8270D

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	MC38192-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
65-85-0	Benzoic acid	ND		2620	507	19	2660	608	23	18	10-170/30
95-57-8	2-Chlorophenol	ND		2620	1670	64	2660	1700	64	2	19-127/30
59-50-7	4-Chloro-3-methyl phenol	ND		2620	2120	81	2660	2200	83	4	29-124/30
120-83-2	2,4-Dichlorophenol	ND		2620	1900	72	2660	1970	74	4	23-133/30
105-67-9	2,4-Dimethylphenol	ND		2620	1840	70	2660	1890	71	3	10-133/30
51-28-5	2,4-Dinitrophenol	ND		2620	1700	65	2660	2110	79	22	10-124/30
534-52-1	4,6-Dinitro-o-cresol	ND		2620	2430	93	2660	2630	99	8	10-147/30
95-48-7	2-Methylphenol	ND		2620	1620	62	2660	1650	62	2	18-128/30
	3&4-Methylphenol	ND		5250	3580	68	5310	3720	70	4	16-131/30
88-75-5	2-Nitrophenol	ND		2620	1860	71	2660	1850	70	1	10-132/30
100-02-7	4-Nitrophenol	ND		2620	2130	81	2660	2190	82	3	13-126/30
87-86-5	Pentachlorophenol	ND		2620	1980	75	2660	2130	80	7	10-150/30
108-95-2	Phenol	ND		2620	1700	65	2660	1790	67	5	20-128/30
95-95-4	2,4,5-Trichlorophenol	ND		2620	2240	85	2660	2340	88	4	29-128/30
88-06-2	2,4,6-Trichlorophenol	ND		2620	2200	84	2660	2280	86	4	20-138/30
62-53-3	Aniline	ND		2620	1250	48	2660	1270	48	2	10-98/30
101-55-3	4-Bromophenyl phenyl ether	ND		2620	2290	87	2660	2390	90	4	37-144/30
85-68-7	Butyl benzyl phthalate	ND		2620	2310	88	2660	2430	91	5	44-144/30
100-51-6	Benzyl Alcohol	ND		2620	1720	66	2660	1760	66	2	10-127/30
91-58-7	2-Chloronaphthalene	ND		2620	2020	77	2660	2020	76	0	37-137/30
106-47-8	4-Chloroaniline	ND		2620	1160	44	2660	1260	47	8	10-121/30
111-91-1	bis(2-Chloroethoxy)methane	ND		2620	1730	66	2660	1750	66	1	19-122/30
111-44-4	bis(2-Chloroethyl)ether	ND		2620	1600	61	2660	1590	60	1	20-119/30
108-60-1	bis(2-Chloroisopropyl)ether	ND		2620	1760	67	2660	1750	66	1	17-163/30
7005-72-3	4-Chlorophenyl phenyl ether	ND		2620	2220	85	2660	2280	86	3	31-137/30
122-66-7	1,2-Diphenylhydrazine	ND		2620	2000	76	2660	2040	77	2	33-137/30
121-14-2	2,4-Dinitrotoluene	ND		2620	2470	94	2660	2550	96	3	37-129/30
606-20-2	2,6-Dinitrotoluene	ND		2620	2300	88	2660	2380	90	3	32-140/30
91-94-1	3,3'-Dichlorobenzidine	ND		2620	2310	88	2660	2460	93	6	10-165/30
132-64-9	Dibenzofuran	ND		2620	2080	79	2660	2120	80	2	28-131/30
84-74-2	Di-n-butyl phthalate	ND		2620	2250	86	2660	2360	89	5	33-143/30
117-84-0	Di-n-octyl phthalate	ND		2620	2380	91	2660	2510	94	5	41-141/30
84-66-2	Diethyl phthalate	ND		2620	2270	87	2660	2330	88	3	35-136/30
131-11-3	Dimethyl phthalate	ND		2620	2240	85	2660	2310	87	3	37-134/30
117-81-7	bis(2-Ethylhexyl)phthalate	ND		2620	2450	93	2660	2590	98	6	36-153/30
118-74-1	Hexachlorobenzene	ND		2620	2350	90	2660	2450	92	4	37-145/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42878-MS	W21739.D	1	04/30/15	KD	04/29/15	OP42878	MSW929
OP42878-MSD	W21740.D	1	04/30/15	KD	04/29/15	OP42878	MSW929
MC38192-4	W21741.D	1	04/30/15	KD	04/29/15	OP42878	MSW929

The QC reported here applies to the following samples: **Method:** SW846 8270D

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	MC38192-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
77-47-4	Hexachlorocyclopentadiene	ND		2620	662	25	2660	649	24	2	10-84/30
67-72-1	Hexachloroethane	ND		2620	1640	63	2660	1620	61	1	10-137/30
78-59-1	Isophorone	ND		2620	1520	58	2660	1530	58	1	26-111/30
88-74-4	2-Nitroaniline	ND		2620	2390	91	2660	2450	92	2	31-136/30
99-09-2	3-Nitroaniline	ND		2620	1690	64	2660	1820	69	7	18-133/30
100-01-6	4-Nitroaniline	ND		2620	2210	84	2660	2370	89	7	19-127/30
98-95-3	Nitrobenzene	ND		2620	1630	62	2660	1600	60	2	12-136/30
62-75-9	n-Nitrosodimethylamine	ND		2620	1730	66	2660	1740	66	1	17-105/30
621-64-7	N-Nitroso-di-n-propylamine	ND		2620	1600	61	2660	1620	61	1	24-131/30
86-30-6	N-Nitrosodiphenylamine	ND		2620	2030	77	2660	2110	79	4	16-156/30
110-86-1	Pyridine	ND		2620	1230	47	2660	1250	47	2	10-99/30

CAS No.	Surrogate Recoveries	MS	MSD	MC38192-4	Limits
367-12-4	2-Fluorophenol	63%	61%	66%	20-114%
4165-62-2	Phenol-d5	65%	66%	70%	22-117%
118-79-6	2,4,6-Tribromophenol	89%	94%	94%	15-145%
4165-60-0	Nitrobenzene-d5	65%	64%	67%	17-118%
321-60-8	2-Fluorobiphenyl	71%	71%	71%	27-121%
1718-51-0	Terphenyl-d14	92%	97%	97%	39-142%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42798-MS	I95344.D	1	04/28/15	MR	04/23/15	OP42798	MSI3567
OP42798-MSD	I95345.D	1	04/28/15	MR	04/23/15	OP42798	MSI3567
MC38192-1	I95346.D	1	04/28/15	MR	04/23/15	OP42798	MSI3567

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	MC38192-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		2520	2040	81	2530	1950	77	5	42-113/30
208-96-8	Acenaphthylene	ND		2520	1900	75	2530	1830	72	4	33-102/30
120-12-7	Anthracene	3.7	J	2520	2070	82	2530	2030	80	2	45-112/30
56-55-3	Benzo(a)anthracene	38.5		2520	2430	95	2530	2360	92	3	43-136/30
50-32-8	Benzo(a)pyrene	38.9		2520	2530	99	2530	2500	97	1	39-125/30
205-99-2	Benzo(b)fluoranthene	30.1		2520	2220	87	2530	2260	88	2	35-143/30
191-24-2	Benzo(g,h,i)perylene	26.3		2520	2450	96	2530	2450	96	0	38-128/30
207-08-9	Benzo(k)fluoranthene	36.7		2520	2300	90	2530	2170	84	6	42-123/30
218-01-9	Chrysene	32.7		2520	2220	87	2530	2150	84	3	44-119/30
53-70-3	Dibenzo(a,h)anthracene	15.3		2520	2440	96	2530	2430	96	0	43-133/30
206-44-0	Fluoranthene	32.7		2520	2230	87	2530	2190	85	2	30-137/30
86-73-7	Fluorene	ND		2520	2100	83	2530	2030	80	3	45-118/30
193-39-5	Indeno(1,2,3-cd)pyrene	24.1		2520	2490	98	2530	2480	97	0	35-133/30
90-12-0	1-Methylnaphthalene	ND		2520	2020	80	2530	1890	75	7	33-110/30
91-57-6	2-Methylnaphthalene	ND		2520	2020	80	2530	1870	74	8	36-109/30
85-01-8	Phenanthrene	6.9		2520	2050	81	2530	1980	78	3	41-115/30
129-00-0	Pyrene	32.5		2520	2200	86	2530	2160	84	2	36-130/30

CAS No.	Surrogate Recoveries	MS	MSD	MC38192-1	Limits
4165-60-0	Nitrobenzene-d5	91%	78%	88%	28-121%
321-60-8	2-Fluorobiphenyl	82%	77%	85%	36-110%
1718-51-0	Terphenyl-d14	105%	103%	113%	41-138%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42846-MS	I95506.D	1	05/06/15	KD	04/27/15	OP42846	MSI3573
OP42846-MSD	I95507.D	1	05/06/15	KD	04/27/15	OP42846	MSI3573
MC38200-14	I95523.D	1	05/06/15	KD	04/27/15	OP42846	MSI3573

The QC reported here applies to the following samples: **Method:** SW846 8270D BY SIM

MC38192-3

CAS No.	Compound	MC38200-14 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		50	37.4	75	50	40.1	80	7	36-124/20
208-96-8	Acenaphthylene	ND		50	34.5	69	50	37.3	75	8	25-116/20
120-12-7	Anthracene	ND		50	38.8	78	50	41.4	83	6	42-122/20
56-55-3	Benzo(a)anthracene	ND		50	44.5	89	50	48.3	97	8	45-145/20
50-32-8	Benzo(a)pyrene	0.021	J	50	47.0	94	50	51.1	102	8	40-136/20
205-99-2	Benzo(b)fluoranthene	0.062		50	39.9	80	50	45.7	91	14	41-148/20
191-24-2	Benzo(g,h,i)perylene	0.035	J	50	48.3	97	50	48.3	97	0	48-140/20
207-08-9	Benzo(k)fluoranthene	0.030	J	50	43.2	86	50	46.8	94	8	45-131/20
218-01-9	Chrysene	0.019	JB	50	40.5	81	50	44.2	88	9	41-135/20
53-70-3	Dibenzo(a,h)anthracene	0.021	J	50	47.3	95	50	48.6	97	3	49-144/20
206-44-0	Fluoranthene	ND		50	38.8	78	50	45.0	90	15	38-136/20
86-73-7	Fluorene	ND		50	39.5	79	50	41.7	83	5	43-127/20
193-39-5	Indeno(1,2,3-cd)pyrene	0.033	J	50	48.4	97	50	49.2	98	2	45-142/20
90-12-0	1-Methylnaphthalene	ND		50	36.8	74	50	37.6	75	2	29-116/20
91-57-6	2-Methylnaphthalene	ND		50	37.1	74	50	37.7	75	2	27-117/20
85-01-8	Phenanthrene	ND		50	37.9	76	50	40.3	81	6	41-126/20
129-00-0	Pyrene	ND		50	38.4	77	50	44.2	88	14	41-131/20

CAS No.	Surrogate Recoveries	MS	MSD	MC38200-14	Limits
4165-60-0	Nitrobenzene-d5	84%	91%	65%	26-121%
321-60-8	2-Fluorobiphenyl	74%	75%	62%	28-107%
1718-51-0	Terphenyl-d14	97%	110%	113%	29-129%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSI3567-CC3561	**Injection Date:**	04/28/15
Lab File ID:	I95341.D	**Injection Time:**	07:46
Instrument ID:	GCMSI	**Method:**	SW846 8270D BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	230404	3.56	482480	4.60	275005	6.12	488458	7.42	353265	10.19	906258	11.62
Upper Limit [a]	460808	4.06	964960	5.10	550010	6.62	976916	7.92	706530	10.69	1812516	12.12
Lower Limit [b]	115202	3.06	241240	4.10	137503	5.62	244229	6.92	176633	9.69	453129	11.12
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
OP42798-MB	263154	3.57	562192	4.60	316198	6.12	544597	7.42	376904	10.20	941968	11.62
OP42798-BS	265751	3.57	576931	4.60	328282	6.12	584309	7.43	425461	10.20	1037924	11.63
OP42798-MS	263697	3.57	579891	4.61	333070	6.12	599418	7.43	435620	10.20	1081582	11.63
OP42798-MSD	244593	3.57	548223	4.60	318526	6.12	578780	7.43	417834	10.20	1037813	11.63
MC38192-1	243289	3.57	515559	4.60	287948	6.12	499058	7.42	346097	10.19	829193	11.62
MC38192-2	243215	3.57	509710	4.60	290002	6.12	498706	7.42	344923	10.20	834274	11.62
MC38192-4	234714	3.57	496845	4.60	280593	6.12	487005	7.42	342963	10.19	838914	11.62

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSI3573-CC3561	**Injection Date:**	05/06/15
Lab File ID:	I95503.D	**Injection Time:**	08:16
Instrument ID:	GCMSI	**Method:**	SW846 8270D BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	213642	3.55	463930	4.59	280363	6.10	514237	7.42	399090	10.18	1016473	11.61
Upper Limit [a]	427284	4.05	927860	5.09	560726	6.60	1028474	7.92	798180	10.68	2032946	12.11
Lower Limit [b]	106821	3.05	231965	4.09	140182	5.60	257119	6.92	199545	9.68	508237	11.11
Lab Sample ID	**IS 1**		**IS 2**		**IS 3**		**IS 4**		**IS 5**		**IS 6**	
	AREA	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**	**AREA**	**RT**
OP42846-MB	222438	3.55	487621	4.59	284618	6.10	494266	7.41	364567	10.18	891301	11.61
OP42846-BS	234189	3.55	512484	4.59	290753	6.11	519960	7.42	379624	10.19	886591	11.61
OP42846-MS	190008	3.55	429252	4.59	255536	6.10	476470	7.42	386433	10.19	985284	11.61
OP42846-MSD	214418	3.55	465554	4.59	260992	6.10	466088	7.42	331384	10.18	788909	11.61
ZZZZZZ	212578	3.55	492616	4.59	275445	6.10	499348	7.42	390143	10.19	980992	11.62
ZZZZZZ	209468	3.55	446085	4.59	263331	6.10	462181	7.42	342159	10.18	833794	11.61
ZZZZZZ	229383	3.55	492554	4.59	291407	6.10	521060	7.41	387522	10.18	956458	11.61
OP42821-MB	272691	3.55	584320	4.59	342705	6.11	596032	7.41	441186	10.18	1075231	11.61
OP42821-BS	245481	3.55	530777	4.59	295416	6.11	521689	7.42	373138	10.18	866491	11.61
ZZZZZZ	193996	3.55	420375	4.59	244484	6.10	420538	7.41	307901	10.18	736517	11.60
ZZZZZZ	206704	3.55	447211	4.59	262602	6.10	456920	7.41	326779	10.18	759945	11.61
OP42821-MS	213719	3.55	464833	4.59	264588	6.10	470814	7.42	352175	10.18	816910	11.61
OP42821-MSD	232249	3.55	510872	4.59	293305	6.10	518202	7.42	389557	10.18	916311	11.61
MC38222-8	242498	3.55	516939	4.59	298990	6.10	521123	7.41	375179	10.18	906745	11.61
ZZZZZZ	221794	3.55	472703	4.59	266232	6.10	457590	7.41	322065	10.18	793135	11.60
MC38200-14	227319	3.55	487524	4.59	282250	6.10	490856	7.41	352080	10.18	843886	11.61
MC38192-3	233233	3.55	491632	4.59	277655	6.10	468997	7.41	330841	10.18	791262	11.60

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSW929-CC902	**Injection Date:**	04/30/15
Lab File ID:	W21736.D	**Injection Time:**	08:16
Instrument ID:	GCMSW	**Method:**	SW846 8270D

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	250279	5.09	936834	6.20	556135	7.74	999347	9.03	1072986	11.57	1090990	13.26
Upper Limit [a]	500558	5.59	1873668	6.70	1112270	8.24	1998694	9.53	2145972	12.07	2181980	13.76
Lower Limit [b]	125140	4.59	468417	5.70	278068	7.24	499674	8.53	536493	11.07	545495	12.76
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**	**IS 6 AREA**	**RT**
OP42878-MB	314295	5.09	1170942	6.19	701835	7.74	1196083	9.03	1306047	11.57	1339353	13.26
OP42878-BS	304205	5.09	1118797	6.20	653920	7.74	1125470	9.03	1158990	11.57	1213733	13.26
OP42878-MS	332258	5.09	1224741	6.20	706645	7.74	1223865	9.03	1278233	11.57	1268055	13.26
OP42878-MSD	315212	5.09	1177800	6.19	687729	7.74	1179309	9.03	1221848	11.57	1210960	13.26
MC38192-4	315753	5.09	1188737	6.19	691343	7.74	1177227	9.03	1251281	11.57	1245876	13.25
ZZZZZZ	306597	5.08	1145395	6.19	672454	7.74	1146648	9.03	1202926	11.57	1180075	13.26
ZZZZZZ	314000	5.08	1171556	6.19	682607	7.74	1138318	9.03	1150166	11.57	1090116	13.25
ZZZZZZ	323318	5.09	1187741	6.19	705097	7.74	1183656	9.03	1229421	11.57	1224415	13.26
MC38192-1	322652	5.09	1194478	6.19	698760	7.74	1182250	9.03	1232260	11.57	1207810	13.26
MC38192-2	310896	5.09	1142817	6.19	676603	7.74	1157875	9.03	1218951	11.57	1199506	13.26
OP42839-MB	361192	5.09	1342549	6.19	790070	7.74	1336425	9.03	1387509	11.57	1337129	13.26
OP42839-BS	354208	5.09	1307015	6.20	776006	7.74	1336573	9.03	1379144	11.57	1341883	13.26
OP42839-MS	377991	5.09	1334953	6.20	884345	7.75	1124644	9.05	1157830	11.61	1269789	13.32
OP42839-MSD	384637	5.09	1392623	6.20	764039	7.75	1254969	9.04	1223145	11.59	1265818	13.29
ZZZZZZ	353207	5.09	1301053	6.20	763869	7.74	1253569	9.03	1207303	11.57	1162049	13.26
ZZZZZZ	319275	5.09	1071763	6.20	654129	7.75	1118833	9.04	1188584	11.58	1150590	13.26
ZZZZZZ	370748	5.09	1371949	6.20	809000	7.74	1345124	9.03	1314293	11.57	1269651	13.26

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSW935-CC902	**Injection Date:**	05/06/15
Lab File ID:	W21881.D	**Injection Time:**	09:28
Instrument ID:	GCMSW	**Method:**	SW846 8270D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
Check Std	235916	4.90	900219	6.01	527771	7.55	987532	8.83	1052515	11.31	1078279	12.96
Upper Limit [a]	471832	5.40	1800438	6.51	1055542	8.05	1975064	9.33	2105030	11.81	2156558	13.46
Lower Limit [b]	117958	4.40	450110	5.51	263886	7.05	493766	8.33	526258	10.81	539140	12.46

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP42826-MB	247910	4.90	944263	6.01	583651	7.55	1003854	8.82	1078070	11.31	1049196	12.95
OP42826-BS	277358	4.91	1041094	6.01	594062	7.55	1023833	8.84	993873	11.32	988152	12.96
OP42826-MS	281481	4.91	1065340	6.01	605622	7.55	1052793	8.84	1019515	11.32	1005860	12.96
OP42826-MSD	239557	4.91	906289	6.01	523775	7.55	905021	8.83	874890	11.32	859751	12.96
MC38200-9	261641	4.90	995712	6.01	608202	7.55	1049656	8.83	1093759	11.31	1067863	12.95
ZZZZZZ	723210[c]	4.90	2715103[c]	6.01	1680562[c]	7.55	2911038[c]	8.83	2952622[c]	11.32	2867724[c]	12.97
ZZZZZZ	276901	4.90	1060118	6.01	632661	7.55	1029003	8.83	961100	11.33	974300	12.97
ZZZZZZ	773581[c]	4.91	2852879[c]	6.01	1772709[c]	7.55	2994840[c]	8.83	2972987[c]	11.32	2852560[c]	12.97
ZZZZZZ	261160	4.90	1007065	6.01	598299	7.55	986687	8.83	903148	11.32	900581	12.97
ZZZZZZ	267812	4.90	1003273	6.00	611472	7.55	1041411	8.83	1083837	11.31	1110936	12.96
ZZZZZZ	292132	4.90	1092787	6.00	658326	7.55	1129570	8.83	1172880	11.31	1189200	12.96
ZZZZZZ	294544	4.90	1100681	6.00	667009	7.55	1148576	8.83	1209650	11.31	1235912	12.96
ZZZZZZ	283021	4.90	1054189	6.00	637719	7.55	1096841	8.83	1145699	11.31	1169577	12.96
ZZZZZZ	293488	4.90	1090296	6.00	661197	7.54	1140813	8.83	1193897	11.31	1191850	12.96
ZZZZZZ	261931	4.90	975203	6.00	588386	7.54	1019551	8.83	1042136	11.31	1050450	12.95
ZZZZZZ	326819	4.90	1202493	6.00	717291	7.55	1241703	8.83	1291188	11.31	1301178	12.96
OP42845-MB	257249	4.90	968157	6.00	587803	7.54	1026355	8.83	1050903	11.31	1045282	12.96
OP42845-BS	264231	4.90	985094	6.01	583137	7.55	1012884	8.83	1041133	11.31	1059247	12.96
OP42845-MS	275336	4.90	1028752	6.00	603965	7.55	1063742	8.83	1094772	11.31	1120293	12.96
OP42845-MSD	244786	4.90	912280	6.00	533481	7.54	933823	8.83	939999	11.31	947101	12.96
MC38192-3	256792	4.90	955256	6.00	583351	7.54	1006786	8.82	1046260	11.31	1038891	12.95
ZZZZZZ	263347	4.90	981492	6.00	596767	7.54	1031736	8.82	1068390	11.31	1062640	12.95
MC38218-2	271820	4.90	1000147	6.00	600641	7.54	1011599	8.82	1040929	11.31	1038733	12.95
ZZZZZZ	264521	4.90	987572	6.00	597720	7.54	1033616	8.82	1067606	11.30	1062956	12.95
ZZZZZZ	277486	4.90	1033809	6.00	619023	7.54	1074075	8.82	1122705	11.31	1114218	12.95
ZZZZZZ	255616	4.90	950717	6.00	574581	7.54	1005559	8.82	1044555	11.31	1047734	12.95
ZZZZZZ	260243	4.90	984448	6.00	575382	7.54	1031927	8.83	1047590	11.31	1065015	12.95
ZZZZZZ	241905	4.90	904352	6.00	548949	7.54	956107	8.82	998315	11.30	996799	12.95

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

Semivolatile Internal Standard Area Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	MSW935-CC902	**Injection Date:**	05/06/15
Lab File ID:	W21881.D	**Injection Time:**	09:28
Instrument ID:	GCMSW	**Method:**	SW846 8270D

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
(c) Internal standard spiked at 4x concentration.

Semivolatile Surrogate Recovery Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8270D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC38192-3	W21903.D	32	24	98	61	66	101
OP42845-BS	W21900.D	48	37	112	84	86	108
OP42845-MB	W21899.D	41	30	100	69	71	101
OP42845-MS	W21901.D	44	33	103	84	82	100
OP42845-MSD	W21902.D	48	36	110	88	81	107

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	10-79%
S2 = Phenol-d5	10-72%
S3 = 2,4,6-Tribromophenol	35-138%
S4 = Nitrobenzene-d5	30-116%
S5 = 2-Fluorobiphenyl	35-107%
S6 = Terphenyl-d14	43-135%

Semivolatile Surrogate Recovery Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8270D **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
MC38192-1	W21746.D	58	62	88	60	63	95
MC38192-2	W21747.D	63	66	87	64	66	94
MC38192-4	W21741.D	66	70	94	67	71	97
OP42878-BS	W21738.D	69	71	99	72	77	102
OP42878-MB	W21737.D	73	77	92	74	73	94
OP42878-MS	W21739.D	63	65	89	65	71	92
OP42878-MSD	W21740.D	61	66	94	64	71	97

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	20-114%
S2 = Phenol-d5	22-117%
S3 = 2,4,6-Tribromophenol	15-145%
S4 = Nitrobenzene-d5	17-118%
S5 = 2-Fluorobiphenyl	27-121%
S6 = Terphenyl-d14	39-142%

Semivolatile Surrogate Recovery Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC38192-3	I95524.D	62	62	103
OP42846-BS	I95505.D	86	79	112
OP42846-MB	I95504.D	70	66	104
OP42846-MS	I95506.D	84	74	97
OP42846-MSD	I95507.D	91	75	110

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	26-121%
S2 = 2-Fluorobiphenyl	28-107%
S3 = Terphenyl-d14	29-129%

Semivolatile Surrogate Recovery Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8270D BY SIM **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC38192-1	I95346.D	88	85	113
MC38192-2	I95347.D	84	80	104
MC38192-4	I95348.D	84	81	104
OP42798-MS	I95344.D	91	82	105
OP42798-MSD	I95345.D	78	77	103

Surrogate Compounds	Recovery Limits
S1 = Nitrobenzene-d5	28-121%
S2 = 2-Fluorobiphenyl	36-110%
S3 = Terphenyl-d14	41-138%

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42812-MB	BB62956.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425

The QC reported here applies to the following samples: **Method:** SW846 8011

MC38192-3, MC38192-6

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.015	0.0061	ug/l	
106-93-4	1,2-Dibromoethane	ND	0.015	0.0061	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	85%	60-140%
460-00-4	Bromofluorobenzene (S)	103%	60-140%

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42837-MB	BB62988.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427

The QC reported here applies to the following samples: **Method:** SW846 8011

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Result	RL	MDL	Units	Q
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.55	ug/kg	
106-93-4	1,2-Dibromoethane	ND	2.5	0.41	ug/kg	

CAS No.	Surrogate Recoveries		Limits
460-00-4	Bromofluorobenzene (S)	101%	70-170%
460-00-4	Bromofluorobenzene (S)	108%	70-170%

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBD3350-MB	BD69728A.D	1	04/24/15	AF	n/a	n/a	GBD3350

The QC reported here applies to the following samples: **Method:** SW846 8015

MC38192-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	0.10	0.013	mg/l	

CAS No.	Surrogate Recoveries		Limits
	2,3,4-Trifluorotoluene	103%	66-126%

Method Blank Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBD3349-MB	BD69728.D	1	04/24/15	AF	n/a	n/a	GBD3349

The QC reported here applies to the following samples: **Method:** SW846 8015

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	5.0	0.52	mg/kg	

CAS No.	Surrogate Recoveries		Limits
	2,3,4-Trifluorotoluene	103%	62-131%

Blank Spike Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42812-BS	BB62957.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425

The QC reported here applies to the following samples: **Method:** SW846 8011

MC38192-3, MC38192-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
96-12-8	1,2-Dibromo-3-chloropropane	0.071	0.077	108	45-149
106-93-4	1,2-Dibromoethane	0.071	0.065	92	51-149

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	Bromofluorobenzene (S)	78%	60-140%
460-00-4	Bromofluorobenzene (S)	99%	60-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42837-BS	BB62989.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427
OP42837-BSD	BB62990.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427

The QC reported here applies to the following samples: Method: SW846 8011

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	32.9	32.3	98	31.6	95	2	56-140/30
106-93-4	1,2-Dibromoethane	32.9	33.2	101	32.6	98	2	59-133/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	Bromofluorobenzene (S)	100%	99%	70-170%
460-00-4	Bromofluorobenzene (S)	101%	100%	70-170%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBD3349-BSP	BD69729.D	1	04/24/15	AF	n/a	n/a	GBD3349
GBD3349-BSD	BD69730.D	1	04/24/15	AF	n/a	n/a	GBD3349

The QC reported here applies to the following samples: **Method:** SW846 8015

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	32.5	30.5	94	31.2	96	2	84-112/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	2,3,4-Trifluorotoluene	102%	103%	62-131%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBD3350-BSP	BD69729A.D	1	04/24/15	AF	n/a	n/a	GBD3350
GBD3350-BSD	BD69730A.D	1	04/24/15	AF	n/a	n/a	GBD3350

The QC reported here applies to the following samples: **Method:** SW846 8015

MC38192-3

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	0.65	0.609	94	0.625	96	3	83-114/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	2,3,4-Trifluorotoluene	102%	103%	66-126%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42812-MS	BB62958.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425
OP42812-MSD	BB62959.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425
MC38200-2	BB62960.D	1	04/28/15	NK	04/24/15	OP42812	GBB3425

The QC reported here applies to the following samples: Method: SW846 8011

MC38192-3, MC38192-6

CAS No.	Compound	MC38200-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		0.071	0.079	111	0.071	0.082	115	4	31-169/30
106-93-4	1,2-Dibromoethane	ND		0.071	0.068	96	0.071	0.072	101	6	34-175/30

CAS No.	Surrogate Recoveries	MS	MSD	MC38200-2	Limits
460-00-4	Bromofluorobenzene (S)	80%	86%	85%	60-140%
460-00-4	Bromofluorobenzene (S)	99%	107%	99%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42837-MS	BB62994.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427
OP42837-MSD	BB62995.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427
MC38153-1	BB62996.D	1	04/28/15	NK	04/27/15	OP42837	GBB3427

The QC reported here applies to the following samples: **Method:** SW846 8011

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	MC38153-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
96-12-8	1,2-Dibromo-3-chloropropane	ND		39.2	45.9	117	39.4	47.3	120	3	50-181/30
106-93-4	1,2-Dibromoethane	ND		39.2	41.3	105	39.4	41.5	106	0	74-147/30

CAS No.	Surrogate Recoveries	MS	MSD	MC38153-1	Limits
460-00-4	Bromofluorobenzene (S)	113%	95%	107%	70-170%
460-00-4	Bromofluorobenzene (S)	113%	99%	114%	70-170%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC38192-1MS	BD69733.D	1	04/24/15	AF	n/a	n/a	GBD3349
MC38192-1MSD	BD69734.D	1	04/24/15	AF	n/a	n/a	GBD3349
MC38192-1	BD69732.D	1	04/24/15	AF	n/a	n/a	GBD3349

The QC reported here applies to the following samples: **Method:** SW846 8015

MC38192-1, MC38192-2, MC38192-4

CAS No.	Compound	MC38192-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	ND		38.3	35.7	93	38.3	37.4	98	5	63-134/20

CAS No.	Surrogate Recoveries	MS	MSD	MC38192-1	Limits
	2,3,4-Trifluorotoluene	101%	104%	103%	62-131%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC38219-1MS	BD69735.D	1	04/24/15	AF	n/a	n/a	GBD3350
MC38219-1MSD	BD69736.D	1	04/24/15	AF	n/a	n/a	GBD3350
MC38219-1	BD69731.D	1	04/24/15	AF	n/a	n/a	GBD3350

The QC reported here applies to the following samples: **Method:** SW846 8015

MC38192-3

CAS No.	Compound	MC38219-1 mg/l	Q	Spike mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	0.661		0.65	1.19	81	0.65	1.22	86	2	45-142/20

CAS No.	Surrogate Recoveries	MS	MSD	MC38219-1	Limits
	2,3,4-Trifluorotoluene	103%	104%	103%	66-126%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8011 **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC38192-3	BB62973.D	84	109
MC38192-6	BB62974.D	83	107
OP42812-BS	BB62957.D	78	99
OP42812-MB	BB62956.D	85	103
OP42812-MS	BB62958.D	80	99
OP42812-MSD	BB62959.D	86	107

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	60-140%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

Volatile Surrogate Recovery Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8011 **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]	S1 [b]
MC38192-1	BB63004.D	100	116
MC38192-2	BB63005.D	106	116
MC38192-4	BB63006.D	103	116
OP42837-BS	BB62989.D	100	101
OP42837-BSD	BB62990.D	99	100
OP42837-MB	BB62988.D	101	108
OP42837-MS	BB62994.D	113	113
OP42837-MSD	BB62995.D	95	99

Surrogate Compounds	Recovery Limits
S1 = Bromofluorobenzene (S)	70-170%

(a) Recovery from GC signal #2
(b) Recovery from GC signal #1

Volatile Surrogate Recovery Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8015	**Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
MC38192-3	BD69738.D	101
GBD3350-BSD	BD69730A.D	103
GBD3350-BSP	BD69729A.D	102
GBD3350-MB	BD69728A.D	103
MC38219-1MS	BD69735.D	103
MC38219-1MSD	BD69736.D	104

Surrogate Compounds	Recovery Limits
S1 = 2,3,4-Trifluorotoluene	66-126%

(a) Recovery from GC signal #1

Volatile Surrogate Recovery Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Method: SW846 8015	**Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
MC38192-1	BD69732.D	103
MC38192-2	BD69739.D	98
MC38192-4	BD69740.D	102
GBD3349-BSD	BD69730.D	103
GBD3349-BSP	BD69729.D	102
GBD3349-MB	BD69728.D	103
MC38192-1MS	BD69733.D	101
MC38192-1MSD	BD69734.D	104

Surrogate Compounds	Recovery Limits
S1 = 2,3,4-Trifluorotoluene	62-131%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBB3425-ICC3425	**Injection Date:**	04/27/15
Lab File ID:	BB62952.D	**Injection Time:**	23:58
Instrument ID:	GCBB	**Method:**	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	6.87	7.23

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP42812-MB	BB62956.D	04/28/15	01:55	6.87	7.22
OP42812-BS	BB62957.D	04/28/15	02:25	6.87	7.22
OP42812-MS	BB62958.D	04/28/15	02:54	6.87	7.22
OP42812-MSD	BB62959.D	04/28/15	03:24	6.87	7.22
MC38200-2	BB62960.D	04/28/15	03:53	6.87	7.22
ZZZZZZ	BB62961.D	04/28/15	04:22	6.87	7.22
ZZZZZZ	BB62962.D	04/28/15	04:51	6.87	7.22
ZZZZZZ	BB62963.D	04/28/15	05:20	6.87	7.22
ZZZZZZ	BB62964.D	04/28/15	05:49	6.87	7.22
ZZZZZZ	BB62965.D	04/28/15	06:17	6.87	7.22

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBB3425-CC3425	**Injection Date:**	04/28/15
Lab File ID:	BB62966.D	**Injection Time:**	06:45
Instrument ID:	GCBB	**Method:**	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	6.87	7.22

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB62967.D	04/28/15	07:13	6.87	7.22
ZZZZZZ	BB62968.D	04/28/15	07:42	6.87	7.22
ZZZZZZ	BB62969.D	04/28/15	08:10	6.87	7.22
ZZZZZZ	BB62970.D	04/28/15	08:37	6.87	7.22
ZZZZZZ	BB62971.D	04/28/15	09:05	6.87	7.23
ZZZZZZ	BB62972.D	04/28/15	09:33	6.87	7.22
MC38192-3	BB62973.D	04/28/15	10:02	6.87	7.22
MC38192-6	BB62974.D	04/28/15	10:30	6.87	7.22
GBB3425-ECC3425	BB62975.D	04/28/15	10:58	6.87	7.22

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBB3427-ICC3427	**Injection Date:**	04/28/15
Lab File ID:	BB62984.D	**Injection Time:**	17:10
Instrument ID:	GCBB	**Method:**	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	6.87	7.22

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
OP42837-MB	BB62988.D	04/28/15	19:06	6.87	7.22
OP42837-BS	BB62989.D	04/28/15	19:35	6.87	7.22
OP42837-BSD	BB62990.D	04/28/15	20:04	6.86	7.22
OP42847-MB	BB62991.D	04/28/15	20:33	6.87	7.22
OP42847-BS	BB62992.D	04/28/15	21:02	6.87	7.22
OP42847-BSD	BB62993.D	04/28/15	21:32	6.87	7.22
OP42837-MS	BB62994.D	04/28/15	22:02	6.86	7.21
OP42837-MSD	BB62995.D	04/28/15	22:31	6.87	7.22
MC38153-1	BB62996.D	04/28/15	23:00	6.87	7.22
ZZZZZZ	BB62997.D	04/28/15	23:30	6.87	7.21

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBB3427-CC3427	**Injection Date:**	04/28/15
Lab File ID:	BB62998.D	**Injection Time:**	23:58
Instrument ID:	GCBB	**Method:**	SW846 8011

	S1 [a] RT	S1 [b] RT
Check Std	6.87	7.22

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT	S1 [b] RT
ZZZZZZ	BB62999.D	04/29/15	00:28	6.87	7.21
ZZZZZZ	BB63000.D	04/29/15	00:57	6.87	7.22
ZZZZZZ	BB63001.D	04/29/15	01:27	6.86	7.21
ZZZZZZ	BB63002.D	04/29/15	01:57	6.87	7.21
ZZZZZZ	BB63003.D	04/29/15	02:26	6.87	7.21
MC38192-1	BB63004.D	04/29/15	02:55	6.87	7.21
MC38192-2	BB63005.D	04/29/15	03:25	6.87	7.21
MC38192-4	BB63006.D	04/29/15	03:55	6.86	7.21
OP42847-MS	BB63007.D	04/29/15	04:25	6.86	7.21
OP42847-MSD	BB63008.D	04/29/15	04:54	6.87	7.21

Surrogate Compounds

S1 = Bromofluorobenzene (S)

(a) Retention time from GC signal #2
(b) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBD3349-CC3249	**Injection Date:**	04/24/15
Lab File ID:	BD69727.D	**Injection Time:**	08:39
Instrument ID:	GCBD	**Method:**	SW846 8015

	S1 [a] RT
Check Std	21.23

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
GBD3349-MB	BD69728.D	04/24/15	09:16	21.23
GBD3350-MB	BD69728A.D	04/24/15	09:16	21.23
GBD3350-BSP	BD69729A.D	04/24/15	09:55	21.23
GBD3349-BSP	BD69729.D	04/24/15	09:55	21.23
GBD3350-BSD	BD69730A.D	04/24/15	10:32	21.23
GBD3349-BSD	BD69730.D	04/24/15	10:32	21.23
MC38219-1	BD69731.D	04/24/15	11:10	21.23
MC38192-1	BD69732.D	04/24/15	11:49	21.23
MC38192-1MS	BD69733.D	04/24/15	12:26	21.23
MC38192-1MSD	BD69734.D	04/24/15	13:04	21.23
MC38219-1MS	BD69735.D	04/24/15	13:42	21.23
MC38219-1MSD	BD69736.D	04/24/15	14:20	21.23

Surrogate Compounds

S1 = 2,3,4-Trifluorotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBD3350-CC3249	**Injection Date:**	04/24/15
Lab File ID:	BD69727A.D	**Injection Time:**	08:39
Instrument ID:	GCBD	**Method:**	SW846 8015

	S1 [a] RT
Check Std	21.23

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
GBD3349-MB	BD69728.D	04/24/15	09:16	21.23
GBD3350-MB	BD69728A.D	04/24/15	09:16	21.23
GBD3350-BSP	BD69729A.D	04/24/15	09:55	21.23
GBD3349-BSP	BD69729.D	04/24/15	09:55	21.23
GBD3350-BSD	BD69730A.D	04/24/15	10:32	21.23
GBD3349-BSD	BD69730.D	04/24/15	10:32	21.23
MC38219-1	BD69731.D	04/24/15	11:10	21.23
MC38192-1	BD69732.D	04/24/15	11:49	21.23
MC38192-1MS	BD69733.D	04/24/15	12:26	21.23
MC38192-1MSD	BD69734.D	04/24/15	13:04	21.23
MC38219-1MS	BD69735.D	04/24/15	13:42	21.23
MC38219-1MSD	BD69736.D	04/24/15	14:20	21.23

Surrogate Compounds

S1 = 2,3,4-Trifluorotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBD3350-CC3249	**Injection Date:**	04/24/15
Lab File ID:	BD69737A.D	**Injection Time:**	14:58
Instrument ID:	GCBD	**Method:**	SW846 8015

	S1 [a] RT
Check Std	21.23

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
MC38192-3	BD69738.D	04/24/15	15:37	21.23
MC38192-2	BD69739.D	04/24/15	16:16	21.23
MC38192-4	BD69740.D	04/24/15	16:55	21.23
ZZZZZZ	BD69741.D	04/24/15	17:33	21.23
ZZZZZZ	BD69742.D	04/24/15	18:12	21.23
ZZZZZZ	BD69743.D	04/24/15	18:52	21.23
ZZZZZZ	BD69744.D	04/24/15	19:31	21.23
ZZZZZZ	BD69745.D	04/24/15	20:09	21.23
ZZZZZZ	BD69746.D	04/24/15	20:49	21.23
ZZZZZZ	BD69747.D	04/24/15	21:30	21.23

Surrogate Compounds

S1 = 2,3,4-Trifluorotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Check Std:	GBD3349-CC3249	**Injection Date:**	04/24/15
Lab File ID:	BD69737.D	**Injection Time:**	14:58
Instrument ID:	GCBD	**Method:**	SW846 8015

	S1 [a] RT
Check Std	21.23

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
MC38192-3	BD69738.D	04/24/15	15:37	21.23
MC38192-2	BD69739.D	04/24/15	16:16	21.23
MC38192-4	BD69740.D	04/24/15	16:55	21.23
ZZZZZZ	BD69741.D	04/24/15	17:33	21.23
ZZZZZZ	BD69742.D	04/24/15	18:12	21.23
ZZZZZZ	BD69743.D	04/24/15	18:52	21.23
ZZZZZZ	BD69744.D	04/24/15	19:31	21.23
ZZZZZZ	BD69745.D	04/24/15	20:09	21.23
ZZZZZZ	BD69746.D	04/24/15	20:49	21.23
ZZZZZZ	BD69747.D	04/24/15	21:30	21.23

Surrogate Compounds

S1 = 2,3,4-Trifluorotoluene

(a) Retention time from GC signal #1

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Percent Solids Raw Data Summary

Percent Solids Raw Data Summary

Job Number: MC38192
Account: SHELLWIC Shell Oil
Project: URSMOSTL:Roxana VMP Soil Sample, 900 South Central Avenue, Roxana, IL

Sample: MC38192-1 **Analyzed:** 23-APR-15 by HS **Method:** SM 2540G-97 MOD
ClientID: VMP-34-042215 (20-22)

Wet Weight (Total)	30.967	g
Tare Weight	19.161	g
Dry Weight (Total)	30.412	g
Solids, Percent	95.3	%

Sample: MC38192-2 **Analyzed:** 23-APR-15 by HS **Method:** SM 2540G-97 MOD
ClientID: VMP-34-042215 (20-22)-DUP

Wet Weight (Total)	30.705	g
Tare Weight	18.909	g
Dry Weight (Total)	30.11	g
Solids, Percent	95	%

Sample: MC38192-4 **Analyzed:** 23-APR-15 by HS **Method:** SM 2540G-97 MOD
ClientID: VMP-34-042215 (30-32)

Wet Weight (Total)	31.3	g
Tare Weight	18.961	g
Dry Weight (Total)	30.514	g
Solids, Percent	93.6	%