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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 – 4th Quarter 2013
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
- Revised analytical results table
- Revised laboratory reports (on CD)

AECOM

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

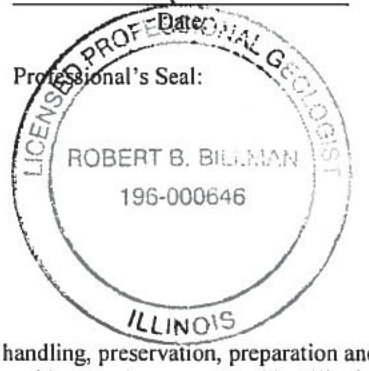
Professional's Address: AECOM Technical Services, Inc.

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

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APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOCs													
				Benzene			n-Butylbenzene			sec-Butylbenzene			Carbon disulfide			Ethylbenzene		
				0.03			52						32			13		
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013	0.0025			0.00045	J		< 0.0064	U		< 0.0064	U		0.0092		
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013	0.0042			< 0.0058	U		< 0.0058	U		0.00057	J		0.0011	J	
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013	< 0.00054	U		< 0.0054	U		< 0.0054	U		< 0.0054	U		< 0.0021	U	
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013	0.0014			0.00033	J		< 0.0063	U		< 0.0063	U		0.0058		
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013	0.00066			< 0.0064	U		< 0.0064	U		< 0.0064	U		0.001	J	
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013	< 0.00055	U		< 0.0055	U		< 0.0055	U		0.00072	J		< 0.0022	U	
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013	0.00075			< 0.0063	U		< 0.0063	U		< 0.0063	U		0.0013	J	
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013	0.0014			< 0.0063	U		< 0.0063	U		< 0.0063	U		0.0059		
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013	< 0.00049	U		< 0.0049	U		< 0.0049	U		0.00058	J		< 0.002	U	
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013	0.00076			< 0.0057	U		0.00054	J		0.00032	J		0.0011	J	
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013	0.0018			0.00057	J		< 0.006	U		< 0.006	U		0.0068		
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013	0.0019			< 0.0053	U		0.00027	J		< 0.0053	U		0.0055		
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013	0.00073			< 0.0061	U		< 0.0061	U		< 0.0061	U		0.0017	J	
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013	0.00081			< 0.0058	U		< 0.0058	U		< 0.0058	U		0.0018	J	
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013	0.00092			< 0.0053	U		< 0.0053	U		< 0.0053	U		0.0017	J	
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013	0.0014			< 0.0054	U		< 0.0054	U		0.0012	J		0.0022		
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013	< 0.00048	U		< 0.0048	U		< 0.0048	U		< 0.0048	U		< 0.0019	U	

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOCs													
				n-Propylbenzene			Toluene			1,2,4-Trimethylbenzene			1,3,5-Trimethylbenzene			Vinyl acetate		
							12						10			170		
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013	0.00089	J		0.0078			0.00084	J		0.00036	J		< 0.0064	U	
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013	< 0.0058	U		0.0013	J		< 0.0058	U		< 0.0058	U		< 0.0058	U	
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013	< 0.0054	U		0.0003	J		< 0.0054	U		< 0.0054	U		< 0.0054	U	
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013	0.00056	J		0.0047	J		0.00067	J		< 0.0063	U		< 0.0063	U	
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013	< 0.0064	U		0.0014	J		< 0.0064	U		< 0.0064	U		0.0052	J	
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013	< 0.0055	U		0.00035	J		< 0.0055	U		< 0.0055	U		< 0.0055	U	
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013	< 0.0063	U		0.0015	J		< 0.0063	U		< 0.0063	U		0.0054	J	
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013	0.00055	J		0.0049	J		0.00078	J		0.00041	J		< 0.0063	U	
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013	< 0.0049	U		< 0.0049	U		< 0.0049	U		< 0.0049	U		< 0.0049	U	
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013	< 0.0057	U		0.0012	J		0.0016	J		0.002	J		< 0.0057	U	
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013	0.00085	J		0.0057	J		0.00098	J		0.00034	J		< 0.006	U	
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013	0.00058	J		0.005	J		0.0009	J		0.00059	J		< 0.0053	U	
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013	< 0.0061	U		0.0017	J		0.0004	J		< 0.0061	U		< 0.0061	U	
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013	0.00029	J		0.0019	J		0.00045	J		< 0.0058	U		< 0.0058	U	
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013	< 0.0053	U		0.0021	J		< 0.0053	U		< 0.0053	U		< 0.0053	U	
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013	< 0.0054	U		0.0027	J		0.00031	J		< 0.0054	U		< 0.0054	U	
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013	< 0.0048	U		0.0012	J		< 0.0048	U		< 0.0048	U		< 0.0048	U	

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APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOCs									VOC TICs					
				m,p-Xylenes			o-Xylenes			Xylenes (total)			Benzeneethanamine, N-(pentafluorophenyl)			Butane		
				150			190			150								
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013	0.0018	J		0.00066	J		0.0024	J					0.16	JN	
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013	< 0.0023	U		< 0.0023	U		0.00032	J					8.5	JN	
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013	< 0.0021	U		< 0.0021	U		< 0.0021	U							
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013	0.0012	J		0.00059	J		0.0018	J		0.042	JN				
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013	0.00036	J		< 0.0025	U		0.00036	J							
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013	< 0.0022	U		< 0.0022	U		< 0.0022	U							
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013	0.00042	J		< 0.0025	U		0.00042	J							
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013	0.0014	J		0.00054	J		0.0019	J							
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013	< 0.002	U		< 0.002	U		< 0.002	U					0.05	JN	
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013	0.0013	J		0.00032	J		0.0016	J							
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013	0.0018	J		0.00066	J		0.0025								
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013	0.0018	J		0.00086	J		0.0027						0.11	JN	
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013	0.00073	J		0.00038	J		0.0011	J							
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013	0.00079	J		0.00034	J		0.0011	J							
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013	0.00053	J		< 0.0021	U		0.00053	J							
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013	0.00063	J		< 0.0022	U		0.00063	J							
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013	< 0.0019	U		< 0.0019	U		< 0.0019	U							

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOC TICs														
				Butane, 2,2,3,3-tetramethyl-			Butane, 2,2-dimethyl-			Butane, 2,3-dimethyl-			2-Butene, 2-methyl-			Cyclohexane		
																280		
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013							0.034	JN							
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013										0.38	JN				
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013															
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013															
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013	0.038	JN		0.009	JN		0.029	JN							
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013															
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013				0.0095	JN		0.048	JN							
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013													0.0073	JN	
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013	0.017	JN													
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013				0.0084	JN								0.02	JN	
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013															
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013	0.013	JN					0.025	JN							
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013															
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013															
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013															
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013				0.028	JN		0.059	JN							
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013															

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOC TICs														
				Cyclohexane, ethyl-			Cyclohexane, 1-ethyl-2-methyl-			cis-1-Ethyl-3-methyl-cyclohexane			1-Ethyl-4-methylcyclohexane			Cyclohexane, 1,2-dimethyl-, cis-		
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013				0.0082	JN										
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013															
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013															
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013															
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013															
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013															
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013							0.0076	JN							
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013															
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013															
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013	0.0095	JN								0.012	JN				
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013															
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013				0.0055	JN										
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013															
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013															
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013															
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013													0.0067	JN	
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013															

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APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOC TICs														
				Cyclohexane, 1,2-dimethyl-, trans-			Cyclohexane, 1,3-dimethyl-, cis-			Cyclohexane, 1,4-dimethyl-, trans-			Cyclohexane, methyl-			Cyclohexane, 1,1,3-trimethyl-		
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013															
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013															
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013															
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013															
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013															
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013															
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013							0.0066	JN					0.0067	JN	
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013															
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013															
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013										0.057	JN				
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013															
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013															
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013															
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013															
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013															
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013	0.01	JN		0.0066	JN										
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013															

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SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOC TICs														
				Cyclopentane			Cyclopentane, methyl-			Cyclopentane, 1,2,4-trimethyl-			Cyclopropane, 1,2-dimethyl-, trans-			Heptane, 4-methyl-		
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013				0.024	JN								0.01	JN	
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013	0.27	JN		0.0089	JN										
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013															
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013															
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013															
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013															
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013													0.029	JN	
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013															
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013													0.0076	JN	
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013										0.017	JN				
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013				0.0066	JN										
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013				0.016	JN										
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013															
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013															
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013															
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013							0.014	JN							
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013															

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APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOC TICs														
				1,3-Hexadiene,c&t			Hexane			Hexane, 2,2-dimethyl-			Hexane, 2-methyl-			Hexane, 2,2,3-trimethyl-		
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013				0.015	JN		0.022	JN							
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013	0.0067	JN		0.0078	JN										
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013															
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013				0.0084	JN										
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013															
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013															
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013															
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013				0.011	JN										
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013													0.0094	JN	
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013															
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013				0.012	JN					0.0063	JN				
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013				0.011	JN										
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013				0.01	JN										
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013				0.018	JN		0.017	JN							
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013															
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013				0.0079	JN										
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013															

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SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOC TICs														
				Isobutane			Isopentane			Octane, 4-methyl-			Oxalic acid, decyl propyl ester			Oxalic acid, hexyl tetradecyl ester		
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013				0.089	JN		0.014	JN		0.0085	JN				
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013	0.36	JN		0.31	JN										
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013															
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013				0.021	JN										
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013				0.078	JN										
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013				0.0039	JN										
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013				0.084	JN										
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013				0.023	JN										
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013				0.039	JN										
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013				0.27	JN										
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013				0.031	JN										
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013				0.044	JN								0.007	JN	
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013				0.016	JN										
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013				0.11	JN										
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013				0.01	JN										
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013				0.016	JN										
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013															

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SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOC TICs														
				Oxirane, ethyl-			Pentane			Pentane, 2,3-dimethyl-			Pentane, 2,4-dimethyl-			Pentane, 2-methyl-		
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013				0.04	JN										
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013	0.11	JN													
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013															
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013				0.015	JN								0.0085	JN	
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013				0.017	JN		0.042	JN		0.026	JN				
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013															
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013				0.019	JN					0.046	JN				
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013				0.017	JN								0.012	JN	
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013				0.015	JN		0.016	JN		0.013	JN		0.021	JN	
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013										0.067	JN		0.11	JN	
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013				0.022	JN								0.013	JN	
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013				0.031	JN										
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013				0.013	JN								0.0099	JN	
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013				0.06	JN		0.015	JN		0.02	JN		0.047	JN	
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013				0.0082	JN								0.0052	JN	
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013				0.013	JN					0.068	JN				
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013															

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APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOC TICs														
				Pentane, 3-methyl-			Pentane, 2,2,3-trimethyl-			Pentane, 2,2,4-trimethyl-			Pentane, 2,3,3-trimethyl-			Pentane, 2,3,4-trimethyl-		
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013	0.023	JN												
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013														
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013														
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013														
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013										0.021	JN		0.018	JN	
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013															
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013							0.059	JN		0.032	JN				
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013	0.0075	JN													
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013										0.009	JN				
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013	0.07	JN					0.1	JN		0.066	JN		0.057	JN	
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013	0.0078	JN													
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013				0.013	JN					0.014	JN		0.0082	JN	
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013															
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013	0.02	JN								0.012	JN		0.0076	JN	
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013															
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013							0.054	JN		0.022	JN		0.015	JN	
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013															

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APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	VOC TICs						Hydrocarbons			SVOCs					
				Sulfurous acid, isobutyl 2-pentyl ester			4-Undecene, 7-methyl-			TPH GRO (C6-C10)			Acenaphthene			Acenaphthylene		
													570					
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013							< 14	U		< 0.0062	U		< 0.0062	U	
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013							< 13	U		< 0.0065	U		< 0.0065	U	
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013							< 11	U		< 0.0057	U		< 0.0057	U	
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013							< 13	U		< 0.0053	U		< 0.0053	U	
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013							11.3	J		0.0016	J		< 0.0058	U	
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013							< 13	U		0.0022	J		0.0016	J	
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013							3.61	J		< 0.0063	U		< 0.0063	U	
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013							4.98	J		< 0.0055	U		< 0.0055	U	
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013							< 11	U		0.0049	J		0.0035	J	
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013							11.5	J		< 0.0066	U		< 0.0066	U	
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013							< 13	U		0.0012	J		< 0.0053	U	
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013							4.61	J		< 0.0061	U		< 0.0061	U	
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013							< 13	U		< 0.006	U		< 0.006	U	
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013	0.0073	JN					< 14	U		< 0.0066	U		< 0.0066	U	
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013							< 12	U		0.0034	J		0.0024	J	
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013				0.008	JN		< 12	U		< 0.0061	U		< 0.0061	U	
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013							< 10	U		0.0025	J		0.0019	J	

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SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	SVOCs													
				Anthracene			Benzo(a)anthracene			Benzo(a)pyrene			Benzo(b)fluoranthene			Benzo(g,h,i)perylene		
				12000			2			8			5					
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013	< 0.0062	U		< 0.0062	U		< 0.0062	U		< 0.0062	U		< 0.0062	U	
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013	< 0.0011	J	U	0.0028	J		< 0.0065	U		0.0085			0.005	J	
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013	< 0.0025	JB	U	0.056			0.0953			0.0984			0.0679		
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013	< 0.0053	U		< 0.0053	U		< 0.0053	U		< 0.0053	U		< 0.0053	U	
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013	0.0014	J		< 0.0058	U		< 0.0058	U		< 0.0058	U		< 0.0058	U	
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013	0.0024	J		0.0021	J		0.0019	J		0.0018	J		0.0025	J	
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013	< 0.0063	U		< 0.0063	U		< 0.0063	U		< 0.0063	U		< 0.0063	U	
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013	< 0.0055	U		0.00095	J		< 0.0055	U		< 0.0055	U		< 0.0055	U	
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013	0.0053	J		0.0067			0.0057	J		0.0066			0.0067		
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013	< 0.0066	U		< 0.0066	U		0.0016	J		0.0024	J		< 0.0066	U	
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013	0.0017	J		0.0044	J		0.0046	J		0.0051	J		0.0037	J	
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013	< 0.0061	U		< 0.0061	U		< 0.0061	U		< 0.0061	U		< 0.0061	U	
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013	0.0014	J		0.0012	J		0.001	J		0.0016	J		< 0.006	U	
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013	< 0.0066	U		< 0.0066	U		< 0.0066	U		< 0.0066	U		< 0.0066	U	
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013	0.0053	J		0.0089			0.0072			0.008			0.0077		
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013	< 0.0061	U		0.0012	J		0.0014	J		0.0016	J		< 0.0061	U	
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013	0.0028	J		0.0143			0.018			0.0186			0.058		

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	SVOCs													
				Benzo(k)fluoranthene			bis(2-Ethylhexyl)phthalate			Chrysene (1,2-Benzphenanthracene)			Dibenzo(a,h)anthracene			Di-n-butyl phthalate		
				49			46			160			2			2300		
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013	< 0.0062	U		< 0.31	U		< 0.0062	U		< 0.0062	U		0.0561	J	
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013	0.0035	J		< 0.32	U		0.007			< 0.0065	U		< 0.32	U	
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013	0.0229			0.0191	J		0.157			0.0286			< 0.29	U	
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013	< 0.0053	U		< 0.27	U		< 0.0053	U		< 0.0053	U		< 0.27	U	
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013	< 0.0058	U		< 0.29	U		< 0.0058	U		< 0.0058	U		< 0.29	U	
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013	0.0014	J		0.0427	J		0.0018	J		< 0.0061	U		< 0.3	U	
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013	< 0.0063	U		< 0.31	U		< 0.0063	U		< 0.0063	U		< 0.31	U	
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013	< 0.0055	U		< 0.28	U		0.0011	J		< 0.0055	U		< 0.28	U	
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013	0.006			< 0.29	U		0.0059			0.006			< 0.29	U	
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013	0.0022	J		< 0.32	U		< 0.0066	U		< 0.0066	U		< 0.32	U	
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013	0.0039	J		< 0.27	U		0.0046	J		0.0024	J		< 0.27	U	
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013	< 0.0061	U		< 0.3	U		< 0.0061	U		< 0.0061	U		< 0.3	U	
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013	0.0012	J		< 0.3	U		0.0014	J		< 0.006	U		< 0.3	U	
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013	< 0.0066	U		< 0.33	U		< 0.0066	U		< 0.0066	U		< 0.33	U	
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013	0.0076			< 0.31	U		0.0068			0.0078			< 0.31	U	
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013	< 0.0061	U		0.0224	J		0.0012	J		< 0.0061	U		< 0.31	U	
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013	0.0021	J		0.0206	J		0.0296			0.0108			< 0.28	U	

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	SVOCs													
				Fluoranthene			Fluorene			Indeno(1,2,3-cd)pyrene			2-Methylnaphthalene			Phenanthrene		
				560			560			14								
				Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals	Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013	< 0.0062	U		< 0.0062	U		< 0.0062	U		< 0.0062	U		< 0.004	JB	U
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013	0.0029	J		< 0.0065	U		0.0034	J		0.0015	J		< 0.0051	JB	U
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013	0.0185			< 0.0057	U		0.0232			0.0021	J		< 0.013	B	U
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013	< 0.0053	U		< 0.0053	U		< 0.0053	U		< 0.0053	U		< 0.0033	JB	U
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013	0.0013	J		0.0015	J		< 0.0058	U		0.002	J		< 0.0037	JB	U
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013	0.0034	J		0.0021	J		< 0.0061	U		0.0024	J		< 0.0057	JB	U
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013	< 0.0063	U		< 0.0063	U		< 0.0063	U		< 0.0063	U		< 0.0031	JB	U
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013	0.0011	J		< 0.0055	U		< 0.0055	U		< 0.0055	U		0.0012	J	
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013	0.0062			0.0055	J		0.0062			0.0051	J		0.0067		
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013	0.0011	J		< 0.0066	U		0.0018	J		< 0.0066	U		0.0016	J	
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013	0.0062	B		0.0014	J		0.0035	J		0.0026	J		< 0.0049	JB	U
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013	< 0.0016	JB	U	< 0.0061	U		< 0.0061	U		0.0014	J		< 0.004	JB	U
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013	< 0.002	JB	U	< 0.006	U		< 0.006	U		0.0083		J	< 0.004	JB	U
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013	< 0.0066	U		< 0.0066	U		< 0.0066	U		< 0.0066	U	UJ	< 0.0031	JB	U
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013	0.0071			0.0044	J		0.0079			0.002	J		0.0062	B	
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013	0.0016	J		< 0.0061	U		< 0.0061	U		< 0.0061	U		< 0.0019	JB	U
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013	0.0088			0.0029	J		0.0114			0.0037	J		0.0115	B	

SEE LAST PAGE OF TABLE FOR NOTES

APPENDIX D
SUMMARY OF SOIL ANALYTICAL DETECTIONS AND SCREENING RESULTS: VMPs 57-61

Location	Sample ID	Depth	Sample Date	SVOCs		
				Pyrene		
				4200		
				Result (mg/kg)	Lab Quals	AECOM Quals
VMP-57	VMP57-082013(25.5-28)	25.5 - 28 ft	8/20/2013	< 0.0062	U	
VMP-57	VMP57-082013(48-50.5)	48 - 50.5 ft	8/20/2013	0.0037	J	
VMP-57	VMP57-082013(6-8)	6 - 8 ft	8/20/2013	0.216		
VMP-58	VMP58-082113(25.5-28)	25.5 - 28 ft	8/21/2013	< 0.0053	U	
VMP-58	VMP58-082113(45.5-48)	45.5 - 48 ft	8/21/2013	< 0.0058	U	
VMP-58	VMP58-082113(4-6)	4 - 6 ft	8/21/2013	0.0037	J	
VMP-58	VMP58-082113-D(45.5-48)	45.5 - 48 ft	8/21/2013	< 0.0063	U	
VMP-59	VMP59-082713(23-25.5)	5 ft	8/27/2013	< 0.0055	U	
VMP-59	VMP59-082713(2-4)	5 ft	8/27/2013	0.0061		
VMP-59	VMP59-082713(45.5-48)	5 ft	8/27/2013	< 0.0066	U	
VMP-60	VMP60-082213(10-13)	10 - 13 ft	8/22/2013	0.006		
VMP-60	VMP60-082213(30.5-33)	30.5 - 33 ft	8/22/2013	< 0.0061	U	
VMP-60	VMP60-082213(38-40.5)	38 - 40.5 ft	8/22/2013	< 0.006	U	
VMP-60	VMP60-082213-D(38-40.5)	38 - 40.5 ft	8/22/2013	< 0.0066	U	
VMP-61	VMP61-082613(33-35.5)	5 ft	8/26/2013	0.0073		
VMP-61	VMP61-082613(43-45.5)	5 ft	8/26/2013	< 0.0061	U	
VMP-61	VMP61-082613(4-6)	5 ft	8/26/2013	0.033		

Notes:

Lab Qualifiers

J = Estimated value; results between the MDL and RL

U = Compound analyzed for but not detected above the RL

JN = Tentatively identified compound (TIC); estimated concentration

B = Indicates analyte found in associated method blank

URS Qualifiers

J = Estimated detect

UJ = Estimated non-detect

U= Non-detect (e.g. method blank contamination)

e-Hardcopy 2.0
Automated Report

Technical Report for

Shell Oil

URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

21562850.18001

SGS Accutest Job Number: MC23682

Sampling Date: 08/20/13

Report to:

AECOM, INC.

Melissa.mansker@aecom.com

ATTN: Melissa Mansker

Total number of pages in report: 87

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 25, 2016

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

RE: SGS Accutest Job # MC23682

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

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Sample Summary

Shell Oil

Job No: MC23682

URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL
Project No: 21562850.18001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC23682-1	08/20/13	13:20	EAMC	08/21/13	SO	Soil	VMP57-082013(6-8')
MC23682-1D	08/20/13	13:20	EAMC	08/21/13	SO	Soil Dup/MSD	VMP57-082013(6-8')
MC23682-1S	08/20/13	13:20	EAMC	08/21/13	SO	Soil Matrix Spike	VMP57-082013(6-8')
MC23682-2	08/20/13	14:45	EAMC	08/21/13	SO	Soil	VMP57-082013(25.5-28")
MC23682-3	08/20/13	15:00	EAMC	08/21/13	SO	Soil	VMP57-082013(48-50.5')
MC23682-4	08/20/13	00:00	EAMC	08/21/13	AQ	Trip Blank Water	TB-082013-HCL

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: She O **Job No** MC23682

Site: URSMOSTL: Roxana SVE System Expans on, 900 South Centra A **Report Date** 0/25/20 6 :35: 4 P

3 Samp e(s), Tr p B ank(s) and 0 F e d B ank(s) were co ected on 08/20/20 3 and were rece ved at SGS Accutest New Eng and on 08/2 /20 3 proper y preserved, at 4 Deg C and ntact These Samp es rece ved a job number of MC23682 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 repo t

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 8260B

Matrix: AQ **Batch ID:** MSV855

- 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) MC23464- MS, MC23464- MSD were used as the QC samp es nd cated
- B ank Sp ke Recove y(s) for , -D ch oroethene, Acetone, Acro e n, Carbon d su f de, Ch oroethane, Ch oromethane are outs de contro m ts Assoc ated samp es are non-detect
- Matr x Sp ke Recovery(s) for , -D ch oroethane, , -D ch oroethene, 2-Ch oroethy v ny ether, Acro e n, Bromoch oromethane, Carbon d su f de, Ch oroethane, Ch oromethane are outs de contro m ts Outs de contro m ts due to poss b e matr x nterference
- Matr x Sp ke Dup cate Recovery(s) for , -D ch oroethane, , -D ch oroethene, 2-Ch oroethy v ny ether, Acro e n, Carbon d su f de, Ch oroethane, Ch oromethane are outs de contro m ts Probab e cause due to matr x nte ference
- MC23682-4 for 2-Ch oroethy v ny ether: In t a Ca brat on outs de of acceptance cr ter a Samp e resu t may be b ased ow

Matrix: SO **Batch ID:** MSG5093

- MC23682-3: Conf rmat on run

Matrix: SO **Batch ID:** MSM2022

- 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) MC23682- MS, MC23682- MSD were used as the QC samp es nd cated
- B ank Sp ke Recove y(s) for Acetone, Acro e n, Ch oromethane, D ch orod f uoromethane are outs de contro m ts
- Matr x Sp ke Recovery(s) for ,2,3-Tr ch oropropane, ,4-D oxane, 2-Ch oroethy v ny ether, 4-Methy -2-pentanone (MIBK), Acry on tr e, Ch oromethane, D ch orod f uoromethane, Styrene, V ny Acetate are outs de contro m ts Outs de contro m ts due to poss b e matr x nterference
- Matr x Sp ke Dup cate Recovery(s) for 2-Ch oroethy v ny ether, Ch oromethane, D ch orod f uoromethane, ,4-D oxane, Styrene, V ny Acetate are outs de contro m ts H gh RPD due to poss b e matr x nterference and/or samp e non-homogene ty
- RPD(s) for MSD for ,4-D oxane, Styrene, V ny Acetate are outs de contro m ts for samp e MC23682- MSD H gh RPD due to poss b e matr x nterference and/or samp e non-homogene ty
- V ny Acetate: In t a Ca brat on Ver f cat on outs de of acceptance cr ter a Samp e resu t may be b ased ow
- MC23682-3 has nterna standard recovery outs de contro m ts due to poss b e matr x nterference Conf rmed by re-ana ys s

Volatiles by GC By Method SW846 8015

Matrix: SO **Batch ID:** GBH 8

- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC23682- MS, MC23682- 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 SM21 2540 B MOD.

Matrix: SO **Batch ID:** GN44057

- Samp e(s) MC23683- DUP were used as the QC samp es for So ds, Percent

SGS Accutest New Eng and ce t 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 report(MC23682)

Summary of Hits

Job Number: MC23682
Account: Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL
Collected: 08/20/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC23682-1	VMP57-082013(6-8')					
Methylene chloride		0.0020 J	0.0021	0.0017	mg/kg	SW846 8260B
Toluene		0.00030 J	0.0054	0.00026	mg/kg	SW846 8260B
MC23682-2	VMP57-082013(25.5-28")					
Benzene		0.0025	0.00064	0.00032	mg/kg	SW846 8260B
n-Butylbenzene		0.00045 J	0.0064	0.00022	mg/kg	SW846 8260B
Ethylbenzene		0.0092	0.0026	0.00023	mg/kg	SW846 8260B
Methylene chloride		0.0025 J	0.0026	0.0020	mg/kg	SW846 8260B
n-Propylbenzene		0.00089 J	0.0064	0.00031	mg/kg	SW846 8260B
Toluene		0.0078	0.0064	0.00031	mg/kg	SW846 8260B
1,2,4-Trimethylbenzene		0.00084 J	0.0064	0.00026	mg/kg	SW846 8260B
1,3,5-Trimethylbenzene		0.00036 J	0.0064	0.00017	mg/kg	SW846 8260B
m,p-Xylene		0.0018 J	0.0026	0.00036	mg/kg	SW846 8260B
o-Xylene		0.00066 J	0.0026	0.00026	mg/kg	SW846 8260B
Xylene (total)		0.0024 J	0.0026	0.00026	mg/kg	SW846 8260B
Total TIC, Volatile		0.249 J			mg/kg	
MC23682-3	VMP57-082013(48-50.5')					
Benzene		0.0042	0.00058	0.00029	mg/kg	SW846 8260B
Carbon disulfide		0.00057 J	0.0058	0.00017	mg/kg	SW846 8260B
Ethylbenzene		0.0011 J	0.0023	0.00020	mg/kg	SW846 8260B
Toluene		0.0013 J	0.0058	0.00028	mg/kg	SW846 8260B
Xylene (total)		0.00032 J	0.0023	0.00024	mg/kg	SW846 8260B
Total TIC, Volatile		8.81 J			mg/kg	
MC23682-4	TB-082013-HCL					

No hits reported in this sample.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	VMP57-082013(6-8')		
Lab Sample ID:	MC23682-1	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	83.7
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M58656.D	1	08/22/13	KD	n/a	n/a	MSM2022
Run #2							

	Initial Weight	Final Volume
Run #1	5.57 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.011	0.0042	mg/kg	
107-02-8	Acrolein	ND	0.027	0.0040	mg/kg	
107-13-1	Acrylonitrile	ND	0.027	0.0014	mg/kg	
71-43-2	Benzene	ND	0.00054	0.00027	mg/kg	
108-86-1	Bromobenzene	ND	0.0054	0.00029	mg/kg	
74-97-5	Bromochloromethane	ND	0.0054	0.00062	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0021	0.00039	mg/kg	
75-25-2	Bromoform	ND	0.0021	0.00031	mg/kg	
74-83-9	Bromomethane	ND	0.0021	0.0010	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0054	0.0033	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0054	0.00018	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0054	0.00017	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0054	0.00038	mg/kg	
75-15-0	Carbon disulfide	ND	0.0054	0.00016	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0021	0.0012	mg/kg	
108-90-7	Chlorobenzene	ND	0.0021	0.00029	mg/kg	
75-00-3	Chloroethane	ND	0.0054	0.00064	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	0.0054	0.0051	mg/kg	
67-66-3	Chloroform	ND	0.0021	0.00031	mg/kg	
74-87-3	Chloromethane	ND	0.0054	0.0013	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0054	0.00044	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0054	0.00047	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0021	0.00046	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0021	0.00022	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0021	0.00024	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0021	0.00022	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0021	0.0012	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0021	0.00036	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0021	0.00058	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0021	0.00056	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0021	0.00055	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0021	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:	VMP57-082013(6-8')		
Lab Sample ID:	MC23682-1	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	83.7
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.0021	0.00045	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0054	0.00048	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0054	0.00070	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0054	0.00025	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0021	0.00031	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0021	0.00031	mg/kg	
123-91-1	1,4-Dioxane	ND	0.027	0.022	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0054	0.0035	mg/kg	
100-41-4	Ethylbenzene	ND	0.0021	0.00019	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0054	0.00061	mg/kg	
591-78-6	2-Hexanone	ND	0.0054	0.0026	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0054	0.00030	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0054	0.00017	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0021	0.00043	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0054	0.0020	mg/kg	
74-95-3	Methylene bromide	ND	0.0054	0.00038	mg/kg	
75-09-2	Methylene chloride	0.0020	0.0021	0.0017	mg/kg	J
91-20-3	Naphthalene	ND	0.0054	0.00084	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0054	0.00026	mg/kg	
100-42-5	Styrene	ND	0.0054	0.00022	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0054	0.00041	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0021	0.00032	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0021	0.00047	mg/kg	
108-88-3	Toluene	0.00030	0.0054	0.00026	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0054	0.00046	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0054	0.00039	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0021	0.00019	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0021	0.00037	mg/kg	
79-01-6	Trichloroethene	ND	0.0021	0.00051	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0021	0.0011	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0054	0.00041	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0054	0.00022	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0054	0.00014	mg/kg	
108-05-4	Vinyl Acetate [a]	ND	0.0054	0.0013	mg/kg	
75-01-4	Vinyl chloride	ND	0.0021	0.00061	mg/kg	
	m,p-Xylene	ND	0.0021	0.00031	mg/kg	
95-47-6	o-Xylene	ND	0.0021	0.00022	mg/kg	
1330-20-7	Xylene (total)	ND	0.0021	0.00022	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:	VMP57-082013(6-8')		
Lab Sample ID:	MC23682-1	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	83.7
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	92%		70-130%

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

(a) Initial Calibration Verification 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:	VMP57-082013(6-8')		
Lab Sample ID:	MC23682-1	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8015	**Percent Solids:**	83.7
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH30993.D	1	08/21/13	TB	n/a	n/a	GBH1811
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.87 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	11	3.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	89%		60-131%

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:	VMP57-082013(25.5-28")		
Lab Sample ID:	MC23682-2	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	78.9
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M58657.D	1	08/22/13	KD	n/a	n/a	MSM2022
Run #2							

	Initial Weight	Final Volume
Run #1	4.95 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.013	0.0050	mg/kg	
107-02-8	Acrolein	ND	0.032	0.0048	mg/kg	
107-13-1	Acrylonitrile	ND	0.032	0.0017	mg/kg	
71-43-2	Benzene	0.0025	0.00064	0.00032	mg/kg	
108-86-1	Bromobenzene	ND	0.0064	0.00035	mg/kg	
74-97-5	Bromochloromethane	ND	0.0064	0.00074	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0026	0.00046	mg/kg	
75-25-2	Bromoform	ND	0.0026	0.00037	mg/kg	
74-83-9	Bromomethane	ND	0.0026	0.0012	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0064	0.0040	mg/kg	
104-51-8	n-Butylbenzene	0.00045	0.0064	0.00022	mg/kg	J
135-98-8	sec-Butylbenzene	ND	0.0064	0.00020	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0064	0.00046	mg/kg	
75-15-0	Carbon disulfide	ND	0.0064	0.00019	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0026	0.0015	mg/kg	
108-90-7	Chlorobenzene	ND	0.0026	0.00035	mg/kg	
75-00-3	Chloroethane	ND	0.0064	0.00077	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	0.0064	0.0061	mg/kg	
67-66-3	Chloroform	ND	0.0026	0.00037	mg/kg	
74-87-3	Chloromethane	ND	0.0064	0.0016	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0064	0.00052	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0064	0.00057	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0026	0.00054	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0026	0.00027	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0026	0.00029	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0026	0.00026	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0026	0.0014	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0026	0.00043	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0026	0.00070	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0026	0.00067	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0026	0.00065	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0026	0.00057	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:	VMP57-082013(25.5-28")		
Lab Sample ID:	MC23682-2	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	78.9
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.0026	0.00054	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0064	0.00057	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0064	0.00084	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0064	0.00030	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0026	0.00037	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0026	0.00037	mg/kg	
123-91-1	1,4-Dioxane	ND	0.032	0.027	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0064	0.0042	mg/kg	
100-41-4	Ethylbenzene	0.0092	0.0026	0.00023	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0064	0.00073	mg/kg	
591-78-6	2-Hexanone	ND	0.0064	0.0031	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0064	0.00036	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0064	0.00020	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0026	0.00051	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0064	0.0024	mg/kg	
74-95-3	Methylene bromide	ND	0.0064	0.00045	mg/kg	
75-09-2	Methylene chloride	0.0025	0.0026	0.0020	mg/kg	J
91-20-3	Naphthalene	ND	0.0064	0.0010	mg/kg	
103-65-1	n-Propylbenzene	0.00089	0.0064	0.00031	mg/kg	J
100-42-5	Styrene	ND	0.0064	0.00026	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0064	0.00049	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0026	0.00038	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0026	0.00057	mg/kg	
108-88-3	Toluene	0.0078	0.0064	0.00031	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0064	0.00055	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0064	0.00046	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0026	0.00023	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0026	0.00044	mg/kg	
79-01-6	Trichloroethene	ND	0.0026	0.00061	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0026	0.0013	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0064	0.00049	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	0.00084	0.0064	0.00026	mg/kg	J
108-67-8	1,3,5-Trimethylbenzene	0.00036	0.0064	0.00017	mg/kg	J
108-05-4	Vinyl Acetate [a]	ND	0.0064	0.0016	mg/kg	
75-01-4	Vinyl chloride	ND	0.0026	0.00073	mg/kg	
	m,p-Xylene	0.0018	0.0026	0.00036	mg/kg	J
95-47-6	o-Xylene	0.00066	0.0026	0.00026	mg/kg	J
1330-20-7	Xylene (total)	0.0024	0.0026	0.00026	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:	VMP57-082013(25.5-28")		
Lab Sample ID:	MC23682-2	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	78.9
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
106-97-8	Butane	5.11	.16	mg/kg	JN
78-78-4	Butane, 2-methyl-	6.07	.089	mg/kg	JN
109-66-0	Pentane	6.49	.04	mg/kg	JN
79-29-8	Butane, 2,3-dimethyl-	7.84	.034	mg/kg	JN
96-14-0	Pentane, 3-methyl-	8.15	.023	mg/kg	JN
110-54-3	Hexane	8.46	.015	mg/kg	JN
96-37-7	Cyclopentane, methyl-	9.17	.024	mg/kg	JN
590-73-8	Hexane, 2,2-dimethyl-	10.43	.022	mg/kg	JN
589-53-7	Heptane, 4-methyl-	11.63	.01	mg/kg	JN
2216-34-4	Octane, 4-methyl-	11.78	.014	mg/kg	JN
1000309-26-3	Oxalic acid, decyl propyl ester	12.36	.0085	mg/kg	JN
3728-54-9	Cyclohexane, 1-ethyl-2-methyl-	14.10	.0082	mg/kg	JN
	Total TIC, Volatile		.249	mg/kg	J

(a) Initial Calibration Verification 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:	VMP57-082013(25.5-28")		
Lab Sample ID:	MC23682-2	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8015	**Percent Solids:**	78.9
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH30996.D	1	08/21/13	TB	n/a	n/a	GBH1811
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.96 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	14	4.2	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	89%		60-131%

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:	VMP57-082013(48-50.5')		
Lab Sample ID:	MC23682-3	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	75.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M58658.D	1	08/22/13	KD	n/a	n/a	MSM2022
Run #2 [a]	G130691.D	1	08/21/13	JM	n/a	n/a	MSG5093

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.73 g	5.0 ml	
Run #2	5.92 g	10.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.012	0.0045	mg/kg	
107-02-8	Acrolein	ND	0.029	0.0043	mg/kg	
107-13-1	Acrylonitrile	ND	0.029	0.0016	mg/kg	
71-43-2	Benzene	0.0042	0.00058	0.00029	mg/kg	
108-86-1	Bromobenzene	ND	0.0058	0.00032	mg/kg	
74-97-5	Bromochloromethane	ND	0.0058	0.00067	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0023	0.00042	mg/kg	
75-25-2	Bromoform	ND	0.0023	0.00034	mg/kg	
74-83-9	Bromomethane	ND	0.0023	0.0011	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0058	0.0036	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0058	0.00020	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0058	0.00018	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0058	0.00041	mg/kg	
75-15-0	Carbon disulfide	0.00057	0.0058	0.00017	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0023	0.0013	mg/kg	
108-90-7	Chlorobenzene	ND	0.0023	0.00031	mg/kg	
75-00-3	Chloroethane	ND	0.0058	0.00069	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	0.0058	0.0055	mg/kg	
67-66-3	Chloroform	ND	0.0023	0.00033	mg/kg	
74-87-3	Chloromethane	ND	0.0058	0.0014	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0058	0.00047	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0058	0.00051	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0023	0.00049	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0023	0.00024	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0023	0.00026	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0023	0.00023	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0023	0.0013	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0023	0.00038	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0023	0.00063	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0023	0.00060	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0023	0.00059	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0023	0.00051	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:	VMP57-082013(48-50.5')		
Lab Sample ID:	MC23682-3	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	75.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, 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	0.0058	0.00051	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0058	0.00076	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0058	0.00027	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0023	0.00033	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0023	0.00034	mg/kg	
123-91-1	1,4-Dioxane	ND	0.029	0.024	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0058	0.0038	mg/kg	
100-41-4	Ethylbenzene	0.0011	0.0023	0.00020	mg/kg	J
87-68-3	Hexachlorobutadiene	ND	0.0058	0.00066	mg/kg	
591-78-6	2-Hexanone	ND	0.0058	0.0028	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0058	0.00032	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0058	0.00018	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0023	0.00046	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0058	0.0021	mg/kg	
74-95-3	Methylene bromide	ND	0.0058	0.00040	mg/kg	
75-09-2	Methylene chloride	ND	0.0023	0.0018	mg/kg	
91-20-3	Naphthalene	ND	0.0058	0.00091	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0058	0.00028	mg/kg	
100-42-5	Styrene	ND	0.0058	0.00024	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0058	0.00045	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0023	0.00034	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0023	0.00051	mg/kg	
108-88-3	Toluene	0.0013	0.0058	0.00028	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0058	0.00050	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0058	0.00042	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0023	0.00021	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0023	0.00040	mg/kg	
79-01-6	Trichloroethene	ND	0.0023	0.00055	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0023	0.0012	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0058	0.00044	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0058	0.00024	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0058	0.00015	mg/kg	
108-05-4	Vinyl Acetate [b]	ND	0.0058	0.0014	mg/kg	
75-01-4	Vinyl chloride	ND	0.0023	0.00066	mg/kg	
	m,p-Xylene	ND	0.0023	0.00033	mg/kg	
95-47-6	o-Xylene	ND	0.0023	0.00024	mg/kg	
1330-20-7	Xylene (total)	0.00032	0.0023	0.00024	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:	VMP57-082013(48-50.5')		
Lab Sample ID:	MC23682-3	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	75.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	88%	104%	70-130%
2037-26-5	Toluene-D8	82%	102%	70-130%
460-00-4	4-Bromofluorobenzene	114%	108%	70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
75-28-5	Isobutane	4.77	.36	mg/kg	JN
106-97-8	Butane	5.09	8.5	mg/kg	JN
78-78-4	Butane, 2-methyl-	6.07	.31	mg/kg	JN
106-88-7	Oxirane, ethyl-	6.49	.11	mg/kg	JN
513-35-9	2-Butene, 2-methyl-	6.92	.38	mg/kg	JN
287-92-3	Cyclopentane	7.85	.27	mg/kg	JN
110-54-3	Hexane	8.47	.0078	mg/kg	JN
96-37-7	Cyclopentane, methyl-	9.17	.0089	mg/kg	JN
592-48-3	1,3-Hexadiene,c&t	9.67	.0067	mg/kg	JN
	Total TIC, Volatile		8.81	mg/kg	J

(a) Confirmation run.
(b) Initial Calibration Verification 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:	VMP57-082013(48-50.5')		
Lab Sample ID:	MC23682-3	**Date Sampled:**	08/20/13
Matrix:	SO - Soil	**Date Received:**	08/21/13
Method:	SW846 8015	**Percent Solids:**	75.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH30997.D	1	08/21/13	TB	n/a	n/a	GBH1811
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.92 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	13	3.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	90%		60-131%

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-082013-HCL		
Lab Sample ID:	MC23682-4	**Date Sampled:**	08/20/13
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V22179.D	1	08/22/13	AMY	n/a	n/a	MSV855
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether [a]	ND	5.0	1.1	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-082013-HCL		
Lab Sample ID:	MC23682-4	**Date Sampled:**	08/20/13
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-082013-HCL		
Lab Sample ID:	MC23682-4	**Date Sampled:**	08/20/13
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/21/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		70-130%
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	96%		70-130%

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

(a) Initial 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

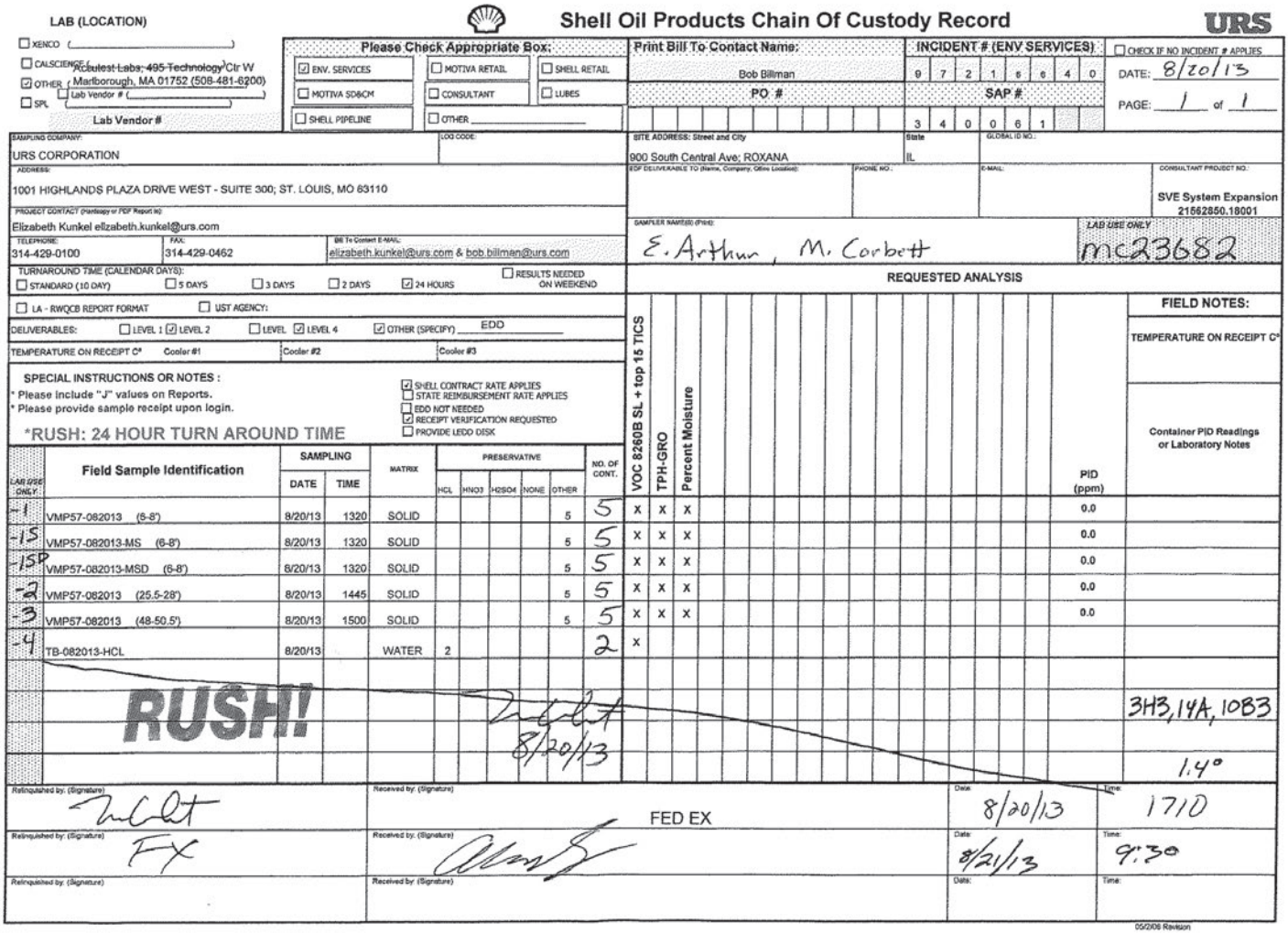
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- REPROC Form: Reprocessed/Corrected Data
- Sample Tracking Chronicle
- Internal Chain of Custody



LAB (LOCATION)

☐ XENCO (_____)
☐ CALSCIENCE (_____)
☑ OTHER (Accutest Labs; 495 Technology Ctr W Marlborough, MA 01752 (508-481-6200))
☐ SPL (_____)
Lab Vendor # (_____)

Shell Oil Products Chain Of Custody Record

URS

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

Print Bill To Contact Name: Bob Billman
PO #:
INCIDENT # (ENV SERVICES): 9 7 2 1 6 6 4 0
SAP #: 3 4 0 0 6 1
☐ CHECK IF NO INCIDENT # APPLIES
DATE: 8/20/13
PAGE: 1 of 1

SAMPLING COMPANY: URS CORPORATION
LOG CODE:
SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA
State: IL
GLOBAL ID NO.:
ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110
EDF DELIVERABLE TO (Name, Company, Office Location):
PHONE NO.:
E-MAIL:
CONSULTANT PROJECT NO.: SVE System Expansion 21562850.18001
PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel elizabeth.kunkel@urs.com
TELEPHONE: 314-429-0100
FAX: 314-429-0462
Bill To Contact E-MAIL: elizabeth.kunkel@urs.com & bob.billman@urs.com
SAMPLER NAME(S) (Print): E. Arthur, M. Corbett
LAB USE ONLY: mc23682

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

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

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

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

SPECIAL INSTRUCTIONS OR NOTES :
* Please include "J" values on Reports.
* Please provide sample receipt upon login.
*RUSH: 24 HOUR TURN AROUND TIME

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260B SL + top 15 TICS	TPH-GRO	Percent Moisture	PID (ppm)	Container PID Readings or Laboratory Notes
-1	VMP57-082013 (5-8')	8/20/13	1320	SOLID					5	5	x	x	x	0.0	
-1S	VMP57-082013-MS (6-8')	8/20/13	1320	SOLID					5	5	x	x	x	0.0	
-1SP	VMP57-082013-MSD (6-8')	8/20/13	1320	SOLID					5	5	x	x	x	0.0	
-2	VMP57-082013 (25.5-28')	8/20/13	1445	SOLID					5	5	x	x	x	0.0	
-3	VMP57-082013 (48-50.5')	8/20/13	1500	SOLID					5	5	x	x	x	0.0	
-4	TB-082013-HCL	8/20/13		WATER	2					2	x				
	RUSH!														3H3, 14A, 10B3
															1.4°

FIELD NOTES:
TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature) — Received by: (Signature) — Date: 8/20/13 — Time: 1710
FED EX
Relinquished by: (Signature) FX — Received by: (Signature) — Date: 8/21/13 — Time: 9:30
Relinquished by: (Signature) — Received by: (Signature) — Date: — Time:

05/2/06 Revision

5.1 5

MC23682: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC23682 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 8/21/2013 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SO CENTRAL **No. Coolers:** 1 **Airbill #'s:**

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. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

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
www/accutest.com

MC23682: Chain of Custody
Page 2 of 2

Initial Calibration Summary

Job Number: MC23682 **Sample:** MSG5092-ICC5092
Account: SHELLWIC Shell Oil **Lab FileID:** G130658.D
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Response Factor Report MSG

Method : O:\msg\1\methods\g130820sx.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration

Calibration Files
2 =G130655.D 5 =G130656.D 50 =G130658.D 100 =G130659.D
200 =G130660.D 400 =G130661.D 0.5 =G130654.D 25 =G130657.D
= =

Compound	2	5	50	100	200	400	0.5	25	Avg	%RSD
1) I 1,4-difluorobenzene	----------ISTD----------									
2) benzene	2.086	1.927	1.797	1.715	1.667	1.604	2.575	1.776	1.893	16.61

---- Linear regression ---- Coefficient = 0.9995
Response Ratio = 0.09845 + 1.60564 *A

(#) = Out of Range ### Number of calibration levels exceeded format ###

g130820sx.m Wed Oct 07 18:35:02 2015

Initial Calibration Verification

Job Number: MC23682 **Sample:** MSG5092-ICV5092
Account: SHELLWIC Shell Oil **Lab FileID:** G130664.D
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Evaluate Continuing Calibration Report

Data File : O:\msg\1\data backup\g130820\g130664.d Vial: 13
Acq On : 20 Aug 2013 5:13 pm Operator: jaimem
Sample : icv5092-50 Inst : MSG
Misc : MS29686,MSG5092,10,,100,10,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : O:\msg\1\methods\g130820sx.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Oct 14 12:43:07 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-difluorobenzene	1.000	1.000	0.0	102	0.00	6.19
		Amount	Calc.	%Drift			
2 M	benzene	50.000	51.080	-2.2	97	0.00	5.89

(#) = Out of Range SPCC's out = 0 CCC's out = 0
G130658.D g130820sx.m Wed Oct 14 12:44:39 2015

Continuing Calibration Summary

Job Number: MC23682 **Sample:** MSG5093-CC5092
Account: SHELLWIC Shell Oil **Lab FileID:** G130684.D
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Evaluate Continuing Calibration Report

Data File : O:\msg\1\data backup\g130821\g130684.d Vial: 5
Acq On : 21 Aug 2013 10:43 am Operator: jaimem
Sample : cc5092-50 Inst : MSG
Misc : MS29686,MSG5093,10,,100,10,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : O:\msg\1\methods\g130820sx.m (RTE Integrator)
Title : SW-846 Method 8260
Last Update : Wed Oct 14 12:43:07 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	1,4-difluorobenzene	1.000	1.000	0.0	80	0.00	6.19
		Amount	Calc.	%Drift			
2 M	benzene	50.000	47.949	4.1	71	0.00	5.89

(#) = Out of Range SPCC's out = 0 CCC's out = 0
G130658.D g130820sx.m Thu Oct 15 12:37:19 2015

Quantitation Report (QT Reviewed)

Data Path : O:\msg\1\data backup\g130820\
Data File : g130654.d
Acq On : 20 Aug 2013 12:31 pm
Operator : jaimem
Sample : ic5092-0.5
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 3 Sample Multiplier: 1

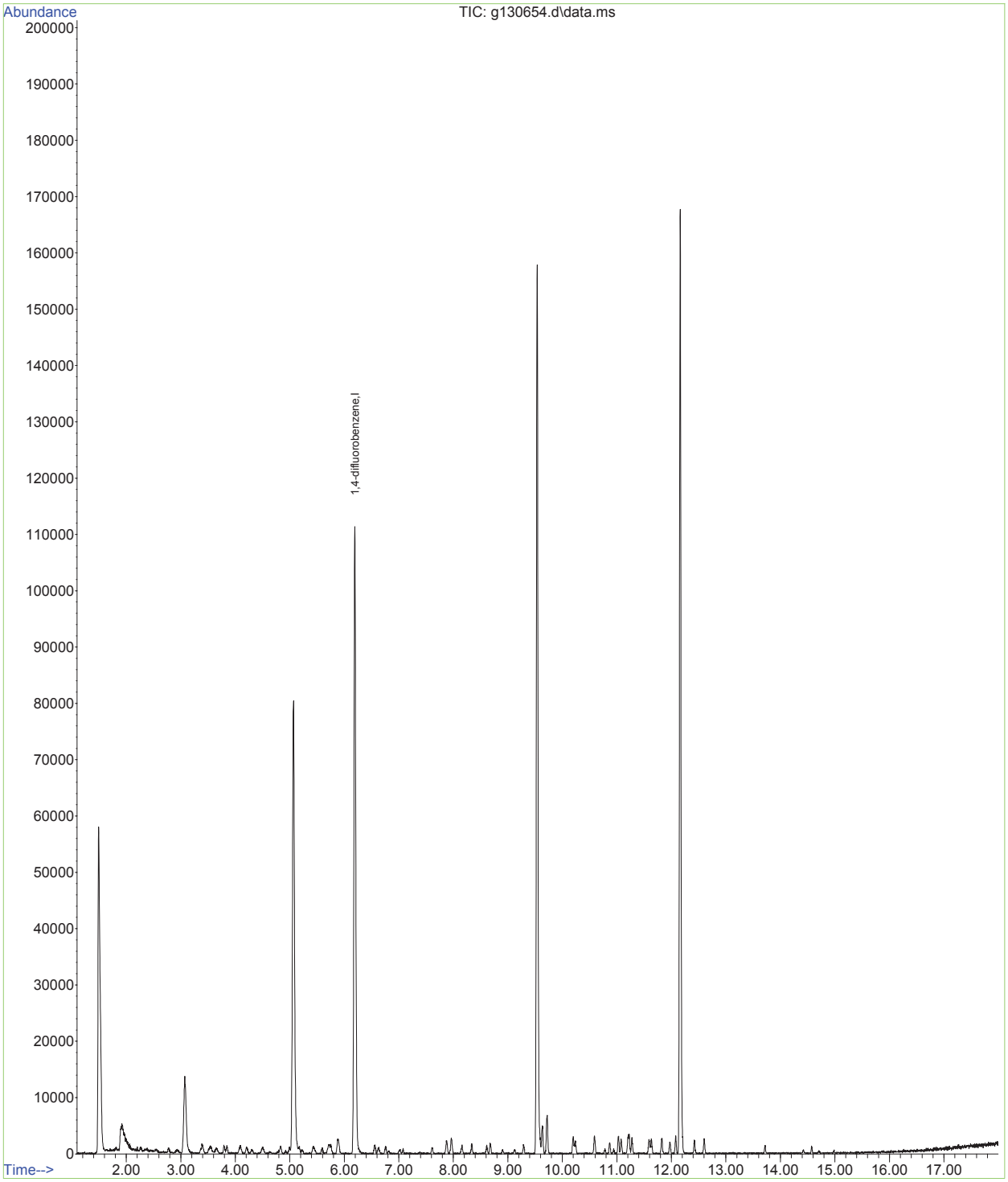
Quant Time: Oct 07 17:13:41 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-difluorobenzene	6.195	114	118495	50.00 ppb	0.00
Target Compounds					Qvalue
2) benzene	5.893	78	3051	Below Cal	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : O:\msg\1\data backup\g130820\
Data File : g130654.d
Acq On : 20 Aug 2013 12:31 pm
Operator : jaimem
Sample : ic5092-0.5
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 07 17:13:41 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msg\1\data backup\g130820\
Data File : g130655.d
Acq On : 20 Aug 2013 1:00 pm
Operator : jaimem
Sample : ic5092-2
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 4 Sample Multiplier: 1

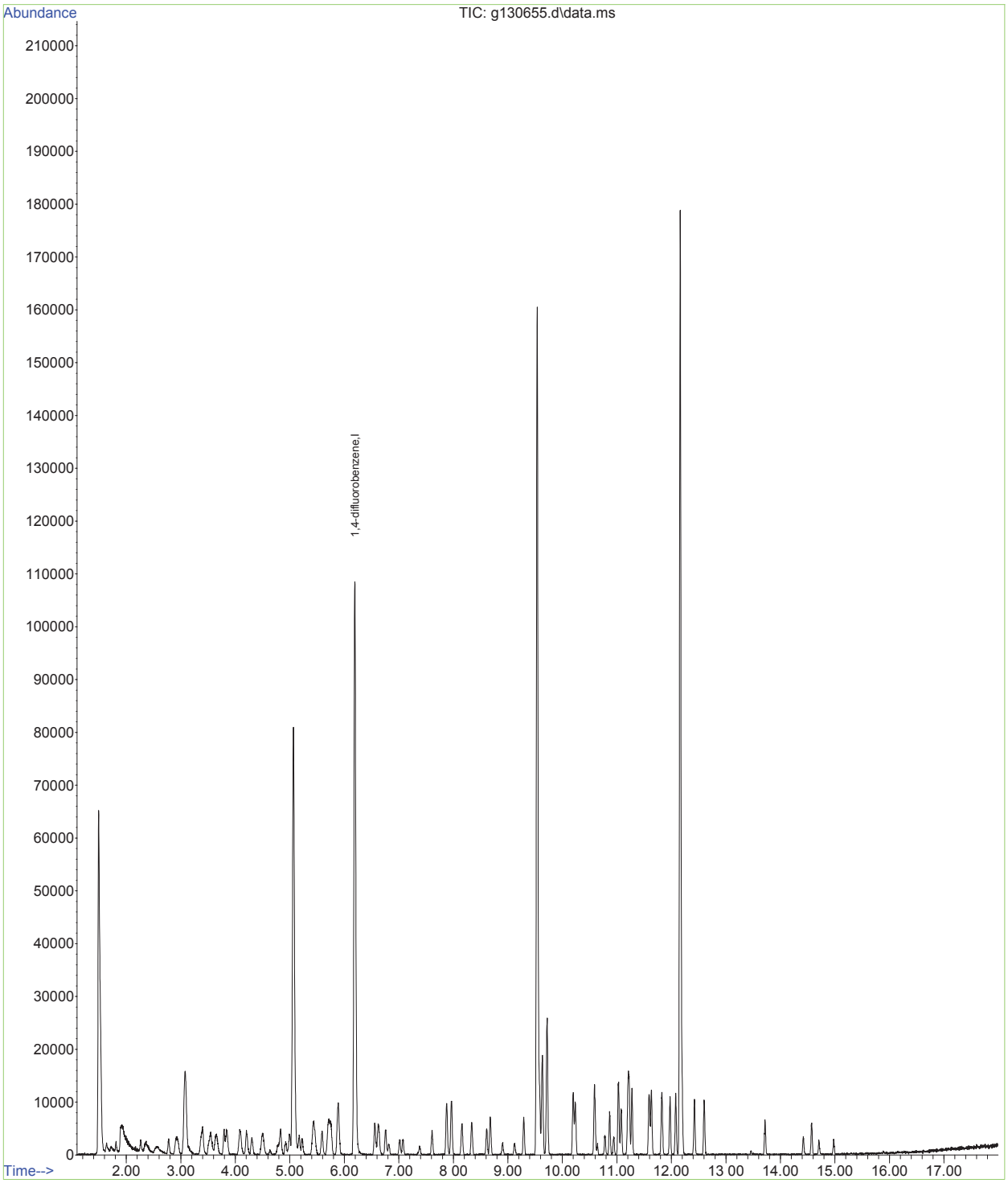
Quant Time: Oct 14 12:41:45 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-difluorobenzene	6.195	114	118467	50.00	ppb	0.00
Target Compounds						Qvalue
2) benzene	5.894	78	9887m	Below Cal		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

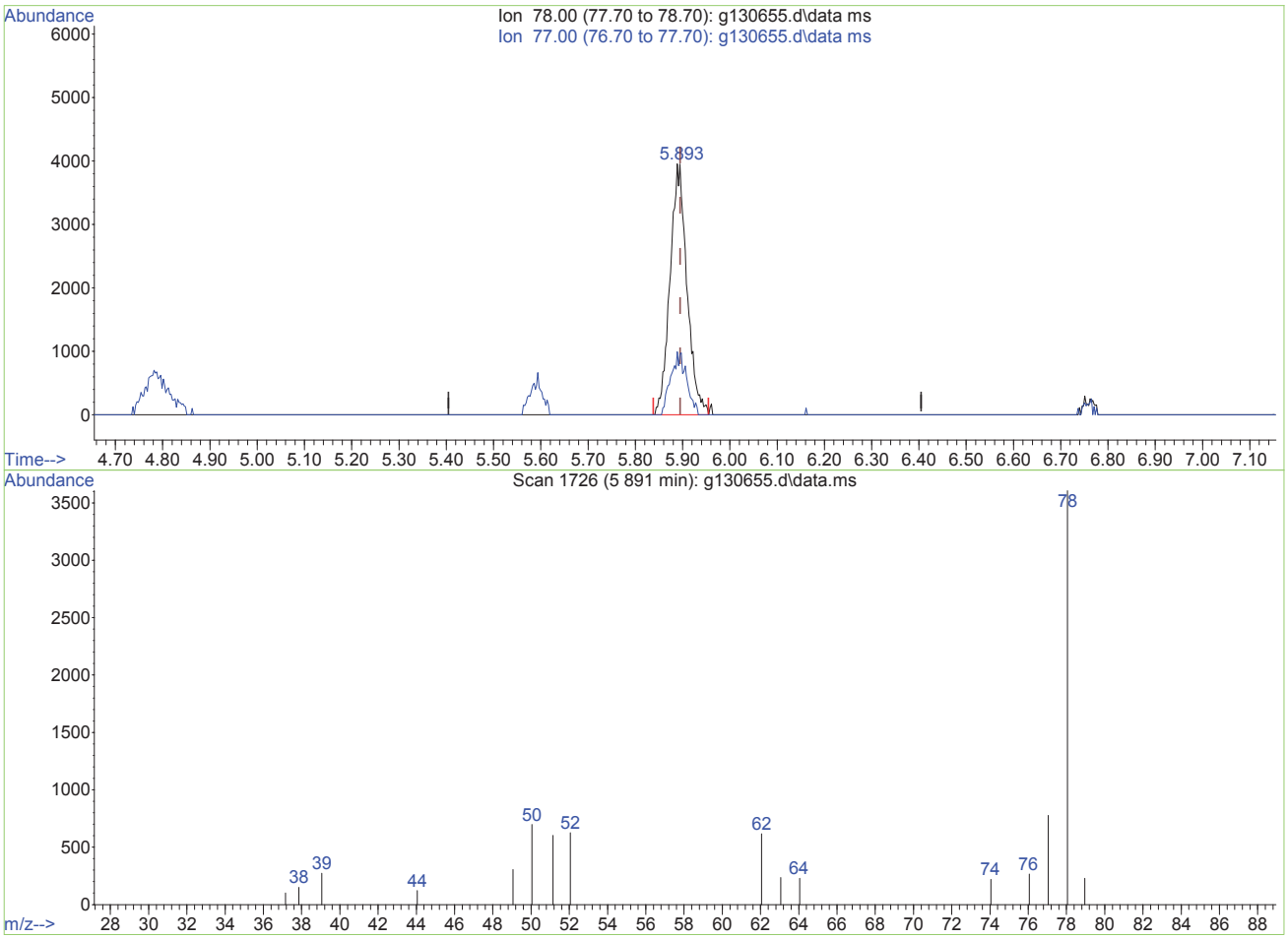
Data Path : O:\msg\1\data backup\g130820\
Data File : g130655.d
Acq On : 20 Aug 2013 1:00 pm
Operator : jaimem
Sample : ic5092-2
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 14 12:41:45 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration



Data Path : O:\msg\1\data backup\g130820\
Data File : g130655.d
Acq On : 20 Aug 2013 1:00 pm
Operator : jaimem
Sample : ic5092-2
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 14 12:41:25 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration



TIC: g130655.d\data.ms

(2) benzene (M)

5.893min (-0.002) -0.48ppb

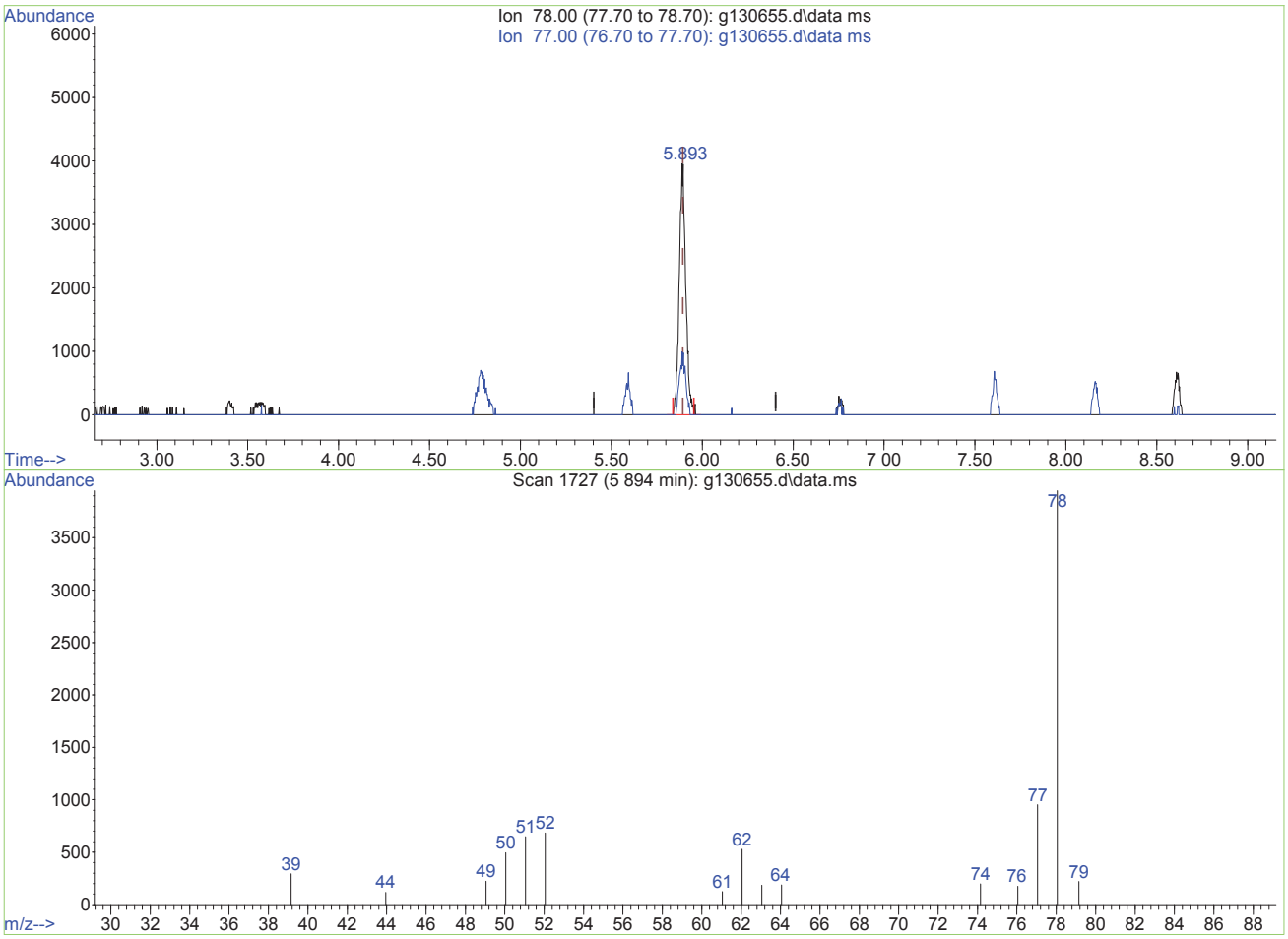
response 9840

Ion	Exp%	Act%
78.00	100	100
77.00	24.00	21.51
0.00	0.00	0.00
0.00	0.00	0.00

G130655.D edits: benzene

Data Path : O:\msg\1\data backup\g130820\
Data File : g130655.d
Acq On : 20 Aug 2013 1:00 pm
Operator : jaimem
Sample : ic5092-2
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 14 12:41:25 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration



TIC: g130655.d\data.ms

(2) benzene (M)

5.894min (-0.001) -0.47ppb m

response 9887

Ion	Exp%	Act%
78.00	100	100
77.00	24.00	24.13
0.00	0.00	0.00
0.00	0.00	0.00

G130655.D edits: benzene

Quantitation Report (QT Reviewed)

Data Path : O:\msg\1\data backup\g130820\
Data File : g130656.d
Acq On : 20 Aug 2013 1:29 pm
Operator : jaimem
Sample : ic5092-5
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 5 Sample Multiplier: 1

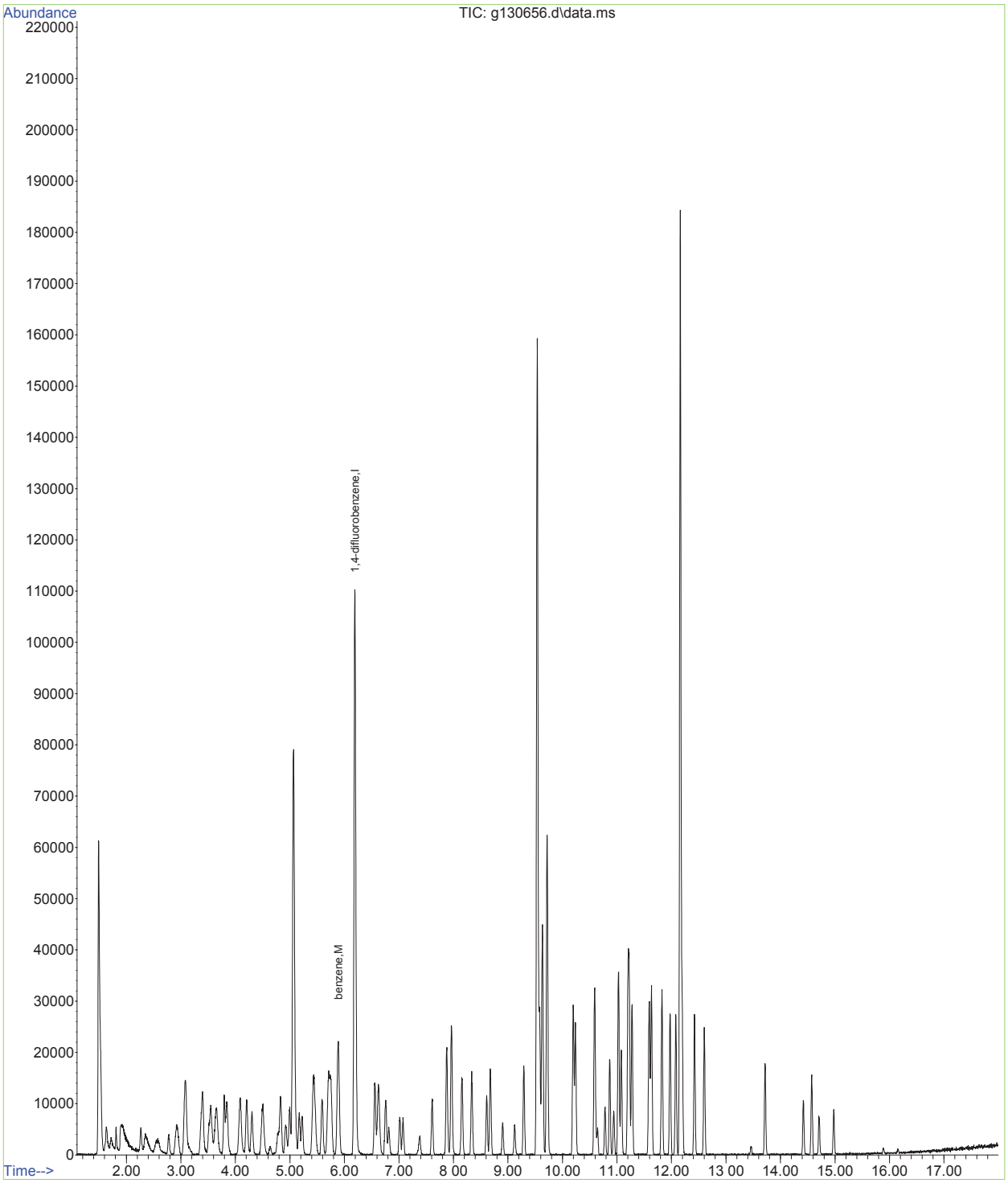
Quant Time: Oct 07 18:27:42 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-difluorobenzene	6.195	114	117570	50.00	ppb	0.00
Target Compounds						Qvalue
2) benzene	5.893	78	22654	2.93	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : O:\msg\1\data backup\g130820\
Data File : g130656.d
Acq On : 20 Aug 2013 1:29 pm
Operator : jaimem
Sample : ic5092-5
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 07 18:27:42 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msg\1\data backup\g130820\
Data File : g130657.d
Acq On : 20 Aug 2013 1:56 pm
Operator : jaimem
Sample : ic5092-25
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 6 Sample Multiplier: 1

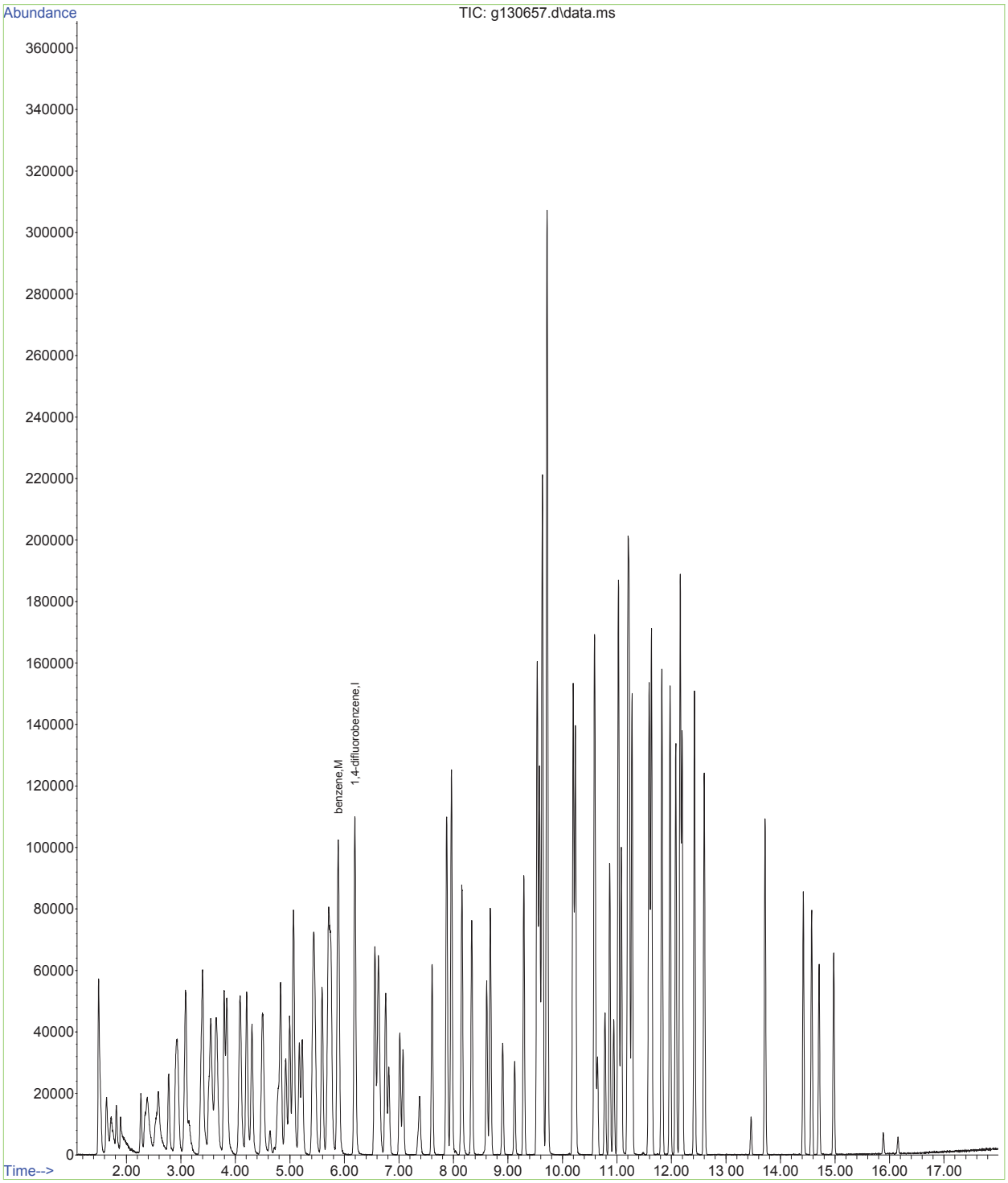
Quant Time: Oct 07 18:28:03 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-difluorobenzene	6.195	114	117275	50.00	ppb	0.00
Target Compounds						Qvalue
2) benzene	5.895	78	104159	24.59	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : O:\msg\1\data backup\g130820\
Data File : g130657.d
Acq On : 20 Aug 2013 1:56 pm
Operator : jaimem
Sample : ic5092-25
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 07 18:28:03 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msg\1\data backup\g130820\
Data File : g130658.d
Acq On : 20 Aug 2013 2:24 pm
Operator : jaimem
Sample : icc5092-50
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 7 Sample Multiplier: 1

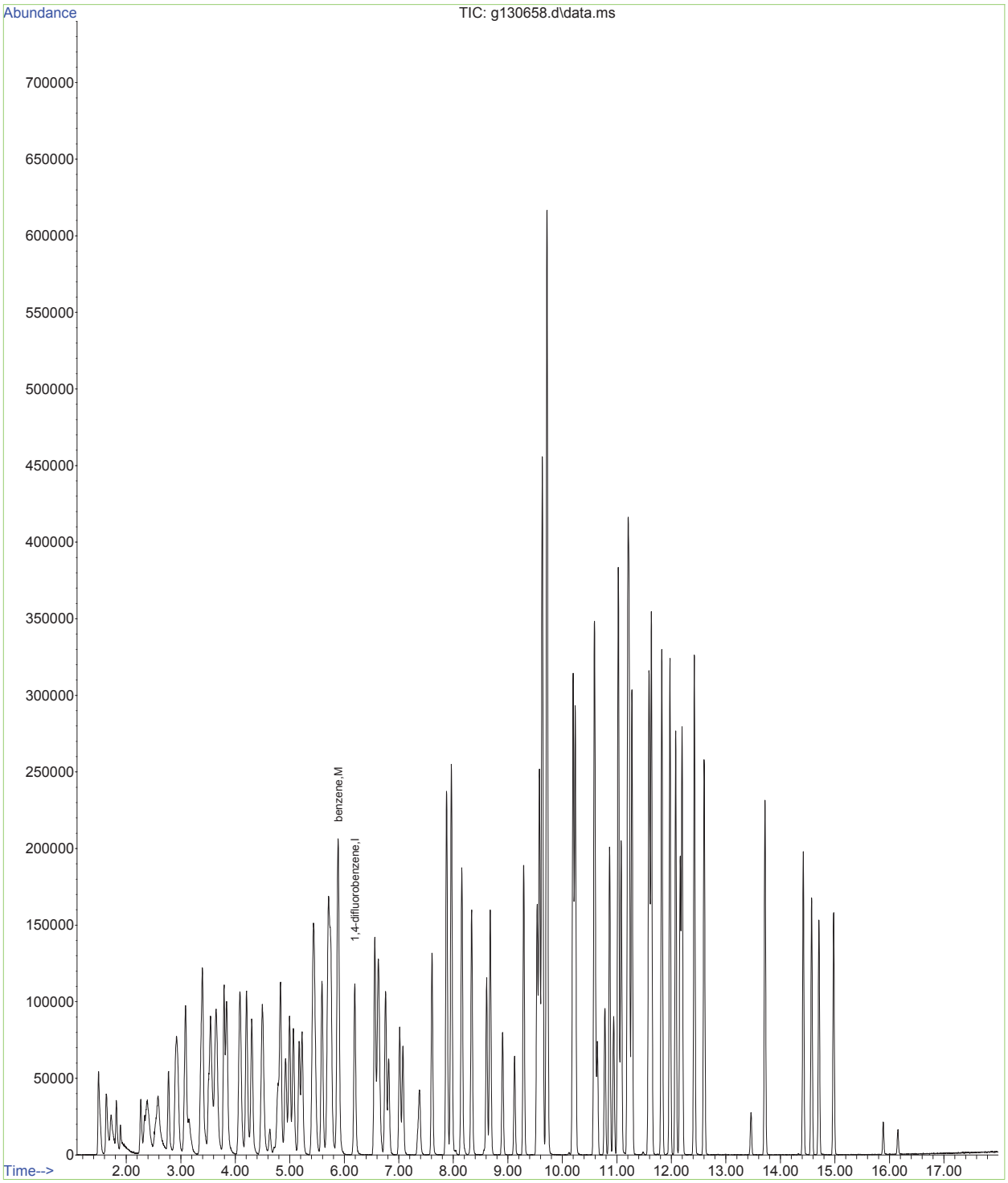
Quant Time: Oct 07 18:29:05 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-difluorobenzene	6.194	114	118097	50.00	ppb	0.00
Target Compounds						Qvalue
2) benzene	5.894	78	212166	52.88	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : O:\msg\1\data backup\g130820\
Data File : g130658.d
Acq On : 20 Aug 2013 2:24 pm
Operator : jaimem
Sample : icc5092-50
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 07 18:29:05 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msg\1\data backup\g130820\
Data File : g130659.d
Acq On : 20 Aug 2013 2:52 pm
Operator : jaimem
Sample : ic5092-100
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 8 Sample Multiplier: 1

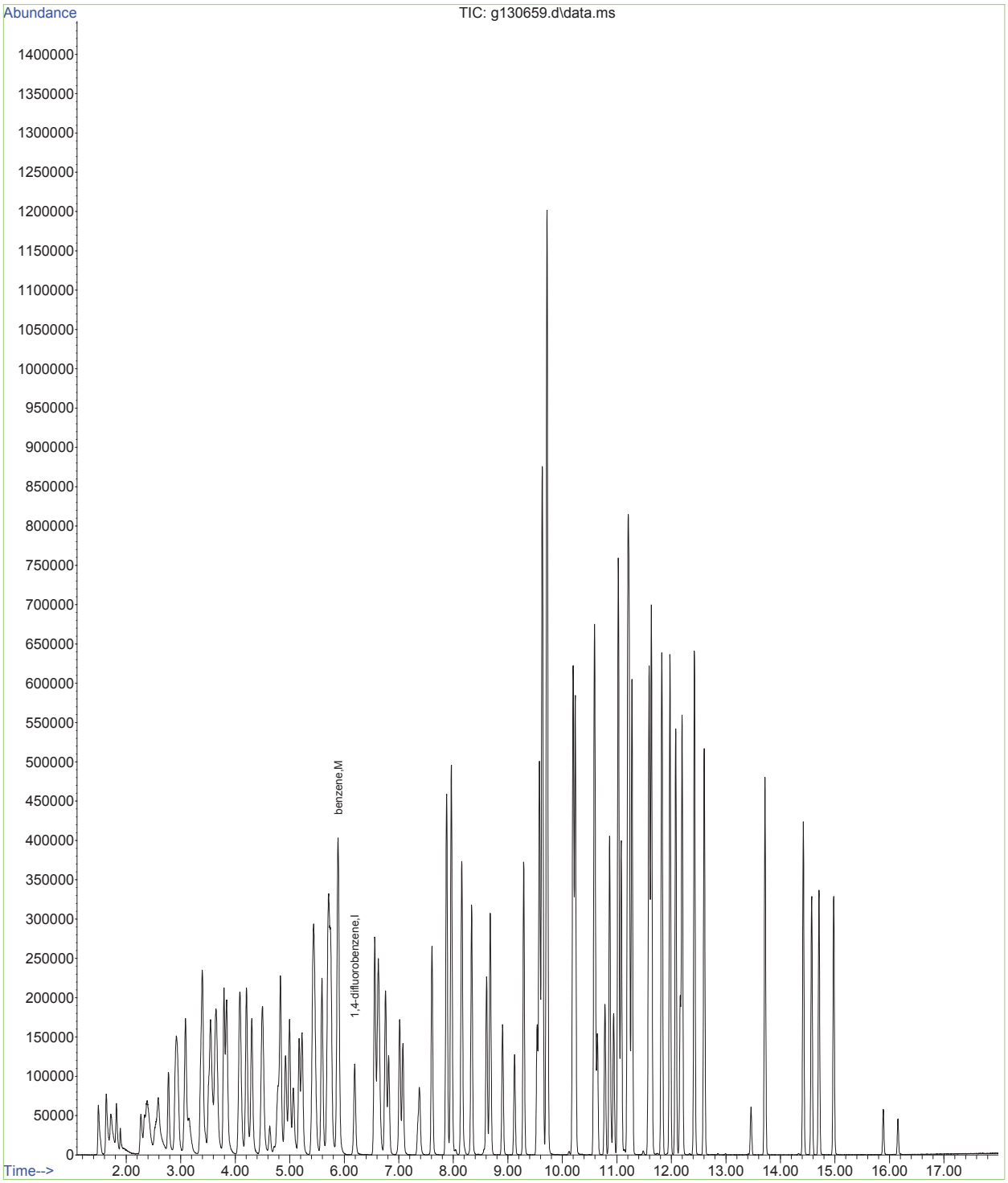
Quant Time: Oct 07 18:29:26 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-difluorobenzene	6.194	114	120192	50.00	ppb	0.00
Target Compounds						Qvalue
2) benzene	5.894	78	412329	103.76	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : O:\msg\1\data backup\g130820\
Data File : g130659.d
Acq On : 20 Aug 2013 2:52 pm
Operator : jaimem
Sample : ic5092-100
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Oct 07 18:29:26 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msg\1\data backup\g130820\
Data File : g130660.d
Acq On : 20 Aug 2013 3:21 pm
Operator : jaimem
Sample : ic5092-200
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 9 Sample Multiplier: 1

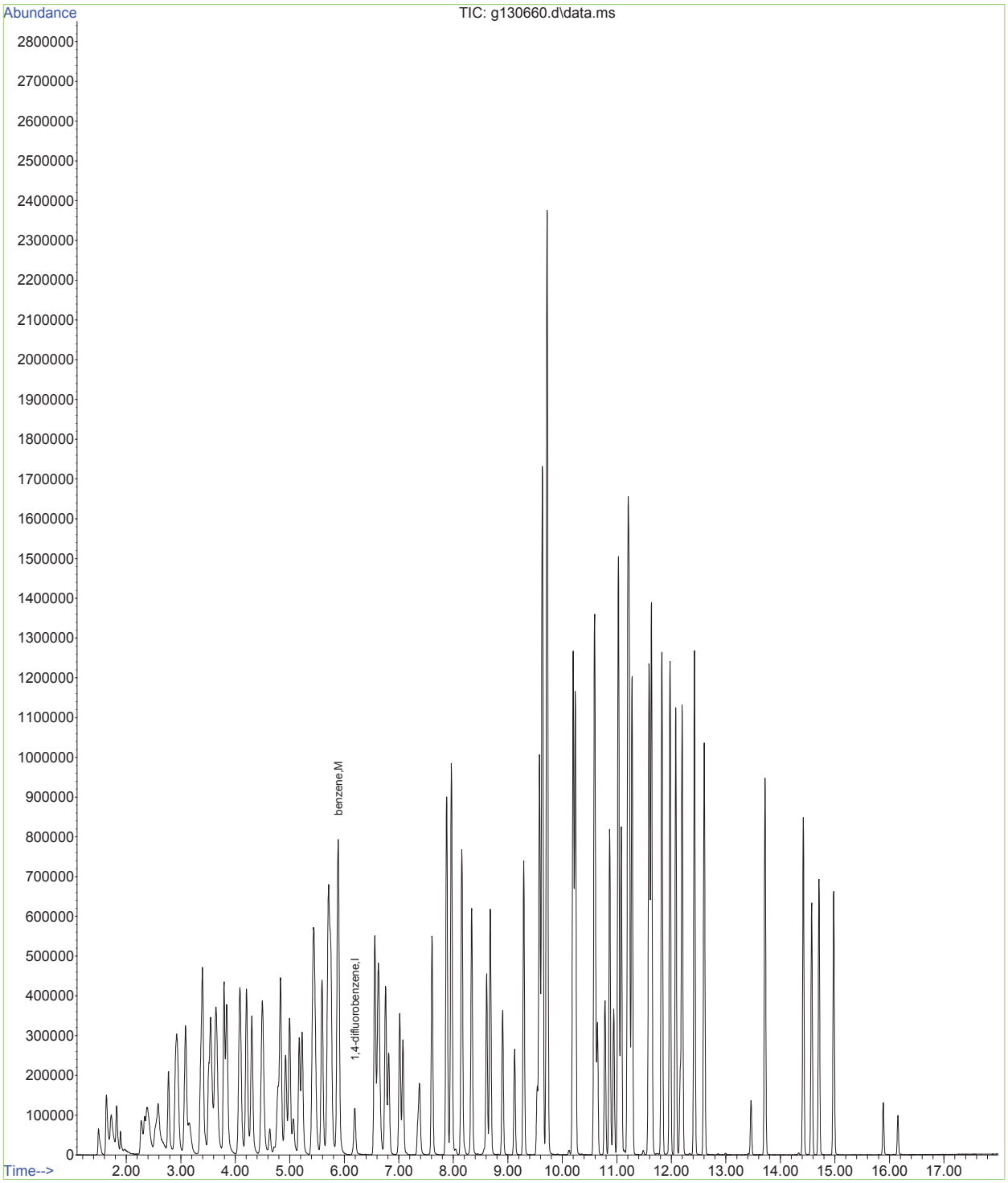
Quant Time: Oct 07 18:29:46 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-difluorobenzene	6.195	114	122887	50.00	ppb	0.00
Target Compounds						Qvalue
2) benzene	5.895	78	819471	204.59	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : O:\msg\1\data backup\g130820\
Data File : g130660.d
Acq On : 20 Aug 2013 3:21 pm
Operator : jaimem
Sample : ic5092-200
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Oct 07 18:29:46 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msg\1\data backup\g130820\
Data File : g130661.d
Acq On : 20 Aug 2013 3:49 pm
Operator : jaimem
Sample : ic5092-400
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 10 Sample Multiplier: 1

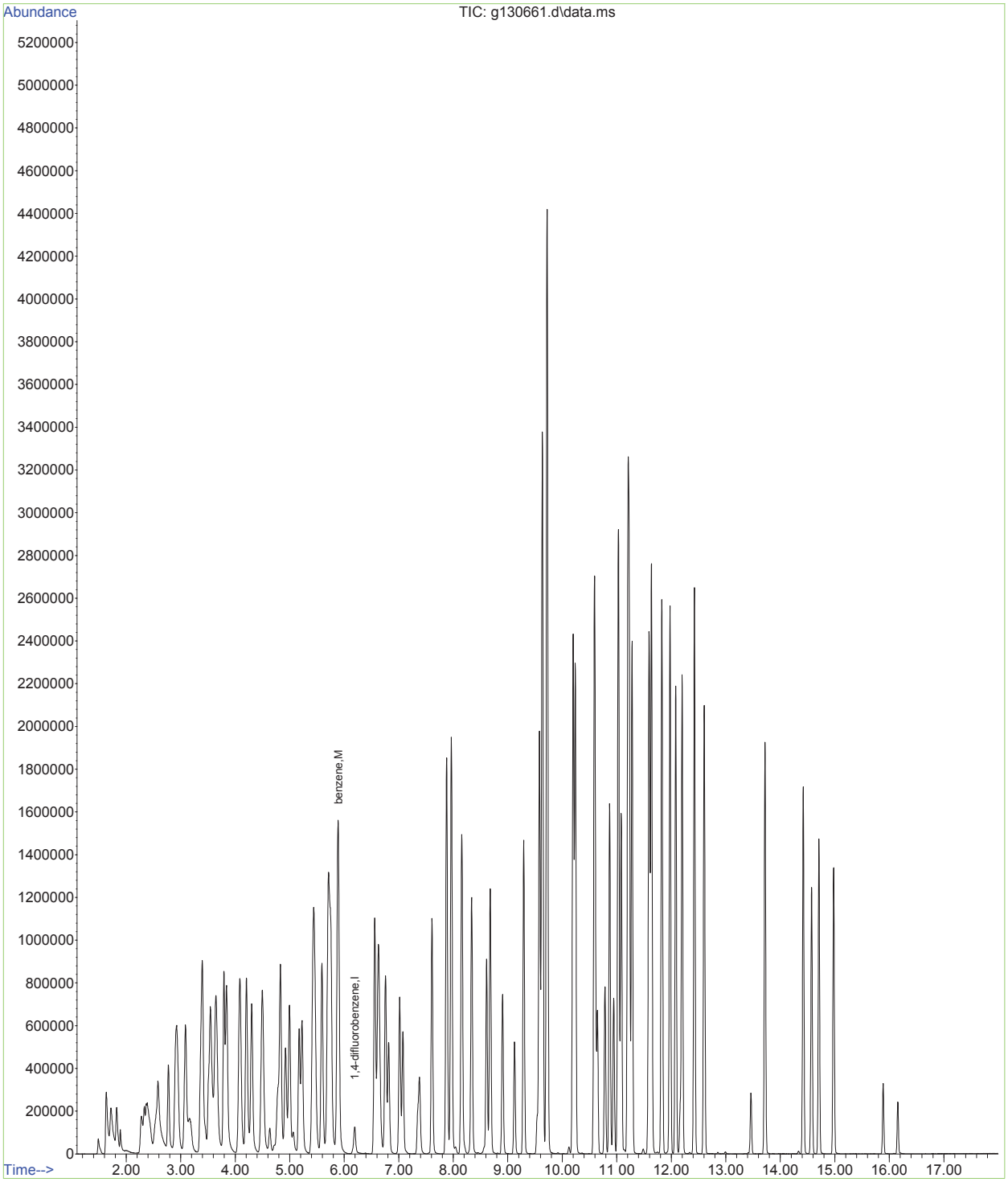
Quant Time: Oct 07 18:30:06 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-difluorobenzene	6.195	114	126723	50.00	ppb	0.00
Target Compounds						Qvalue
2) benzene	5.895	78	1625886	396.47	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : O:\msg\1\data backup\g130820\
Data File : g130661.d
Acq On : 20 Aug 2013 3:49 pm
Operator : jaimem
Sample : ic5092-400
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 07 18:30:06 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Fri Oct 02 12:22:05 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msg\1\data backup\g130820\
Data File : g130664.d
Acq On : 20 Aug 2013 5:13 pm
Operator : jaimem
Sample : bs
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 13 Sample Multiplier: 1

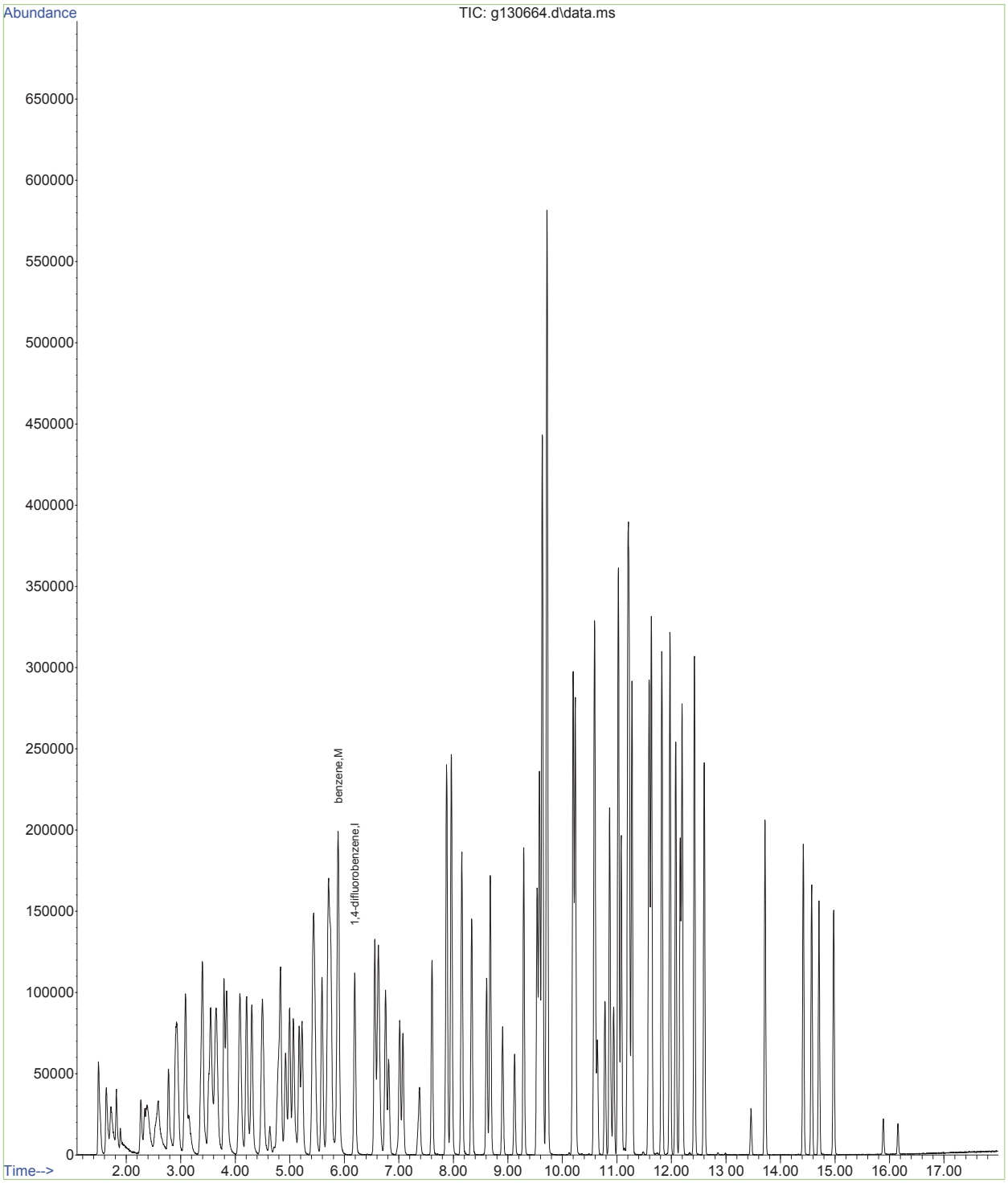
Quant Time: Oct 14 12:44:05 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Wed Oct 14 12:43:07 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-difluorobenzene	6.195	114	120819	50.00	ppb	0.00
Target Compounds						Qvalue
2) benzene	5.894	78	205207	51.08	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : O:\msg\1\data backup\g130820\
Data File : g130664.d
Acq On : 20 Aug 2013 5:13 pm
Operator : jaimem
Sample : bs
Misc : MS29686,MSG5092,10,,100,10,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 14 12:44:05 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Wed Oct 14 12:43:07 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : O:\msg\1\data backup\g130821\
Data File : g130684.d
Acq On : 21 Aug 2013 10:43 am
Operator : jaimem
Sample : bs
Misc : MS29686,MSG5093,10,,100,10,1
ALS Vial : 5 Sample Multiplier: 1

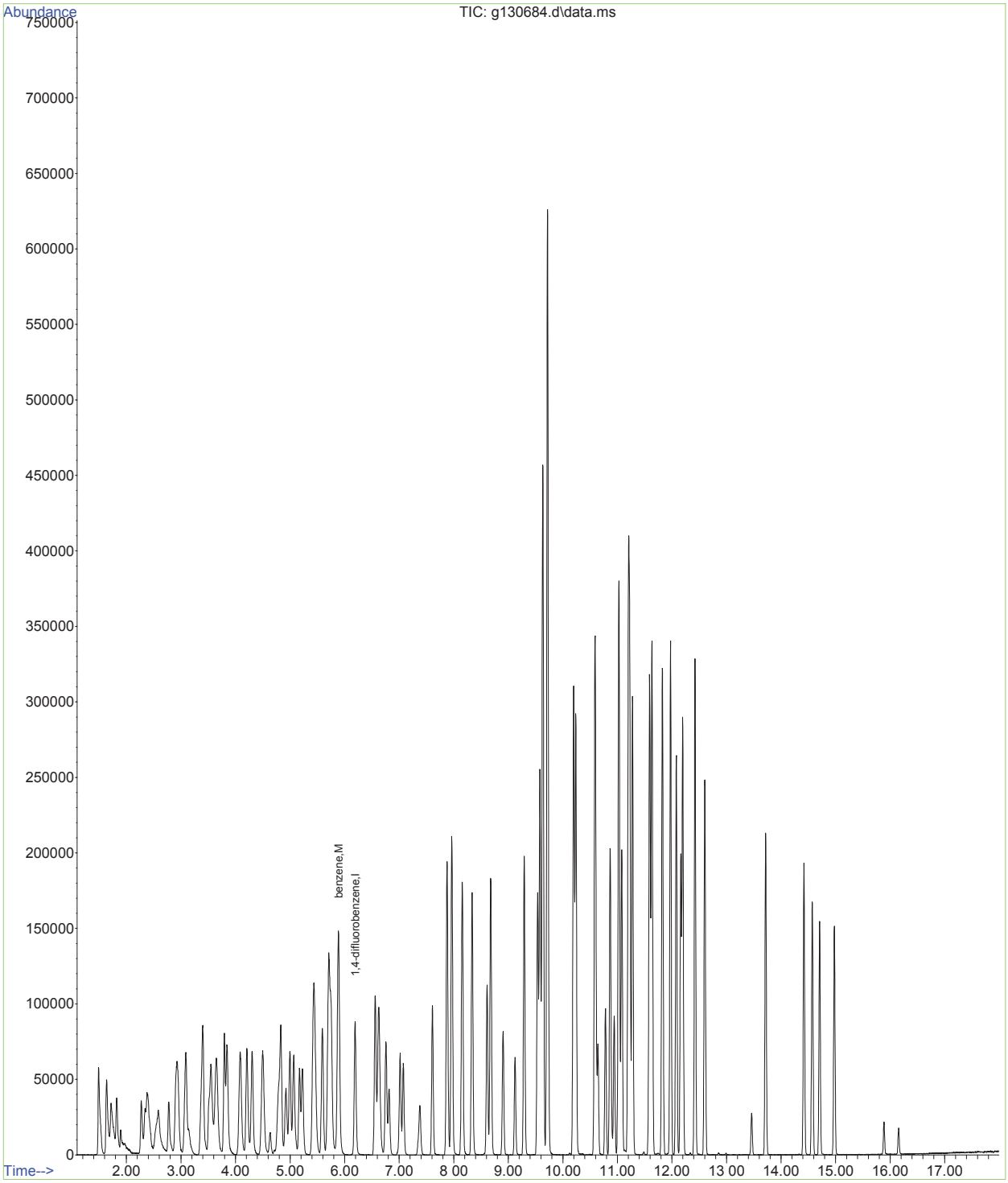
Quant Time: Oct 15 11:15:31 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Wed Oct 14 12:43:07 2015
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-difluorobenzene	6.195	114	94164	50.00	ppb	0.00
Target Compounds						Qvalue
2) benzene	5.894	78	150212	47.95	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : O:\msg\1\data backup\g130821\
Data File : g130684.d
Acq On : 21 Aug 2013 10:43 am
Operator : jaimem
Sample : bs
Misc : MS29686,MSG5093,10,,100,10,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 15 11:15:31 2015
Quant Method : O:\msg\1\methods\g130820sx.m
Quant Title : SW-846 Method 8260
QLast Update : Wed Oct 14 12:43:07 2015
Response via : Initial Calibration



Internal Sample Tracking Chronicle

Shell Oil

Job No: MC23682

URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL
Project No: 21562850.18001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC23682-1 Collected: 20-AUG-13 13:20 By: EAMC Received: 21-AUG-13 By: VMP57-082013(6-8')						
MC23682-1	SM21 2540 B MOD.	21-AUG-13	HS			%SOL
MC23682-1	SW846 8015	21-AUG-13 19:22	TB			V8015GRO
MC23682-1	SW846 8260B	22-AUG-13 10:43	KD			V8260SL+
MC23682-2 Collected: 20-AUG-13 14:45 By: EAMC Received: 21-AUG-13 By: VMP57-082013(25.5-28")						
MC23682-2	SM21 2540 B MOD.	21-AUG-13	HS			%SOL
MC23682-2	SW846 8015	21-AUG-13 21:06	TB			V8015GRO
MC23682-2	SW846 8260B	22-AUG-13 11:12	KD			V8260SL+
MC23682-3 Collected: 20-AUG-13 15:00 By: EAMC Received: 21-AUG-13 By: VMP57-082013(48-50.5')						
MC23682-3	SM21 2540 B MOD.	21-AUG-13	HS			%SOL
MC23682-3	SW846 8260B	21-AUG-13 14:01	JM			V8260SL+
MC23682-3	SW846 8015	21-AUG-13 21:40	TB			V8015GRO
MC23682-3	SW846 8260B	22-AUG-13 11:41	KD			V8260SL+
MC23682-4 Collected: 20-AUG-13 00:00 By: EAMC Received: 21-AUG-13 By: TB-082013-HCL						
MC23682-4	SW846 8260B	22-AUG-13 08:49	AMY			V8260SL+

SGS Accutest Internal Chain of Custody

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL
Received: 08/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC23682-1.8	VOC Ref #10	Krysten Dufort	08/22/13 09:24	Retrieve from Storage
MC23682-1.8	Krysten Dufort	GCMSM	08/22/13 09:24	Load on Instrument
MC23682-1.8	GCMSM	Krysten Dufort	08/23/13 08:40	Unload from Instrument
MC23682-1.8	Krysten Dufort	VOC Ref #10	08/23/13 08:40	Return to Storage
MC23682-1.8	Scott Parsick		10/04/13 13:50	Disposed
MC23682-1.11	VOC Ref #10	Krysten Dufort	08/22/13 09:24	Retrieve from Storage
MC23682-1.11	Krysten Dufort	GCMSM	08/22/13 09:24	Load on Instrument
MC23682-1.11	GCMSM	Krysten Dufort	08/23/13 08:40	Unload from Instrument
MC23682-1.11	Krysten Dufort	VOC Ref #10	08/23/13 08:40	Return to Storage
MC23682-1.11	Scott Parsick		10/04/13 13:50	Disposed
MC23682-1.12	VOC Ref #10	Krysten Dufort	08/22/13 09:24	Retrieve from Storage
MC23682-1.12	Krysten Dufort	GCMSM	08/22/13 09:24	Load on Instrument
MC23682-1.12	GCMSM	Krysten Dufort	08/23/13 08:40	Unload from Instrument
MC23682-1.12	Krysten Dufort	VOC Ref #10	08/23/13 08:40	Return to Storage
MC23682-1.12	Scott Parsick		10/04/13 13:50	Disposed
MC23682-1.13	VOC Ref #10	Todd Bahosh	08/21/13 17:04	Retrieve from Storage
MC23682-1.13	Todd Bahosh	GCBH	08/21/13 17:04	Load on Instrument
MC23682-1.13	GCBH	Todd Bahosh	08/22/13 09:47	Unload from Instrument
MC23682-1.13	Todd Bahosh	VOC Ref #10	08/22/13 09:47	Return to Storage
MC23682-1.13	Scott Parsick		10/04/13 13:50	Disposed
MC23682-1.14	VOC Ref #10	Jaime Maslowski	08/21/13 11:31	Retrieve from Storage
MC23682-1.14	Jaime Maslowski	VOC Ref #10	08/22/13 10:03	Return to Storage
MC23682-1.14	Scott Parsick		10/04/13 13:50	Disposed
MC23682-2.3	VOC Ref #10	Krysten Dufort	08/22/13 09:24	Retrieve from Storage
MC23682-2.3	Krysten Dufort	GCMSM	08/22/13 09:24	Load on Instrument
MC23682-2.3	GCMSM	Krysten Dufort	08/23/13 08:40	Unload from Instrument
MC23682-2.3	Krysten Dufort	VOC Ref #10	08/23/13 08:40	Return to Storage
MC23682-2.3	Scott Parsick		10/04/13 13:50	Disposed
MC23682-2.5	VOC Ref #10	Jaime Maslowski	08/21/13 11:31	Retrieve from Storage
MC23682-2.5	Jaime Maslowski	VOC Ref #10	08/22/13 10:03	Return to Storage
MC23682-2.5	Scott Parsick		10/04/13 13:50	Disposed
MC23682-3.3	VOC Ref #10	Krysten Dufort	08/22/13 09:24	Retrieve from Storage
MC23682-3.3	Krysten Dufort	GCMSM	08/22/13 09:24	Load on Instrument
MC23682-3.3	GCMSM	Krysten Dufort	08/23/13 08:40	Unload from Instrument
MC23682-3.3	Krysten Dufort	VOC Ref #10	08/23/13 08:40	Return to Storage
MC23682-3.3	Scott Parsick		10/04/13 13:50	Disposed

SGS Accutest Internal Chain of Custody

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL
Received: 08/21/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC23682-3.5	VOC Ref #10	Jaime Maslowski	08/21/13 11:31	Retrieve from Storage
MC23682-3.5	Jaime Maslowski	VOC Ref #10	08/22/13 10:03	Return to Storage
MC23682-3.5	Scott Parsick		10/04/13 13:50	Disposed
MC23682-4.1	VOC Ref #3	Amy Min Yang	08/21/13 11:36	Retrieve from Storage
MC23682-4.1	Amy Min Yang	GCMSV	08/21/13 11:36	Load on Instrument
MC23682-4.1	GCMSV	Amy Min Yang	08/22/13 15:08	Unload from Instrument
MC23682-4.1	Amy Min Yang	VOC Ref #3	08/22/13 15:09	Return to Storage
MC23682-4.1	Scott Parsick		10/04/13 13:50	Disposed

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: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV855-MB	V22160.D	1	08/22/13	AMY	n/a	n/a	MSV855

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

MC23682-4

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.1	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV855-MB	V22160.D	1	08/22/13	AMY	n/a	n/a	MSV855

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

MC23682-4

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV855-MB	V22160.D	1	08/22/13	AMY	n/a	n/a	MSV855

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

MC23682-4

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	95%	70-130%

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

Method Blank Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2022-MB	M58655.D	1	08/22/13	KD	n/a	n/a	MSM2022

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.9	ug/kg	
107-02-8	Acrolein	ND	25	3.8	ug/kg	
107-13-1	Acrylonitrile	ND	25	1.3	ug/kg	
71-43-2	Benzene	ND	0.50	0.25	ug/kg	
108-86-1	Bromobenzene	ND	5.0	0.27	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.58	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.36	ug/kg	
75-25-2	Bromoform	ND	2.0	0.29	ug/kg	
74-83-9	Bromomethane	ND	2.0	0.97	ug/kg	
78-93-3	2-Butanone (MEK)	ND	5.0	3.1	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	0.17	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	0.16	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	0.36	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	0.15	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.27	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.60	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	4.7	ug/kg	
67-66-3	Chloroform	ND	2.0	0.29	ug/kg	
74-87-3	Chloromethane	ND	5.0	1.2	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	0.41	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	0.44	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.43	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.21	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.22	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.20	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.0	0.33	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.0	0.54	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.0	0.52	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	0.51	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	0.45	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.42	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	0.45	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	0.66	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	0.23	ug/kg	

Method Blank Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2022-MB	M58655.D	1	08/22/13	KD	n/a	n/a	MSM2022

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.29	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.29	ug/kg	
123-91-1	1,4-Dioxane	ND	25	21	ug/kg	
97-63-2	Ethyl methacrylate	ND	5.0	3.3	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	0.57	ug/kg	
591-78-6	2-Hexanone	ND	5.0	2.4	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.28	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	0.16	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	0.40	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.8	ug/kg	
74-95-3	Methylene bromide	ND	5.0	0.35	ug/kg	
75-09-2	Methylene chloride	2.7	2.0	1.5	ug/kg	
91-20-3	Naphthalene	ND	5.0	0.79	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	0.24	ug/kg	
100-42-5	Styrene	ND	5.0	0.21	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.39	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.29	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.44	ug/kg	
108-88-3	Toluene	ND	5.0	0.24	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.43	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.36	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.18	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.35	ug/kg	
79-01-6	Trichloroethene	ND	2.0	0.47	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.0	1.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.21	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.13	ug/kg	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.57	ug/kg	
	m,p-Xylene	ND	2.0	0.29	ug/kg	
95-47-6	o-Xylene	ND	2.0	0.20	ug/kg	
1330-20-7	Xylene (total)	ND	2.0	0.20	ug/kg	

Method Blank Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2022-MB	M58655.D	1	08/22/13	KD	n/a	n/a	MSM2022

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	83%	70-130%
2037-26-5	Toluene-D8	87%	70-130%
460-00-4	4-Bromofluorobenzene	93%	70-130%

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

Blank Spike Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV855-BS	V22157.D	1	08/21/13	AMY	n/a	n/a	MSV855

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

MC23682-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	71.5	143* [a]	70-130
107-02-8	Acrolein	250	437	175* [a]	70-130
107-13-1	Acrylonitrile	50	61.0	122	70-130
71-43-2	Benzene	50	56.1	112	70-130
108-86-1	Bromobenzene	50	49.5	99	70-130
74-97-5	Bromochloromethane	50	63.9	128	70-130
75-27-4	Bromodichloromethane	50	54.8	110	70-130
75-25-2	Bromoform	50	47.6	95	70-130
74-83-9	Bromomethane	50	63.1	126	70-130
78-93-3	2-Butanone (MEK)	50	62.0	124	70-130
104-51-8	n-Butylbenzene	50	53.6	107	70-130
135-98-8	sec-Butylbenzene	50	52.3	105	70-130
98-06-6	tert-Butylbenzene	50	50.5	101	70-130
75-15-0	Carbon disulfide	50	65.9	132* [a]	70-130
56-23-5	Carbon tetrachloride	50	58.3	117	70-130
108-90-7	Chlorobenzene	50	46.8	94	70-130
75-00-3	Chloroethane	50	65.9	132* [a]	70-130
110-75-8	2-Chloroethyl vinyl ether	50	52.6	105	70-130
67-66-3	Chloroform	50	57.3	115	70-130
74-87-3	Chloromethane	50	72.6	145* [a]	70-130
95-49-8	o-Chlorotoluene	50	46.8	94	70-130
106-43-4	p-Chlorotoluene	50	48.4	97	70-130
124-48-1	Dibromochloromethane	50	46.3	93	70-130
95-50-1	1,2-Dichlorobenzene	50	45.9	92	70-130
541-73-1	1,3-Dichlorobenzene	50	46.4	93	70-130
106-46-7	1,4-Dichlorobenzene	50	45.8	92	70-130
75-71-8	Dichlorodifluoromethane	50	50.2	100	70-130
75-34-3	1,1-Dichloroethane	50	64.3	129	70-130
107-06-2	1,2-Dichloroethane	50	47.6	95	70-130
75-35-4	1,1-Dichloroethene	50	66.5	133* [a]	70-130
156-59-2	cis-1,2-Dichloroethene	50	60.1	120	70-130
156-60-5	trans-1,2-Dichloroethene	50	59.1	118	70-130
78-87-5	1,2-Dichloropropane	50	58.8	118	70-130
142-28-9	1,3-Dichloropropane	50	49.9	100	70-130
594-20-7	2,2-Dichloropropane	50	63.2	126	70-130
563-58-6	1,1-Dichloropropene	50	55.6	111	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV855-BS	V22157.D	1	08/21/13	AMY	n/a	n/a	MSV855

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

MC23682-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	51.2	102	70-130
10061-02-6	trans-1,3-Dichloropropene	50	51.2	102	70-130
123-91-1	1,4-Dioxane	250	283	113	70-130
97-63-2	Ethyl methacrylate	50	53.7	107	77-137
100-41-4	Ethylbenzene	50	50.9	102	70-130
87-68-3	Hexachlorobutadiene	50	48.3	97	70-130
591-78-6	2-Hexanone	50	55.9	112	70-130
98-82-8	Isopropylbenzene	50	51.3	103	70-130
99-87-6	p-Isopropyltoluene	50	56.1	112	70-130
1634-04-4	Methyl Tert Butyl Ether	50	56.6	113	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	57.3	115	70-130
74-95-3	Methylene bromide	50	58.5	117	70-130
75-09-2	Methylene chloride	50	61.6	123	70-130
91-20-3	Naphthalene	50	53.8	108	70-130
103-65-1	n-Propylbenzene	50	51.4	103	70-130
100-42-5	Styrene	50	57.1	114	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	50.7	101	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	48.3	97	70-130
127-18-4	Tetrachloroethene	50	55.5	111	70-130
108-88-3	Toluene	50	57.0	114	70-130
87-61-6	1,2,3-Trichlorobenzene	50	49.4	99	70-130
120-82-1	1,2,4-Trichlorobenzene	50	50.2	100	70-130
71-55-6	1,1,1-Trichloroethane	50	61.8	124	70-130
79-00-5	1,1,2-Trichloroethane	50	55.3	111	70-130
79-01-6	Trichloroethene	50	53.5	107	70-130
75-69-4	Trichlorofluoromethane	50	55.3	111	70-130
96-18-4	1,2,3-Trichloropropane	50	48.6	97	70-130
95-63-6	1,2,4-Trimethylbenzene	50	49.2	98	70-130
108-67-8	1,3,5-Trimethylbenzene	50	50.5	101	70-130
108-05-4	Vinyl Acetate	50	48.2	96	70-130
75-01-4	Vinyl chloride	50	52.8	106	70-130
	m,p-Xylene	100	100	100	70-130
95-47-6	o-Xylene	50	52.2	104	70-130
1330-20-7	Xylene (total)	150	153	102	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV855-BS	V22157.D	1	08/21/13	AMY	n/a	n/a	MSV855

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

MC23682-4

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	95%	70-130%
2037-26-5	Toluene-D8	103%	70-130%
460-00-4	4-Bromofluorobenzene	96%	70-130%

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

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2022-BS	M58653.D	1	08/22/13	KD	n/a	n/a	MSM2022

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	50	80.4	161* [a]	70-130
107-02-8	Acrolein	250	398	159* [a]	70-130
107-13-1	Acrylonitrile	50	53.3	107	70-130
71-43-2	Benzene	50	55.0	110	70-130
108-86-1	Bromobenzene	50	58.2	116	70-130
74-97-5	Bromochloromethane	50	59.0	118	70-130
75-27-4	Bromodichloromethane	50	58.0	116	70-130
75-25-2	Bromoform	50	61.4	123	70-130
74-83-9	Bromomethane	50	55.4	111	70-130
78-93-3	2-Butanone (MEK)	50	56.4	113	70-130
104-51-8	n-Butylbenzene	50	56.1	112	70-130
135-98-8	sec-Butylbenzene	50	56.7	113	70-130
98-06-6	tert-Butylbenzene	50	56.1	112	70-130
75-15-0	Carbon disulfide	50	60.3	121	70-130
56-23-5	Carbon tetrachloride	50	60.1	120	70-130
108-90-7	Chlorobenzene	50	56.3	113	70-130
75-00-3	Chloroethane	50	58.2	116	70-130
110-75-8	2-Chloroethyl vinyl ether	50	48.1	96	10-160
67-66-3	Chloroform	50	59.3	119	70-130
74-87-3	Chloromethane	50	67.9	136* [a]	70-130
95-49-8	o-Chlorotoluene	50	56.1	112	70-130
106-43-4	p-Chlorotoluene	50	57.3	115	70-130
124-48-1	Dibromochloromethane	50	59.7	119	70-130
95-50-1	1,2-Dichlorobenzene	50	54.3	109	70-130
541-73-1	1,3-Dichlorobenzene	50	54.5	109	70-130
106-46-7	1,4-Dichlorobenzene	50	58.5	117	70-130
75-71-8	Dichlorodifluoromethane	50	74.5	149* [a]	70-130
75-34-3	1,1-Dichloroethane	50	60.8	122	70-130
107-06-2	1,2-Dichloroethane	50	57.3	115	70-130
75-35-4	1,1-Dichloroethene	50	59.1	118	70-130
156-59-2	cis-1,2-Dichloroethene	50	54.6	109	70-130
156-60-5	trans-1,2-Dichloroethene	50	56.5	113	70-130
78-87-5	1,2-Dichloropropane	50	56.1	112	70-130
142-28-9	1,3-Dichloropropane	50	57.0	114	70-130
594-20-7	2,2-Dichloropropane	50	59.7	119	70-130
563-58-6	1,1-Dichloropropene	50	57.5	115	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2022-BS	M58653.D	1	08/22/13	KD	n/a	n/a	MSM2022

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	54.7	109	70-130
10061-02-6	trans-1,3-Dichloropropene	50	58.7	117	70-130
123-91-1	1,4-Dioxane	250	261	104	70-130
97-63-2	Ethyl methacrylate	50	53.7	107	76-141
100-41-4	Ethylbenzene	50	58.2	116	70-130
87-68-3	Hexachlorobutadiene	50	52.5	105	70-130
591-78-6	2-Hexanone	50	54.8	110	70-130
98-82-8	Isopropylbenzene	50	57.0	114	70-130
99-87-6	p-Isopropyltoluene	50	60.2	120	70-130
1634-04-4	Methyl Tert Butyl Ether	50	56.1	112	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	51.2	102	70-130
74-95-3	Methylene bromide	50	61.3	123	70-130
75-09-2	Methylene chloride	50	53.9	108	70-130
91-20-3	Naphthalene	50	55.6	111	70-130
103-65-1	n-Propylbenzene	50	56.0	112	70-130
100-42-5	Styrene	50	57.6	115	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	57.6	115	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	57.8	116	70-130
127-18-4	Tetrachloroethene	50	60.4	121	70-130
108-88-3	Toluene	50	57.2	114	70-130
87-61-6	1,2,3-Trichlorobenzene	50	54.7	109	70-130
120-82-1	1,2,4-Trichlorobenzene	50	53.3	107	70-130
71-55-6	1,1,1-Trichloroethane	50	59.6	119	70-130
79-00-5	1,1,2-Trichloroethane	50	55.4	111	70-130
79-01-6	Trichloroethene	50	54.4	109	70-130
75-69-4	Trichlorofluoromethane	50	56.5	113	70-130
96-18-4	1,2,3-Trichloropropane	50	58.8	118	70-130
95-63-6	1,2,4-Trimethylbenzene	50	56.8	114	70-130
108-67-8	1,3,5-Trimethylbenzene	50	57.2	114	70-130
108-05-4	Vinyl Acetate	50	43.8	88	70-130
75-01-4	Vinyl chloride	50	47.5	95	70-130
	m,p-Xylene	100	114	114	70-130
95-47-6	o-Xylene	50	56.1	112	70-130
1330-20-7	Xylene (total)	150	170	113	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2022-BS	M58653.D	1	08/22/13	KD	n/a	n/a	MSM2022

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	85%	70-130%
2037-26-5	Toluene-D8	85%	70-130%
460-00-4	4-Bromofluorobenzene	89%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23464-1MS	V22168.D	5	08/22/13	AMY	n/a	n/a	MSV855
MC23464-1MSD	V22169.D	5	08/22/13	AMY	n/a	n/a	MSV855
MC23464-1	V22161.D	1	08/22/13	AMY	n/a	n/a	MSV855

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

MC23682-4

CAS No.	Compound	MC23464-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	212	85	250	216	86	2	70-130/30
107-02-8	Acrolein	ND		1250	2020	162* a	1250	2030	162* a	0	70-130/30
107-13-1	Acrylonitrile	ND		250	309	124	250	312	125	1	70-130/30
71-43-2	Benzene	ND		250	286	114	250	277	111	3	70-130/30
108-86-1	Bromobenzene	ND		250	246	98	250	239	96	3	70-130/30
74-97-5	Bromochloromethane	ND		250	332	133* a	250	322	129	3	70-130/30
75-27-4	Bromodichloromethane	ND		250	284	114	250	277	111	2	70-130/30
75-25-2	Bromoform	ND		250	247	99	250	245	98	1	70-130/30
74-83-9	Bromomethane	ND		250	322	129	250	318	127	1	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	253	101	250	260	104	3	70-130/30
104-51-8	n-Butylbenzene	ND		250	265	106	250	259	104	2	70-130/30
135-98-8	sec-Butylbenzene	ND		250	258	103	250	254	102	2	70-130/30
98-06-6	tert-Butylbenzene	ND		250	251	100	250	243	97	3	70-130/30
75-15-0	Carbon disulfide	ND		250	348	139* a	250	338	135* a	3	70-130/30
56-23-5	Carbon tetrachloride	ND		250	305	122	250	293	117	4	70-130/30
108-90-7	Chlorobenzene	ND		250	239	96	250	230	92	4	70-130/30
75-00-3	Chloroethane	ND		250	345	138* a	250	335	134* a	3	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	ND	0* a	250	ND	0* a	nc	70-130/30
67-66-3	Chloroform	ND		250	298	119	250	290	116	3	70-130/30
74-87-3	Chloromethane	ND		250	383	153* a	250	373	149* a	3	70-130/30
95-49-8	o-Chlorotoluene	ND		250	235	94	250	227	91	3	70-130/30
106-43-4	p-Chlorotoluene	ND		250	242	97	250	235	94	3	70-130/30
124-48-1	Dibromochloromethane	ND		250	242	97	250	236	94	3	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	226	90	250	222	89	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	229	92	250	223	89	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	228	91	250	224	90	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	259	104	250	262	105	1	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	337	135* a	250	330	132* a	2	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	247	99	250	240	96	3	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	341	136* a	250	331	132* a	3	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	307	123	250	300	120	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	305	122	250	297	119	3	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	301	120	250	294	118	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	254	102	250	248	99	2	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	281	112	250	276	110	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	286	114	250	275	110	4	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23464-1MS	V22168.D	5	08/22/13	AMY	n/a	n/a	MSV855
MC23464-1MSD	V22169.D	5	08/22/13	AMY	n/a	n/a	MSV855
MC23464-1	V22161.D	1	08/22/13	AMY	n/a	n/a	MSV855

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

MC23682-4

CAS No.	Compound	MC23464-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	250	100	250	244	98	2	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	254	102	250	250	100	2	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1170	94	1250	1300	104	11	70-130/30
97-63-2	Ethyl methacrylate	ND		250	279	112	250	271	108	3	72-139/30
100-41-4	Ethylbenzene	ND		250	258	103	250	251	100	3	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	227	91	250	233	93	3	70-130/30
591-78-6	2-Hexanone	ND		250	253	101	250	251	100	1	70-130/30
98-82-8	Isopropylbenzene	ND		250	255	102	250	248	99	3	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	280	112	250	272	109	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	290	116	250	287	115	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	302	121	250	296	118	2	70-130/30
74-95-3	Methylene bromide	ND		250	306	122	250	297	119	3	70-130/30
75-09-2	Methylene chloride	ND		250	313	125	250	306	122	2	70-130/30
91-20-3	Naphthalene	ND		250	214	86	250	239	96	11	70-130/30
103-65-1	n-Propylbenzene	ND		250	254	102	250	246	98	3	70-130/30
100-42-5	Styrene	ND		250	283	113	250	277	111	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	262	105	250	254	102	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	252	101	250	252	101	0	70-130/30
127-18-4	Tetrachloroethene	ND		250	281	112	250	269	108	4	70-130/30
108-88-3	Toluene	ND		250	291	116	250	280	112	4	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	217	87	250	245	98	12	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	235	94	250	245	98	4	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	321	128	250	315	126	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	282	113	250	275	110	3	70-130/30
79-01-6	Trichloroethene	ND		250	266	106	250	258	103	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	281	112	250	274	110	3	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	224	90	250	226	90	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	242	97	250	235	94	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	251	100	250	242	97	4	70-130/30
108-05-4	Vinyl Acetate	ND		250	257	103	250	254	102	1	70-130/30
75-01-4	Vinyl chloride	ND		250	269	108	250	263	105	2	70-130/30
	m,p-Xylene	ND		500	511	102	500	496	99	3	70-130/30
95-47-6	o-Xylene	ND		250	261	104	250	255	102	2	70-130/30
1330-20-7	Xylene (total)	ND		750	773	103	750	751	100	3	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23464-1MS	V22168.D	5	08/22/13	AMY	n/a	n/a	MSV855
MC23464-1MSD	V22169.D	5	08/22/13	AMY	n/a	n/a	MSV855
MC23464-1	V22161.D	1	08/22/13	AMY	n/a	n/a	MSV855

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

MC23682-4

CAS No.	Surrogate Recoveries	MS	MSD	MC23464-1	Limits
1868-53-7	Dibromofluoromethane	96%	96%	98%	70-130%
2037-26-5	Toluene-D8	103%	103%	101%	70-130%
460-00-4	4-Bromofluorobenzene	96%	96%	95%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23682-1MS	M58660.D	1	08/22/13	KD	n/a	n/a	MSM2022
MC23682-1MSD	M58661.D	1	08/22/13	KD	n/a	n/a	MSM2022
MC23682-1	M58656.D	1	08/22/13	KD	n/a	n/a	MSM2022

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Compound	MC23682-1 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		49.6	56.6	114	48.8	52.8	108	7	70-130/30
107-02-8	Acrolein	ND		248	280	113	244	221	91	24	70-130/30
107-13-1	Acrylonitrile	ND		49.6	65.5	132* [a]	48.8	56.5	116	15	70-130/30
71-43-2	Benzene	ND		49.6	49.3	99	48.8	52.0	107	5	70-130/30
108-86-1	Bromobenzene	ND		49.6	49.6	100	48.8	50.2	103	1	70-130/30
74-97-5	Bromochloromethane	ND		49.6	54.6	110	48.8	55.8	114	2	70-130/30
75-27-4	Bromodichloromethane	ND		49.6	51.5	104	48.8	53.6	110	4	70-130/30
75-25-2	Bromoform	ND		49.6	60.9	123	48.8	60.7	124	0	70-130/30
74-83-9	Bromomethane	ND		49.6	53.7	108	48.8	54.1	111	1	70-130/30
78-93-3	2-Butanone (MEK)	ND		49.6	50.2	101	48.8	44.6	91	12	70-130/30
104-51-8	n-Butylbenzene	ND		49.6	49.0	99	48.8	51.2	105	4	70-130/30
135-98-8	sec-Butylbenzene	ND		49.6	48.8	98	48.8	50.9	104	4	70-130/30
98-06-6	tert-Butylbenzene	ND		49.6	48.7	98	48.8	50.8	104	4	70-130/30
75-15-0	Carbon disulfide	ND		49.6	59.3	120	48.8	61.7	126	4	70-130/30
56-23-5	Carbon tetrachloride	ND		49.6	57.5	116	48.8	61.0	125	6	70-130/30
108-90-7	Chlorobenzene	ND		49.6	47.9	97	48.8	50.2	103	5	70-130/30
75-00-3	Chloroethane	ND		49.6	58.4	118	48.8	60.5	124	4	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		49.6	ND	0* [a]	48.8	ND	0* [a]	nc	10-160/30
67-66-3	Chloroform	ND		49.6	54.1	109	48.8	56.1	115	4	70-130/30
74-87-3	Chloromethane	ND		49.6	65.1	131* [a]	48.8	72.7	149* [a]	11	70-130/30
95-49-8	o-Chlorotoluene	ND		49.6	47.5	96	48.8	48.6	100	2	70-130/30
106-43-4	p-Chlorotoluene	ND		49.6	48.4	98	48.8	50.5	103	4	70-130/30
124-48-1	Dibromochloromethane	ND		49.6	53.7	108	48.8	54.6	112	2	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		49.6	44.8	90	48.8	45.6	93	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		49.6	45.1	91	48.8	46.3	95	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		49.6	47.1	95	48.8	48.5	99	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND		49.6	70.6	142* [a]	48.8	74.2	152* [a]	5	70-130/30
75-34-3	1,1-Dichloroethane	ND		49.6	57.4	116	48.8	60.1	123	5	70-130/30
107-06-2	1,2-Dichloroethane	ND		49.6	52.5	106	48.8	53.0	109	1	70-130/30
75-35-4	1,1-Dichloroethene	ND		49.6	58.5	118	48.8	60.9	125	4	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		49.6	48.7	98	48.8	50.9	104	4	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		49.6	52.9	107	48.8	54.4	111	3	70-130/30
78-87-5	1,2-Dichloropropane	ND		49.6	49.1	99	48.8	51.7	106	5	70-130/30
142-28-9	1,3-Dichloropropane	ND		49.6	52.9	107	48.8	52.7	108	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		49.6	58.3	118	48.8	59.7	122	2	70-130/30
563-58-6	1,1-Dichloropropene	ND		49.6	53.7	108	48.8	57.1	117	6	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23682-1MS	M58660.D	1	08/22/13	KD	n/a	n/a	MSM2022
MC23682-1MSD	M58661.D	1	08/22/13	KD	n/a	n/a	MSM2022
MC23682-1	M58656.D	1	08/22/13	KD	n/a	n/a	MSM2022

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Compound	MC23682-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		49.6	48.1	97	48.8	50.1	103	4	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		49.6	53.3	107	48.8	54.1	111	1	70-130/30
123-91-1	1,4-Dioxane	ND		248	560	226* [a]	244	408	167* [a]	31* [b]	70-130/30
97-63-2	Ethyl methacrylate	ND		49.6	53.1	107	48.8	50.6	104	5	41-160/30
100-41-4	Ethylbenzene	ND		49.6	50.6	102	48.8	53.8	110	6	70-130/30
87-68-3	Hexachlorobutadiene	ND		49.6	44.5	90	48.8	45.9	94	3	70-130/30
591-78-6	2-Hexanone	ND		49.6	50.5	102	48.8	44.3	91	13	70-130/30
98-82-8	Isopropylbenzene	ND		49.6	50.2	101	48.8	51.6	106	3	70-130/30
99-87-6	p-Isopropyltoluene	ND		49.6	50.7	102	48.8	53.1	109	5	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		49.6	54.0	109	48.8	54.2	111	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		49.6	67.3	136* [a]	48.8	62.5	128	7	70-130/30
74-95-3	Methylene bromide	ND		49.6	59.4	120	48.8	58.9	121	1	70-130/30
75-09-2	Methylene chloride	2.0	J	49.6	52.9	103	48.8	54.6	108	3	70-130/30
91-20-3	Naphthalene	ND		49.6	49.8	100	48.8	47.1	97	6	70-130/30
103-65-1	n-Propylbenzene	ND		49.6	49.2	99	48.8	50.6	104	3	70-130/30
100-42-5	Styrene	ND		49.6	11.6	23* [a]	48.8	7.2	15* [a]	47* [b]	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		49.6	50.0	101	48.8	51.9	106	4	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		49.6	61.6	124	48.8	57.6	118	7	70-130/30
127-18-4	Tetrachloroethene	ND		49.6	55.6	112	48.8	59.1	121	6	70-130/30
108-88-3	Toluene	0.30	J	49.6	50.5	101	48.8	53.7	109	6	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		49.6	43.2	87	48.8	44.0	90	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		49.6	43.1	87	48.8	44.1	90	2	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		49.6	57.6	116	48.8	60.7	124	5	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		49.6	52.5	106	48.8	52.6	108	0	70-130/30
79-01-6	Trichloroethene	ND		49.6	48.6	98	48.8	52.9	108	8	70-130/30
75-69-4	Trichlorofluoromethane	ND		49.6	56.2	113	48.8	58.9	121	5	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		49.6	65.8	133* [a]	48.8	60.4	124	9	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		49.6	46.6	94	48.8	46.3	95	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		49.6	50.4	102	48.8	51.6	106	2	70-130/30
108-05-4	Vinyl Acetate	ND		49.6	22.9	46* [a]	48.8	12.2	25* [a]	61* [b]	70-130/30
75-01-4	Vinyl chloride	ND		49.6	45.8	92	48.8	46.9	96	2	70-130/30
	m,p-Xylene	ND		99.2	97.4	98	97.6	104	107	7	70-130/30
95-47-6	o-Xylene	ND		49.6	46.4	94	48.8	49.8	102	7	70-130/30
1330-20-7	Xylene (total)	ND		149	144	97	146	154	105	7	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23682-1MS	M58660.D	1	08/22/13	KD	n/a	n/a	MSM2022
MC23682-1MSD	M58661.D	1	08/22/13	KD	n/a	n/a	MSM2022
MC23682-1	M58656.D	1	08/22/13	KD	n/a	n/a	MSM2022

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Surrogate Recoveries	MS	MSD	MC23682-1	Limits
1868-53-7	Dibromofluoromethane	87%	86%	85%	70-130%
2037-26-5	Toluene-D8	86%	86%	86%	70-130%
460-00-4	4-Bromofluorobenzene	89%	86%	92%	70-130%

(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.

Volatile Internal Standard Area Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Check Std:	MSG5093-CC5092	**Injection Date:**	08/21/13
Lab File ID:	G130684.D	**Injection Time:**	10:43
Instrument ID:	GCMSG	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	62035	5.07	94164	6.19	62479	9.54	58750	12.16	17446	3.08
Upper Limit [a]	124070	5.57	188328	6.69	124958	10.04	117500	12.66	34892	3.58
Lower Limit [b]	31018	4.57	47082	5.69	31240	9.04	29375	11.66	8723	2.58
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**
MSG5093-BSD	79304	5.07	125240	6.19	61988	9.54	58125	12.16	26323	3.08
MSG5093-MB	76804	5.07	122659	6.19	59399	9.54	53948	12.16	24161	3.08
ZZZZZZ	76193	5.07	121833	6.19	59507	9.54	52158	12.16	22113	3.08
MC23682-3 [c]	74576	5.07	118886	6.19	57978	9.54	50353	12.16	24216	3.08
MC23582-1	73791	5.07	117575	6.19	58418	9.54	53079	12.16	25804	3.08
ZZZZZZ	56638	5.07	104841	6.19	56915	9.54	50959	12.16	14802	3.08
ZZZZZZ	71900	5.07	115291	6.20	56469	9.54	50750	12.16	20959	3.08
ZZZZZZ	73763	5.07	117364	6.20	58519	9.54	52531	12.16	22909	3.08
ZZZZZZ	56626	5.07	84130	6.19	42327	9.54	38701	12.16	13985	3.07
ZZZZZZ	51108	5.07	74839	6.20	36004	9.54	32957	12.16	11353	3.07
ZZZZZZ	50789	5.07	74247	6.20	35825	9.54	33694	12.16	13738	3.08
ZZZZZZ	49394	5.07	72211	6.20	35254	9.54	32942	12.16	13677	3.08
ZZZZZZ	48242	5.07	71314	6.20	34467	9.54	32746	12.16	14242	3.09
ZZZZZZ	49671	5.07	72857	6.20	37875	9.54	36391	12.16	11029	3.07
ZZZZZZ	53415	5.07	79286	6.20	40111	9.54	38710	12.16	11458	3.07
MC23582-1MS	54772	5.07	79439	6.20	38665	9.54	39923	12.16	13793	3.08
MC23582-1MSD	55842	5.07	81607	6.20	38840	9.54	40388	12.16	12801	3.07

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) Confirmation run.

Volatile Internal Standard Area Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Check Std:	MSM2022-CC2022	**Injection Date:**	08/22/13
Lab File ID:	M58652.D	**Injection Time:**	08:45
Instrument ID:	GCMSM	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	347875	9.36	593994	10.23	268831	13.51	276732	16.07	142096	6.84
Upper Limit [a]	695750	9.86	1187988	10.73	537662	14.01	553464	16.57	284192	7.34
Lower Limit [b]	173938	8.86	296997	9.73	134416	13.01	138366	15.57	71048	6.34

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSM2022-BS	356230	9.36	602271	10.23	272982	13.51	272182	16.07	147390	6.84
MSM2022-MB	324837	9.36	544625	10.24	232953	13.51	221927	16.07	139101	6.84
MC23682-1	303201	9.36	508163	10.24	216225	13.51	205455	16.07	238474	6.84
MC23682-2	244607	9.36	422201	10.24	182495	13.51	172112	16.07	205789	6.84
MC23682-3	276883	9.36	469291	10.23	177060	13.51	121012[c]	16.07	261195	6.84
ZZZZZZ	315899	9.35	531376	10.23	224858	13.51	218248	16.07	157805	6.84
MC23682-1MS	291937	9.35	499477	10.23	230240	13.51	225873	16.07	250846	6.84
MC23682-1MSD	311874	9.35	529211	10.23	245296	13.51	247341	16.07	250229	6.84
ZZZZZZ	338345	9.35	565401	10.23	243839	13.51	231854	16.07	285465[d]	6.84
ZZZZZZ	330610	9.36	554615	10.24	239362	13.51	229329	16.07	281445	6.84
ZZZZZZ	324978	9.36	556206	10.24	235681	13.51	226951	16.07	255402	6.84
ZZZZZZ	329039	9.36	549709	10.24	234648	13.51	222998	16.07	144670	6.84
ZZZZZZ	313038	9.35	523046	10.23	224489	13.51	217325	16.07	163847	6.84
ZZZZZZ	303879	9.36	515741	10.24	218387	13.51	200021	16.07	251903	6.84
ZZZZZZ	261372	9.36	436699	10.24	146026	13.51	72998[c]	16.08	253910	6.84
ZZZZZZ	305921	9.36	516913	10.24	221829	13.51	208565	16.08	277208	6.84
ZZZZZZ	267167	9.35	455397	10.23	193288	13.51	170717	16.07	252304	6.84
ZZZZZZ	307900	9.36	523394	10.24	224167	13.51	211134	16.07	253103	6.84
ZZZZZZ	271905	9.36	464137	10.23	193687	13.51	168392	16.07	197792	6.84
ZZZZZZ	277279	9.35	460879	10.23	191546	13.51	153060	16.07	271483	6.84

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. Target analytes not associated with this internal standard.

Volatile Internal Standard Area Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Check Std:	MSV855-CC832	**Injection Date:**	08/21/13
Lab File ID:	V22157.D	**Injection Time:**	23:05
Instrument ID:	GCMSV	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	393182	6.57	574275	7.75	310834	11.08	352332	13.29	107808	3.50
Upper Limit [a]	786364	7.07	1148550	8.25	621668	11.58	704664	13.79	215616	4.00
Lower Limit [b]	196591	6.07	287138	7.25	155417	10.58	176166	12.79	53904	3.00

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSV855-BS	393182	6.57	574275	7.75	310834	11.08	352332	13.29	107808	3.50
MSV855-MB	368480	6.57	551444	7.75	302171	11.08	332397	13.29	95944	3.51
MC23464-1	362191	6.57	546431	7.75	296354	11.08	329831	13.29	94816	3.51
ZZZZZZ	347985	6.57	527046	7.75	292587	11.08	322454	13.29	100612	3.50
MC23464-1MS	387087	6.57	559340	7.75	304333	11.08	350093	13.29	107781	3.51
MC23464-1MSD	391646	6.57	573152	7.75	310917	11.08	358088	13.29	112089	3.51
ZZZZZZ	398167	6.58	602280	7.76	327336	11.08	367817	13.29	118132	3.52
ZZZZZZ	354738	6.57	531386	7.75	291762	11.08	324370	13.29	104691	3.50
ZZZZZZ	342554	6.57	517202	7.75	287665	11.08	315262	13.29	103117	3.51
ZZZZZZ	335898	6.57	515747	7.75	285685	11.08	313441	13.29	97016	3.51
ZZZZZZ	326405	6.58	503318	7.75	280039	11.08	308203	13.29	95881	3.51
ZZZZZZ	313028	6.58	485930	7.76	270598	11.08	298074	13.29	93884	3.51
ZZZZZZ	312070	6.57	478438	7.75	270317	11.08	295065	13.29	95054	3.51
ZZZZZZ	302498	6.57	472498	7.75	265424	11.08	291700	13.29	90843	3.51
MC23682-4	328742	6.58	507943	7.76	289990	11.08	315565	13.29	92530	3.52
ZZZZZZ	288094	6.57	451190	7.75	251240	11.08	280602	13.29	81640	3.51
ZZZZZZ	282764	6.57	447247	7.75	256474	11.08	279489	13.29	80257	3.50
ZZZZZZ	281244	6.57	443977	7.75	252302	11.08	300853	13.29	78023	3.50
ZZZZZZ	293863	6.58	465054	7.76	262442	11.08	303798	13.29	79634	3.51
ZZZZZZ	296681	6.57	464611	7.75	260125	11.08	291775	13.29	82648	3.51

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: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Method: SW846 8260B	**Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC23682-4	V22179.D	106	104	96
MC23464-1MS	V22168.D	96	103	96
MC23464-1MSD	V22169.D	96	103	96
MSV855-BS	V22157.D	95	103	96
MSV855-MB	V22160.D	97	101	95

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

Volatile Surrogate Recovery Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Method: SW846 8260B	**Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC23682-1	M58656.D	85	86	92
MC23682-2	M58657.D	85	86	95
MC23682-3	G130691.D	104	102	108
MC23682-3	M58658.D	88	82	114
MC23682-1MS	M58660.D	87	86	89
MC23682-1MSD	M58661.D	86	86	86
MSM2022-BS	M58653.D	85	85	89
MSM2022-MB	M58655.D	83	87	93

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

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: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBH1811-MB	BH30989A.D	1	08/21/13	TB	n/a	n/a	GBH1811

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	5.0	1.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
	2,3,4-Trifluorotoluene	90%	60-131%

Blank Spike Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBH1811-BSP	BH30990A.D	1	08/21/13	TB	n/a	n/a	GBH1811

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (VOA)	20	18.3	92	67-133

CAS No.	Surrogate Recoveries	BSP	Limits
	2,3,4-Trifluorotoluene	91%	60-131%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23682-1MS	BH30994.D	1	08/21/13	TB	n/a	n/a	GBH1811
MC23682-1MSD	BH30995.D	1	08/21/13	TB	n/a	n/a	GBH1811
MC23682-1	BH30993.D	1	08/21/13	TB	n/a	n/a	GBH1811

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

MC23682-1, MC23682-2, MC23682-3

CAS No.	Compound	MC23682-1 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		44.6	38.1	85	44.6	37.1	83	3	40-154/20

CAS No.	Surrogate Recoveries	MS	MSD	MC23682-1	Limits
	2,3,4-Trifluorotoluene	89%	89%	89%	60-131%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Method: SW846 8015	**Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
MC23682-1	BH30993.D	89
MC23682-2	BH30996.D	89
MC23682-3	BH30997.D	90
GBH1811-BSP	BH30990A.D	91
GBH1811-MB	BH30989A.D	90
MC23682-1MS	BH30994.D	89
MC23682-1MSD	BH30995.D	89

Surrogate Compounds	Recovery Limits
S1 = 2,3,4-Trifluorotoluene	60-131%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Check Std:	GBH1811-CC1786	**Injection Date:**	08/21/13
Lab File ID:	BH30988A.D	**Injection Time:**	15:15
Instrument ID:	GCBH	**Method:**	SW846 8015

	S1 [a] RT
Check Std	20.27

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
GBH1811-MB	BH30989A.D	08/21/13	15:50	20.27
GBH1810-MB	BH30989.D	08/21/13	15:50	20.27
GBH1811-BSP	BH30990A.D	08/21/13	16:25	20.27
GBH1810-BSP	BH30990.D	08/21/13	16:25	20.27
ZZZZZZ	BH30991.D	08/21/13	18:12	20.27
ZZZZZZ	BH30992.D	08/21/13	18:47	20.27
MC23682-1	BH30993.D	08/21/13	19:22	20.27
MC23682-1MS	BH30994.D	08/21/13	19:56	20.27
MC23682-1MSD	BH30995.D	08/21/13	20:31	20.27
MC23682-2	BH30996.D	08/21/13	21:06	20.27
MC23682-3	BH30997.D	08/21/13	21:40	20.27

Surrogate Compounds

S1 = 2,3,4-Trifluorotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Check Std:	GBH1810-CC1786	**Injection Date:**	08/21/13
Lab File ID:	BH30988.D	**Injection Time:**	15:15
Instrument ID:	GCBH	**Method:**	SW846 8015

	S1 [a] RT
Check Std	20.27

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
GBH1811-MB	BH30989A.D	08/21/13	15:50	20.27
GBH1810-MB	BH30989.D	08/21/13	15:50	20.27
GBH1811-BSP	BH30990A.D	08/21/13	16:25	20.27
GBH1810-BSP	BH30990.D	08/21/13	16:25	20.27
ZZZZZZ	BH30991.D	08/21/13	18:12	20.27
ZZZZZZ	BH30992.D	08/21/13	18:47	20.27
MC23682-1	BH30993.D	08/21/13	19:22	20.27
MC23682-1MS	BH30994.D	08/21/13	19:56	20.27
MC23682-1MSD	BH30995.D	08/21/13	20:31	20.27
MC23682-2	BH30996.D	08/21/13	21:06	20.27
MC23682-3	BH30997.D	08/21/13	21:40	20.27

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: MC23682
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample: MC23682-1 **Analyzed:** 21-AUG-13 by HS **Method:** SM21 2540 B MOD.
ClientID: VMP57-082013(6-8')

Wet Weight (Total)	30.908	g
Tare Weight	20.621	g
Dry Weight (Total)	29.234	g
Solids, Percent	83.7	%

Sample: MC23682-2 **Analyzed:** 21-AUG-13 by HS **Method:** SM21 2540 B MOD.
ClientID: VMP57-082013(25.5-28")

Wet Weight (Total)	31.216	g
Tare Weight	19.491	g
Dry Weight (Total)	28.747	g
Solids, Percent	78.9	%

Sample: MC23682-3 **Analyzed:** 21-AUG-13 by HS **Method:** SM21 2540 B MOD.
ClientID: VMP57-082013(48-50.5')

Wet Weight (Total)	37.869	g
Tare Weight	26.89	g
Dry Weight (Total)	35.188	g
Solids, Percent	75.6	%

e-Hardcopy 2.0
Automated Report

Technical Report for

Shell Oil

URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

21562850.18001

SGS Accutest Job Number: MC23880

Sampling Date: 08/27/13

Report to:

AECOM, INC.

Melissa.mansker@aecom.com

ATTN: Melissa Mansker

Total number of pages in report: 65

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 25, 2016

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

RE: SGS Accutest Job # MC23880

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

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Sample Summary

Shell Oil

Job No: MC23880

URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL
Project No: 21562850.18001

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
MC23880-1	08/27/13	00:00	MCEA	08/28/13	AQ	Trip Blank Water	TB-082713-HCL
MC23880-2	08/27/13	10:30	MCEA	08/28/13	AQ	Equipment Blank	VMP59-082713-EB(25.5-28')
MC23880-3	08/27/13	12:35	MCEA	08/28/13	SO	Soil	VMP59-082713(2-4')
MC23880-4	08/27/13	12:50	MCEA	08/28/13	SO	Soil	VMP59-082713(23-25.5')
MC23880-5	08/27/13	13:05	MCEA	08/28/13	SO	Soil	VMP59-082713(45.5-48')

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

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: She O **Job No** MC23880

Site: URSMOSTL: Roxana SVE System Expans on, 900 South Centra A **Report Date** 0/25/20 6 4:37:39 P

4 Samp e(s), Tr p B ank(s) and 0 F e d B ank(s) were co ected on 08/27/20 3 and were rece ved at SGS Accutest New Eng and on 08/28/20 3 proper y preserved, at Deg C and ntact These Samp es rece ved a job number of MC23880 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 repo t

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 8260B

Matrix: AQ **Batch ID:** MSN2988

- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC23804- MS, MC23804- 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
- Matr x Sp ke Recovery(s) for , , -Tr ch oroethane, ,2-D ch oroethane, 4-Methy -2-pentanone (MIBK), Bromod ch oromethane, Carbon tetrach or de, Ch oroform, Ch oromethane, D ch orod f uoromethane, Methy Tert Buty Ether, Naphtha ene, Tr ch orof uoromethane are outs de contro m ts Outs de contro m ts due to poss b e matr x nte ference
- Matr x Sp ke Dup cate Recovery(s) for ,2-D ch oroethane, 2-Butanone (MEK), Acetone, Ch oromethane, Methy Te t Buty Ether, Naphtha ene are outs de contro m ts Probab e cause due to matr x nterference
- V ny Acetate: In t a Ca brat on Ver f cat on outs de of acceptance cr ter a Samp e resu t may be b ased ow
- Bromoch oromethane, Naphtha ene, ,2,4-Tr ch orobenzene, Ethy methacry ate, 2,2-D ch oropropane, ,2,3-Tr ch orobenzene, ,2,3-Tr 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
- MSN2988-BS for ,2-D ch oroethan, Bromod ch oromethane, Acro e n, Ch oromethane: Outs de contro m ts Assoc ated samp es are non-detect for th s compound
- Acetone: In t a Ca brat on Ver f cat on outs de of acceptance cr ter a Samp e resu t may be b ased h gh
- MSM2029-BSD Recovery(s) for Acetone, Acro e n, Ch oromethane, D ch orod f uoromethane, , -D ch oroethane, 4-Methy -2-pentanone (MIBK), Tr ch orof uoromethane, are outs de contro m ts

Matrix: SO **Batch ID:** MSM2029

- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC23880-5MS, MC23880-5MSD 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 Recove y(s) for Acetone, Acro e n are outs de contro m ts t
- Matr x Sp ke Recovery(s) for ,2,3-Tr ch orobenzene, ,2,4-Tr ch orobenzene, ,4-D oxane, 2-Ch oroethy v ny ether, Acro e n, Hexach orobutad ene are outs de contro m ts Outs de contro m ts due to poss b e matr x nte ference
- Matr x Sp ke Dup cate Recovery(s) for ,2,3-Tr ch orobenzene, ,2,4-Tr ch orobenzene, ,4-D oxane, 2-Ch oroethy v ny ether, Acro e n, Bromoform, D ch orod f uoromethane are outs de contro m ts Probab e cause due to matr x nterference
- MSM2029-BS for Bromoform: Outs de contro m ts Assoc ated samp es are non-detect for th s compound
- V ny Acetate: In t a Ca brat on Ver f cat on outs de of acceptance cr ter a Samp e resu t may be b ased ow

Volatiles by GC By Method SW846 8015

Matrix: SO **Batch ID:** GBH 8 8

- A samp es were ana yzed w th n the recommended method ho d ng t me
- Samp e(s) MC2383 -2MS, MC2383 -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

Wet Chemistry By Method SM21 2540 B MOD.

Matrix:	SO	Batch ID:	GN44_37

- Samp e(s) MC23880-4DUP were used as the QC samp es for So ds, Percent

SGS Accutest New Eng and ce t 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 report(MC23880)

Summary of Hits

Job Number: MC23880
Account: Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL
Collected: 08/27/13

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
MC23880-1	TB-082713-HCL					
No hits reported in this sample.						
MC23880-2	VMP59-082713-EB(25.5-28')					
Acetone [a]		19.2	10	2.8	ug/l	SW846 8260B
Total TIC, Volatile		66 J			ug/l	
MC23880-3	VMP59-082713(2-4')					
Carbon disulfide		0.00058 J	0.0049	0.00015	mg/kg	SW846 8260B
Total TIC, Volatile		0.197 J			mg/kg	
MC23880-4	VMP59-082713(23-25.5')					
Benzene		0.0014	0.00063	0.00031	mg/kg	SW846 8260B
Ethylbenzene		0.0059	0.0025	0.00022	mg/kg	SW846 8260B
n-Propylbenzene		0.00055 J	0.0063	0.00030	mg/kg	SW846 8260B
Toluene		0.0049 J	0.0063	0.00031	mg/kg	SW846 8260B
1,2,4-Trimethylbenzene		0.00078 J	0.0063	0.00026	mg/kg	SW846 8260B
1,3,5-Trimethylbenzene		0.00041 J	0.0063	0.00016	mg/kg	SW846 8260B
m,p-Xylene		0.0014 J	0.0025	0.00036	mg/kg	SW846 8260B
o-Xylene		0.00054 J	0.0025	0.00026	mg/kg	SW846 8260B
Xylene (total)		0.0019 J	0.0025	0.00026	mg/kg	SW846 8260B
Total TIC, Volatile		0.0778 J			mg/kg	
TPH-GRO (VOA)		4.98 J	13	2.8	mg/kg	SW846 8015
MC23880-5	VMP59-082713(45.5-48')					
Benzene		0.00076	0.00057	0.00028	mg/kg	SW846 8260B
sec-Butylbenzene		0.00054 J	0.0057	0.00018	mg/kg	SW846 8260B
Carbon disulfide		0.00032 J	0.0057	0.00017	mg/kg	SW846 8260B
Ethylbenzene		0.0011 J	0.0023	0.00020	mg/kg	SW846 8260B
Toluene		0.0012 J	0.0057	0.00028	mg/kg	SW846 8260B
1,2,4-Trimethylbenzene		0.0016 J	0.0057	0.00024	mg/kg	SW846 8260B
1,3,5-Trimethylbenzene		0.0020 J	0.0057	0.00015	mg/kg	SW846 8260B
m,p-Xylene		0.0013 J	0.0023	0.00033	mg/kg	SW846 8260B
o-Xylene		0.00032 J	0.0023	0.00023	mg/kg	SW846 8260B
Xylene (total)		0.0016 J	0.0023	0.00023	mg/kg	SW846 8260B
Total TIC, Volatile		0.8639 J			mg/kg	
TPH-GRO (VOA)		11.5 J	14	3.0	mg/kg	SW846 8015

(a) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased high.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	TB-082713-HCL		
Lab Sample ID:	MC23880-1	**Date Sampled:**	08/27/13
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N79862.D	1	08/29/13	JB	n/a	n/a	MSN2988
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	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane [a]	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.1	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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-082713-HCL		
Lab Sample ID:	MC23880-1	**Date Sampled:**	08/27/13
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane [a]	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate [a]	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene [a]	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene [a]	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene [a]	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane [a]	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate [b]	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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-082713-HCL		
Lab Sample ID:	MC23880-1	**Date Sampled:**	08/27/13
Matrix:	AQ - Trip Blank Water	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

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

(a) Continuing Calibration Verification outside of acceptance criteria. Sample result may be biased low.
(b) Initial Calibration Verification 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:	VMP59-082713-EB(25.5-28')		
Lab Sample ID:	MC23880-2	**Date Sampled:**	08/27/13
Matrix:	AQ - Equipment Blank	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N79863.D	1	08/29/13	JB	n/a	n/a	MSN2988
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]	19.2	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane [b]	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.1	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	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:	VMP59-082713-EB(25.5-28')		
Lab Sample ID:	MC23880-2	**Date Sampled:**	08/27/13
Matrix:	AQ - Equipment Blank	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane [b]	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate [b]	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene [b]	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene [b]	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene [b]	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane [b]	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate [c]	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	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:	VMP59-082713-EB(25.5-28')		
Lab Sample ID:	MC23880-2	**Date Sampled:**	08/27/13
Matrix:	AQ - Equipment Blank	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
115-11-7	1-Propene, 2-methyl-	4.98	66	ug/l	JN
	Total TIC, Volatile		66	ug/l	J

(a) Initial Calibration Verification outside of acceptance criteria. Sample result may be biased high.
(b) Continuing Calibration Verification outside of acceptance criteria. Sample result may be biased low.
(c) Initial Calibration Verification 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:	VMP59-082713(2-4')		
Lab Sample ID:	MC23880-3	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	83.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M58839.D	1	08/29/13	KD	n/a	n/a	MSM2029
Run #2							

	Initial Weight	Final Volume
Run #1	6.12 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.0098	0.0038	mg/kg	
107-02-8	Acrolein	ND	0.024	0.0037	mg/kg	
107-13-1	Acrylonitrile	ND	0.024	0.0013	mg/kg	
71-43-2	Benzene	ND	0.00049	0.00024	mg/kg	
108-86-1	Bromobenzene	ND	0.0049	0.00027	mg/kg	
74-97-5	Bromochloromethane	ND	0.0049	0.00057	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0020	0.00035	mg/kg	
75-25-2	Bromoform	ND	0.0020	0.00028	mg/kg	
74-83-9	Bromomethane	ND	0.0020	0.00095	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0049	0.0030	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0049	0.00017	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0049	0.00015	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0049	0.00035	mg/kg	
75-15-0	Carbon disulfide	0.00058	0.0049	0.00015	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0020	0.0011	mg/kg	
108-90-7	Chlorobenzene	ND	0.0020	0.00026	mg/kg	
75-00-3	Chloroethane	ND	0.0049	0.00059	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	0.0049	0.0046	mg/kg	
67-66-3	Chloroform	ND	0.0020	0.00028	mg/kg	
74-87-3	Chloromethane	ND	0.0049	0.0012	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0049	0.00040	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0049	0.00043	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0020	0.00042	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0020	0.00020	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0020	0.00022	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0020	0.00020	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0020	0.0011	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0020	0.00032	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0020	0.00053	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0020	0.00051	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0020	0.00050	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0020	0.00044	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:	VMP59-082713(2-4')		
Lab Sample ID:	MC23880-3	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	83.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.0020	0.00041	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0049	0.00044	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0049	0.00064	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0049	0.00023	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0020	0.00028	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0020	0.00029	mg/kg	
123-91-1	1,4-Dioxane	ND	0.024	0.020	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0049	0.0032	mg/kg	
100-41-4	Ethylbenzene	ND	0.0020	0.00017	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0049	0.00055	mg/kg	
591-78-6	2-Hexanone	ND	0.0049	0.0024	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0049	0.00027	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0049	0.00016	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0020	0.00039	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0049	0.0018	mg/kg	
74-95-3	Methylene bromide	ND	0.0049	0.00034	mg/kg	
75-09-2	Methylene chloride	ND	0.0020	0.0015	mg/kg	
91-20-3	Naphthalene	ND	0.0049	0.00077	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0049	0.00024	mg/kg	
100-42-5	Styrene	ND	0.0049	0.00020	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0049	0.00038	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0020	0.00029	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0020	0.00043	mg/kg	
108-88-3	Toluene	ND	0.0049	0.00024	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0049	0.00042	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0049	0.00035	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0020	0.00018	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0020	0.00034	mg/kg	
79-01-6	Trichloroethene	ND	0.0020	0.00046	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0020	0.0010	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0049	0.00038	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0049	0.00020	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0049	0.00013	mg/kg	
108-05-4	Vinyl Acetate [a]	ND	0.0049	0.0012	mg/kg	
75-01-4	Vinyl chloride	ND	0.0020	0.00056	mg/kg	
	m,p-Xylene	ND	0.0020	0.00028	mg/kg	
95-47-6	o-Xylene	ND	0.0020	0.00020	mg/kg	
1330-20-7	Xylene (total)	ND	0.0020	0.00020	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:	VMP59-082713(2-4')		
Lab Sample ID:	MC23880-3	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	83.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
106-97-8	Butane	5.10	.05	mg/kg	JN
78-78-4	Butane, 2-methyl-	6.08	.039	mg/kg	JN
109-66-0	Pentane	6.50	.015	mg/kg	JN
107-83-5	Pentane, 2-methyl-	7.83	.021	mg/kg	JN
16747-25-4	Hexane, 2,2,3-trimethyl-	8.15	.0094	mg/kg	JN
108-08-7	Pentane, 2,4-dimethyl-	9.13	.013	mg/kg	JN
565-59-3	Pentane, 2,3-dimethyl-	9.99	.016	mg/kg	JN
594-82-1	Butane, 2,2,3,3-tetramethyl-	10.43	.017	mg/kg	JN
589-53-7	Heptane, 4-methyl-	11.63	.0076	mg/kg	JN
560-21-4	Pentane, 2,3,3-trimethyl-	11.78	.009	mg/kg	JN
	Total TIC, Volatile		.197	mg/kg	J

(a) Initial Calibration Verification 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:	VMP59-082713(2-4')		
Lab Sample ID:	MC23880-3	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8015	**Percent Solids:**	83.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH31102.D	1	08/29/13	TB	n/a	n/a	GBH1818
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.00 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	11	2.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	85%		61-116%

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:	VMP59-082713(23-25.5')		
Lab Sample ID:	MC23880-4	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	88.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M58840.D	1	08/29/13	KD	n/a	n/a	MSM2029
Run #2							

	Initial Weight	Final Volume
Run #1	4.50 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.013	0.0049	mg/kg	
107-02-8	Acrolein	ND	0.031	0.0047	mg/kg	
107-13-1	Acrylonitrile	ND	0.031	0.0017	mg/kg	
71-43-2	Benzene	0.0014	0.00063	0.00031	mg/kg	
108-86-1	Bromobenzene	ND	0.0063	0.00034	mg/kg	
74-97-5	Bromochloromethane	ND	0.0063	0.00073	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0025	0.00045	mg/kg	
75-25-2	Bromoform	ND	0.0025	0.00037	mg/kg	
74-83-9	Bromomethane	ND	0.0025	0.0012	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0063	0.0039	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0063	0.00022	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0063	0.00020	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0063	0.00045	mg/kg	
75-15-0	Carbon disulfide	ND	0.0063	0.00019	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0025	0.0015	mg/kg	
108-90-7	Chlorobenzene	ND	0.0025	0.00034	mg/kg	
75-00-3	Chloroethane	ND	0.0063	0.00075	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	0.0063	0.0059	mg/kg	
67-66-3	Chloroform	ND	0.0025	0.00036	mg/kg	
74-87-3	Chloromethane	ND	0.0063	0.0015	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0063	0.00051	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0063	0.00055	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0025	0.00053	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0025	0.00026	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0025	0.00028	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0025	0.00025	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0025	0.0014	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0025	0.00042	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0025	0.00068	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0025	0.00065	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0025	0.00064	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0025	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:	VMP59-082713(23-25.5')		
Lab Sample ID:	MC23880-4	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	88.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.0025	0.00053	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0063	0.00056	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0063	0.00082	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0063	0.00029	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0025	0.00036	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0025	0.00037	mg/kg	
123-91-1	1,4-Dioxane	ND	0.031	0.026	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0063	0.0042	mg/kg	
100-41-4	Ethylbenzene	0.0059	0.0025	0.00022	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0063	0.00071	mg/kg	
591-78-6	2-Hexanone	ND	0.0063	0.0031	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0063	0.00035	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0063	0.00020	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0025	0.00050	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0063	0.0023	mg/kg	
74-95-3	Methylene bromide	ND	0.0063	0.00044	mg/kg	
75-09-2	Methylene chloride	ND	0.0025	0.0019	mg/kg	
91-20-3	Naphthalene	ND	0.0063	0.00099	mg/kg	
103-65-1	n-Propylbenzene	0.00055	0.0063	0.00030	mg/kg	J
100-42-5	Styrene	ND	0.0063	0.00026	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0063	0.00048	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0025	0.00037	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0025	0.00056	mg/kg	
108-88-3	Toluene	0.0049	0.0063	0.00031	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0063	0.00054	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0063	0.00045	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0025	0.00023	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0025	0.00044	mg/kg	
79-01-6	Trichloroethene	ND	0.0025	0.00059	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0025	0.0013	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0063	0.00048	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	0.00078	0.0063	0.00026	mg/kg	J
108-67-8	1,3,5-Trimethylbenzene	0.00041	0.0063	0.00016	mg/kg	J
108-05-4	Vinyl Acetate [a]	ND	0.0063	0.0016	mg/kg	
75-01-4	Vinyl chloride	ND	0.0025	0.00071	mg/kg	
	m,p-Xylene	0.0014	0.0025	0.00036	mg/kg	J
95-47-6	o-Xylene	0.00054	0.0025	0.00026	mg/kg	J
1330-20-7	Xylene (total)	0.0019	0.0025	0.00026	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:	VMP59-082713(23-25.5')		
Lab Sample ID:	MC23880-4	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	88.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	96%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
78-78-4	Butane, 2-methyl-	6.08	.023	mg/kg	JN
109-66-0	Pentane	6.49	.017	mg/kg	JN
107-83-5	Pentane, 2-methyl-	7.85	.012	mg/kg	JN
96-14-0	Pentane, 3-methyl-	8.15	.0075	mg/kg	JN
110-54-3	Hexane	8.47	.011	mg/kg	JN
110-82-7	Cyclohexane	9.17	.0073	mg/kg	JN
	Total TIC, Volatile		.0778	mg/kg	J

(a) Initial Calibration Verification 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:	VMP59-082713(23-25.5')		
Lab Sample ID:	MC23880-4	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8015	**Percent Solids:**	88.6
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH31103.D	1	08/29/13	TB	n/a	n/a	GBH1818
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.76 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	4.98	13	2.8	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	85%		61-116%

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:	VMP59-082713(45.5-48')		
Lab Sample ID:	MC23880-5	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	74.7
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M58841.D	1	08/29/13	KD	n/a	n/a	MSM2029
Run #2							

	Initial Weight	Final Volume
Run #1	5.83 g	5.0 ml
Run #2		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.011	0.0045	mg/kg	
107-02-8	Acrolein	ND	0.029	0.0043	mg/kg	
107-13-1	Acrylonitrile	ND	0.029	0.0015	mg/kg	
71-43-2	Benzene	0.00076	0.00057	0.00028	mg/kg	
108-86-1	Bromobenzene	ND	0.0057	0.00032	mg/kg	
74-97-5	Bromochloromethane	ND	0.0057	0.00067	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0023	0.00042	mg/kg	
75-25-2	Bromoform	ND	0.0023	0.00033	mg/kg	
74-83-9	Bromomethane	ND	0.0023	0.0011	mg/kg	
78-93-3	2-Butanone (MEK)	ND	0.0057	0.0035	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0057	0.00020	mg/kg	
135-98-8	sec-Butylbenzene	0.00054	0.0057	0.00018	mg/kg	J
98-06-6	tert-Butylbenzene	ND	0.0057	0.00041	mg/kg	
75-15-0	Carbon disulfide	0.00032	0.0057	0.00017	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0023	0.0013	mg/kg	
108-90-7	Chlorobenzene	ND	0.0023	0.00031	mg/kg	
75-00-3	Chloroethane	ND	0.0057	0.00069	mg/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	0.0057	0.0054	mg/kg	
67-66-3	Chloroform	ND	0.0023	0.00033	mg/kg	
74-87-3	Chloromethane	ND	0.0057	0.0014	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0057	0.00047	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0057	0.00051	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0023	0.00049	mg/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.0023	0.00024	mg/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.0023	0.00026	mg/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.0023	0.00023	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0023	0.0013	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0023	0.00038	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0023	0.00062	mg/kg	
75-35-4	1,1-Dichloroethene	ND	0.0023	0.00060	mg/kg	
156-59-2	cis-1,2-Dichloroethene	ND	0.0023	0.00058	mg/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.0023	0.00051	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:	VMP59-082713(45.5-48')		
Lab Sample ID:	MC23880-5	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	74.7
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
78-87-5	1,2-Dichloropropane	ND	0.0023	0.00048	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0057	0.00051	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0057	0.00075	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0057	0.00027	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0023	0.00033	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0023	0.00034	mg/kg	
123-91-1	1,4-Dioxane	ND	0.029	0.024	mg/kg	
97-63-2	Ethyl methacrylate	ND	0.0057	0.0038	mg/kg	
100-41-4	Ethylbenzene	0.0011	0.0023	0.00020	mg/kg	J
87-68-3	Hexachlorobutadiene	ND	0.0057	0.00065	mg/kg	
591-78-6	2-Hexanone	ND	0.0057	0.0028	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0057	0.00032	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0057	0.00018	mg/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.0023	0.00046	mg/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	0.0057	0.0021	mg/kg	
74-95-3	Methylene bromide	ND	0.0057	0.00040	mg/kg	
75-09-2	Methylene chloride	ND	0.0023	0.0018	mg/kg	
91-20-3	Naphthalene	ND	0.0057	0.00090	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0057	0.00028	mg/kg	
100-42-5	Styrene	ND	0.0057	0.00024	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0057	0.00044	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0023	0.00034	mg/kg	
127-18-4	Tetrachloroethene	ND	0.0023	0.00051	mg/kg	
108-88-3	Toluene	0.0012	0.0057	0.00028	mg/kg	J
87-61-6	1,2,3-Trichlorobenzene	ND	0.0057	0.00050	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0057	0.00042	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0023	0.00021	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0023	0.00040	mg/kg	
79-01-6	Trichloroethene	ND	0.0023	0.00054	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0023	0.0012	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0057	0.00044	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	0.0016	0.0057	0.00024	mg/kg	J
108-67-8	1,3,5-Trimethylbenzene	0.0020	0.0057	0.00015	mg/kg	J
108-05-4	Vinyl Acetate [a]	ND	0.0057	0.0014	mg/kg	
75-01-4	Vinyl chloride	ND	0.0023	0.00065	mg/kg	
	m,p-Xylene	0.0013	0.0023	0.00033	mg/kg	J
95-47-6	o-Xylene	0.00032	0.0023	0.00023	mg/kg	J
1330-20-7	Xylene (total)	0.0016	0.0023	0.00023	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:	VMP59-082713(45.5-48')		
Lab Sample ID:	MC23880-5	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8260B	**Percent Solids:**	74.7
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

VOA Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	85%		70-130%
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	101%		70-130%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
78-78-4	Butane, 2-methyl-	6.07	.27	mg/kg	JN
2402-06-4	Cyclopropane, 1,2-dimethyl-, trans-	6.91	.017	mg/kg	JN
75-83-2	Butane, 2,2-dimethyl-	7.21	.0084	mg/kg	JN
107-83-5	Pentane, 2-methyl-	7.83	.11	mg/kg	JN
96-14-0	Pentane, 3-methyl-	8.15	.07	mg/kg	JN
108-08-7	Pentane, 2,4-dimethyl-	9.13	.067	mg/kg	JN
110-82-7	Cyclohexane	9.92	.02	mg/kg	JN
540-84-1	Pentane, 2,2,4-trimethyl-	10.43	.1	mg/kg	JN
108-87-2	Cyclohexane, methyl-	11.18	.057	mg/kg	JN
565-75-3	Pentane, 2,3,4-trimethyl-	11.63	.057	mg/kg	JN
560-21-4	Pentane, 2,3,3-trimethyl-	11.78	.066	mg/kg	JN
1678-91-7	Cyclohexane, ethyl-	13.20	.0095	mg/kg	JN
3728-56-1	1-Ethyl-4-methylcyclohexane	14.09	.012	mg/kg	JN
	Total TIC, Volatile		.8639	mg/kg	J

(a) Initial Calibration Verification 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:	VMP59-082713(45.5-48')		
Lab Sample ID:	MC23880-5	**Date Sampled:**	08/27/13
Matrix:	SO - Soil	**Date Received:**	08/28/13
Method:	SW846 8015	**Percent Solids:**	74.7
Project:	URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	BH31108.D	1	08/29/13	TB	n/a	n/a	GBH1818
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.59 g	10.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	11.5	14	3.0	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	2,3,4-Trifluorotoluene	85%		61-116%

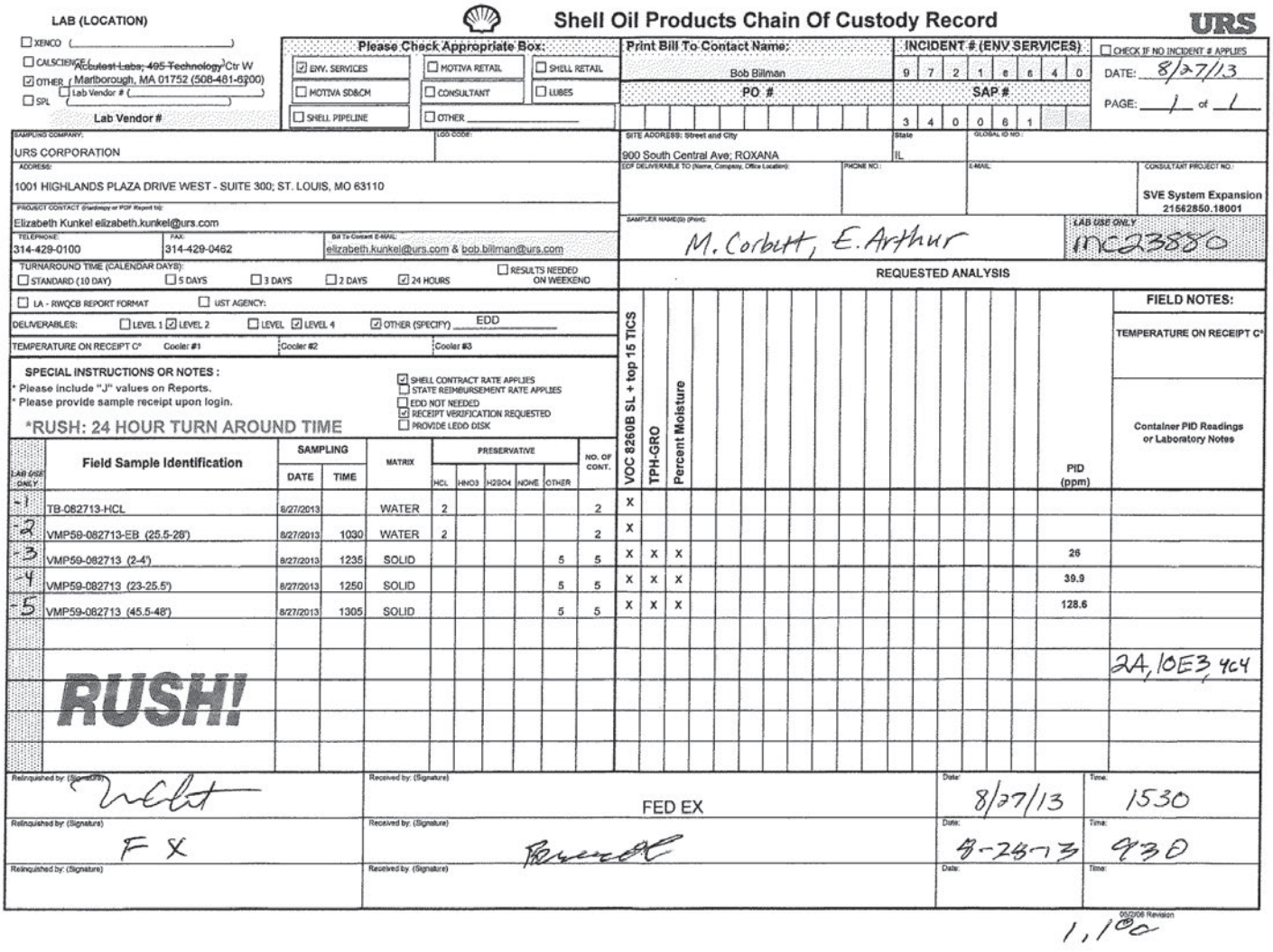
ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

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



LAB (LOCATION)

☐ XENCO (_____)
☐ CALSCIENCE (Accutest Labs; 495 Technology Ctr W
☑ OTHER (Marlborough, MA 01752 (508-481-6200)
☐ SPL (_____)
Lab Vendor # (_____)
Lab Vendor #

Shell Oil Products Chain Of Custody Record

URS

Please Check Appropriate Box:

☑ ENV. SERVICES	☐ MOTIVA RETAIL	☐ SHELL RETAIL
☐ MOTIVA SD&CM	☐ CONSULTANT	☐ LUBES
☐ SHELL PIPELINE	☐ OTHER _____	

Print Bill To Contact Name: Bob Billman

INCIDENT # (ENV SERVICES): 9 7 2 1 e 6 4 0

☐ CHECK IF NO INCIDENT # APPLIES

DATE: 8/27/13

PAGE: 1 of 1

PO #

SAP #: 3 4 0 0 6 1

SAMPLING COMPANY: URS CORPORATION

LOG CODE:

SITE ADDRESS: Street and City: 900 South Central Ave; ROXANA

State: IL

GLOBAL ID NO.:

ADDRESS: 1001 HIGHLANDS PLAZA DRIVE WEST - SUITE 300; ST. LOUIS, MO 63110

EDF DELIVERABLE TO (Name, Company, Office Location):

PHONE NO.:

E-MAIL:

CONSULTANT PROJECT NO.: SVE System Expansion 21562850.18001

PROJECT CONTACT (Hardcopy or PDF Report to): Elizabeth Kunkel elizabeth.kunkel@urs.com

TELEPHONE: 314-429-0100

FAX: 314-429-0462

Bill To Content E-MAIL: elizabeth.kunkel@urs.com & bob.billman@urs.com

SAMPLER NAME(S) (Print): M. Corbett, E. Arthur

LAB USE ONLY: MC23880

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

REQUESTED ANALYSIS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

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

TEMPERATURE ON RECEIPT C° Cooler #1 Cooler #2 Cooler #3

SPECIAL INSTRUCTIONS OR NOTES :
* Please include "J" values on Reports.
* Please provide sample receipt upon login.
*RUSH: 24 HOUR TURN AROUND TIME

☑ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☑ RECEIPT VERIFICATION REQUESTED
☐ PROVIDE LEDD DISK

FIELD NOTES:
TEMPERATURE ON RECEIPT C°
Container PID Readings or Laboratory Notes

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	VOC 8260B SL + top 15 TICS	TPH-GRO	Percent Moisture	PID (ppm)	Container PID Readings or Laboratory Notes
-1	TB-082713-HCL	8/27/2013		WATER	2					2	X				
-2	VMP59-082713-EB (25.5-26')	8/27/2013	1030	WATER	2					2	X				
-3	VMP59-082713 (2-4')	8/27/2013	1235	SOLID					5	5	X	X	X	26	
-4	VMP59-082713 (23-25.5')	8/27/2013	1250	SOLID					5	5	X	X	X	39.9	
-5	VMP59-082713 (45.5-48')	8/27/2013	1305	SOLID					5	5	X	X	X	128.6	
															2A, 10E3, 4C4

RUSH!

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	FED EX	8/27/13	1530
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
F X		8-28-13	930
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

06/2006 Revision

1,10a

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MC23880: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC23880 **Client:** URS **Immediate Client Services Action Required:** No

Date / Time Received: 8/28/2013 **Delivery Method:** **Client Service Action Required at Login:** No

Project: 900 SOUTH CENTRAL **No. Coolers:** 1 **Airbill #'s:**

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. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

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
www/accutest.com

MC23880: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Shell Oil

Job No: MC23880

URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL
Project No: 21562850.18001

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
MC23880-1 Collected: 27-AUG-13 00:00 By: MCEA Received: 28-AUG-13 By: TB-082713-HCL						
MC23880-1	SW846 8260B	29-AUG-13 11:34	JB			V8260SL+
MC23880-2 Collected: 27-AUG-13 10:30 By: MCEA Received: 28-AUG-13 By: VMP59-082713-EB(25.5-28')						
MC23880-2	SW846 8260B	29-AUG-13 12:03	JB			V8260SL+
MC23880-3 Collected: 27-AUG-13 12:35 By: MCEA Received: 28-AUG-13 By: VMP59-082713(2-4')						
MC23880-3	SM21 2540 B MOD.	28-AUG-13	MC			%SOL
MC23880-3	SW846 8015	29-AUG-13 05:43	TB			V8015GRO
MC23880-3	SW846 8260B	29-AUG-13 10:58	KD			V8260SL+
MC23880-4 Collected: 27-AUG-13 12:50 By: MCEA Received: 28-AUG-13 By: VMP59-082713(23-25.5')						
MC23880-4	SM21 2540 B MOD.	28-AUG-13	MC			%SOL
MC23880-4	SW846 8015	29-AUG-13 06:18	TB			V8015GRO
MC23880-4	SW846 8260B	29-AUG-13 11:28	KD			V8260SL+
MC23880-5 Collected: 27-AUG-13 13:05 By: MCEA Received: 28-AUG-13 By: VMP59-082713(45.5-48')						
MC23880-5	SM21 2540 B MOD.	28-AUG-13	MC			%SOL
MC23880-5	SW846 8015	29-AUG-13 09:13	TB			V8015GRO
MC23880-5	SW846 8260B	29-AUG-13 11:57	KD			V8260SL+

SGS Accutest Internal Chain of Custody

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL
Received: 08/28/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC23880-1.2	VOC Ref #4	Jaclyn Bergeron	08/29/13 10:41	Retrieve from Storage
MC23880-1.2	Jaclyn Bergeron	GCMSN	08/29/13 10:41	Load on Instrument
MC23880-1.2	GCMSN	Jaclyn Bergeron	09/04/13 09:22	Unload from Instrument
MC23880-1.2	Jaclyn Bergeron	VOC Ref #4	09/04/13 09:23	Return to Storage
MC23880-1.2	Scott Parsick		10/04/13 13:50	Disposed
MC23880-2.1	VOC Ref #4	Jaclyn Bergeron	08/29/13 10:41	Retrieve from Storage
MC23880-2.1	Jaclyn Bergeron	GCMSN	08/29/13 10:41	Load on Instrument
MC23880-2.1	GCMSN	Jaclyn Bergeron	09/04/13 09:22	Unload from Instrument
MC23880-2.1	Jaclyn Bergeron	VOC Ref #4	09/04/13 09:23	Return to Storage
MC23880-2.1	Scott Parsick		10/04/13 13:50	Disposed
MC23880-3.1	Walk In Ref #5	Miranda Cardullo	08/28/13 13:42	Retrieve from Storage
MC23880-3.1	Miranda Cardullo	Walk In Ref #5	08/28/13 15:03	Return to Storage
MC23880-3.1	Scott Parsick		10/04/13 13:50	Disposed
MC23880-3.4	VOC Ref #10	Krysten Dufort	08/29/13 09:27	Retrieve from Storage
MC23880-3.4	Krysten Dufort	GCMSM	08/29/13 09:27	Load on Instrument
MC23880-3.4	GCMSM	Krysten Dufort	08/30/13 09:13	Unload from Instrument
MC23880-3.4	Krysten Dufort	VOC Ref #10	08/30/13 09:13	Return to Storage
MC23880-3.4	Scott Parsick		10/04/13 13:50	Disposed
MC23880-3.5	VOC Ref #10	Jaime Maslowski	08/28/13 12:10	Retrieve from Storage
MC23880-3.5	Jaime Maslowski	VOC Ref #10	08/29/13 11:41	Return to Storage
MC23880-3.5	Scott Parsick		10/04/13 13:50	Disposed
MC23880-4.1	Walk In Ref #5	Miranda Cardullo	08/28/13 13:42	Retrieve from Storage
MC23880-4.1	Miranda Cardullo	Walk In Ref #5	08/28/13 15:03	Return to Storage
MC23880-4.1	Scott Parsick		10/04/13 13:50	Disposed
MC23880-4.3	VOC Ref #10	Krysten Dufort	08/29/13 09:27	Retrieve from Storage
MC23880-4.3	Krysten Dufort	GCMSM	08/29/13 09:27	Load on Instrument
MC23880-4.3	GCMSM	Krysten Dufort	08/30/13 09:13	Unload from Instrument
MC23880-4.3	Krysten Dufort	VOC Ref #10	08/30/13 09:13	Return to Storage
MC23880-4.3	Scott Parsick		10/04/13 13:50	Disposed
MC23880-4.5	VOC Ref #10	Jaime Maslowski	08/28/13 12:10	Retrieve from Storage
MC23880-4.5	Jaime Maslowski	VOC Ref #10	08/29/13 11:41	Return to Storage
MC23880-4.5	Scott Parsick		10/04/13 13:50	Disposed
MC23880-5.1	Walk In Ref #5	Miranda Cardullo	08/28/13 13:42	Retrieve from Storage
MC23880-5.1	Miranda Cardullo	Walk In Ref #5	08/28/13 15:03	Return to Storage
MC23880-5.1	Scott Parsick		10/04/13 13:50	Disposed

SGS Accutest Internal Chain of Custody

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL
Received: 08/28/13

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
MC23880-5.4	VOC Ref #10	Krysten Dufort	08/29/13 09:27	Retrieve from Storage
MC23880-5.4	Krysten Dufort	GCMSM	08/29/13 09:27	Load on Instrument
MC23880-5.4	GCMSM	Krysten Dufort	08/30/13 09:13	Unload from Instrument
MC23880-5.4	Krysten Dufort	VOC Ref #10	08/30/13 09:13	Return to Storage
MC23880-5.4	Scott Parsick		10/04/13 13:50	Disposed
MC23880-5.5	VOC Ref #10	Jaime Maslowski	08/28/13 12:10	Retrieve from Storage
MC23880-5.5	Jaime Maslowski	VOC Ref #10	08/29/13 11:41	Return to Storage
MC23880-5.5	Scott Parsick		10/04/13 13:50	Disposed

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: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2029-MB	M58838.D	1	08/29/13	KD	n/a	n/a	MSM2029

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	3.9	ug/kg	
107-02-8	Acrolein	ND	25	3.8	ug/kg	
107-13-1	Acrylonitrile	ND	25	1.3	ug/kg	
71-43-2	Benzene	ND	0.50	0.25	ug/kg	
108-86-1	Bromobenzene	ND	5.0	0.27	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.58	ug/kg	
75-27-4	Bromodichloromethane	ND	2.0	0.36	ug/kg	
75-25-2	Bromoform	ND	2.0	0.29	ug/kg	
74-83-9	Bromomethane	ND	2.0	0.97	ug/kg	
78-93-3	2-Butanone (MEK)	ND	5.0	3.1	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	0.17	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	0.16	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	0.36	ug/kg	
75-15-0	Carbon disulfide	ND	5.0	0.15	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	1.2	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.27	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.60	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	4.7	ug/kg	
67-66-3	Chloroform	ND	2.0	0.29	ug/kg	
74-87-3	Chloromethane	ND	5.0	1.2	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	0.41	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	0.44	ug/kg	
124-48-1	Dibromochloromethane	ND	2.0	0.43	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	2.0	0.21	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	2.0	0.22	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	2.0	0.20	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.1	ug/kg	
75-34-3	1,1-Dichloroethane	ND	2.0	0.33	ug/kg	
107-06-2	1,2-Dichloroethane	ND	2.0	0.54	ug/kg	
75-35-4	1,1-Dichloroethene	ND	2.0	0.52	ug/kg	
156-59-2	cis-1,2-Dichloroethene	ND	2.0	0.51	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	2.0	0.45	ug/kg	
78-87-5	1,2-Dichloropropane	ND	2.0	0.42	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	0.45	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	0.66	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	0.23	ug/kg	

Method Blank Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2029-MB	M58838.D	1	08/29/13	KD	n/a	n/a	MSM2029

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.29	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.29	ug/kg	
123-91-1	1,4-Dioxane	ND	25	21	ug/kg	
97-63-2	Ethyl methacrylate	ND	5.0	3.3	ug/kg	
100-41-4	Ethylbenzene	ND	2.0	0.18	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	0.57	ug/kg	
591-78-6	2-Hexanone	ND	5.0	2.4	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.28	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	0.16	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	2.0	0.40	ug/kg	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.8	ug/kg	
74-95-3	Methylene bromide	ND	5.0	0.35	ug/kg	
75-09-2	Methylene chloride	ND	2.0	1.5	ug/kg	
91-20-3	Naphthalene	ND	5.0	0.79	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	0.24	ug/kg	
100-42-5	Styrene	ND	5.0	0.21	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.39	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.29	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.44	ug/kg	
108-88-3	Toluene	ND	5.0	0.24	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.43	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.36	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.18	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.35	ug/kg	
79-01-6	Trichloroethene	ND	2.0	0.47	ug/kg	
75-69-4	Trichlorofluoromethane	ND	2.0	1.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.39	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.21	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.13	ug/kg	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/kg	
75-01-4	Vinyl chloride	ND	2.0	0.57	ug/kg	
	m,p-Xylene	ND	2.0	0.29	ug/kg	
95-47-6	o-Xylene	ND	2.0	0.20	ug/kg	
1330-20-7	Xylene (total)	ND	2.0	0.20	ug/kg	

Method Blank Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2029-MB	M58838.D	1	08/29/13	KD	n/a	n/a	MSM2029

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	81%	70-130%
2037-26-5	Toluene-D8	84%	70-130%
460-00-4	4-Bromofluorobenzene	91%	70-130%

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

Method Blank Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2988-MB	N79861.D	1	08/29/13	JB	n/a	n/a	MSN2988

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

MC23880-1, MC23880-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.8	ug/l	
107-02-8	Acrolein	ND	25	6.3	ug/l	
107-13-1	Acrylonitrile	ND	5.0	3.5	ug/l	
71-43-2	Benzene	ND	0.50	0.45	ug/l	
108-86-1	Bromobenzene	ND	5.0	0.44	ug/l	
74-97-5	Bromochloromethane	ND	5.0	0.64	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.33	ug/l	
75-25-2	Bromoform	ND	1.0	0.42	ug/l	
74-83-9	Bromomethane	ND	2.0	1.5	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	1.6	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.54	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.58	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.87	ug/l	
75-15-0	Carbon disulfide	ND	5.0	0.59	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.62	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.48	ug/l	
75-00-3	Chloroethane	ND	2.0	0.84	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.1	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
74-87-3	Chloromethane	ND	2.0	1.4	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.55	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.48	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.33	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.35	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.26	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.2	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.37	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.35	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.67	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.54	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.45	ug/l	
142-28-9	1,3-Dichloropropane	ND	5.0	0.97	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	1.3	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	0.63	ug/l	

Method Blank Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2988-MB	N79861.D	1	08/29/13	JB	n/a	n/a	MSN2988

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

MC23880-1, MC23880-2

CAS No.	Compound	Result	RL	MDL	Units	Q
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.22	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.29	ug/l	
123-91-1	1,4-Dioxane	ND	25	16	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	0.81	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.38	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	1.3	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.3	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.64	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.55	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.43	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	1.3	ug/l	
74-95-3	Methylene bromide	ND	5.0	0.43	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.41	ug/l	
91-20-3	Naphthalene	ND	5.0	0.79	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.59	ug/l	
100-42-5	Styrene	ND	5.0	0.49	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.46	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.42	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.46	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.76	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.45	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.94	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.49	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.45	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.61	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.70	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.47	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.1	ug/l	
108-05-4	Vinyl Acetate	ND	5.0	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.61	ug/l	
	m,p-Xylene	ND	1.0	0.70	ug/l	
95-47-6	o-Xylene	ND	1.0	0.41	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.41	ug/l	

Method Blank Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2988-MB	N79861.D	1	08/29/13	JB	n/a	n/a	MSN2988

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

MC23880-1, MC23880-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	106%	70-130%

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

Blank Spike Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2029-BS	M58835.D	1	08/29/13	KD	n/a	n/a	MSM2029

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	50	80.9	162* [a]	70-130
107-02-8	Acrolein	250	397	159* [a]	70-130
107-13-1	Acrylonitrile	50	50.4	101	70-130
71-43-2	Benzene	50	51.5	103	70-130
108-86-1	Bromobenzene	50	55.1	110	70-130
74-97-5	Bromochloromethane	50	61.5	123	70-130
75-27-4	Bromodichloromethane	50	54.5	109	70-130
75-25-2	Bromoform	50	66.3	133* [b]	70-130
74-83-9	Bromomethane	50	54.4	109	70-130
78-93-3	2-Butanone (MEK)	50	46.3	93	70-130
104-51-8	n-Butylbenzene	50	51.4	103	70-130
135-98-8	sec-Butylbenzene	50	51.9	104	70-130
98-06-6	tert-Butylbenzene	50	50.5	101	70-130
75-15-0	Carbon disulfide	50	57.0	114	70-130
56-23-5	Carbon tetrachloride	50	59.2	118	70-130
108-90-7	Chlorobenzene	50	57.2	114	70-130
75-00-3	Chloroethane	50	54.6	109	70-130
110-75-8	2-Chloroethyl vinyl ether	50	37.4	75	10-160
67-66-3	Chloroform	50	55.5	111	70-130
74-87-3	Chloromethane	50	59.0	118	70-130
95-49-8	o-Chlorotoluene	50	49.7	99	70-130
106-43-4	p-Chlorotoluene	50	51.5	103	70-130
124-48-1	Dibromochloromethane	50	62.7	125	70-130
95-50-1	1,2-Dichlorobenzene	50	52.0	104	70-130
541-73-1	1,3-Dichlorobenzene	50	51.9	104	70-130
106-46-7	1,4-Dichlorobenzene	50	53.7	107	70-130
75-71-8	Dichlorodifluoromethane	50	57.9	116	70-130
75-34-3	1,1-Dichloroethane	50	56.4	113	70-130
107-06-2	1,2-Dichloroethane	50	51.1	102	70-130
75-35-4	1,1-Dichloroethene	50	58.3	117	70-130
156-59-2	cis-1,2-Dichloroethene	50	51.8	104	70-130
156-60-5	trans-1,2-Dichloroethene	50	54.2	108	70-130
78-87-5	1,2-Dichloropropane	50	51.6	103	70-130
142-28-9	1,3-Dichloropropane	50	55.0	110	70-130
594-20-7	2,2-Dichloropropane	50	54.9	110	70-130
563-58-6	1,1-Dichloropropene	50	53.4	107	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2029-BS	M58835.D	1	08/29/13	KD	n/a	n/a	MSM2029

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
10061-01-5	cis-1,3-Dichloropropene	50	51.6	103	70-130
10061-02-6	trans-1,3-Dichloropropene	50	55.3	111	70-130
123-91-1	1,4-Dioxane	250	258	103	70-130
97-63-2	Ethyl methacrylate	50	50.7	101	76-141
100-41-4	Ethylbenzene	50	57.2	114	70-130
87-68-3	Hexachlorobutadiene	50	50.1	100	70-130
591-78-6	2-Hexanone	50	45.3	91	70-130
98-82-8	Isopropylbenzene	50	51.8	104	70-130
99-87-6	p-Isopropyltoluene	50	55.6	111	70-130
1634-04-4	Methyl Tert Butyl Ether	50	51.1	102	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	48.1	96	70-130
74-95-3	Methylene bromide	50	58.5	117	70-130
75-09-2	Methylene chloride	50	55.1	110	70-130
91-20-3	Naphthalene	50	53.7	107	70-130
103-65-1	n-Propylbenzene	50	49.6	99	70-130
100-42-5	Styrene	50	57.7	115	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	61.5	123	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	50.7	101	70-130
127-18-4	Tetrachloroethene	50	62.7	125	70-130
108-88-3	Toluene	50	53.7	107	70-130
87-61-6	1,2,3-Trichlorobenzene	50	52.1	104	70-130
120-82-1	1,2,4-Trichlorobenzene	50	51.0	102	70-130
71-55-6	1,1,1-Trichloroethane	50	56.5	113	70-130
79-00-5	1,1,2-Trichloroethane	50	52.7	105	70-130
79-01-6	Trichloroethene	50	50.9	102	70-130
75-69-4	Trichlorofluoromethane	50	53.4	107	70-130
96-18-4	1,2,3-Trichloropropane	50	51.5	103	70-130
95-63-6	1,2,4-Trimethylbenzene	50	52.7	105	70-130
108-67-8	1,3,5-Trimethylbenzene	50	52.5	105	70-130
108-05-4	Vinyl Acetate	50	38.0	76	70-130
75-01-4	Vinyl chloride	50	39.8	80	70-130
	m,p-Xylene	100	114	114	70-130
95-47-6	o-Xylene	50	57.3	115	70-130
1330-20-7	Xylene (total)	150	171	114	70-130

* = Outside of Control Limits.

Blank Spike Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSM2029-BS	M58835.D	1	08/29/13	KD	n/a	n/a	MSM2029

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	80%	70-130%
2037-26-5	Toluene-D8	83%	70-130%
460-00-4	4-Bromofluorobenzene	84%	70-130%

(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: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2988-BS	N79858.D	1	08/29/13	JB	n/a	n/a	MSN2988
MSN2988-BSD	N79859.D	1	08/29/13	JB	n/a	n/a	MSN2988

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

MC23880-1, MC23880-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	63.8	128	68.0	136* a	6	70-130/25
107-02-8	Acrolein	250	343	137* b	380	152* a	10	70-130/25
107-13-1	Acrylonitrile	50	56.0	112	58.9	118	5	70-130/25
71-43-2	Benzene	50	52.6	105	58.6	117	11	70-130/25
108-86-1	Bromobenzene	50	50.3	101	54.1	108	7	70-130/25
74-97-5	Bromochloromethane	50	48.8	98	51.9	104	6	70-130/25
75-27-4	Bromodichloromethane	50	66.7	133* b	73.2	146* b	9	70-130/25
75-25-2	Bromoform	50	46.9	94	53.0	106	12	70-130/25
74-83-9	Bromomethane	50	52.5	105	59.3	119	12	70-130/25
78-93-3	2-Butanone (MEK)	50	51.6	103	50.1	100	3	70-130/25
104-51-8	n-Butylbenzene	50	49.6	99	53.9	108	8	70-130/25
135-98-8	sec-Butylbenzene	50	54.2	108	60.2	120	10	70-130/25
98-06-6	tert-Butylbenzene	50	61.2	122	66.5	133* b	8	70-130/25
75-15-0	Carbon disulfide	50	51.8	104	57.4	115	10	70-130/25
56-23-5	Carbon tetrachloride	50	60.9	122	67.8	136* b	11	70-130/25
108-90-7	Chlorobenzene	50	50.0	100	54.9	110	9	70-130/25
75-00-3	Chloroethane	50	52.0	104	57.1	114	9	70-130/25
110-75-8	2-Chloroethyl vinyl ether	50	52.8	106	57.2	114	8	70-130/25
67-66-3	Chloroform	50	60.5	121	66.1	132* b	9	70-130/25
74-87-3	Chloromethane	50	70.1	140* b	70.9	142* a	10	70-130/25
95-49-8	o-Chlorotoluene	50	54.7	109	61.8	124	12	70-130/25
106-43-4	p-Chlorotoluene	50	56.7	113	63.5	127	11	70-130/25
124-48-1	Dibromochloromethane	50	47.7	95	53.6	107	12	70-130/25
95-50-1	1,2-Dichlorobenzene	50	50.7	101	56.2	112	10	70-130/25
541-73-1	1,3-Dichlorobenzene	50	48.3	97	54.0	108	11	70-130/25
106-46-7	1,4-Dichlorobenzene	50	46.5	93	50.6	101	8	70-130/25
75-71-8	Dichlorodifluoromethane	50	64.3	129	69.2	138* a	7	70-130/25
75-34-3	1,1-Dichloroethane	50	58.2	116	65.9	132* a	12	70-130/25
107-06-2	1,2-Dichloroethane	50	74.1	148* b	80.0	160* b	8	70-130/25
75-35-4	1,1-Dichloroethene	50	53.2	106	60.9	122	13	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	50.7	101	55.2	110	8	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	53.2	106	56.7	113	6	70-130/25
78-87-5	1,2-Dichloropropane	50	53.0	106	57.4	115	8	70-130/25
142-28-9	1,3-Dichloropropane	50	49.3	99	54.5	109	10	70-130/25
594-20-7	2,2-Dichloropropane	50	45.5	91	46.9	94	3	70-130/25
563-58-6	1,1-Dichloropropene	50	58.9	118	65.7	131* b	11	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2988-BS	N79858.D	1	08/29/13	JB	n/a	n/a	MSN2988
MSN2988-BSD	N79859.D	1	08/29/13	JB	n/a	n/a	MSN2988

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

MC23880-1, MC23880-2

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	48.2	96	52.2	104	8	70-130/25
10061-02-6	trans-1,3-Dichloropropene	50	51.7	103	55.7	111	7	70-130/25
123-91-1	1,4-Dioxane	250	252	101	289	116	14	70-130/25
97-63-2	Ethyl methacrylate	50	40.1	80	44.9	90	11	77-137/25
100-41-4	Ethylbenzene	50	50.6	101	56.2	112	10	70-130/25
87-68-3	Hexachlorobutadiene	50	52.8	106	58.1	116	10	70-130/25
591-78-6	2-Hexanone	50	60.7	121	62.7	125	3	70-130/25
98-82-8	Isopropylbenzene	50	54.9	110	61.4	123	11	70-130/25
99-87-6	p-Isopropyltoluene	50	52.2	104	57.3	115	9	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	43.1	86	46.4	93	7	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	65.2	130	71.0	142* [a]	9	70-130/25
74-95-3	Methylene bromide	50	56.2	112	60.4	121	7	70-130/25
75-09-2	Methylene chloride	50	50.5	101	57.0	114	12	70-130/25
91-20-3	Naphthalene	50	37.0	74	41.5	83	11	70-130/25
103-65-1	n-Propylbenzene	50	54.9	110	61.7	123	12	70-130/25
100-42-5	Styrene	50	46.2	92	52.2	104	12	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	49.7	99	56.0	112	12	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	47.5	95	55.2	110	15	70-130/25
127-18-4	Tetrachloroethene	50	50.3	101	54.8	110	9	70-130/25
108-88-3	Toluene	50	53.7	107	59.7	119	11	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	43.6	87	49.6	99	13	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	44.1	88	49.9	100	12	70-130/25
71-55-6	1,1,1-Trichloroethane	50	62.7	125	68.0	136* [b]	8	70-130/25
79-00-5	1,1,2-Trichloroethane	50	52.6	105	59.2	118	12	70-130/25
79-01-6	Trichloroethene	50	54.1	108	64.4	129	17	70-130/25
75-69-4	Trichlorofluoromethane	50	61.1	122	65.9	132* [a]	8	70-130/25
96-18-4	1,2,3-Trichloropropane	50	44.0	88	49.8	100	12	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	50.3	101	55.3	111	9	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	50.0	100	55.5	111	10	70-130/25
108-05-4	Vinyl Acetate	50	59.3	119	63.2	126	6	70-130/25
75-01-4	Vinyl chloride	50	48.4	97	54.0	108	11	70-130/25
	m,p-Xylene	100	101	101	113	113	11	70-130/25
95-47-6	o-Xylene	50	56.0	112	61.5	123	9	70-130/25
1330-20-7	Xylene (total)	150	157	105	175	117	11	70-130/25

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN2988-BS	N79858.D	1	08/29/13	JB	n/a	n/a	MSN2988
MSN2988-BSD	N79859.D	1	08/29/13	JB	n/a	n/a	MSN2988

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

MC23880-1, MC23880-2

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	98%	101%	70-130%
2037-26-5	Toluene-D8	106%	104%	70-130%
460-00-4	4-Bromofluorobenzene	95%	96%	70-130%

(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: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23880-5MS	M58842.D	1	08/29/13	KD	n/a	n/a	MSM2029
MC23880-5MSD	M58843.D	1	08/29/13	KD	n/a	n/a	MSM2029
MC23880-5	M58841.D	1	08/29/13	KD	n/a	n/a	MSM2029

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Compound	MC23880-5 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		69.3	57.4	83	67.6	58.5	87	2	70-130/30
107-02-8	Acrolein	ND		347	547	158* a	338	597	177* a	9	70-130/30
107-13-1	Acrylonitrile	ND		69.3	69.2	100	67.6	77.6	115	11	70-130/30
71-43-2	Benzene	0.76		69.3	59.4	85	67.6	64.5	94	8	70-130/30
108-86-1	Bromobenzene	ND		69.3	59.7	86	67.6	63.1	93	6	70-130/30
74-97-5	Bromochloromethane	ND		69.3	72.1	104	67.6	78.7	116	9	70-130/30
75-27-4	Bromodichloromethane	ND		69.3	62.7	90	67.6	66.8	99	6	70-130/30
75-25-2	Bromoform	ND		69.3	82.4	119	67.6	89.6	133* a	8	70-130/30
74-83-9	Bromomethane	ND		69.3	61.6	89	67.6	67.8	100	10	70-130/30
78-93-3	2-Butanone (MEK)	ND		69.3	54.8	79	67.6	71.7	106	27	70-130/30
104-51-8	n-Butylbenzene	ND		69.3	50.7	73	67.6	53.1	79	5	70-130/30
135-98-8	sec-Butylbenzene	0.54	J	69.3	54.0	77	67.6	56.7	83	5	70-130/30
98-06-6	tert-Butylbenzene	ND		69.3	53.7	77	67.6	57.1	84	6	70-130/30
75-15-0	Carbon disulfide	0.32	J	69.3	67.3	97	67.6	73.6	108	9	70-130/30
56-23-5	Carbon tetrachloride	ND		69.3	70.9	102	67.6	77.4	115	9	70-130/30
108-90-7	Chlorobenzene	ND		69.3	60.6	87	67.6	66.0	98	9	70-130/30
75-00-3	Chloroethane	ND		69.3	65.0	94	67.6	73.6	109	12	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		69.3	ND	0* a	67.6	ND	0* a	nc	10-160/30
67-66-3	Chloroform	ND		69.3	64.7	93	67.6	69.9	103	8	70-130/30
74-87-3	Chloromethane	ND		69.3	72.1	104	67.6	79.9	118	10	70-130/30
95-49-8	o-Chlorotoluene	ND		69.3	54.1	78	67.6	55.5	82	3	70-130/30
106-43-4	p-Chlorotoluene	ND		69.3	55.1	79	67.6	57.3	85	4	70-130/30
124-48-1	Dibromochloromethane	ND		69.3	73.2	106	67.6	79.0	117	8	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		69.3	51.7	75	67.6	53.3	79	3	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		69.3	52.6	76	67.6	54.1	80	3	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		69.3	55.0	79	67.6	57.1	84	4	70-130/30
75-71-8	Dichlorodifluoromethane	ND		69.3	78.5	113	67.6	88.8	131* a	12	70-130/30
75-34-3	1,1-Dichloroethane	ND		69.3	66.7	96	67.6	71.8	106	7	70-130/30
107-06-2	1,2-Dichloroethane	ND		69.3	62.1	90	67.6	66.8	99	7	70-130/30
75-35-4	1,1-Dichloroethene	ND		69.3	70.2	101	67.6	76.9	114	9	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		69.3	59.6	86	67.6	65.4	97	9	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		69.3	63.2	91	67.6	68.1	101	7	70-130/30
78-87-5	1,2-Dichloropropane	ND		69.3	60.0	87	67.6	63.5	94	6	70-130/30
142-28-9	1,3-Dichloropropane	ND		69.3	67.1	97	67.6	73.0	108	8	70-130/30
594-20-7	2,2-Dichloropropane	ND		69.3	64.2	93	67.6	68.7	102	7	70-130/30
563-58-6	1,1-Dichloropropene	ND		69.3	63.0	91	67.6	68.6	102	9	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23880-5MS	M58842.D	1	08/29/13	KD	n/a	n/a	MSM2029
MC23880-5MSD	M58843.D	1	08/29/13	KD	n/a	n/a	MSM2029
MC23880-5	M58841.D	1	08/29/13	KD	n/a	n/a	MSM2029

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Compound	MC23880-5 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		69.3	59.2	85	67.6	63.2	94	7	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		69.3	65.6	95	67.6	70.9	105	8	70-130/30
123-91-1	1,4-Dioxane	ND		347	465	134* [a]	338	486	144* [a]	4	70-130/30
97-63-2	Ethyl methacrylate	ND		69.3	70.5	102	67.6	74.8	111	6	41-160/30
100-41-4	Ethylbenzene	1.1	J	69.3	62.9	89	67.6	68.2	99	8	70-130/30
87-68-3	Hexachlorobutadiene	ND		69.3	44.4	64* [a]	67.6	47.4	70	7	70-130/30
591-78-6	2-Hexanone	ND		69.3	61.9	89	67.6	66.9	99	8	70-130/30
98-82-8	Isopropylbenzene	ND		69.3	58.0	84	67.6	60.8	90	5	70-130/30
99-87-6	p-Isopropyltoluene	ND		69.3	57.8	83	67.6	60.3	89	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		69.3	64.4	93	67.6	70.7	105	9	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		69.3	77.0	111	67.6	83.9	124	9	70-130/30
74-95-3	Methylene bromide	ND		69.3	72.8	105	67.6	79.2	117	8	70-130/30
75-09-2	Methylene chloride	ND		69.3	59.6	86	67.6	68.1	101	13	70-130/30
91-20-3	Naphthalene	ND		69.3	53.7	77	67.6	55.2	82	3	70-130/30
103-65-1	n-Propylbenzene	ND		69.3	54.3	78	67.6	57.2	85	5	70-130/30
100-42-5	Styrene	ND		69.3	59.1	85	67.6	65.2	96	10	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		69.3	66.1	95	67.6	71.5	106	8	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		69.3	71.0	102	67.6	73.1	108	3	70-130/30
127-18-4	Tetrachloroethene	ND		69.3	70.3	101	67.6	77.2	114	9	70-130/30
108-88-3	Toluene	1.2	J	69.3	62.4	88	67.6	67.8	99	8	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		69.3	42.9	62* [a]	67.6	43.7	65* [a]	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		69.3	44.1	64* [a]	67.6	45.1	67* [a]	2	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		69.3	67.5	97	67.6	73.1	108	8	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		69.3	68.0	98	67.6	73.5	109	8	70-130/30
79-01-6	Trichloroethene	ND		69.3	59.8	86	67.6	64.6	96	8	70-130/30
75-69-4	Trichlorofluoromethane	ND		69.3	66.2	95	67.6	73.2	108	10	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		69.3	77.9	112	67.6	80.3	119	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	1.6	J	69.3	56.4	79	67.6	59.6	86	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	2.0	J	69.3	57.3	80	67.6	60.1	86	5	70-130/30
108-05-4	Vinyl Acetate	ND		69.3	49.7	72	67.6	53.3	79	7	70-130/30
75-01-4	Vinyl chloride	ND		69.3	48.6	70	67.6	53.9	80	10	70-130/30
	m,p-Xylene	1.3	J	139	123	88	135	134	98	9	70-130/30
95-47-6	o-Xylene	0.32	J	69.3	60.5	87	67.6	65.0	96	7	70-130/30
1330-20-7	Xylene (total)	1.6	J	208	183	87	203	199	97	8	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23880-5MS	M58842.D	1	08/29/13	KD	n/a	n/a	MSM2029
MC23880-5MSD	M58843.D	1	08/29/13	KD	n/a	n/a	MSM2029
MC23880-5	M58841.D	1	08/29/13	KD	n/a	n/a	MSM2029

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Surrogate Recoveries	MS	MSD	MC23880-5	Limits
1868-53-7	Dibromofluoromethane	84%	84%	85%	70-130%
2037-26-5	Toluene-D8	85%	84%	84%	70-130%
460-00-4	4-Bromofluorobenzene	91%	92%	101%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23804-1MS	N79867.D	5	08/29/13	JB	n/a	n/a	MSN2988
MC23804-1MSD	N79868.D	5	08/29/13	JB	n/a	n/a	MSN2988
MC23804-1	N79864.D	1	08/29/13	JB	n/a	n/a	MSN2988

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

MC23880-1, MC23880-2

CAS No.	Compound	MC23804-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		250	215	86	250	163	65* [a]	28	70-130/30
107-02-8	Acrolein	ND		1250	1590	127	1250	1330	106	18	70-130/30
107-13-1	Acrylonitrile	ND		250	289	116	250	225	90	25	70-130/30
71-43-2	Benzene	ND		250	280	112	250	246	98	13	70-130/30
108-86-1	Bromobenzene	ND		250	263	105	250	234	94	12	70-130/30
74-97-5	Bromochloromethane	ND		250	251	100	250	221	88	13	70-130/30
75-27-4	Bromodichloromethane	ND		250	353	141* [a]	250	311	124	13	70-130/30
75-25-2	Bromoform	ND		250	230	92	250	214	86	7	70-130/30
74-83-9	Bromomethane	ND		250	268	107	250	253	101	6	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	213	85	250	172	69* [a]	21	70-130/30
104-51-8	n-Butylbenzene	ND		250	249	100	250	229	92	8	70-130/30
135-98-8	sec-Butylbenzene	ND		250	284	114	250	256	102	10	70-130/30
98-06-6	tert-Butylbenzene	ND		250	322	129	250	294	118	9	70-130/30
75-15-0	Carbon disulfide	ND		250	279	112	250	235	94	17	70-130/30
56-23-5	Carbon tetrachloride	ND		250	334	134* [a]	250	291	116	14	70-130/30
108-90-7	Chlorobenzene	ND		250	246	98	250	220	88	11	70-130/30
75-00-3	Chloroethane	ND		250	262	105	250	233	93	12	70-130/30
110-75-8	2-Chloroethyl vinyl ether	ND		250	266	106	250	246	98	8	70-130/30
67-66-3	Chloroform	ND		250	327	131* [a]	250	284	114	14	70-130/30
74-87-3	Chloromethane	ND		250	378	151* [a]	250	362	145* [a]	4	70-130/30
95-49-8	o-Chlorotoluene	ND		250	285	114	250	256	102	11	70-130/30
106-43-4	p-Chlorotoluene	ND		250	294	118	250	271	108	8	70-130/30
124-48-1	Dibromochloromethane	ND		250	239	96	250	211	84	12	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	261	104	250	237	95	10	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	252	101	250	229	92	10	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	238	95	250	221	88	7	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	362	145* [a]	250	318	127	13	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	307	123	250	267	107	14	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	389	156* [a]	250	347	139* [a]	11	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	295	118	250	243	97	19	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	267	107	250	235	94	13	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	272	109	250	243	97	11	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	267	107	250	247	99	8	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	239	96	250	209	84	13	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	200	80	250	185	74	8	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	315	126	250	281	112	11	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23804-1MS	N79867.D	5	08/29/13	JB	n/a	n/a	MSN2988
MC23804-1MSD	N79868.D	5	08/29/13	JB	n/a	n/a	MSN2988
MC23804-1	N79864.D	1	08/29/13	JB	n/a	n/a	MSN2988

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

MC23880-1, MC23880-2

CAS No.	Compound	MC23804-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-01-5	cis-1,3-Dichloropropene	ND		250	237	95	250	215	86	10	70-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		250	239	96	250	218	87	9	70-130/30
123-91-1	1,4-Dioxane	ND		1250	1380	110	1250	1180	94	16	70-130/30
97-63-2	Ethyl methacrylate	ND		250	197	79	250	181	72	8	72-139/30
100-41-4	Ethylbenzene	ND		250	251	100	250	225	90	11	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	280	112	250	257	103	9	70-130/30
591-78-6	2-Hexanone	ND		250	215	86	250	202	81	6	70-130/30
98-82-8	Isopropylbenzene	ND		250	289	116	250	258	103	11	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	273	109	250	252	101	8	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	157	63* [a]	250	134	54* [a]	16	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	328	131* [a]	250	284	114	14	70-130/30
74-95-3	Methylene bromide	ND		250	296	118	250	255	102	15	70-130/30
75-09-2	Methylene chloride	ND		250	269	108	250	234	94	14	70-130/30
91-20-3	Naphthalene	ND		250	157	63* [a]	250	167	67* [a]	6	70-130/30
103-65-1	n-Propylbenzene	ND		250	287	115	250	260	104	10	70-130/30
100-42-5	Styrene	ND		250	230	92	250	206	82	11	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	240	96	250	222	89	8	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	240	96	250	216	86	11	70-130/30
127-18-4	Tetrachloroethene	ND		250	253	101	250	223	89	13	70-130/30
108-88-3	Toluene	ND		250	283	113	250	249	100	13	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	205	82	250	204	82	0	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	209	84	250	199	80	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	333	133* [a]	250	293	117	13	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	275	110	250	242	97	13	70-130/30
79-01-6	Trichloroethene	ND		250	305	122	250	265	106	14	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	353	141* [a]	250	299	120	17	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	212	85	250	201	80	5	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	263	105	250	237	95	10	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	260	104	250	235	94	10	70-130/30
108-05-4	Vinyl Acetate	ND		250	281	112	250	247	99	13	70-130/30
75-01-4	Vinyl chloride	ND		250	255	102	250	223	89	13	70-130/30
	m,p-Xylene	ND		500	505	101	500	457	91	10	70-130/30
95-47-6	o-Xylene	ND		250	282	113	250	240	96	16	70-130/30
1330-20-7	Xylene (total)	ND		750	787	105	750	697	93	12	70-130/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23804-1MS	N79867.D	5	08/29/13	JB	n/a	n/a	MSN2988
MC23804-1MSD	N79868.D	5	08/29/13	JB	n/a	n/a	MSN2988
MC23804-1	N79864.D	1	08/29/13	JB	n/a	n/a	MSN2988

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

MC23880-1, MC23880-2

CAS No.	Surrogate Recoveries	MS	MSD	MC23804-1	Limits
1868-53-7	Dibromofluoromethane	100%	97%	97%	70-130%
2037-26-5	Toluene-D8	104%	104%	104%	70-130%
460-00-4	4-Bromofluorobenzene	96%	98%	102%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

* = Outside of Control Limits.

Volatile Internal Standard Area Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Check Std:	MSM2029-CC2022	**Injection Date:**	08/29/13
Lab File ID:	M58834.D	**Injection Time:**	08:30
Instrument ID:	GCMSM	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	391980	9.35	663377	10.23	296301	13.51	334229	16.07	158841	6.84
Upper Limit [a]	783960	9.85	1326754	10.73	592602	14.01	668458	16.57	317682	7.34
Lower Limit [b]	195990	8.85	331689	9.73	148151	13.01	167115	15.57	79421	6.34

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSM2029-BS	402180	9.36	679528	10.23	299020	13.51	332041	16.07	156582	6.84
MSM2029-MB	366174	9.35	616831	10.23	257161	13.51	257541	16.07	157752	6.84
MC23880-3	369476	9.36	633012	10.24	268373	13.51	265888	16.07	292587	6.85
MC23880-4	357913	9.36	615669	10.24	262026	13.51	261245	16.07	301011	6.84
MC23880-5	335432	9.36	577129	10.23	245900	13.51	241685	16.07	242708	6.84
MC23880-5MS	382232	9.36	651212	10.24	295648	13.51	309361	16.07	262749	6.84
MC23880-5MSD	381960	9.36	653109	10.23	294196	13.51	318012	16.07	265615	6.84
ZZZZZZ	323229	9.36	550825	10.23	220493	13.51	189822	16.07	266862	6.84
ZZZZZZ	373754	9.36	628528	10.23	268561	13.51	259371	16.07	312303	6.85
ZZZZZZ	344643	9.36	587520	10.24	246625	13.51	236008	16.07	299314	6.84
ZZZZZZ	354528	9.36	593733	10.23	255775	13.51	249732	16.07	307019	6.84
ZZZZZZ	346945	9.36	590609	10.23	247148	13.51	233781	16.07	305248	6.85
ZZZZZZ	337949	9.36	573221	10.23	245944	13.51	242441	16.07	300187	6.84
ZZZZZZ	337039	9.36	570766	10.23	243187	13.51	239764	16.07	326010[c]	6.84

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. Target analytes not associated with this internal standard.

Volatile Internal Standard Area Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Check Std:	MSN2988-CC2927	**Injection Date:**	08/29/13
Lab File ID:	N79857.D	**Injection Time:**	09:10
Instrument ID:	GCMSN	**Method:**	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	145823	9.22	219673	10.09	124636	13.34	106995	15.90	71469	6.78
Upper Limit [a]	291646	9.72	439346	10.59	249272	13.84	213990	16.40	142938	7.28
Lower Limit [b]	72912	8.72	109837	9.59	62318	12.84	53498	15.40	35735	6.28

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN2988-BS	143727	9.22	217629	10.09	123732	13.34	106021	15.90	76089	6.78
MSN2988-BSD	134366	9.22	203895	10.09	114209	13.34	97467	15.90	67720	6.78
MSN2988-MB	150026	9.22	225341	10.09	123861	13.34	92085	15.90	77154	6.79
MC23880-1	143151	9.22	214776	10.09	118093	13.35	89473	15.90	62755	6.79
MC23880-2	139694	9.22	204868	10.09	114531	13.35	86556	15.90	63987	6.79
MC23804-1	135242	9.22	199217	10.09	115797	13.34	88574	15.90	56984	6.78
ZZZZZZ	130817	9.22	201560	10.09	111165	13.34	82707	15.90	53641	6.78
ZZZZZZ	132334	9.22	200656	10.10	109417	13.34	82231	15.90	43299	6.78
MC23804-1MS	113216	9.22	171119	10.09	104669	13.34	86740	15.90	52239	6.78
MC23804-1MSD	135345	9.22	202499	10.09	121284	13.34	99365	15.90	53047	6.78
ZZZZZZ	136247	9.22	205517	10.09	116351	13.35	92443	15.90	58804	6.78
ZZZZZZ	136251	9.22	208629	10.09	113728	13.34	86126	15.90	41194	6.78
ZZZZZZ	134197	9.22	199952	10.09	108659	13.34	87306	15.90	54651	6.78
ZZZZZZ	131884	9.22	195350	10.09	111669	13.35	83312	15.90	51214	6.79
ZZZZZZ	114620	9.22	169390	10.09	97304	13.35	72929	15.90	34613[c]	6.78
ZZZZZZ	126487	9.22	194626	10.10	108213	13.34	82112	15.90	40781	6.79
ZZZZZZ	126053	9.22	188116	10.09	107717	13.34	80824	15.90	48264	6.78
ZZZZZZ	126570	9.22	187725	10.09	105463	13.34	81364	15.90	48447	6.79
ZZZZZZ	124402	9.22	178335	10.10	102887	13.35	76151	15.90	49047	6.79
ZZZZZZ	108449	9.22	157872	10.09	88212	13.35	65111	15.91	41531	6.78
ZZZZZZ	122856	9.22	181705	10.09	102374	13.34	79539	15.90	48364	6.78
ZZZZZZ	118975	9.22	179591	10.10	100983	13.35	79992	15.90	42498	6.78

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. Target analytes not associated with this internal standard.

Volatile Surrogate Recovery Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Method: SW846 8260B **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC23880-1	N79862.D	96	101	106
MC23880-2	N79863.D	98	103	106
MC23804-1MS	N79867.D	100	104	96
MC23804-1MSD	N79868.D	97	104	98
MSN2988-BS	N79858.D	98	106	95
MSN2988-BSD	N79859.D	101	104	96
MSN2988-MB	N79861.D	98	101	106

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

Volatile Surrogate Recovery Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Method: SW846 8260B **Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC23880-3	M58839.D	83	84	95
MC23880-4	M58840.D	85	84	96
MC23880-5	M58841.D	85	84	101
MC23880-5MS	M58842.D	84	85	91
MC23880-5MSD	M58843.D	84	84	92
MSM2029-BS	M58835.D	80	83	84
MSM2029-MB	M58838.D	81	84	91

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	70-130%
S2 = Toluene-D8	70-130%
S3 = 4-Bromofluorobenzene	70-130%

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: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBH1818-MB	BH31083.D	1	08/28/13	TB	n/a	n/a	GBH1818

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (VOA)	ND	5.0	1.1	mg/kg	

CAS No.	Surrogate Recoveries		Limits
	2,3,4-Trifluorotoluene	86%	61-116%

Blank Spike Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GBH1818-BSP	BH31084.D	1	08/28/13	TB	n/a	n/a	GBH1818

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (VOA)	20	17.5	88	66-126

CAS No.	Surrogate Recoveries	BSP	Limits
	2,3,4-Trifluorotoluene	86%	61-116%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MC23831-2MS	BH31089.D	1	08/28/13	TB	n/a	n/a	GBH1818
MC23831-2MSD	BH31090.D	1	08/28/13	TB	n/a	n/a	GBH1818
MC23831-2	BH31088.D	1	08/28/13	TB	n/a	n/a	GBH1818

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

MC23880-3, MC23880-4, MC23880-5

CAS No.	Compound	MC23831-2 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	Spike mg/kg	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (VOA)	13.2		32.5	39.5	81	32.5	39.0	79	1	41-150/20

CAS No.	Surrogate Recoveries	MS	MSD	MC23831-2	Limits
	2,3,4-Trifluorotoluene	85%	85%	86%	61-116%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Method: SW846 8015	**Matrix:** SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
MC23880-3	BH31102.D	85
MC23880-4	BH31103.D	85
MC23880-5	BH31108.D	85
GBH1818-BSP	BH31084.D	86
GBH1818-MB	BH31083.D	86
MC23831-2MS	BH31089.D	85
MC23831-2MSD	BH31090.D	85

Surrogate Compounds	Recovery Limits
S1 = 2,3,4-Trifluorotoluene	61-116%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Check Std:	GBH1818-CC1786	**Injection Date:**	08/28/13
Lab File ID:	BH31082.D	**Injection Time:**	16:26
Instrument ID:	GCBH	**Method:**	SW846 8015

	S1 [a] RT
Check Std	20.25

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
GBH1818-MB	BH31083.D	08/28/13	17:01	20.25
GBH1818-BSP	BH31084.D	08/28/13	17:35	20.25
ZZZZZZ	BH31085.D	08/28/13	19:52	20.25
ZZZZZZ	BH31086.D	08/28/13	20:26	20.25
ZZZZZZ	BH31087.D	08/28/13	21:01	20.24
MC23831-2	BH31088.D	08/28/13	21:36	20.25
MC23831-2MS	BH31089.D	08/28/13	22:10	20.25
MC23831-2MSD	BH31090.D	08/28/13	22:45	20.25
ZZZZZZ	BH31091.D	08/28/13	23:20	20.25
ZZZZZZ	BH31092.D	08/28/13	23:55	20.25

Surrogate Compounds

S1 = 2,3,4-Trifluorotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Check Std:	GBH1818-CC1786	**Injection Date:**	08/29/13
Lab File ID:	BH31093.D	**Injection Time:**	00:29
Instrument ID:	GCBH	**Method:**	SW846 8015

	S1 [a] RT
Check Std	20.24

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
ZZZZZZ	BH31094.D	08/29/13	01:04	20.24
ZZZZZZ	BH31095.D	08/29/13	01:39	20.25
ZZZZZZ	BH31096.D	08/29/13	02:14	20.24
ZZZZZZ	BH31097.D	08/29/13	02:49	20.25
ZZZZZZ	BH31098.D	08/29/13	03:24	20.24
ZZZZZZ	BH31099.D	08/29/13	03:59	20.25
ZZZZZZ	BH31100.D	08/29/13	04:33	20.25
MC23880-3	BH31102.D	08/29/13	05:43	20.25
MC23880-4	BH31103.D	08/29/13	06:18	20.25

Surrogate Compounds

S1 = 2,3,4-Trifluorotoluene

(a) Retention time from GC signal #1

GC Surrogate Retention Time Summary

Job Number: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Check Std:	GBH1818-CC1786	**Injection Date:**	08/29/13
Lab File ID:	BH31104.D	**Injection Time:**	06:53
Instrument ID:	GCBH	**Method:**	SW846 8015

	S1 [a] RT
Check Std	20.24

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
ZZZZZZ	BH31105.D	08/29/13	07:28	20.25
ZZZZZZ	BH31106.D	08/29/13	08:03	20.24
ZZZZZZ	BH31107.D	08/29/13	08:38	20.24
MC23880-5	BH31108.D	08/29/13	09:13	20.25

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: MC23880
Account: SHELLWIC Shell Oil
Project: URSMOSTL: Roxana SVE System Expansion, 900 South Central Ave, IL

Sample: MC23880-3 **Analyzed:** 28-AUG-13 by MC **Method:** SM21 2540 B MOD.
ClientID: VMP59-082713(2-4')

Wet Weight (Total)	28.475	g
Tare Weight	19.022	g
Dry Weight (Total)	26.921	g
Solids, Percent	83.6	%

Sample: MC23880-4 **Analyzed:** 28-AUG-13 by MC **Method:** SM21 2540 B MOD.
ClientID: VMP59-082713(23-25.5')

Wet Weight (Total)	33.643	g
Tare Weight	25.43	g
Dry Weight (Total)	32.703	g
Solids, Percent	88.6	%

Sample: MC23880-5 **Analyzed:** 28-AUG-13 by MC **Method:** SM21 2540 B MOD.
ClientID: VMP59-082713(45.5-48')

Wet Weight (Total)	32.016	g
Tare Weight	24.602	g
Dry Weight (Total)	30.142	g
Solids, Percent	74.7	%