From:	Michael PINTO
To:	Bury, Carolyn
Subject:	FW: Legacy Site Services - East Plant Area 17 Quarterly Monitoring Report - Q4 2014 ~COR-018224-03~
Date:	Friday, February 06, 2015 2:51:26 PM
Attachments:	removed.txt 018224 - Area 17 Quarterly Monitoring Report - Q4 2014.pdf
Importance:	High

Carolyn,

Please see the request below to modify the sampling program at the Arkema East Plant. Based on the consistency of our quarterly sampling results last year and the maturity of the source and any associated plume, we believe we can reduce the sampling program somewhat and still achieve our objectives of monitoring the effectiveness of the containment system and any trends in contaminant concentration and distribution. Have you had a chance to consider this?

Michael Pinto
RETIA USA LLC/Legacy Site Services LLC
468 Thomas Jones Way, Suite 150
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Office: 610 594-4435
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From: Swanson, Peter [mailto:pswanson@craworld.com]
Sent: Thursday, December 18, 2014 1:39 PM
To: Carolyn Bury (bury.carolyn@epa.gov)
Cc: Michael PINTO; 'Mike.Bollinger@TRMI.Biz'; 'westje@dow.com'; 'QUACKENBUSHP@michigan.gov'; 'VERONAL@michigan.gov'; Canfield, David; Project Email Filing
Subject: Legacy Site Services - East Plant Area 17 Quarterly Monitoring Report - Q4 2014 ~COR-018224-03~

Ms. Bury,

On behalf of Legacy Site Services LLC, agent of Arkema, please find the attached Area 17 Quarterly Monitoring Report for the fourth quarter of 2014. A hard copy of the report will follow by mail.

This quarter's activities conclude the first year of sampling. Based on the consistency of the results obtained in 2014, LSS would like to discuss a reduction in sampling requirements. Specifically we are requesting the following:

1. Reduction of monitoring frequency from quarterly to biannually (only during the high water seasons - spring and fall)
2. Reduction of the sampling network from 6 to 4 wells:
    a. Removal of MW-016 from the sampling network (no constituents were detected above criteria during any of the quarterly events in 2014)
    b. Removal of IRM-MW-3 from the sampling network due to its close proximity to MW-025 and consistency with results from IRM-MW-2

3. Removal of chromium and lead from the analytical suite (neither were detected above criteria in 2014; trace concentrations of chromium were detected but well below criteria; lead was not detected above laboratory reporting limits at any time)

If approved, the monitoring program would consist of the following:

Sampling Event	**Hydraulic Monitoring/DNAPL Gauging Network**	**Sampling Network**	**Analyses**	**Report Delivery to U.S. EPA**
April 2015	IRM-MW-1 IRM-MW-2 IRM-MW-3 MW009 MW010A MW011 MW016 MW025	IRM-MW-1 IRM-MW-2 MW010A MW025	TCL VOCs TCL SVOCs QA/QC – 1 Trip, 1 Dup, 1 MS/MSD	June 2015
October 2015	IRM-MW-1 IRM-MW-2 IRM-MW-3 MW009 MW010A MW011 MW016 MW025	IRM-MW-1 IRM-MW-2 MW010A MW025	TCL VOCs TCL SVOCs QA/QC – 1 Trip, 1 Dup, 1 MS/MSD	December 2015

Please let us know if you would like us to prepare a work plan to detail 2015 sampling or if you'd like to have a call to discuss.

Thank you,

Pete Swanson

Pete Swanson, P.E.
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This message contained an attachment which the administrator has caused to be removed.

********** ATTACHMENT REMOVED **********

Attachment name: [image001.jpg]
Attachment type: [image/jpeg]

CONESTOGA-ROVERS
& ASSOCIATES

14496 Sheldon Road, Suite 200, Plymouth, Michigan 48170
Telephone: (734) 453-5123 Fax: (734) 453-5201
www.CRAworld.com

December 18, 2014 Reference No. 018224-03

Ms. Carolyn Bury
U.S. EPA Region 5
LU-9J
77 West Jackson Blvd.
Chicago, IL 60604-3507

Dear Ms. Bury:

Re: Quarterly Monitoring Report – Fourth Quarter 2014
Halowax Area (Area 17) Interim Remedial Measure
Arkema - East Plant
Wyandotte, Michigan

1.0 Introduction

On behalf of Legacy Site Services, LLC (LSS), Agent for Arkema Inc., Conestoga-Rovers & Associates, Inc. (CRA) has prepared this Halowax Area (Area 17) Interim Remedial Measure (IRM) Quarterly Monitoring Report in accordance with the United States Environmental Protection Agency (U.S. EPA)-approved Area 17 Quarterly Monitoring Plan (QMP), dated December 20, 2013.

In accordance with the approved QMP, 2014 quarterly events include hydraulic/DNAPL monitoring of eight shallow monitoring wells (IRM-MW-1, IRM-MW-2, IRM-MW-3, MW009, MW010A, MW011, MW016 and MW025) and sampling of six monitoring wells (IRM-MW-1, IRM-MW-2, IRM-MW-3, MW010A, MW016 and MW025). Refer to Figure 1 for the location of monitoring wells.

The objective of quarterly sampling is to supplement the conclusions presented in the May 2010 Corrective measures Study (CMS) Report which indicates that the current Area 17 IRM effectively contains, captures, recovers and treats (or disposes) impacted groundwater and DNAPL prior to migration to the Trenton Channel. To achieve this objective, select monitoring wells throughout Area 17 are to be sampled and gauged on a quarterly basis to evaluate groundwater flow direction, DNAPL presence/thickness and dissolved constituent concentrations.

In accordance with the approved QMP, the remaining sections of this report are presented as follows:

- Section 2.0 - Field Activities
- Section 3.0 - Laboratory Analysis and Data Validation
- Section 4.0 - Groundwater Analytical Results
- Section 5.0 - Summary and Conclusions

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2.0 Field Activities

2.1 Fluid (Groundwater and DNAPL) Level Monitoring

To start the event, static water levels (using an Oil/Water Interface Probe) were collected from all existing shallow monitoring wells in and near Area 17 to define flow conditions and investigate the presence of DNAPL. These wells included IRM-MW-1, IRM-MW-2, IRM-MW-3, MW009, MW010A, MW011, MW016, and MW025, as depicted on Figure 1. Monitoring wells MW017 and MW022, shown on Figure 1, are damaged and were not sampled as part of this event.

Prior to collection of measurements, monitoring well caps were removed and time was given to promote water table equalization. The elevation of the Trenton Channel was also obtained from the National Oceanic and Atmospheric Administration (NOAA) Wyandotte River Gauging Station (http://glakesonline.nos.noaa.gov/glin.shtml?station_info=9044030+Wyandotte+MI).

Fluid levels collected as part of this activity are summarized in the following table:

Well ID	TOC Elevation	Water Level (ft btoc)	Depth to DNAPL (ft btoc)	TOS (ft btoc)	BOS (ft btoc)	BOW (ft btoc)	Water Elev.	DNAPL Elev.	DNAPL Thickness (ft)
IRM-MW-1	580.02	6.10	ND	12.25	17.25	22.25	573.92	ND	NA
IRM-MW-2	579.57	6.10	16.90	11.52	16.52	21.52	573.47	562.67	4.62
IRM-MW-3	579.30	5.80	ND	11.31	16.31	21.31	573.50	ND	NA
MW009	579.57	5.42	8.30	11.14	16.14	16.14	574.15	571.27	7.84
MW010a	579.76	4.78	ND	6.52	11.52	11.52	574.98	ND	NA
MW011	580.66	4.89	ND	5.17	10.17	10.17	575.77	ND	NA
MW016	579.29	5.52	ND	17.25	22.25	22.25	573.77	ND	NA
MW025	581.11	7.62	ND	16.91	21.91	21.91	573.49	ND	NA
Surface Water (1)	NA	NA	NA	NA	NA	NA	573.30	NA	NA

Table Notes:

Elevation Datum - NAVD 88
TOC - Top of casing
ft btoc - feet below top of casing
NA - Not Applicable
TOS - approximate top of screen (feet below top of casing) based on field measurement with oil/water interface probe
BOS - approximate bottom of screen (feet below top of casing) based on field measurement with oil/water interface probe
BOW - approximate bottom of well (feet below top of casing) based on field measurement with oil/water interface probe
(1) - Based on Wyandotte, MI station reading at 9:00 A.M. on 10/9/14; converted from IGLD 85 to NAVD 88 elevation using -0.265ft conversion factor. Elevation is approximate.

Data presented in the table were used to develop groundwater flow contours and to document DNAPL conditions. As shown on Figure 1, groundwater flow returned to an observed easterly direction at the time of the event, consistent with the first and second quarter observations of shallow groundwater flow in Area 17. The inward, westerly gradient observed during the third quarter was attributed to a high seasonal river elevation.

As shown in the above table, DNAPL was encountered in IRM-MW-2 and MW009 only. This is consistent with previous gauging events (DNAPL has only been observed in these two wells since initiation of RCRA Corrective Action Activities). The DNAPL thickness in IRM-MW-2 and MW009 remained relatively stable between the July and October sampling events.

2.2 DNAPL Recovery

As part of this event, CRA extracted recoverable DNAPL from IRM-MW-2 and MW009; a total of 1 gallon was recovered during the effort and placed in DNAPL waste drums which are staged adjacent to treatment system building. DNAPL will be properly disposed along with other Area 17 groundwater treatment system O&M waste.

2.3 Monitoring Well Sampling

Sampling of the monitoring well network was completed in accordance with CRA's Field Method Guidelines (FMGs) for Groundwater Sample Purging and Collection Procedures. Tubing used for sampling was dedicated to each monitoring well to prevent potential cross-contamination, to eliminate decontamination of tubing and to facilitate follow-up sampling rounds. All water generated during well purging efforts was processed through the Area 17 groundwater treatment system.

During sampling, the water level and pumping rates were recorded every 3 to 5 minutes (or less, depending on the recharge rate of the monitoring well) and the groundwater was monitored with a flow-through cell for field parameters including dissolved oxygen (DO), oxidation reduction potential (ORP), pH, specific conductance, turbidity, and temperature. After the field parameters stabilized, groundwater samples were collected using laboratory-supplied glass containers, starting with VOCs. Field quality control samples were also collected during the sampling event and consisted of one trip blank, one duplicate and one matrix spike/matrix spike duplicate (MS/MSD). Upon collection, samples were immediately placed in a cooler on ice for shipment to the analytical laboratory under chain-of-custody (COC) protocol. Refer to Attachment A for copies of Low Flow Purging Forms and Table 1 for a Sample Key.

3.0 Laboratory Analysis and Data Validation

Groundwater samples collected for chemical analysis were submitted to TestAmerica Laboratories under COC protocol and all samples were analyzed under standard turn-around time (2 weeks) for Target Compound List (TCL) volatile organic compounds (VOCs) by SW846, Method 8260; TCL semi-volatile organic compounds (SVOCs) by SW846, Method 8270; and chromium and lead by SW846, Method 6010.

Quality Assurance/Quality Control (QA/QC) procedures were conducted by the laboratory during sample analyses. A review of the analytical data package was also performed to validate results and to determine usability. This validation was performed by project chemists experienced in laboratory methods and validation procedures, and did not include those persons directly involved with the analyses. The data validation was performed in general accordance with criteria established in federal guidelines. Refer to Attachment B for a memorandum describing Data Quality Assessment and Validation.

4.0 Groundwater Analytical Results

Results of the groundwater analyses are provided in the laboratory analytical reports contained in Attachment C and are summarized in Table 2. Analytical results presented in Table 2 are compared to Michigan Act 451, Part 201 Generic Nonresidential Cleanup Criteria (GNRCC). As shown (and consistent with the previous 2014 sampling events) various constituents were detected above GRCC (criteria protective of the drinking water pathway or the groundwater-surface water interface [GSI], depending on the constituent) in IRM-MW-1, IRM-MW-2, IRM-MW-3 and MW010A. However, drinking water exceedances are mitigated through implementation of a restrictive covenant, which prohibits use of groundwater for drinking water purposes. With respect to the GSI exceedances, whether the flow is easterly (as in Q1, Q2 and Q4) or westerly (as in Q3) the wells with exceedances are located such that detected constituents, if mobile, would migrate toward and be captured by the containment wall (as observed during Q1, Q2 and Q4), or away from the surface water (Q3), thereby mitigating exceedances. As such, the drinking water and GSI pathways are not complete for those wells and the associated exceedances do not present unacceptable exposures.

Similar to the previous 2014 sampling events, no constituents were detected above applicable criteria in MW016. Additionally, with the exception of chlorobenzene (0.036 mg/l), slightly above GSI criteria (0.025 mg/l), no constituents were detected in MW025 at concentrations above applicable GNRCC.

5.0 Summary and Conclusions

CRA conducted Q4 2014 monitoring of the Area 17 IRM in accordance with the U.S. EPA-approved QMP, dated December 20, 2013. Activities included hydraulic/DNAPL monitoring of eight shallow monitoring wells (IRM-MW-1, IRM-MW-2, IRM-MW-3, MW009, MW010A, MW011, MW016 and MW025) and sampling of six shallow monitoring wells (IRM-MW-1, IRM-MW-2, IRM-MW-3, MW010A, MW016 and MW025) to evaluate groundwater flow direction, DNAPL presence/thickness and dissolved constituent concentrations.

As identified herein, groundwater was found to flow in an easterly direction (consistent with Q1 and Q2 events). The observed near river westerly groundwater flow during Q3 can be attributed to seasonal variation. Groundwater flow direction will continue to be monitored during future sampling events to further evaluate seasonal variations in groundwater flow.

DNAPL was encountered in IRM-MW-2 and MW009 only. This is consistent with previous gauging events and provides evidence that the DNAPL plume is stable (i.e., does not appear to be mobile or migrating). Cross-sectional diagrams were updated during preparation of the Quarterly Monitoring Report to reflect field measured groundwater and DNAPL depths. Figures 2, 3 and 4 present cross-sectional diagrams of the Area 17 hydrogeologic profile, which show an easterly sloping clay layer. This provides evidence that, if present, mobile and migrating, DNAPL would flow along the top of the clay layer (dipping to the east – toward the containment wall) and be contained.

Results of the groundwater analyses show that various constituents were detected in IRM-MW-1, IRM-MW-2, IRM-MW-3 and MW010A. However, based on their location and institutional controls in place at the Site, the constituents do not present the potential for unacceptable exposures.

No constituents were detected above applicable GNRCC in MW016. Additionally, with the exception of chlorobenzene (0.036 mg/l), slightly above GSI criteria (0.025 mg/l), no constituents were detected in MW025 at concentrations above GNRCC. The 0.036 mg/l concentration of chlorobenzene detected in MW025 is generally consistent from the Q3 2014 event when chlorobenzene was detected at 0.029 mg/l.

We trust that this report satisfies your requirements at this time. If you should have any questions or comments or require further clarification, please contact Mr. Michael Pinto at (610) 594-4435.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Peter S. Swanson, P.E.

DC/pss/5/Det.

Encls: Figure 1 - Site Layout and Groundwater Contours
Figure 2 - Cross-Section Location Map
Figure 3 - Cross-Section A-A'
Figure 4 - Cross-Section B-B'

Table 1 - Sample Key
Table 2 - Summary of Groundwater Analytical Results

Attachment A - Low Flow Purging Forms
Attachment B - Data Quality Assessment and Validation Memorandum
Attachment C - Laboratory Analytical Reports

cc: Michael Pinto, LSS
Laura Verona, MDEQ
Peter Quackenbush, MDEQ
Joanne West, Union Carbide
Michael Bollinger, Beazer East
Dave Canfield, CRA

Figures

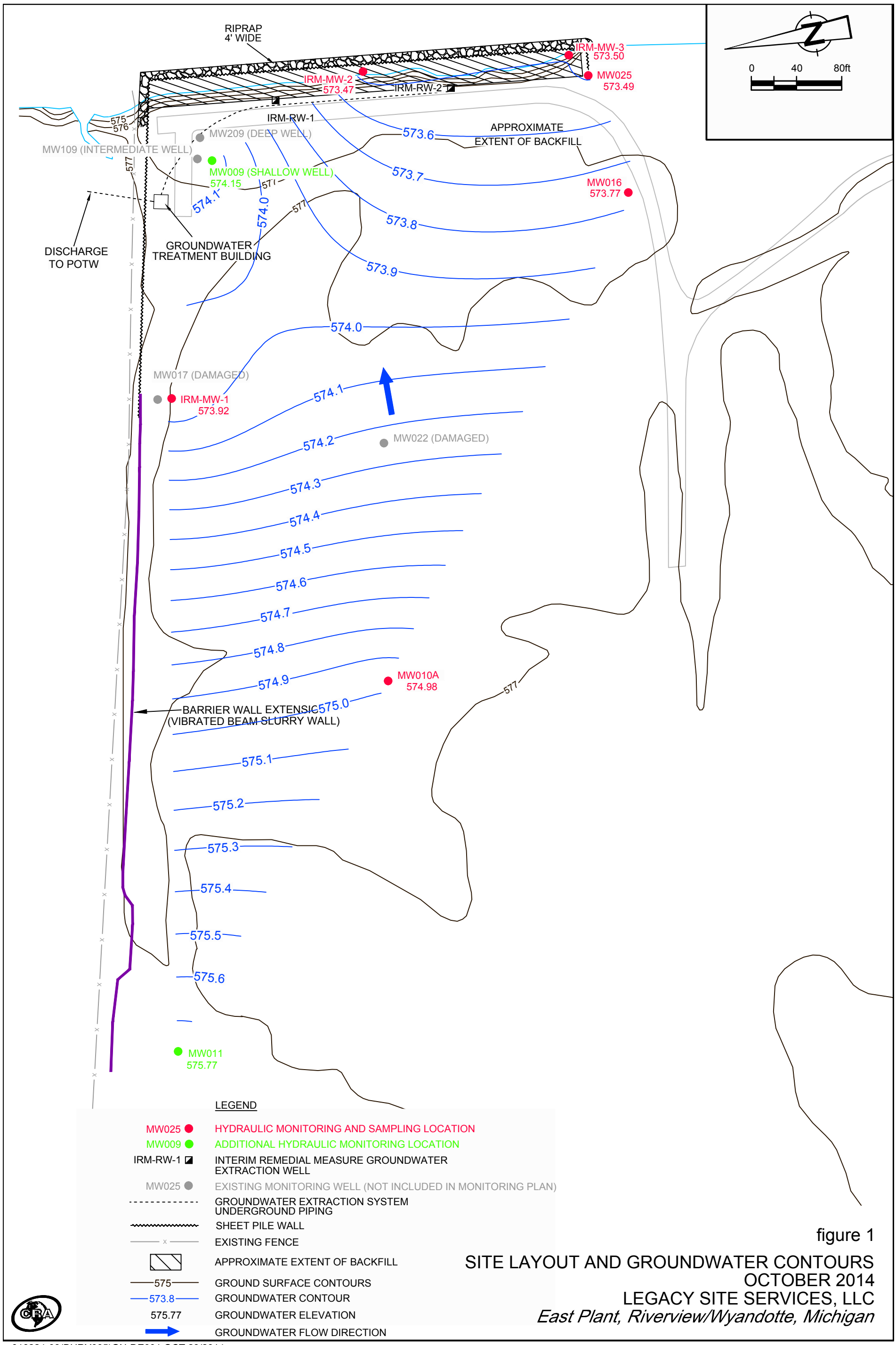
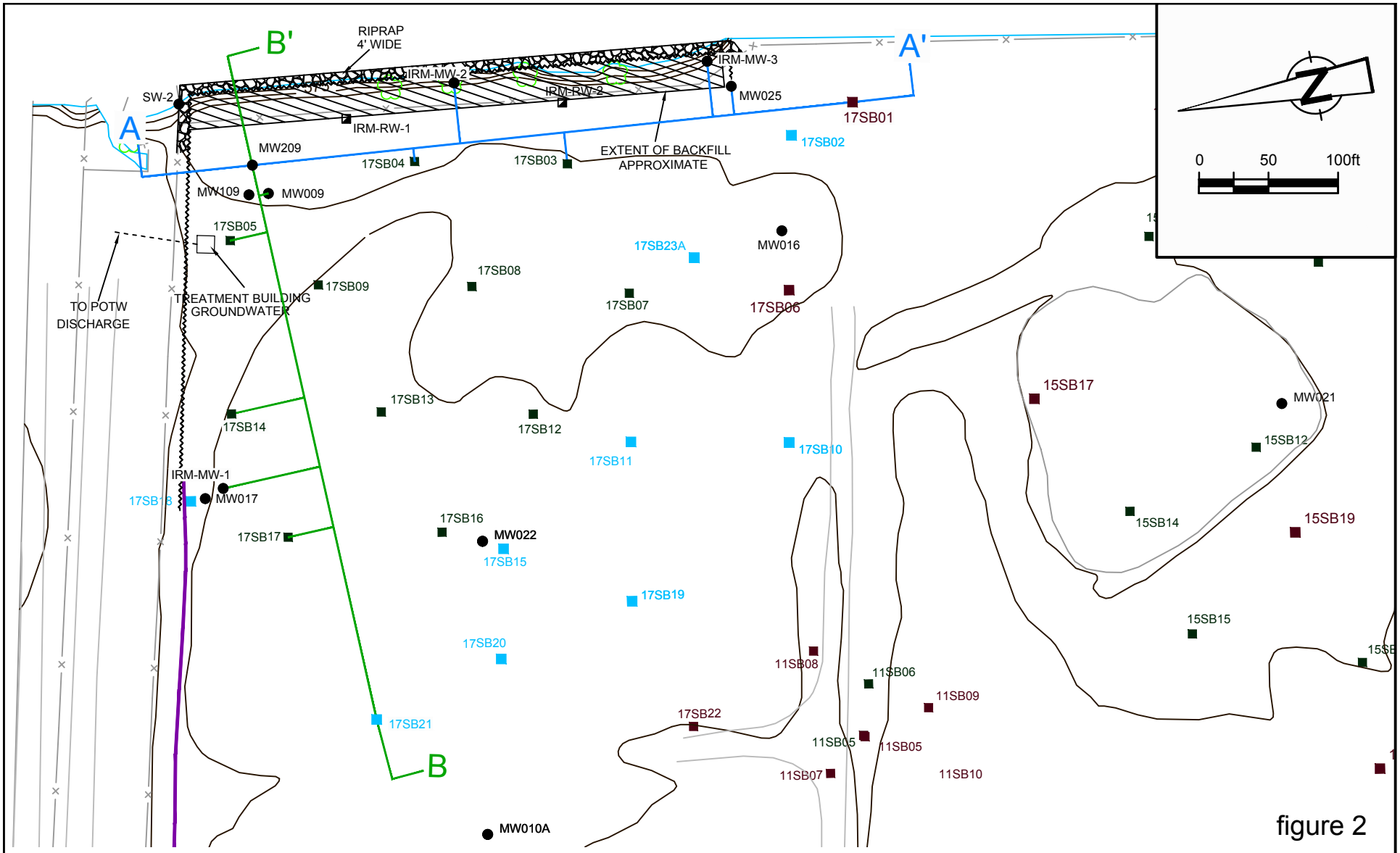


figure 1

SITE LAYOUT AND GROUNDWATER CONTOURS
OCTOBER 2014
LEGACY SITE SERVICES, LLC
East Plant, Riverview/Wyandotte, Michigan

018224-03(BURY005)GN-DE001 OCT 28/2014



LEGEND

MW010A ● MONITORING WELL LOCATION

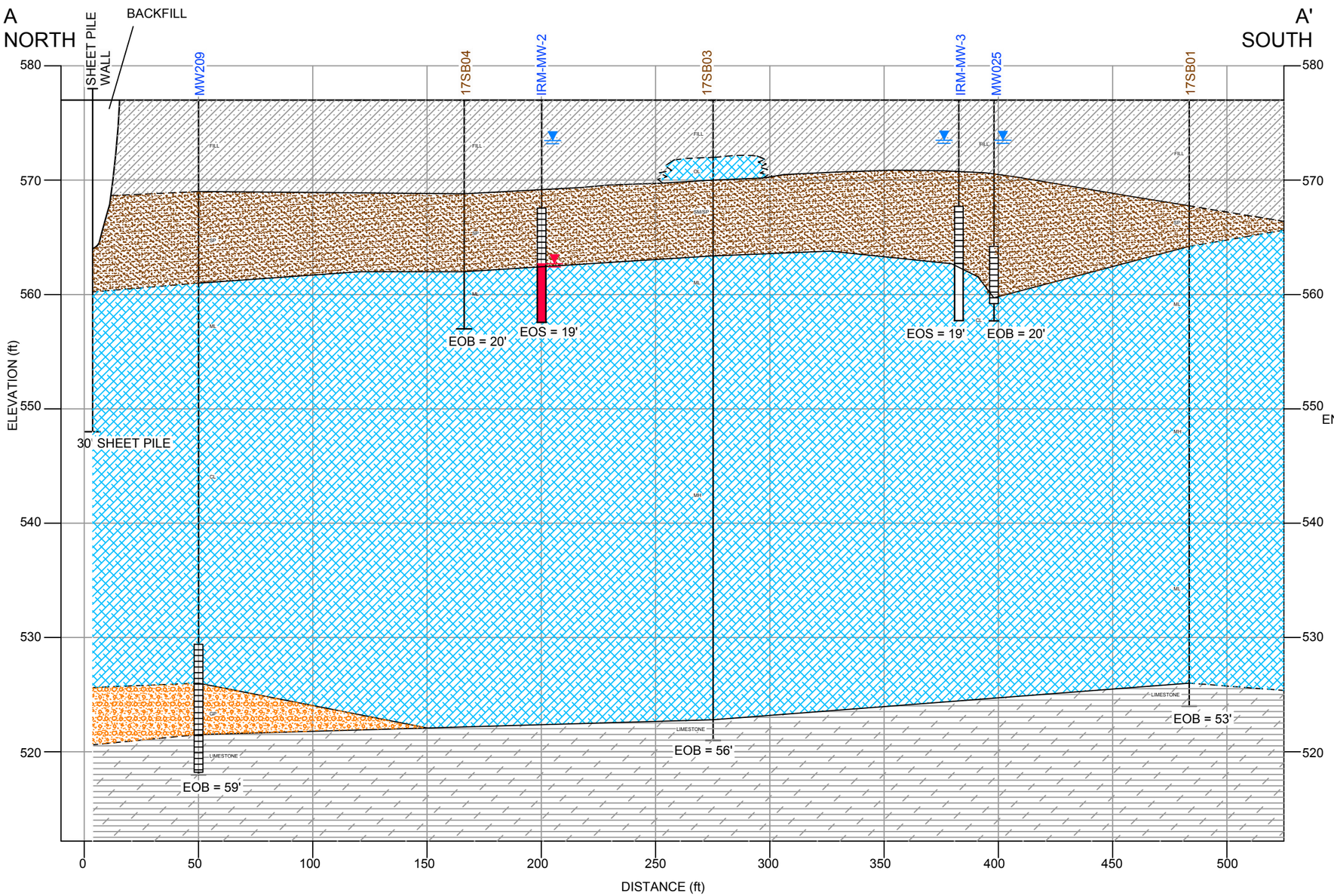
17SB21 ■ SOIL BORING

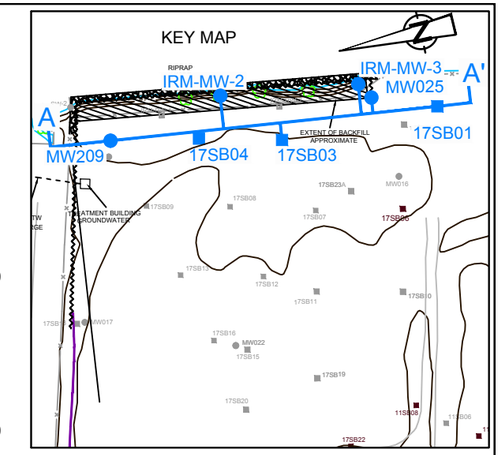
A — A' CROSS-SECTION LINE

figure 2

CROSS-SECTION LOCATION MAP
HALOWAX AREA LAYOUT
LEGACY SITE SERVICES, LLC
East Plant, Riverview/Wyandotte, Michigan

018224-03(BURY005)GN-DE002 OCT 28/2014





MW209 — WELL ID — GROUND — WELL — SCREEN — EOB = END OF BORING BGS

IRM-MW-3 — WELL ID — GROUND — WELL — SCREEN — EOS = END OF SUMP BGS

17SB04 — WELL ID — GROUND — WELL — SOIL BORING — EOB = END OF BORING BGS

SCALE:
HORIZONTAL 1" = 50'
VERTICAL 1" = 10'

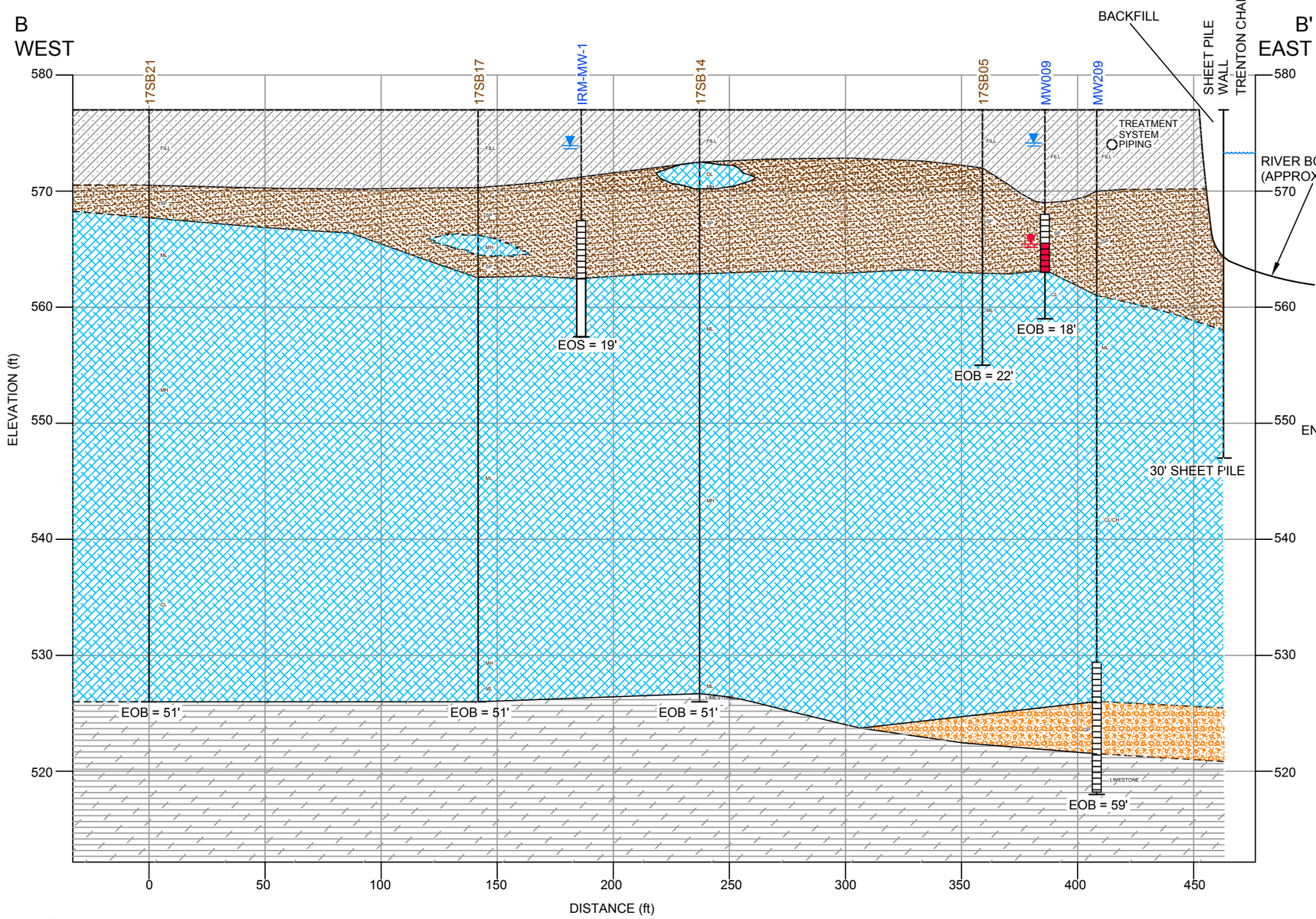
NOTES:
1. GROUNDWATER AND DNAPL LEVELS BASED ON 1/30/14 GAUGING EVENT
2. DNAPL DOCUMENTED IN IRM-MW2 & MW-009.
3. BGS = BELOW GROUND SURFACE

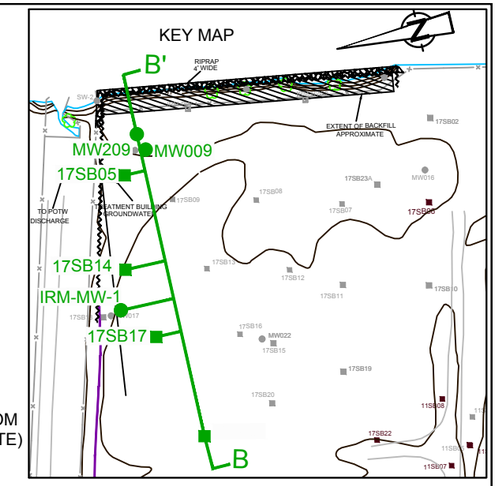
	APPROXIMATE DNAPL THICKNESS	
	FILL	FILL
	GP	GRAVEL
	SP/SM	SAND
	ML/MH CL/CH OL	SILTS AND CLAYS
	LIMESTONE	
	GROUNDWATER LEVEL	
	DNAPL ELEVATION	

figure 3

CROSS-SECTION A-A'
HALOWAX AREA LAYOUT
LEGACY SITE SERVICES, LLC
East Plant, Riverview/Wyandotte, Michigan

018224-03(BURY005)GN-DE003 OCT 28/2014





MW009
- WELL ID
- GROUND
- WELL
- SCREEN

EOB = END OF BORING BGS

IRM-MW-1
- WELL ID
- GROUND
- WELL
- SCREEN

EOS = END OF SUMP BGS

17SB17
- WELL ID
- GROUND
- WELL
- SOIL BORING

EOB = END OF BORING BGS

SCALE:
HORIZONTAL 1" = 50'
VERTICAL 1" = 10'

NOTES:
1. GROUNDWATER AND DNAPL LEVELS BASED ON 1/30/14 GAUGING EVENT
2. DNAPL DOCUMENTED IN IRM-MW2 & MW-009.
3. BGS = BELOW GROUND SURFACE

	APPROXIMATE DNAPL THICKNESS
FILL	FILL
GP	GRAVEL
SP/SM	SAND
ML/MH CL/CH OL	SILTS AND CLAYS
	LIMESTONE
	GROUNDWATER LEVEL
	DNAPL ELEVATION

figure 4

CROSS-SECTION B-B'
HALOWAX AREA LAYOUT
LEGACY SITE SERVICES, LLC
East Plant, Riverview/Wyandotte, Michigan

018224-03(BURY005)GN-DE003 OCT 28/2014

Tables

TABLE 1
GROUNDWATER SAMPLE KEY
OCTOBER 2014 QUARTERLY SAMPLING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE, MICHIGAN

Sample Identification	*Sample Location*	*Date*	*QA/QC*	*Analysis*
GW-18224-100914-SR-001	IRM-MW-1	10/9/2014		VOCs, SVOCs, Pb, Cr
GW-18224-100914-SR-002	IRM-MW-1	10/9/2014	Duplicate	VOCs, SVOCs, Pb, Cr
GW-18224-100914-SR-003	MW010A	10/9/2014		VOCs, SVOCs, Pb, Cr
GW-18224-100914-SR-004	IRM-MW-3	10/9/2014	MS/MSD	VOCs, SVOCs, Pb, Cr
GW-18224-100914-SR-005	MW025	10/9/2014		VOCs, SVOCs, Pb, Cr
GW-18224-100914-SR-006	MW016	10/9/2014		VOCs, SVOCs, Pb, Cr
GW-18224-100914-SR-007	IRM-MW-2	10/9/2014		VOCs, SVOCs, Pb, Cr
TB-18224-100914	--	10/9/2014	Trip Blank	VOCs

Notes:
VOCs = Volatile Organic Compounds
SVOCs = Semi-Volatile Organic Compounds
Pb = Lead
Cr = Chromium
MS/MSD = Matrix Spike/ Matrix Spike Duplicate
QA/QC = Quality Assurance/ Quality Control

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2014 QUARTERLY SAMPLING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE, MICHIGAN

Sample Location:		***MDEQ Generic Groundwater Cleanup Criteria: Nonresidential [1]***					***IRM-MW-1***	***IRM-MW-1***	***IRM-MW-2***	***IRM-MW-3***	***MW010A***	***MW016***	***MW025***
Sample Identification: GW-18224-100914-SR-		Non-Residential Drinking Water	Groundwater Surface Water Interface	Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Water Solubility	Flammability and Explosivity Screening Levels	***-001***	***-002***	***-007***	***-004***	***-003***	***-006***	***-005***
Sample Date:							***10/9/2014***	***10/9/2014***	***10/9/2014***	***10/9/2014***	***10/9/2014***	***10/9/2014***	***10/9/2014***
Sample Type:								***Duplicate***					
	Units	***a***	***b***	***c***	***d***	***e***							
Metal [2]													
Chromium[3]	mg/L	0.1	0.084	NLV	--	ID	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	**0.028**	**0.0063**
Lead	mg/L	0.004	0.012	NLV	--	ID	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
2,4,5-Trichlorophenol	mg/L	2.1	--	NLV	1200	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
2,4,6-Trichlorophenol	mg/L	0.47	0.005	NLV	800	ID	0.004 U	0.0039 U	0.019 U	0.0038 U	0.0038 U	0.0038 U	0.0038 U
2,4-Dichlorophenol	mg/L	0.21	0.011	NLV	4500	ID	0.0099 U	0.0098 U	0.048 U	0.0095 U	0.0095 U	0.0096 U	0.0096 U
2,4-Dimethylphenol	mg/L	1	0.38	NLV	7870	ID	0.005 U	0.0049 U	**0.028**	0.0048 U	0.0048 U	0.0048 U	0.0048 U
2,4-Dinitrophenol	mg/L	--	--	--	--	--	0.02 U	0.02 U	0.096 U	0.019 U	0.019 U	0.019 U	0.019 U
2,4-Dinitrotoluene	mg/L	0.032	--	NLV	270	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
2,6-Dinitrotoluene	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
2-Chloronaphthalene	mg/L	5.2	--	ID	6.74	ID	0.005 U	0.0049 U	**0.044**	**0.0059**	0.0048 U	0.0048 UJ	0.0048 U
2-Chlorophenol	mg/L	0.13	0.018	ID	22000	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
2-Methylnaphthalene	mg/L	0.75	0.019	25	24.6	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
2-Methylphenol	mg/L	1	0.03	NLV	28000	--	**0.011**	**0.01**	0.024 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
2-Nitroaniline	mg/L	--	--	--	--	--	0.02 U	0.02 U	0.096 U	0.019 U	0.019 U	0.019 UJ	0.019 U
2-Nitrophenol	mg/L	0.058	ID	NLV	2500	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
3&4-Methylphenol	mg/L	1	0.03	NLV	28000	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
3,3'-Dichlorobenzidine	mg/L	0.0043	0.0003	NLV	3.11	ID	0.00099 U	0.00098 U	0.0048 U	0.00095 U	0.00095 U	0.00096 UJ	0.00096 U
3-Nitroaniline	mg/L	--	--	--	--	--	0.02 U	0.02 U	0.096 U	0.019 U	0.019 U	0.019 UJ	0.019 U
4,6-Dinitro-2-methylphenol	mg/L	0.02	--	NLV	200	ID	0.02 U	0.02 U	0.096 U	0.019 U	0.019 U	0.019 U	0.019 U
4-Bromophenyl phenyl ether	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
4-Chloro-3-methylphenol	mg/L	0.42	0.0074	NLV	3900	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
4-Chloroaniline	mg/L	--	--	--	--	--	0.0099 U	0.0098 U	0.048 U	0.0095 U	0.0095 U	0.0096 UJ	0.0096 U
4-Chlorophenyl phenyl ether	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
4-Nitroaniline	mg/L	--	--	--	--	--	0.02 U	0.02 U	0.096 U	0.019 U	0.019 U	0.019 UJ	0.019 U
4-Nitrophenol	mg/L	--	--	--	--	--	0.02 U	0.02 U	0.096 U	0.019 U	0.019 U	0.019 U	0.019 U
Acenaphthene	mg/L	3.8	0.038	4.2	4.24	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Acenaphthylene	mg/L	0.15	ID	3.9	3.93	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Acetophenone	mg/L	4.4	--	6100	6100	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Anthracene	mg/L	0.043	ID	0.043	0.0434	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Atrazine	mg/L	0.003	0.0073	NLV	70	ID	0.003 U	0.0029 U	0.014 U	0.0029 U	0.0029 U	0.0029 UJ	0.0029 U
Benzaldehyde	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Benzo(a)anthracene	mg/L	0.0085	ID	NLV	0.0094	ID	0.00099 U	0.00098 U	0.0048 U	0.00095 U	0.00095 U	0.00096 UJ	0.00096 U
Benzo(a)pyrene	mg/L	0.005	ID	NLV	0.00162	ID	0.00099 U	0.00098 U	0.0048 U	0.00095 U	0.00095 U	0.00096 UJ	0.00096 U
Benzo(b)fluoranthene	mg/L	0.0015	ID	ID	0.0015	ID	0.00099 U	0.00098 U	0.0048 U	0.00095 U	0.00095 U	0.00096 UJ	0.00096 U
Benzo(g,h,i)perylene	mg/L	0.001	--	NLV	0.00026	ID	0.00099 U	0.00098 U	0.0048 U	0.00095 U	0.00095 U	0.00096 UJ	0.00096 U
Benzo(k)fluoranthene	mg/L	0.001	--	NLV	0.0008	ID	0.00099 U	0.00098 U	0.0048 U	0.00095 U	0.00095 U	0.00096 UJ	0.00096 U
Biphenyl (1,1-Biphenyl)	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
bis(2-Chloroethoxy)methane	mg/L	--	--	--	--	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
bis(2-Chloroethyl)ether	mg/L	0.0083	0.001	210	17200	17000	0.00099 U	0.00098 U	0.0048 U	0.00095 U	0.00095 U	0.00096 UJ	0.00096 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.006	0.025	NLV	0.34	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Butyl benzylphthalate (BBP)	mg/L	2.7	0.067	NLV	2.69	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Caprolactam	mg/L	17	--	NLV	5250000	--	0.0099 U	0.0098 U	0.048 U	0.0095 U	0.0095 U	0.0096 UJ	0.0096 U
Carbazole	mg/L	0.35	0.01	NLV	7.48	ID	0.0099 U	0.0098 U	0.048 U	0.0095 U	0.0095 U	0.0096 UJ	0.0096 U
Chrysene	mg/L	0.0016	ID	ID	0.0016	ID	0.00099 U	0.00098 U	0.0048 U	0.00095 U	0.00095 U	0.00096 UJ	0.00096 U
Dibenz(a,h)anthracene	mg/L	0.002	ID	NLV	0.00249	ID	0.002 U	0.002 U	0.0096 U	0.0019 U	0.0019 U	0.0019 UJ	0.0019 U
Dibenzofuran	mg/L	ID	0.004	10	10	ID	0.004 U	0.0039 U	0.019 U	0.0038 U	0.0038 U	0.0038 UJ	0.0038 U
Diethyl phthalate	mg/L	16	0.11	NLV	1080	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Dimethyl phthalate	mg/L	210	--	NLV	4190	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Di-n-butylphthalate (DBP)	mg/L	2.5	0.0097	NLV	11.2	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Di-n-octyl phthalate (DnOP)	mg/L	0.38	ID	NLV	3	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Fluoranthene	mg/L	0.21	0.0016	0.21	0.206	ID	0.00099 U	0.00098 U	0.0048 U	0.00095 U	0.00095 U	0.00096 UJ	0.00096 U
Fluorene	mg/L	2	0.012	2	1.98	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Hexachlorobenzene	mg/L	0.001	0.0002	3	6.2	ID	0.0002 U	0.0002 U	0.00096 U	0.00019 U	0.00019 U	0.00019 UJ	0.00019 U
Hexachlorobutadiene	mg/L	0.042	0.000053	3.2	3.23	ID	0.00099 U	0.00098 U	0.0048 U	0.00095 U	0.00095 U	0.00096 UJ	0.00096 U
Hexachlorocyclopentadiene	mg/L	0.05	ID	0.42	1.8	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Hexachloroethane	mg/L	0.021	0.0067	50	50	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Indeno(1,2,3-cd)pyrene	mg/L	0.002	ID	NLV	0.000022	ID	0.002 U	0.002 U	0.0096 U	0.0019 U	0.0019 U	0.0019 UJ	0.0019 U
Isophorone	mg/L	3.1	1.3	NLV	12000	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Naphthalene	mg/L	1.5	0.011	31	31	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Nitrobenzene	mg/L	0.0096	0.18	550	2090	--	0.003 U	0.0029 U	0.014 U	0.0029 U	0.0029 U	0.0029 UJ	0.0029 U
N-Nitrosodi-n-propylamine	mg/L	0.005	--	NLV	9890	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
N-Nitrosodiphenylamine	mg/L	1.1	--	NLV	35.1	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U
Pentachlorophenol	mg/L	0.001	0.0018	NLV	1850	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
Phenanthrene	mg/L	0.15	0.002	1	1	ID	0.002 U	0.002 U	0.0096 U	0.0019 U	0.0019 U	0.0019 UJ	0.0019 U
Phenol	mg/L	13	0.45	NLV	82800	--	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U
Pyrene	mg/L	0.14	ID	0.14	0.135	ID	0.005 U	0.0049 U	0.024 U	0.0048 U	0.0048 U	0.0048 UJ	0.0048 U

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
OCTOBER 2014 QUARTERLY SAMPLING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE, MICHIGAN

Sample Location:		*MDEQ Generic Groundwater Cleanup Criteria: Nonresidential* [1]					*IRM-MW-1*	*IRM-MW-1*	*IRM-MW-2*	*IRM-MW-3*	*MW010A*	*MW016*	*MW025*
Sample Identification: GW-18224-100914-SR-		Non-Residential Drinking Water	Groundwater Surface Water Interface	Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Water Solubility	Flammability and Explosivity Screening Levels	*-001*	*-002*	*-007*	*-004*	*-003*	*-006*	*-005*
Sample Date:							*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*
Sample Type:								*Duplicate*					
	Units	*a*	*b*	*c*	*d*	*e*							
Volatile Organic Compounds (VOC)													
1,1,1-Trichloroethane	mg/L	0.2	0.089	1300	1330	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.035	0.078	77	2970	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.005	0.33	110	4420	--	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
1,1-Dichloroethane	mg/L	2.5	0.74	2300	5060	380	**0.0028**	**0.0026**	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
1,1-Dichloroethene	mg/L	0.007	0.13	1.3	2250	97	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.07	0.099	300	300	--	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.0002	--	1.2	1.23	--	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.00005	0.0057	15	4200	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.6	0.013	160	156	--	0.002 U	0.002 U	**0.026**[b]	**0.015**[b]	0.013 U	0.002 U	**0.0021**
1,2-Dichloroethane	mg/L	0.005	0.36	59	8520	2500	**0.011**[a]	**0.011**[a]	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
1,2-Dichloropropane	mg/L	0.005	0.23	36	2800	550	**0.0086**[a]	**0.0079**[a]	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.019	0.028	41	111	ID	0.002 U	0.002 U	**0.036**[ab]	**0.015**	0.013 U	0.002 U	**0.003**
1,4-Dichlorobenzene	mg/L	0.075	0.017	74	73.8	--	0.002 U	0.002 U	**0.17**[ab]	**0.025**[b]	0.013 U	0.002 U	**0.0076**
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	38	2.2	240000	240000	ID	0.02 U	0.02 U	0.22 U	0.071 U	0.13 U	0.02 U	0.01 U
2-Hexanone	mg/L	2.9	ID	8700	16000	--	0.02 U	0.02 U	0.22 U	0.071 U	0.13 U	0.02 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	5.2	ID	20000	20000	ID	0.02 U	0.02 U	0.22 U	0.071 U	0.13 U	0.02 U	0.01 U
Acetone	mg/L	2.1	1.7	1000000	1000000	15000	0.02 U	0.02 U	0.22 U	0.071 U	0.13 U	0.02 U	0.01 U
Benzene	mg/L	0.005	0.2	35	1750	68	0.002 U	0.002 U	**0.23**[ab]	**0.0075**[a]	0.013 U	0.002 U	0.001 U
Bromodichloromethane	mg/L	0.08	ID	37	6740	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Bromoform	mg/L	0.08	ID	3100	3100	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.029	0.035	9	14500	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Carbon disulfide	mg/L	2.3	ID	550	1190	13	0.01 U	0.01 U	0.11 U	0.036 U	0.067 U	0.01 U	0.005 U
Carbon tetrachloride	mg/L	0.005	0.045	2.4	793	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Chlorobenzene	mg/L	0.1	0.025	470	472	160	0.002 U	0.002 U	**0.58**[ab]	**0.19**[ab]	0.013 U	0.002 U	**0.036**[b]
Chloroethane	mg/L	1.7	1.1	5700	5740	110	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	**0.024**	0.001 U
Chloroform (Trichloromethane)	mg/L	0.08	0.35	180	7920	ID	**0.012**	**0.012**	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	1.1	ID	45	6340	36	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.07	0.62	210	3500	530	**0.055**	**0.052**	0.022 U	0.0071 U	**0.33**[a]	0.002 U	0.001 U
cis-1,3-Dichloropropene	mg/L	--	--	--	--	--	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Cyclohexane	mg/L	--	--	--	--	--	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Dibromochloromethane	mg/L	0.08	ID	110	2600	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	4.8	ID	300	300	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Ethylbenzene	mg/L	0.074	0.018	170	169	43	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Isopropyl benzene	mg/L	2.3	0.028	56	56	29	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Methyl acetate	mg/L	--	--	--	--	--	0.02 U	0.02 U	0.22 U	0.071 U	0.13 U	0.02 U	0.01 U
Methyl cyclohexane	mg/L	--	--	--	--	--	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.04	7.1	47000	46800	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Methylene chloride	mg/L	0.005	1.5	1400	17000	ID	0.01 U	0.01 U	0.11 U	0.036 U	0.067 U	0.01 U	0.005 U
Styrene	mg/L	0.1	0.08	310	310	140	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Tetrachloroethene	mg/L	0.005	0.06	170	200	ID	0.002 U	0.002 U	0.022 U	0.0071 U	**0.021**[a]	0.002 U	0.001 U
Toluene	mg/L	0.79	0.27	530	526	61	0.002 U	0.002 U	**0.055**	0.0071 U	0.013 U	0.002 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.1	1.5	200	6300	230	**0.002**	**0.0021**	0.022 U	0.0071 U	**0.11**[a]	0.002 U	0.001 U
trans-1,3-Dichloropropene	mg/L	--	--	--	--	--	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Trichloroethene	mg/L	0.005	0.2	4.9	1100	ID	**0.0029**	**0.0027**	0.022 U	0.0071 U	**0.08**[a]	0.002 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	7.3	--	1100	1100	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	170	0.032	170	170	ID	0.002 U	0.002 U	0.022 U	0.0071 U	0.013 U	0.002 U	0.001 U
Vinyl chloride	mg/L	0.002	0.013	13	2760	33	**0.036**[ab]	**0.036**[ab]	0.022 U	0.0071 U	**0.03**[ab]	0.002 U	0.001 U
Xylenes (total)	mg/L	0.28	0.041	190	186	70	0.004 U	0.004 U	0.044 U	0.014 U	0.027 U	0.004 U	0.002 U

Notes:
(1) MDEQ (Michigan) Generic groundwater cleanup criteria, administrative rule R 299.44 effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended (Part 201 Groundwater Criteria
(2) The December 20, 2013 Quarterly Monitoring Plan accounted for both total and dissolved metals analysis. However, turbidity stablized below 10 NTU in each well. As such, field filtering was not deemed warranted and only total metals were analyzec
(3) Criteria for chromium assumes chromium III (Cr III). Cr VI has not been a constituent of concern on Site. The most conservative criteria for Chromium VI is 0.011 mg/l, which is exceeded in MW016 only.
mg/L - milligrams per liter (parts per million)
U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

Attachment A

Low-Flow Purging Record Forms

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: ARKEMA - HALOWAX AREA

Ref. No.: 18224

Date: 10/9/14

Personnel: STEVE RAPAH

Monitoring Well Data:

Well No.: IDW MW-1

Vapour PID (ppm):

Measurement Point:

Constructed Well Depth (m/ft):

Measured Well Depth (m/ft):

Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):

Depth to Pump Intake (m/ft)[1]:

Well Diameter, D (cm/in):

Well Screen Volume, V_s (L)[2]:

Initial Depth to Water (m/ft): 6.10

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
8:50	100		–								
9:25	100	6.17	0.07	12.61	1.56	4.04	2.01	6.90	-150		
9:35	100	6.17	0.07	12.61	1.58	2.68	0.98	6.59	-153		
9:50	100	6.18	0.08	12.58	1.60	1.67	0.84	6.56	-150		
10:00	100	6.18	0.08	12.66	1.60	2.49	0.73	6.55	-148		
10:10	100	6.18	0.08	12.60	1.61	2.06	0.65	6.55	-147		
10:15	100	6.19	0.09	12.59	1.61	1.84	0.64	6.55	-147		
10:20	100	6.19	0.09	12.59	1.61	1.71	0.64	6.55	-146		
	Sample @	10:25									

Sample ID: GW-18224-100914-SR-001 -002 (DUP)

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: 018224 Arkema Helena Area

Ref. No.: 018224

Date: 10/9/14

Personnel: D. Canfield

Monitoring Well Data:

Well No.: TMA-MW-3

Vapour PID (ppm):

Measurement Point:

Constructed Well Depth (m/ft):

Measured Well Depth (m/ft):

Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):

Depth to Pump Intake (m/ft)[1]:

Well Diameter, D (cm/in):

Well Screen Volume, V_s (L)[2]:

Initial Depth to Water (m/ft): 5.80

Start: 10:30

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
11:10	100	5.85		14.43	5.44	3.56	0.24	7.03	-192		
11:25	↓	↓		14.61	5.45	3.30	0.23	7.11	-198		
11:30				14.65	5.47	3.43	0.22	7.11	-198		
11:35				14.07	5.50	3.23	0.22	7.12	-199		
	Sample @	11:35									

Sample ID: GW-18224-100914-SR-04 (MS/MSD)

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Arkema Halowax Area

Ref. No.: 018224

Date: 10/9/14

Personnel: D. Comfield

Monitoring Well Data:

Well No.: IRA - MW-2

Vapour PID (ppm):

Measurement Point:

Constructed Well Depth (m/ft):

Measured Well Depth (m/ft):

Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):

Depth to Pump Intake (m/ft)[1]:

Well Diameter, D (cm/in):

Well Screen Volume, V_s (L)[2]:

Initial Depth to Water (m/ft): 6.10

Start: 13:25

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
13:50	100	6.25		17.32	4.94	3.44	0.18	7.18	-171		
13:55	↓	↓		17.30	4.73	4.08	0.14	7.16	-175		
14:05				17.18	4.06	2.58	0.11	7.16	-179		
14:25				17.46	3.51	2.60	0.09	7.15	-186		
14:35				17.51	3.28	2.62	0.09	7.16	-188		
14:40				17.62	3.23	2.11	0.08	7.16	-189		
14:45	↓	↓		17.54	3.23	1.93	0.08	7.16	-191		
	Sampled	14:45									

Sample ID: GW-18224-100914-SR-007

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Arkema Halowax Area

Ref. No.: 018224

Date: 10/9/14

Personnel: D. Canfield

Monitoring Well Data:

Well No.: AW 10A

Vapour PID (ppm):

Measurement Point:

Constructed Well Depth (m/ft):

Measured Well Depth (m/ft):

Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):

Depth to Pump Intake (m/ft)[1]:

Well Diameter, D (cm/in):

Well Screen Volume, V_s (L)[2]:

Initial Depth to Water (m/ft): 4.78

Start: 9:00

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
9:35	100	5.18		12.78	3.44	5.01	0.24	6.76	-191		
9:40	↓	↓		12.81	3.42	3.13	0.17	6.81	-194		
9:45				12.84	3.42	2.64	0.15	6.85	-198		
9:50				12.96	3.41	3.08	0.14	6.86	-201		
9:55				13.03	3.40	2.67	0.15	6.87	-204		
	Sample @	9:55									

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

Sample ID: GW-18224-100914-SR-003

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: ARKEMA- HALOWAX AREA
Ref. No.: 18224

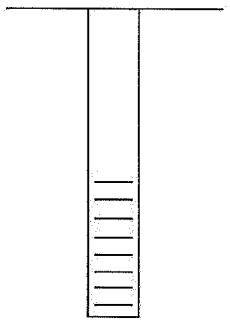
Date: 10/9/14
Personnel: STEVE RAPAI

Monitoring Well Data:

Well No.: MW16

Vapour PID (ppm):
Measurement Point:
Constructed Well Depth (m/ft):
Measured Well Depth (m/ft):
Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):
Depth to Pump Intake (m/ft)[1]:
Well Diameter, D (cm/in):
Well Screen Volume, V_s (L)[2]:
Initial Depth to Water (m/ft): 5.52



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
1125	50	5.52									
1135	50	5.81		13.84	47.6	9.32	0.48	7.71	-243		
1200	50	6.16		14.32	44.1	7.11	0.16	8.16	-269		
1215	50	6.46		14.98	31.5	6.15	0.09	8.35	-259		
1230	50	6.37		15.17	33.1	5.00	0.05	8.35	-260		
1245	50	6.31		15.63	30.2	3.93	0.05	8.38	-270		
1300	50	6.21		16.52	27.9	4.19	0.04	8.33	-273		
1305	50	6.23		15.88	26.1	4.38	0.04	8.36	-269		
1315	50	6.28		16.59	24.5	5.06	0.03	8.46	-206		
	Sampled @	1315									

Sample ID: GW-18224-1009 14-002-006

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Arkema Helena Area

Ref. No.: 018224

Date: 10/9/14

Personnel: D. Canfield

Monitoring Well Data:

Well No.: MW-25

Vapour PID (ppm):

Measurement Point:

Constructed Well Depth (m/ft):

Measured Well Depth (m/ft):

Depth of Sediment (m/ft):

Saturated Screen Length (m/ft):

Depth to Pump Intake (m/ft)[1]:

Well Diameter, D (cm/in):

Well Screen Volume, V_s (L)[2]:

Initial Depth to Water (m/ft): 7.62

Start: 10:40

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level[3] (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, Vp (L)	No. of Well Screen Volumes Purged[4]
			Precision Required[5]:	±3 %	±0.005 or 0.01[6]	±10 %	±10 %	±0.1 Units	±10 mV		
11:10	100	7.64		12.97	12.12	7.54	0.12	7.11	-214		
11:25				13.06	10.93	6.88	0.09	7.11	-210		
11:45				13.19	10.44	5.27	0.07	7.11	-219		
11:55				13.43	10.23	6.07	0.08	7.11	-221		
12:00				13.55	10.03	3.17	0.08	7.11	-220		
12:05				13.58	9.58	3.17	0.09	7.11	-222		
12:10				13.59	9.85	3.17	0.08	7.12	-222		
	Sampled @	12:10									

Sample ID: GW-18224-100914-SD-0005

Notes:

(1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.

(2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s=\pi*(r^2)*L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s=\pi*(r^2)*L*(2.54)^3$, where r and L are in inches

(3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.

(4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

Attachment B

Data Quality Assessment and Validation Memorandum

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO:	Pete Swanson	REF. NO.:	018224
FROM:	Nancy Bergstrom/tl/16/Det	DATE:	November 4, 2014
RE:	**Analytical Results and Reduced Validation Quarterly Monitoring Event Arkema East Plant – Halowax Area Wyandotte/Riverview, Michigan October 2014**		

1.0 Introduction

The following document details a reduced validation of analytical results for groundwater samples collected in support of the Quarterly Monitoring Event at the Arkema East Plant – Halowax Area during October 2014. Samples were submitted to TestAmerica Laboratories, Inc., located in North Canton, Ohio. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS), matrix spikes (MS), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 540/R-94-013, February 1994

Items i) and ii) will subsequently be referred to as the "Guidelines" in this Memorandum.

2.0 Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (4 ± 2° C).

3.0 Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4.0 Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC) and semivolatile organic compound (SVOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. Table 4 presents the SVOC data qualified due to outlying surrogate recoveries. All remaining surrogate recoveries met the above criteria.

5.0 Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS contained all compounds of interest. All LCS associated with investigative samples were within the laboratory control limits or were biased high and did not warrant qualification, demonstrating acceptable analytical accuracy.

Inorganic Analyses

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries were within the control limits, demonstrating acceptable analytical accuracy.

6.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the extraction or digestion process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

Organic Analyses

The MS/MSD samples were spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits or outlying percent recoveries and RPD values did not result in qualification, demonstrating acceptable analytical accuracy and precision.

Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines". All percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision.

7.0 Field QA/QC Samples

The field QA/QC consisted of one trip blank sample and one field duplicate sample set.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank sample was submitted to the laboratory for VOC analysis. All results were non-detect for the compounds of interest.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the reporting limit (RL), the evaluation criteria is one time the RL value for water samples.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

8.0 Analyte Reporting

The laboratory reported detected results down to the RL for each analyte. Non-detect results were presented as non-detect at the RL in Table 2.

9.0 Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific qualifications noted herein.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

					Analysis/Parameters			
Sample Identification	*Location*	*Matrix*	*Collection Date (mm/dd/yyyy)*	*Collection Time (hr:min)*	*TCL VOC*	*TCL SVOC*	*Chromium and Lead*	*Comments*
TA-NC SDG No.: 240-42958-1								
GW-18224-100914-SR-001	IRM-MW-1	water	10/09/2014	10:25	X	X	X	
GW-18224-100914-SR-002	IRM-MW-1	water	10/09/2014	10:25	X	X	X	Field duplicate of IRM-MW-1
GW-18224-100914-SR-003	MW010A	water	10/09/2014	9:55	X	X	X	
GW-18224-100914-SR-004	IRM-MW-3	water	10/09/2014	11:35	X	X	X	MS/MSD
GW-18224-100914-SR-005	MW025	water	10/09/2014	12:10	X	X	X	
GW-18224-100914-SR-006	MW016	water	10/09/2014	13:15	X	X	X	
GW-18224-100914-SR-007	IRM-MW-2	water	10/09/2014	14:45	X	X	X	
TB-18224-100914	--	water	10/09/2014	--	X	--	--	Trip Blank

Notes:

TCL - Target Compound List
VOC - Volatile Organic Compounds
SVOC - Semivolatile Organic Compounds
MS/MSD - Matrix Spike/Matrix Spike Duplicate
TA-NC - TestAmerica Laboratories, Inc. - North Canton, Ohio
SDG - Sample Delivery Group

TABLE 2

VALIDATED ANAYLTICAL RESULT SUMMARY
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

Sample Location:		*IRM-MW-1*	*IRM-MW-1*	*IRM-MW-2*	*IRM-MW-3*
Sample Identification:		*GW-18224-100914-SR-001*	*GW-18224-100914-SR-002*	*GW-18224-100914-SR-007*	*GW-18224-100914-SR-004*
Sample Date:		*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*
Sample Type:			*Duplicate*		
	Units				
Metals					
Chromium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U
Lead	mg/L	0.003 U	0.003 U	0.003 U	0.003 U
Semi-Volatile Organic Compound					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
2,4,5-Trichlorophenol	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
2,4,6-Trichlorophenol	mg/L	0.004 U	0.0039 U	0.019 U	0.0038 U
2,4-Dichlorophenol	mg/L	0.0099 U	0.0098 U	0.048 U	0.0095 U
2,4-Dimethylphenol	mg/L	0.005 U	0.0049 U	0.028	0.0048 U
2,4-Dinitrophenol	mg/L	0.02 U	0.02 U	0.096 U	0.019 U
2,4-Dinitrotoluene	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
2,6-Dinitrotoluene	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
2-Chloronaphthalene	mg/L	0.005 U	0.0049 U	0.044	0.0059
2-Chlorophenol	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
2-Methylnaphthalene	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
2-Methylphenol	mg/L	0.011	0.01	0.024 U	0.0048 U
2-Nitroaniline	mg/L	0.02 U	0.02 U	0.096 U	0.019 U
2-Nitrophenol	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
3&4-Methylphenol	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
3,3'-Dichlorobenzidine	mg/L	0.00099 U	0.00098 U	0.0048 U	0.00095 U
3-Nitroaniline	mg/L	0.02 U	0.02 U	0.096 U	0.019 U
4,6-Dinitro-2-methylphenol	mg/L	0.02 U	0.02 U	0.096 U	0.019 U
4-Bromophenyl phenyl ether	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
4-Chloro-3-methylphenol	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
4-Chloroaniline	mg/L	0.0099 U	0.0098 U	0.048 U	0.0095 U
4-Chlorophenyl phenyl ether	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
4-Nitroaniline	mg/L	0.02 U	0.02 U	0.096 U	0.019 U
4-Nitrophenol	mg/L	0.02 U	0.02 U	0.096 U	0.019 U
Acenaphthene	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Acenaphthylene	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Acetophenone	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Anthracene	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Atrazine	mg/L	0.003 U	0.0029 U	0.014 U	0.0029 U
Benzaldehyde	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Benzo(a)anthracene	mg/L	0.00099 U	0.00098 U	0.0048 U	0.00095 U
Benzo(a)pyrene	mg/L	0.00099 U	0.00098 U	0.0048 U	0.00095 U
Benzo(b)fluoranthene	mg/L	0.00099 U	0.00098 U	0.0048 U	0.00095 U

TABLE 2

VALIDATED ANAYLTICAL RESULT SUMMARY
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

Sample Location:		*IRM-MW-1*	*IRM-MW-1*	*IRM-MW-2*	*IRM-MW-3*
Sample Identification:		*GW-18224-100914-SR-001*	*GW-18224-100914-SR-002*	*GW-18224-100914-SR-007*	*GW-18224-100914-SR-004*
Sample Date:		*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*
Sample Type:			*Duplicate*		
	Units				
Semi-Volatile Organic Compound					
Benzo(g,h,i)perylene	mg/L	0.00099 U	0.00098 U	0.0048 U	0.00095 U
Benzo(k)fluoranthene	mg/L	0.00099 U	0.00098 U	0.0048 U	0.00095 U
Biphenyl (1,1-Biphenyl)	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
bis(2-Chloroethoxy)methane	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
bis(2-Chloroethyl)ether	mg/L	0.00099 U	0.00098 U	0.0048 U	0.00095 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Butyl benzylphthalate (BBP)	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Caprolactam	mg/L	0.0099 U	0.0098 U	0.048 U	0.0095 U
Carbazole	mg/L	0.0099 U	0.0098 U	0.048 U	0.0095 U
Chrysene	mg/L	0.00099 U	0.00098 U	0.0048 U	0.00095 U
Dibenz(a,h)anthracene	mg/L	0.002 U	0.002 U	0.0096 U	0.0019 U
Dibenzofuran	mg/L	0.004 U	0.0039 U	0.019 U	0.0038 U
Diethyl phthalate	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Dimethyl phthalate	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Di-n-butylphthalate (DBP)	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Di-n-octyl phthalate (DnOP)	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Fluoranthene	mg/L	0.00099 U	0.00098 U	0.0048 U	0.00095 U
Fluorene	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Hexachlorobenzene	mg/L	0.0002 U	0.0002 U	0.00096 U	0.00019 U
Hexachlorobutadiene	mg/L	0.00099 U	0.00098 U	0.0048 U	0.00095 U
Hexachlorocyclopentadiene	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Hexachloroethane	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Indeno(1,2,3-cd)pyrene	mg/L	0.002 U	0.002 U	0.0096 U	0.0019 U
Isophorone	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Naphthalene	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Nitrobenzene	mg/L	0.003 U	0.0029 U	0.014 U	0.0029 U
N-Nitrosodi-n-propylamine	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
N-Nitrosodiphenylamine	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Pentachlorophenol	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Phenanthrene	mg/L	0.002 U	0.002 U	0.0096 U	0.0019 U
Phenol	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Pyrene	mg/L	0.005 U	0.0049 U	0.024 U	0.0048 U
Volatile Organic Compound					
1,1,1-Trichloroethane	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
1,1,2,2-Tetrachloroethane	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
1,1,2-Trichloroethane	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U

TABLE 2

VALIDATED ANAYLTICAL RESULT SUMMARY
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

Sample Location:		*IRM-MW-1*	*IRM-MW-1*	*IRM-MW-2*	*IRM-MW-3*
Sample Identification:		*GW-18224-100914-SR-001*	*GW-18224-100914-SR-002*	*GW-18224-100914-SR-007*	*GW-18224-100914-SR-004*
Sample Date:		*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*
Sample Type:			*Duplicate*		
	Units				
Volatile Organic Compound					
1,1-Dichloroethane	mg/L	0.0028	0.0026	0.022 U	0.0071 U
1,1-Dichloroethene	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
1,2,4-Trichlorobenzene	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
1,2-Dichlorobenzene	mg/L	0.002 U	0.002 U	0.026	0.015
1,2-Dichloroethane	mg/L	0.011	0.011	0.022 U	0.0071 U
1,2-Dichloropropane	mg/L	0.0086	0.0079	0.022 U	0.0071 U
1,3-Dichlorobenzene	mg/L	0.002 U	0.002 U	0.036	0.015
1,4-Dichlorobenzene	mg/L	0.002 U	0.002 U	0.17	0.025
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.02 U	0.02 U	0.22 U	0.071 U
2-Hexanone	mg/L	0.02 U	0.02 U	0.22 U	0.071 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.02 U	0.02 U	0.22 U	0.071 U
Acetone	mg/L	0.02 U	0.02 U	0.22 U	0.071 U
Benzene	mg/L	0.002 U	0.002 U	0.23	0.0075
Bromodichloromethane	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Bromoform	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Bromomethane (Methyl bromide)	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Carbon disulfide	mg/L	0.01 U	0.01 U	0.11 U	0.036 U
Carbon tetrachloride	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Chlorobenzene	mg/L	0.002 U	0.002 U	0.58	0.19
Chloroethane	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Chloroform (Trichloromethane)	mg/L	0.012	0.012	0.022 U	0.0071 U
Chloromethane (Methyl chloride)	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
cis-1,2-Dichloroethene	mg/L	0.055	0.052	0.022 U	0.0071 U
cis-1,3-Dichloropropene	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Cyclohexane	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Dibromochloromethane	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Ethylbenzene	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Isopropyl benzene	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Methyl acetate	mg/L	0.02 U	0.02 U	0.22 U	0.071 U
Methyl cyclohexane	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Methyl tert butyl ether (MTBE)	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Methylene chloride	mg/L	0.01 U	0.01 U	0.11 U	0.036 U
Styrene	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Tetrachloroethene	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U

TABLE 2

VALIDATED ANAYLTICAL RESULT SUMMARY
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

Sample Location:		*IRM-MW-1*	*IRM-MW-1*	*IRM-MW-2*	*IRM-MW-3*
Sample Identification:		*GW-18224-100914-SR-001*	*GW-18224-100914-SR-002*	*GW-18224-100914-SR-007*	*GW-18224-100914-SR-004*
Sample Date:		*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*
Sample Type:			*Duplicate*		
	Units				
Volatile Organic Compound					
Toluene	mg/L	0.002 U	0.002 U	0.055	0.0071 U
trans-1,2-Dichloroethene	mg/L	0.002	0.0021	0.022 U	0.0071 U
trans-1,3-Dichloropropene	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Trichloroethene	mg/L	0.0029	0.0027	0.022 U	0.0071 U
Trichlorofluoromethane (CFC-11)	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.002 U	0.002 U	0.022 U	0.0071 U
Vinyl chloride	mg/L	0.036	0.036	0.022 U	0.0071 U
Xylenes (total)	mg/L	0.004 U	0.004 U	0.044 U	0.014 U

TABLE 2

VALIDATED ANAYLTICAL RESULT SUMMARY
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

Sample Location:		*MW010A*	*MW016*	*MW025*	*Trip Blank*
Sample Identification:		*GW-18224-100914-SR-003*	*GW-18224-100914-SR-006*	*GW-18224-100914-SR-005*	*TB-18224-100914*
Sample Date:		*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*
Sample Type:	*Units*				
Metals					
Chromium	mg/L	0.005 U	0.028	0.0063	--
Lead	mg/L	0.003 U	0.003 U	0.003 U	--
Semi-Volatile Organic Compound					
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
2,4,5-Trichlorophenol	mg/L	0.0048 U	0.0048 U	0.0048 U	--
2,4,6-Trichlorophenol	mg/L	0.0038 U	0.0038 U	0.0038 U	--
2,4-Dichlorophenol	mg/L	0.0095 U	0.0096 U	0.0096 U	--
2,4-Dimethylphenol	mg/L	0.0048 U	0.0048 U	0.0048 U	--
2,4-Dinitrophenol	mg/L	0.019 U	0.019 U	0.019 U	--
2,4-Dinitrotoluene	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
2,6-Dinitrotoluene	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
2-Chloronaphthalene	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
2-Chlorophenol	mg/L	0.0048 U	0.0048 U	0.0048 U	--
2-Methylnaphthalene	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
2-Methylphenol	mg/L	0.0048 U	0.0048 U	0.0048 U	--
2-Nitroaniline	mg/L	0.019 U	0.019 UJ	0.019 U	--
2-Nitrophenol	mg/L	0.0048 U	0.0048 U	0.0048 U	--
3&4-Methylphenol	mg/L	0.0048 U	0.0048 U	0.0048 U	--
3,3'-Dichlorobenzidine	mg/L	0.00095 U	0.00096 UJ	0.00096 U	--
3-Nitroaniline	mg/L	0.019 U	0.019 UJ	0.019 U	--
4,6-Dinitro-2-methylphenol	mg/L	0.019 U	0.019 U	0.019 U	--
4-Bromophenyl phenyl ether	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
4-Chloro-3-methylphenol	mg/L	0.0048 U	0.0048 U	0.0048 U	--
4-Chloroaniline	mg/L	0.0095 U	0.0096 UJ	0.0096 U	--
4-Chlorophenyl phenyl ether	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
4-Nitroaniline	mg/L	0.019 U	0.019 UJ	0.019 U	--
4-Nitrophenol	mg/L	0.019 U	0.019 U	0.019 U	--
Acenaphthene	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Acenaphthylene	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Acetophenone	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Anthracene	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Atrazine	mg/L	0.0029 U	0.0029 UJ	0.0029 U	--
Benzaldehyde	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Benzo(a)anthracene	mg/L	0.00095 U	0.00096 UJ	0.00096 U	--
Benzo(a)pyrene	mg/L	0.00095 U	0.00096 UJ	0.00096 U	--
Benzo(b)fluoranthene	mg/L	0.00095 U	0.00096 UJ	0.00096 U	--

TABLE 2

VALIDATED ANAYLTICAL RESULT SUMMARY
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

Sample Location:		*MW010A*	*MW016*	*MW025*	*Trip Blank*
Sample Identification:		*GW-18224-100914-SR-003*	*GW-18224-100914-SR-006*	*GW-18224-100914-SR-005*	*TB-18224-100914*
Sample Date:		*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*
Sample Type:					
	Units				
Semi-Volatile Organic Compound					
Benzo(g,h,i)perylene	mg/L	0.00095 U	0.00096 UJ	0.00096 U	--
Benzo(k)fluoranthene	mg/L	0.00095 U	0.00096 UJ	0.00096 U	--
Biphenyl (1,1-Biphenyl)	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
bis(2-Chloroethoxy)methane	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
bis(2-Chloroethyl)ether	mg/L	0.00095 U	0.00096 UJ	0.00096 U	--
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Butyl benzylphthalate (BBP)	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Caprolactam	mg/L	0.0095 U	0.0096 UJ	0.0096 U	--
Carbazole	mg/L	0.0095 U	0.0096 UJ	0.0096 U	--
Chrysene	mg/L	0.00095 U	0.00096 UJ	0.00096 U	--
Dibenz(a,h)anthracene	mg/L	0.0019 U	0.0019 UJ	0.0019 U	--
Dibenzofuran	mg/L	0.0038 U	0.0038 UJ	0.0038 U	--
Diethyl phthalate	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Dimethyl phthalate	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Di-n-butylphthalate (DBP)	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Di-n-octyl phthalate (DnOP)	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Fluoranthene	mg/L	0.00095 U	0.00096 UJ	0.00096 U	--
Fluorene	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Hexachlorobenzene	mg/L	0.00019 U	0.00019 UJ	0.00019 U	--
Hexachlorobutadiene	mg/L	0.00095 U	0.00096 UJ	0.00096 U	--
Hexachlorocyclopentadiene	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Hexachloroethane	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Indeno(1,2,3-cd)pyrene	mg/L	0.0019 U	0.0019 UJ	0.0019 U	--
Isophorone	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Naphthalene	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Nitrobenzene	mg/L	0.0029 U	0.0029 UJ	0.0029 U	--
N-Nitrosodi-n-propylamine	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
N-Nitrosodiphenylamine	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Pentachlorophenol	mg/L	0.0048 U	0.0048 U	0.0048 U	--
Phenanthrene	mg/L	0.0019 U	0.0019 UJ	0.0019 U	--
Phenol	mg/L	0.0048 U	0.0048 U	0.0048 U	--
Pyrene	mg/L	0.0048 U	0.0048 UJ	0.0048 U	--
Volatile Organic Compound					
1,1,1-Trichloroethane	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
1,1,2,2-Tetrachloroethane	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
1,1,2-Trichloroethane	mg/L	0.013 U	0.002 U	0.001 U	0.001 U

TABLE 2

VALIDATED ANAYLTICAL RESULT SUMMARY
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

Sample Location:		*MW010A*	*MW016*	*MW025*	*Trip Blank*
Sample Identification:		*GW-18224-100914-SR-003*	*GW-18224-100914-SR-006*	*GW-18224-100914-SR-005*	*TB-18224-100914*
Sample Date:		*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*
Sample Type:					
	Units				
Volatile Organic Compound					
1,1-Dichloroethane	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
1,1-Dichloroethene	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
1,2,4-Trichlorobenzene	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
1,2-Dichlorobenzene	mg/L	0.013 U	0.002 U	0.0021	0.001 U
1,2-Dichloroethane	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
1,2-Dichloropropane	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
1,3-Dichlorobenzene	mg/L	0.013 U	0.002 U	0.003	0.001 U
1,4-Dichlorobenzene	mg/L	0.013 U	0.002 U	0.0076	0.001 U
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	0.13 U	0.02 U	0.01 U	0.01 U
2-Hexanone	mg/L	0.13 U	0.02 U	0.01 U	0.01 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/L	0.13 U	0.02 U	0.01 U	0.01 U
Acetone	mg/L	0.13 U	0.02 U	0.01 U	0.01 U
Benzene	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Bromodichloromethane	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Bromoform	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Bromomethane (Methyl bromide)	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Carbon disulfide	mg/L	0.067 U	0.01 U	0.005 U	0.005 U
Carbon tetrachloride	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Chlorobenzene	mg/L	0.013 U	0.002 U	0.036	0.001 U
Chloroethane	mg/L	0.013 U	0.024	0.001 U	0.001 U
Chloroform (Trichloromethane)	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Chloromethane (Methyl chloride)	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	mg/L	0.33	0.002 U	0.001 U	0.001 U
cis-1,3-Dichloropropene	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Cyclohexane	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Dibromochloromethane	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Dichlorodifluoromethane (CFC-12)	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Ethylbenzene	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Isopropyl benzene	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Methyl acetate	mg/L	0.13 U	0.02 U	0.01 U	0.01 U
Methyl cyclohexane	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Methyl tert butyl ether (MTBE)	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Methylene chloride	mg/L	0.067 U	0.01 U	0.005 U	0.005 U
Styrene	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Tetrachloroethene	mg/L	0.021	0.002 U	0.001 U	0.001 U

TABLE 2

VALIDATED ANAYLTICAL RESULT SUMMARY
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

Sample Location:		*MW010A*	*MW016*	*MW025*	*Trip Blank*
Sample Identification:		*GW-18224-100914-SR-003*	*GW-18224-100914-SR-006*	*GW-18224-100914-SR-005*	*TB-18224-100914*
Sample Date:		*10/9/2014*	*10/9/2014*	*10/9/2014*	*10/9/2014*
Sample Type:					
	Units				
Volatile Organic Compound					
Toluene	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	mg/L	0.11	0.002 U	0.001 U	0.001 U
trans-1,3-Dichloropropene	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Trichloroethene	mg/L	0.08	0.002 U	0.001 U	0.001 U
Trichlorofluoromethane (CFC-11)	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Trifluorotrichloroethane (Freon 113)	mg/L	0.013 U	0.002 U	0.001 U	0.001 U
Vinyl chloride	mg/L	0.03	0.002 U	0.001 U	0.001 U
Xylenes (total)	mg/L	0.027 U	0.004 U	0.002 U	0.002 U

Notes:

U - Not detected at the associated reporting limit.
J - Estimated concentration.
UJ - Not detected; associated reporting limit is estimated.

TABLE 3

ANALYTICAL METHODS AND HOLDING TIME CRITERIA
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

Parameter	*Method*	*Matrix*	*Preservation*	*Holding Time*	
				Collection to Extraction (Days)	*Collection or Extraction to Analysis (Days)*
TCL VOC	SW-846 8260B	Water	pH < 2 and Iced, 4 ± 2° C	-	14
TCL SVOC	SW-846 8270C	Water	Iced, 4 ± 2° C	7	40
Chromium and Lead	SW-846 6010B	Water	pH < 2 and Iced, 4 ± 2° C	-	180

Notes

SW-846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions.
TCL - Target Compound List
VOC - Volatile Organic Compounds
SVOC - Semivolatile Organic Compounds

TABLE 4

QUALIFIED SAMPLE DATA DUE TO OUTLYING SURROGATE RECOVERIES
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

Parameter	*Sample ID*	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Analyte*	*Qualified Result*	*Units*
TCL SVOC	GW-18224-100914-SR-006	2-Fluorobiphenyl	22	29-110	4-Nitroaniline	19 UJ	µg/L
		Nitrobenzend-d_5	30	31-110	Benzaldehyde	4.8 UJ	µg/L
		Terphenyl-d_{14}	19	31-115	4-Bromophenyl phenyl ether	4.8 UJ	µg/L
					Caprolactam	9.6 UJ	µg/L
					4-Chloroaniline	9.6 UJ	µg/L
					2,2'-Oxybis(1-chloropropane)	4.8 UJ	µg/L
					bis(2-Chloroethyl)ether	0.96 UJ	µg/L
					bis(2-Chloroethoxy)methane	4.8 UJ	µg/L
					bis(2-Ethylhexyl)phthalate	4.8 UJ	µg/L
					Di-n-octyl phthalate	4.8 UJ	µg/L
					Hexachlorobenzene	0.19 UJ	µg/L
					Anthracene	4.8 UJ	µg/L
					2,4-Dinitrotoluene	4.8 UJ	µg/L
					Pyrene	4.8 UJ	µg/L
					Dimethyl phthalate	4.8 UJ	µg/L
					Dibenzofuran	3.8 UJ	µg/L
					Benzo(g,h,i)perylene	0.96 UJ	µg/L
					Atrazine	2.9 UJ	µg/L
					Indeno(1,2,3-cd)pyrene	1.9 UJ	µg/L
					Benzo(b)fluoranthene	0.96 UJ	µg/L
					Fluoranthene	0.96 UJ	µg/L
					Benzo(k)fluoranthene	0.96 UJ	µg/L
					Acenaphthylene	4.8 UJ	µg/L
					Chrysene	0.96 UJ	µg/L
					Benzo(a)pyrene	0.96 UJ	µg/L
					Dibenz(a,h)anthracene	1.9 UJ	µg/L
					Benzo(a)anthracene	0.96 UJ	µg/L
					2,6-Dinitrotoluene	4.8 UJ	µg/L
					N-Nitrosodi-n-propylamine	4.8 UJ	µg/L
					Hexachloroethane	4.8 UJ	µg/L
					4-Chlorophenyl phenyl ether	4.8 UJ	µg/L
					Hexachlorocyclopentadiene	4.8 UJ	µg/L
					Isophorone	4.8 UJ	µg/L

TABLE 4

QUALIFIED SAMPLE DATA DUE TO OUTLYING SURROGATE RECOVERIES
QUARTERLY MONITORING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
OCTOBER 2014

Parameter	*Sample ID*	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Analyte*	*Qualified Result*	*Units*
TCL SVOC	GW-18224-100914-SR-006	2-Fluorobiphenyl	22	29-110	Acenaphthene	4.8 UJ	µg/L
		Nitrobenzend-d_5	30	31-110	Diethyl phthalate	4.8 UJ	µg/L
		Terphenyl-d_{14}	19	31-115	Di-n-butylphthalate	4.8 UJ	µg/L
					Phenanthrene	1.9 UJ	µg/L
					Butyl benzylphthalate	4.8 UJ	µg/L
					N-Nitrosodiphenylamine	4.8 UJ	µg/L
					Fluorene	4.8 UJ	µg/L
					Carbazole	9.6 UJ	µg/L
					Hexachlorobutadiene	0.96 UJ	µg/L
					2-Nitroaniline	19 UJ	µg/L
					Naphthalene	4.8 UJ	µg/L
					2-Methylnaphthalene	4.8 UJ	µg/L
					2-Chloronaphthalene	4.8 UJ	µg/L
					3,3'-Dichlorobenzidine	0.96 UJ	µg/L
					Biphenyl	4.8 UJ	µg/L
					Acetophenone	4.8 UJ	µg/L
					Nitrobenzene	2.9 UJ	µg/L
					3-Nitroaniline	19 UJ	µg/L

Notes:

UJ - Not detected; associated reporting limit is estimated.
TCL - Target Compound List
SVOC - Semivolatile Organic Compounds

Attachment C

Laboratory Analytical Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-42958-1
Client Project/Site: 18224-003, Arkema Halowax Area

For:
Conestoga-Rovers & Associates, Inc.
14496 Sheldon Road, Suite 200
Plymouth, Michigan 48170

Attn: Rawa Fleisher

Denise D Heckler

Authorized for release by:
10/27/2014 1:42:42 PM

Denise Heckler, Project Manager II
(330)966-9477
denise.heckler@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 240-42958-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 18224-003, Arkema Halowax Area

Report Number: 240-42958-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 10/10/2014; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.6º C, 2.6º C and 3.2º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples GW-18224-100914-SR-001 (240-42958-1), GW-18224-100914-SR-002 (240-42958-2), GW-18224-100914-SR-003 (240-42958-3), GW-18224-100914-SR-004 (240-42958-4), GW-18224-100914-SR-005 (240-42958-5), GW-18224-100914-SR-006 (240-42958-6), GW-18224-100914-SR-007 (240-42958-7) and TB-18224-100914 (240-42958-8) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/16/2014 and 10/17/2014.

1,1,1-Trichloroethane, Bromoform and Carbon tetrachloride failed the recovery criteria high for LCS 240-151923/4. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Chlorobenzene failed the recovery criteria low for the MSD of sample GW-18224-100914-SR-004MSD (240-42958-4) in batch 240-152000. Chloroethane exceeded the RPD limit.

Samples GW-18224-100914-SR-001 (240-42958-1)[2X], GW-18224-100914-SR-002 (240-42958-2)[2X], GW-18224-100914-SR-003 (240-42958-3)[13.33X], GW-18224-100914-SR-004 (240-42958-4)[7.14X], GW-18224-100914-SR-006 (240-42958-6)[2X] and GW-18224-100914-SR-007 (240-42958-7)[22.22X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Job ID: 240-42958-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

The following sample was diluted due to foaming at the time of purging during the original sample analysis: GW-18224-100914-SR-006 (240-42958-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples GW-18224-100914-SR-001 (240-42958-1), GW-18224-100914-SR-002 (240-42958-2), GW-18224-100914-SR-003 (240-42958-3), GW-18224-100914-SR-004 (240-42958-4), GW-18224-100914-SR-005 (240-42958-5), GW-18224-100914-SR-006 (240-42958-6) and GW-18224-100914-SR-007 (240-42958-7) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 10/13/2014 and analyzed on 10/21/2014.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Surrogate recovery for the following sample(s) was outside control limits: GW-18224-100914-SR-006 (240-42958-6). Re-extraction and/or re-analysis was performed with concurring results. The original analysis has been reported.

4-Chloroaniline failed the recovery criteria low for the MSD of sample GW-18224-100914-SR-004MSD (240-42958-4) in batch 240-152476. 4-Chloroaniline exceeded the RPD limit.

Sample GW-18224-100914-SR-007 (240-42958-7)[5X] required dilution prior to analysis due to the nature of the sample matrix. The reporting limits have been adjusted accordingly.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICP)

Samples GW-18224-100914-SR-001 (240-42958-1), GW-18224-100914-SR-002 (240-42958-2), GW-18224-100914-SR-003 (240-42958-3), GW-18224-100914-SR-004 (240-42958-4), GW-18224-100914-SR-005 (240-42958-5), GW-18224-100914-SR-006 (240-42958-6) and GW-18224-100914-SR-007 (240-42958-7) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 10/13/2014 and analyzed on 10/14/2014.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F1	MS and/or MSD Recovery exceeds the control limits
F2	MS/MSD RPD exceeds control limits
*	LCS or LCSD exceeds the control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F1	MS and/or MSD Recovery exceeds the control limits
F2	MS/MSD RPD exceeds control limits
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-42958-1	GW-18224-100914-SR-001	Water	10/09/14 10:25	10/10/14 08:00
240-42958-2	GW-18224-100914-SR-002	Water	10/09/14 10:25	10/10/14 08:00
240-42958-3	GW-18224-100914-SR-003	Water	10/09/14 09:55	10/10/14 08:00
240-42958-4	GW-18224-100914-SR-004	Water	10/09/14 11:35	10/10/14 08:00
240-42958-5	GW-18224-100914-SR-005	Water	10/09/14 12:10	10/10/14 08:00
240-42958-6	GW-18224-100914-SR-006	Water	10/09/14 13:15	10/10/14 08:00
240-42958-7	GW-18224-100914-SR-007	Water	10/09/14 14:45	10/10/14 08:00
240-42958-8	TB-18224-100914	Water	10/09/14 00:00	10/10/14 08:00

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Client Sample ID: GW-18224-100914-SR-001 — Lab Sample ID: 240-42958-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	12		2.0	ug/L	2		8260B	Total/NA
1,1-Dichloroethane	2.8		2.0	ug/L	2		8260B	Total/NA
1,2-Dichloroethane	11		2.0	ug/L	2		8260B	Total/NA
1,2-Dichloropropane	8.6		2.0	ug/L	2		8260B	Total/NA
Trichloroethene	2.9		2.0	ug/L	2		8260B	Total/NA
Vinyl chloride	36		2.0	ug/L	2		8260B	Total/NA
cis-1,2-Dichloroethene	55		2.0	ug/L	2		8260B	Total/NA
trans-1,2-Dichloroethene	2.0		2.0	ug/L	2		8260B	Total/NA
2-Methylphenol	11		5.0	ug/L	1		8270C	Total/NA

Client Sample ID: GW-18224-100914-SR-002 — Lab Sample ID: 240-42958-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	12		2.0	ug/L	2		8260B	Total/NA
1,1-Dichloroethane	2.6		2.0	ug/L	2		8260B	Total/NA
1,2-Dichloroethane	11		2.0	ug/L	2		8260B	Total/NA
1,2-Dichloropropane	7.9		2.0	ug/L	2		8260B	Total/NA
Trichloroethene	2.7		2.0	ug/L	2		8260B	Total/NA
Vinyl chloride	36		2.0	ug/L	2		8260B	Total/NA
cis-1,2-Dichloroethene	52		2.0	ug/L	2		8260B	Total/NA
trans-1,2-Dichloroethene	2.1		2.0	ug/L	2		8260B	Total/NA
2-Methylphenol	10		4.9	ug/L	1		8270C	Total/NA

Client Sample ID: GW-18224-100914-SR-003 — Lab Sample ID: 240-42958-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	21		13	ug/L	13.33		8260B	Total/NA
Trichloroethene	80		13	ug/L	13.33		8260B	Total/NA
Vinyl chloride	30		13	ug/L	13.33		8260B	Total/NA
cis-1,2-Dichloroethene	330		13	ug/L	13.33		8260B	Total/NA
trans-1,2-Dichloroethene	110		13	ug/L	13.33		8260B	Total/NA

Client Sample ID: GW-18224-100914-SR-004 — Lab Sample ID: 240-42958-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzene	7.5		7.1	ug/L	7.14		8260B	Total/NA
Chlorobenzene	190		7.1	ug/L	7.14		8260B	Total/NA
1,2-Dichlorobenzene	15		7.1	ug/L	7.14		8260B	Total/NA
1,3-Dichlorobenzene	15		7.1	ug/L	7.14		8260B	Total/NA
1,4-Dichlorobenzene	25		7.1	ug/L	7.14		8260B	Total/NA
2-Chloronaphthalene	5.9		4.8	ug/L	1		8270C	Total/NA

Client Sample ID: GW-18224-100914-SR-005 — Lab Sample ID: 240-42958-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	36		1.0	ug/L	1		8260B	Total/NA
1,2-Dichlorobenzene	2.1		1.0	ug/L	1		8260B	Total/NA
1,3-Dichlorobenzene	3.0		1.0	ug/L	1		8260B	Total/NA
1,4-Dichlorobenzene	7.6		1.0	ug/L	1		8260B	Total/NA
Chromium	6.3		5.0	ug/L	1		6010B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Client Sample ID: GW-18224-100914-SR-006 — Lab Sample ID: 240-42958-6

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloroethane	24		2.0		ug/L	2		8260B	Total/NA
Chromium	28		5.0		ug/L	1		6010B	Total Recoverable

Client Sample ID: GW-18224-100914-SR-007 — Lab Sample ID: 240-42958-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	230		22		ug/L	22.22		8260B	Total/NA
Chlorobenzene	580		22		ug/L	22.22		8260B	Total/NA
Toluene	55		22		ug/L	22.22		8260B	Total/NA
1,2-Dichlorobenzene	26		22		ug/L	22.22		8260B	Total/NA
1,3-Dichlorobenzene	36		22		ug/L	22.22		8260B	Total/NA
1,4-Dichlorobenzene	170		22		ug/L	22.22		8260B	Total/NA
2,4-Dimethylphenol	28		24		ug/L	5		8270C	Total/NA
2-Chloronaphthalene	44		24		ug/L	5		8270C	Total/NA

Client Sample ID: TB-18224-100914 — Lab Sample ID: 240-42958-8

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL CAN
6010B	Metals (ICP)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-001
Date Collected: 10/09/14 10:25
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20	U	20		ug/L			10/16/14 22:30	2
Benzene	2.0	U	2.0		ug/L			10/16/14 22:30	2
Bromodichloromethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
Bromoform	2.0	U	2.0		ug/L			10/16/14 22:30	2
Bromomethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
2-Butanone (MEK)	20	U	20		ug/L			10/16/14 22:30	2
Carbon disulfide	10	U	10		ug/L			10/16/14 22:30	2
Carbon tetrachloride	2.0	U	2.0		ug/L			10/16/14 22:30	2
Chlorobenzene	2.0	U	2.0		ug/L			10/16/14 22:30	2
Chloroethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
Chloroform	**12**		2.0		ug/L			10/16/14 22:30	2
Chloromethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
1,1-Dichloroethane	**2.8**		2.0		ug/L			10/16/14 22:30	2
1,2-Dichloroethane	**11**		2.0		ug/L			10/16/14 22:30	2
1,1-Dichloroethene	2.0	U	2.0		ug/L			10/16/14 22:30	2
1,2-Dichloropropane	**8.6**		2.0		ug/L			10/16/14 22:30	2
cis-1,3-Dichloropropene	2.0	U	2.0		ug/L			10/16/14 22:30	2
trans-1,3-Dichloropropene	2.0	U	2.0		ug/L			10/16/14 22:30	2
Ethylbenzene	2.0	U	2.0		ug/L			10/16/14 22:30	2
2-Hexanone	20	U	20		ug/L			10/16/14 22:30	2
Methylene Chloride	10	U	10		ug/L			10/16/14 22:30	2
4-Methyl-2-pentanone (MIBK)	20	U	20		ug/L			10/16/14 22:30	2
Styrene	2.0	U	2.0		ug/L			10/16/14 22:30	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
Tetrachloroethene	2.0	U	2.0		ug/L			10/16/14 22:30	2
Toluene	2.0	U	2.0		ug/L			10/16/14 22:30	2
Trichloroethene	**2.9**		2.0		ug/L			10/16/14 22:30	2
Vinyl chloride	**36**		2.0		ug/L			10/16/14 22:30	2
Xylenes, Total	4.0	U	4.0		ug/L			10/16/14 22:30	2
1,1,1-Trichloroethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
1,1,2-Trichloroethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
Cyclohexane	2.0	U	2.0		ug/L			10/16/14 22:30	2
1,2-Dibromo-3-Chloropropane	2.0	U	2.0		ug/L			10/16/14 22:30	2
1,2-Dibromoethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
Dichlorodifluoromethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
cis-1,2-Dichloroethene	**55**		2.0		ug/L			10/16/14 22:30	2
trans-1,2-Dichloroethene	**2.0**		2.0		ug/L			10/16/14 22:30	2
Isopropylbenzene	2.0	U	2.0		ug/L			10/16/14 22:30	2
Methyl acetate	20	U	20		ug/L			10/16/14 22:30	2
Methyl tert-butyl ether	2.0	U	2.0		ug/L			10/16/14 22:30	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
1,2,4-Trichlorobenzene	2.0	U	2.0		ug/L			10/16/14 22:30	2
1,2-Dichlorobenzene	2.0	U	2.0		ug/L			10/16/14 22:30	2
1,3-Dichlorobenzene	2.0	U	2.0		ug/L			10/16/14 22:30	2
1,4-Dichlorobenzene	2.0	U	2.0		ug/L			10/16/14 22:30	2
Trichlorofluoromethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
Dibromochloromethane	2.0	U	2.0		ug/L			10/16/14 22:30	2
Methylcyclohexane	2.0	U	2.0		ug/L			10/16/14 22:30	2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 129		10/16/14 22:30	2
4-Bromofluorobenzene (Surr)	93		66 - 120		10/16/14 22:30	2
Toluene-d8 (Surr)	101		74 - 120		10/16/14 22:30	2
Dibromofluoromethane (Surr)	103		75 - 121		10/16/14 22:30	2

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-002
Date Collected: 10/09/14 10:25
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20	U	20		ug/L			10/16/14 22:53	2
Benzene	2.0	U	2.0		ug/L			10/16/14 22:53	2
Bromodichloromethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
Bromoform	2.0	U	2.0		ug/L			10/16/14 22:53	2
Bromomethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
2-Butanone (MEK)	20	U	20		ug/L			10/16/14 22:53	2
Carbon disulfide	10	U	10		ug/L			10/16/14 22:53	2
Carbon tetrachloride	2.0	U	2.0		ug/L			10/16/14 22:53	2
Chlorobenzene	2.0	U	2.0		ug/L			10/16/14 22:53	2
Chloroethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
Chloroform	**12**		2.0		ug/L			10/16/14 22:53	2
Chloromethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
1,1-Dichloroethane	**2.6**		2.0		ug/L			10/16/14 22:53	2
1,2-Dichloroethane	**11**		2.0		ug/L			10/16/14 22:53	2
1,1-Dichloroethene	2.0	U	2.0		ug/L			10/16/14 22:53	2
1,2-Dichloropropane	**7.9**		2.0		ug/L			10/16/14 22:53	2
cis-1,3-Dichloropropene	2.0	U	2.0		ug/L			10/16/14 22:53	2
trans-1,3-Dichloropropene	2.0	U	2.0		ug/L			10/16/14 22:53	2
Ethylbenzene	2.0	U	2.0		ug/L			10/16/14 22:53	2
2-Hexanone	20	U	20		ug/L			10/16/14 22:53	2
Methylene Chloride	10	U	10		ug/L			10/16/14 22:53	2
4-Methyl-2-pentanone (MIBK)	20	U	20		ug/L			10/16/14 22:53	2
Styrene	2.0	U	2.0		ug/L			10/16/14 22:53	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
Tetrachloroethene	2.0	U	2.0		ug/L			10/16/14 22:53	2
Toluene	2.0	U	2.0		ug/L			10/16/14 22:53	2
Trichloroethene	**2.7**		2.0		ug/L			10/16/14 22:53	2
Vinyl chloride	**36**		2.0		ug/L			10/16/14 22:53	2
Xylenes, Total	4.0	U	4.0		ug/L			10/16/14 22:53	2
1,1,1-Trichloroethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
1,1,2-Trichloroethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
Cyclohexane	2.0	U	2.0		ug/L			10/16/14 22:53	2
1,2-Dibromo-3-Chloropropane	2.0	U	2.0		ug/L			10/16/14 22:53	2
1,2-Dibromoethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
Dichlorodifluoromethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
cis-1,2-Dichloroethene	**52**		2.0		ug/L			10/16/14 22:53	2
trans-1,2-Dichloroethene	**2.1**		2.0		ug/L			10/16/14 22:53	2
Isopropylbenzene	2.0	U	2.0		ug/L			10/16/14 22:53	2
Methyl acetate	20	U	20		ug/L			10/16/14 22:53	2
Methyl tert-butyl ether	2.0	U	2.0		ug/L			10/16/14 22:53	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
1,2,4-Trichlorobenzene	2.0	U	2.0		ug/L			10/16/14 22:53	2
1,2-Dichlorobenzene	2.0	U	2.0		ug/L			10/16/14 22:53	2
1,3-Dichlorobenzene	2.0	U	2.0		ug/L			10/16/14 22:53	2
1,4-Dichlorobenzene	2.0	U	2.0		ug/L			10/16/14 22:53	2
Trichlorofluoromethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
Dibromochloromethane	2.0	U	2.0		ug/L			10/16/14 22:53	2
Methylcyclohexane	2.0	U	2.0		ug/L			10/16/14 22:53	2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		63 - 129		10/16/14 22:53	2
4-Bromofluorobenzene (Surr)	95		66 - 120		10/16/14 22:53	2
Toluene-d8 (Surr)	99		74 - 120		10/16/14 22:53	2
Dibromofluoromethane (Surr)	99		75 - 121		10/16/14 22:53	2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-003
Date Collected: 10/09/14 09:55
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-3
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	130	U	130	ug/L			10/16/14 23:16	13.33
Benzene	13	U	13	ug/L			10/16/14 23:16	13.33
Bromodichloromethane	13	U	13	ug/L			10/16/14 23:16	13.33
Bromoform	13	U	13	ug/L			10/16/14 23:16	13.33
Bromomethane	13	U	13	ug/L			10/16/14 23:16	13.33
2-Butanone (MEK)	130	U	130	ug/L			10/16/14 23:16	13.33
Carbon disulfide	67	U	67	ug/L			10/16/14 23:16	13.33
Carbon tetrachloride	13	U	13	ug/L			10/16/14 23:16	13.33
Chlorobenzene	13	U	13	ug/L			10/16/14 23:16	13.33
Chloroethane	13	U	13	ug/L			10/16/14 23:16	13.33
Chloroform	13	U	13	ug/L			10/16/14 23:16	13.33
Chloromethane	13	U	13	ug/L			10/16/14 23:16	13.33
1,1-Dichloroethane	13	U	13	ug/L			10/16/14 23:16	13.33
1,2-Dichloroethane	13	U	13	ug/L			10/16/14 23:16	13.33
1,1-Dichloroethene	13	U	13	ug/L			10/16/14 23:16	13.33
1,2-Dichloropropane	13	U	13	ug/L			10/16/14 23:16	13.33
cis-1,3-Dichloropropene	13	U	13	ug/L			10/16/14 23:16	13.33
trans-1,3-Dichloropropene	13	U	13	ug/L			10/16/14 23:16	13.33
Ethylbenzene	13	U	13	ug/L			10/16/14 23:16	13.33
2-Hexanone	130	U	130	ug/L			10/16/14 23:16	13.33
Methylene Chloride	67	U	67	ug/L			10/16/14 23:16	13.33
4-Methyl-2-pentanone (MIBK)	130	U	130	ug/L			10/16/14 23:16	13.33
Styrene	13	U	13	ug/L			10/16/14 23:16	13.33
1,1,2,2-Tetrachloroethane	13	U	13	ug/L			10/16/14 23:16	13.33
Tetrachloroethene	**21**		13	ug/L			10/16/14 23:16	13.33
Toluene	13	U	13	ug/L			10/16/14 23:16	13.33
Trichloroethene	**80**		13	ug/L			10/16/14 23:16	13.33
Vinyl chloride	**30**		13	ug/L			10/16/14 23:16	13.33
Xylenes, Total	27	U	27	ug/L			10/16/14 23:16	13.33
1,1,1-Trichloroethane	13	U	13	ug/L			10/16/14 23:16	13.33
1,1,2-Trichloroethane	13	U	13	ug/L			10/16/14 23:16	13.33
Cyclohexane	13	U	13	ug/L			10/16/14 23:16	13.33
1,2-Dibromo-3-Chloropropane	13	U	13	ug/L			10/16/14 23:16	13.33
1,2-Dibromoethane	13	U	13	ug/L			10/16/14 23:16	13.33
Dichlorodifluoromethane	13	U	13	ug/L			10/16/14 23:16	13.33
cis-1,2-Dichloroethene	**330**		13	ug/L			10/16/14 23:16	13.33
trans-1,2-Dichloroethene	**110**		13	ug/L			10/16/14 23:16	13.33
Isopropylbenzene	13	U	13	ug/L			10/16/14 23:16	13.33
Methyl acetate	130	U	130	ug/L			10/16/14 23:16	13.33
Methyl tert-butyl ether	13	U	13	ug/L			10/16/14 23:16	13.33
1,1,2-Trichloro-1,2,2-trifluoroethane	13	U	13	ug/L			10/16/14 23:16	13.33
1,2,4-Trichlorobenzene	13	U	13	ug/L			10/16/14 23:16	13.33
1,2-Dichlorobenzene	13	U	13	ug/L			10/16/14 23:16	13.33
1,3-Dichlorobenzene	13	U	13	ug/L			10/16/14 23:16	13.33
1,4-Dichlorobenzene	13	U	13	ug/L			10/16/14 23:16	13.33
Trichlorofluoromethane	13	U	13	ug/L			10/16/14 23:16	13.33
Dibromochloromethane	13	U	13	ug/L			10/16/14 23:16	13.33
Methylcyclohexane	13	U	13	ug/L			10/16/14 23:16	13.33

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		63 - 129		10/16/14 23:16	13.33
4-Bromofluorobenzene (Surr)	98		66 - 120		10/16/14 23:16	13.33
Toluene-d8 (Surr)	100		74 - 120		10/16/14 23:16	13.33
Dibromofluoromethane (Surr)	99		75 - 121		10/16/14 23:16	13.33

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-004
Date Collected: 10/09/14 11:35
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-4
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	71	U	71	ug/L			10/16/14 23:39	7.14
Benzene	**7.5**		7.1	ug/L			10/16/14 23:39	7.14
Bromodichloromethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Bromoform	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Bromomethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
2-Butanone (MEK)	71	U	71	ug/L			10/16/14 23:39	7.14
Carbon disulfide	36	U	36	ug/L			10/16/14 23:39	7.14
Carbon tetrachloride	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Chlorobenzene	**190**		7.1	ug/L			10/16/14 23:39	7.14
Chloroethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Chloroform	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Chloromethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
1,1-Dichloroethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
1,2-Dichloroethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
1,1-Dichloroethene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
1,2-Dichloropropane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
cis-1,3-Dichloropropene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
trans-1,3-Dichloropropene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Ethylbenzene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
2-Hexanone	71	U	71	ug/L			10/16/14 23:39	7.14
Methylene Chloride	36	U	36	ug/L			10/16/14 23:39	7.14
4-Methyl-2-pentanone (MIBK)	71	U	71	ug/L			10/16/14 23:39	7.14
Styrene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
1,1,2,2-Tetrachloroethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Tetrachloroethene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Toluene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Trichloroethene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Vinyl chloride	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Xylenes, Total	14	U	14	ug/L			10/16/14 23:39	7.14
1,1,1-Trichloroethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
1,1,2-Trichloroethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Cyclohexane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
1,2-Dibromo-3-Chloropropane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
1,2-Dibromoethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Dichlorodifluoromethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
cis-1,2-Dichloroethene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
trans-1,2-Dichloroethene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Isopropylbenzene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Methyl acetate	71	U	71	ug/L			10/16/14 23:39	7.14
Methyl tert-butyl ether	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
1,1,2-Trichloro-1,2,2-trifluoroethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
1,2,4-Trichlorobenzene	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
1,2-Dichlorobenzene	**15**		7.1	ug/L			10/16/14 23:39	7.14
1,3-Dichlorobenzene	**15**		7.1	ug/L			10/16/14 23:39	7.14
1,4-Dichlorobenzene	**25**		7.1	ug/L			10/16/14 23:39	7.14
Trichlorofluoromethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Dibromochloromethane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14
Methylcyclohexane	7.1	U	7.1	ug/L			10/16/14 23:39	7.14

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		63 - 129		10/16/14 23:39	7.14
4-Bromofluorobenzene (Surr)	98		66 - 120		10/16/14 23:39	7.14
Toluene-d8 (Surr)	98		74 - 120		10/16/14 23:39	7.14
Dibromofluoromethane (Surr)	98		75 - 121		10/16/14 23:39	7.14

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-005
Date Collected: 10/09/14 12:10
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-5
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10		ug/L			10/17/14 00:01	1
Benzene	1.0	U	1.0		ug/L			10/17/14 00:01	1
Bromodichloromethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
Bromoform	1.0	U	1.0		ug/L			10/17/14 00:01	1
Bromomethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
2-Butanone (MEK)	10	U	10		ug/L			10/17/14 00:01	1
Carbon disulfide	5.0	U	5.0		ug/L			10/17/14 00:01	1
Carbon tetrachloride	1.0	U	1.0		ug/L			10/17/14 00:01	1
Chlorobenzene	**36**		1.0		ug/L			10/17/14 00:01	1
Chloroethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
Chloroform	1.0	U	1.0		ug/L			10/17/14 00:01	1
Chloromethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
1,1-Dichloroethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
1,2-Dichloroethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
1,1-Dichloroethene	1.0	U	1.0		ug/L			10/17/14 00:01	1
1,2-Dichloropropane	1.0	U	1.0		ug/L			10/17/14 00:01	1
cis-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/17/14 00:01	1
trans-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/17/14 00:01	1
Ethylbenzene	1.0	U	1.0		ug/L			10/17/14 00:01	1
2-Hexanone	10	U	10		ug/L			10/17/14 00:01	1
Methylene Chloride	5.0	U	5.0		ug/L			10/17/14 00:01	1
4-Methyl-2-pentanone (MIBK)	10	U	10		ug/L			10/17/14 00:01	1
Styrene	1.0	U	1.0		ug/L			10/17/14 00:01	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
Tetrachloroethene	1.0	U	1.0		ug/L			10/17/14 00:01	1
Toluene	1.0	U	1.0		ug/L			10/17/14 00:01	1
Trichloroethene	1.0	U	1.0		ug/L			10/17/14 00:01	1
Vinyl chloride	1.0	U	1.0		ug/L			10/17/14 00:01	1
Xylenes, Total	2.0	U	2.0		ug/L			10/17/14 00:01	1
1,1,1-Trichloroethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
1,1,2-Trichloroethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
Cyclohexane	1.0	U	1.0		ug/L			10/17/14 00:01	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0		ug/L			10/17/14 00:01	1
1,2-Dibromoethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
Dichlorodifluoromethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
cis-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/17/14 00:01	1
trans-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/17/14 00:01	1
Isopropylbenzene	1.0	U	1.0		ug/L			10/17/14 00:01	1
Methyl acetate	10	U	10		ug/L			10/17/14 00:01	1
Methyl tert-butyl ether	1.0	U	1.0		ug/L			10/17/14 00:01	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
1,2,4-Trichlorobenzene	1.0	U	1.0		ug/L			10/17/14 00:01	1
1,2-Dichlorobenzene	**2.1**		1.0		ug/L			10/17/14 00:01	1
1,3-Dichlorobenzene	**3.0**		1.0		ug/L			10/17/14 00:01	1
1,4-Dichlorobenzene	**7.6**		1.0		ug/L			10/17/14 00:01	1
Trichlorofluoromethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
Dibromochloromethane	1.0	U	1.0		ug/L			10/17/14 00:01	1
Methylcyclohexane	1.0	U	1.0		ug/L			10/17/14 00:01	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		63 - 129		10/17/14 00:01	1
4-Bromofluorobenzene (Surr)	100		66 - 120		10/17/14 00:01	1
Toluene-d8 (Surr)	100		74 - 120		10/17/14 00:01	1
Dibromofluoromethane (Surr)	99		75 - 121		10/17/14 00:01	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-006
Date Collected: 10/09/14 13:15
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-6
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	20	U	20		ug/L			10/17/14 00:24	2
Benzene	2.0	U	2.0		ug/L			10/17/14 00:24	2
Bromodichloromethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
Bromoform	2.0	U	2.0		ug/L			10/17/14 00:24	2
Bromomethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
2-Butanone (MEK)	20	U	20		ug/L			10/17/14 00:24	2
Carbon disulfide	10	U	10		ug/L			10/17/14 00:24	2
Carbon tetrachloride	2.0	U	2.0		ug/L			10/17/14 00:24	2
Chlorobenzene	2.0	U	2.0		ug/L			10/17/14 00:24	2
Chloroethane	**24**		2.0		ug/L			10/17/14 00:24	2
Chloroform	2.0	U	2.0		ug/L			10/17/14 00:24	2
Chloromethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,1-Dichloroethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,2-Dichloroethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,1-Dichloroethene	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,2-Dichloropropane	2.0	U	2.0		ug/L			10/17/14 00:24	2
cis-1,3-Dichloropropene	2.0	U	2.0		ug/L			10/17/14 00:24	2
trans-1,3-Dichloropropene	2.0	U	2.0		ug/L			10/17/14 00:24	2
Ethylbenzene	2.0	U	2.0		ug/L			10/17/14 00:24	2
2-Hexanone	20	U	20		ug/L			10/17/14 00:24	2
Methylene Chloride	10	U	10		ug/L			10/17/14 00:24	2
4-Methyl-2-pentanone (MIBK)	20	U	20		ug/L			10/17/14 00:24	2
Styrene	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,1,2,2-Tetrachloroethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
Tetrachloroethene	2.0	U	2.0		ug/L			10/17/14 00:24	2
Toluene	2.0	U	2.0		ug/L			10/17/14 00:24	2
Trichloroethene	2.0	U	2.0		ug/L			10/17/14 00:24	2
Vinyl chloride	2.0	U	2.0		ug/L			10/17/14 00:24	2
Xylenes, Total	4.0	U	4.0		ug/L			10/17/14 00:24	2
1,1,1-Trichloroethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,1,2-Trichloroethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
Cyclohexane	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,2-Dibromo-3-Chloropropane	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,2-Dibromoethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
Dichlorodifluoromethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
cis-1,2-Dichloroethene	2.0	U	2.0		ug/L			10/17/14 00:24	2
trans-1,2-Dichloroethene	2.0	U	2.0		ug/L			10/17/14 00:24	2
Isopropylbenzene	2.0	U	2.0		ug/L			10/17/14 00:24	2
Methyl acetate	20	U	20		ug/L			10/17/14 00:24	2
Methyl tert-butyl ether	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,2,4-Trichlorobenzene	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,2-Dichlorobenzene	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,3-Dichlorobenzene	2.0	U	2.0		ug/L			10/17/14 00:24	2
1,4-Dichlorobenzene	2.0	U	2.0		ug/L			10/17/14 00:24	2
Trichlorofluoromethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
Dibromochloromethane	2.0	U	2.0		ug/L			10/17/14 00:24	2
Methylcyclohexane	2.0	U	2.0		ug/L			10/17/14 00:24	2

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		63 - 129		10/17/14 00:24	2
4-Bromofluorobenzene (Surr)	94		66 - 120		10/17/14 00:24	2
Toluene-d8 (Surr)	97		74 - 120		10/17/14 00:24	2
Dibromofluoromethane (Surr)	100		75 - 121		10/17/14 00:24	2

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-007
Date Collected: 10/09/14 14:45
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-7
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	220	U	220	ug/L			10/17/14 00:47	22.22
Benzene	**230**		22	ug/L			10/17/14 00:47	22.22
Bromodichloromethane	22	U	22	ug/L			10/17/14 00:47	22.22
Bromoform	22	U	22	ug/L			10/17/14 00:47	22.22
Bromomethane	22	U	22	ug/L			10/17/14 00:47	22.22
2-Butanone (MEK)	220	U	220	ug/L			10/17/14 00:47	22.22
Carbon disulfide	110	U	110	ug/L			10/17/14 00:47	22.22
Carbon tetrachloride	22	U	22	ug/L			10/17/14 00:47	22.22
Chlorobenzene	**580**		22	ug/L			10/17/14 00:47	22.22
Chloroethane	22	U	22	ug/L			10/17/14 00:47	22.22
Chloroform	22	U	22	ug/L			10/17/14 00:47	22.22
Chloromethane	22	U	22	ug/L			10/17/14 00:47	22.22
1,1-Dichloroethane	22	U	22	ug/L			10/17/14 00:47	22.22
1,2-Dichloroethane	22	U	22	ug/L			10/17/14 00:47	22.22
1,1-Dichloroethene	22	U	22	ug/L			10/17/14 00:47	22.22
1,2-Dichloropropane	22	U	22	ug/L			10/17/14 00:47	22.22
cis-1,3-Dichloropropene	22	U	22	ug/L			10/17/14 00:47	22.22
trans-1,3-Dichloropropene	22	U	22	ug/L			10/17/14 00:47	22.22
Ethylbenzene	22	U	22	ug/L			10/17/14 00:47	22.22
2-Hexanone	220	U	220	ug/L			10/17/14 00:47	22.22
Methylene Chloride	110	U	110	ug/L			10/17/14 00:47	22.22
4-Methyl-2-pentanone (MIBK)	220	U	220	ug/L			10/17/14 00:47	22.22
Styrene	22	U	22	ug/L			10/17/14 00:47	22.22
1,1,2,2-Tetrachloroethane	22	U	22	ug/L			10/17/14 00:47	22.22
Tetrachloroethene	22	U	22	ug/L			10/17/14 00:47	22.22
Toluene	**55**		22	ug/L			10/17/14 00:47	22.22
Trichloroethene	22	U	22	ug/L			10/17/14 00:47	22.22
Vinyl chloride	22	U	22	ug/L			10/17/14 00:47	22.22
Xylenes, Total	44	U	44	ug/L			10/17/14 00:47	22.22
1,1,1-Trichloroethane	22	U	22	ug/L			10/17/14 00:47	22.22
1,1,2-Trichloroethane	22	U	22	ug/L			10/17/14 00:47	22.22
Cyclohexane	22	U	22	ug/L			10/17/14 00:47	22.22
1,2-Dibromo-3-Chloropropane	22	U	22	ug/L			10/17/14 00:47	22.22
1,2-Dibromoethane	22	U	22	ug/L			10/17/14 00:47	22.22
Dichlorodifluoromethane	22	U	22	ug/L			10/17/14 00:47	22.22
cis-1,2-Dichloroethene	22	U	22	ug/L			10/17/14 00:47	22.22
trans-1,2-Dichloroethene	22	U	22	ug/L			10/17/14 00:47	22.22
Isopropylbenzene	22	U	22	ug/L			10/17/14 00:47	22.22
Methyl acetate	220	U	220	ug/L			10/17/14 00:47	22.22
Methyl tert-butyl ether	22	U	22	ug/L			10/17/14 00:47	22.22
1,1,2-Trichloro-1,2,2-trifluoroethane	22	U	22	ug/L			10/17/14 00:47	22.22
1,2,4-Trichlorobenzene	22	U	22	ug/L			10/17/14 00:47	22.22
1,2-Dichlorobenzene	**26**		22	ug/L			10/17/14 00:47	22.22
1,3-Dichlorobenzene	**36**		22	ug/L			10/17/14 00:47	22.22
1,4-Dichlorobenzene	**170**		22	ug/L			10/17/14 00:47	22.22
Trichlorofluoromethane	22	U	22	ug/L			10/17/14 00:47	22.22
Dibromochloromethane	22	U	22	ug/L			10/17/14 00:47	22.22
Methylcyclohexane	22	U	22	ug/L			10/17/14 00:47	22.22

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		63 - 129		10/17/14 00:47	22.22
4-Bromofluorobenzene (Surr)	97		66 - 120		10/17/14 00:47	22.22
Toluene-d8 (Surr)	99		74 - 120		10/17/14 00:47	22.22
Dibromofluoromethane (Surr)	96		75 - 121		10/17/14 00:47	22.22

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: TB-18224-100914
Date Collected: 10/09/14 00:00
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-8
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10		ug/L			10/16/14 14:07	1
Benzene	1.0	U	1.0		ug/L			10/16/14 14:07	1
Bromodichloromethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
Bromoform	1.0	U *	1.0		ug/L			10/16/14 14:07	1
Bromomethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
2-Butanone (MEK)	10	U	10		ug/L			10/16/14 14:07	1
Carbon disulfide	5.0	U	5.0		ug/L			10/16/14 14:07	1
Carbon tetrachloride	1.0	U *	1.0		ug/L			10/16/14 14:07	1
Chlorobenzene	1.0	U	1.0		ug/L			10/16/14 14:07	1
Chloroethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
Chloroform	1.0	U	1.0		ug/L			10/16/14 14:07	1
Chloromethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,1-Dichloroethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,2-Dichloroethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,1-Dichloroethene	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,2-Dichloropropane	1.0	U	1.0		ug/L			10/16/14 14:07	1
cis-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/16/14 14:07	1
trans-1,3-Dichloropropene	1.0	U	1.0		ug/L			10/16/14 14:07	1
Ethylbenzene	1.0	U	1.0		ug/L			10/16/14 14:07	1
2-Hexanone	10	U	10		ug/L			10/16/14 14:07	1
Methylene Chloride	5.0	U	5.0		ug/L			10/16/14 14:07	1
4-Methyl-2-pentanone (MIBK)	10	U	10		ug/L			10/16/14 14:07	1
Styrene	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
Tetrachloroethene	1.0	U	1.0		ug/L			10/16/14 14:07	1
Toluene	1.0	U	1.0		ug/L			10/16/14 14:07	1
Trichloroethene	1.0	U	1.0		ug/L			10/16/14 14:07	1
Vinyl chloride	1.0	U	1.0		ug/L			10/16/14 14:07	1
Xylenes, Total	2.0	U	2.0		ug/L			10/16/14 14:07	1
1,1,1-Trichloroethane	1.0	U *	1.0		ug/L			10/16/14 14:07	1
1,1,2-Trichloroethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
Cyclohexane	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,2-Dibromoethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
Dichlorodifluoromethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
cis-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/16/14 14:07	1
trans-1,2-Dichloroethene	1.0	U	1.0		ug/L			10/16/14 14:07	1
Isopropylbenzene	1.0	U	1.0		ug/L			10/16/14 14:07	1
Methyl acetate	10	U	10		ug/L			10/16/14 14:07	1
Methyl tert-butyl ether	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,2,4-Trichlorobenzene	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,2-Dichlorobenzene	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,3-Dichlorobenzene	1.0	U	1.0		ug/L			10/16/14 14:07	1
1,4-Dichlorobenzene	1.0	U	1.0		ug/L			10/16/14 14:07	1
Trichlorofluoromethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
Dibromochloromethane	1.0	U	1.0		ug/L			10/16/14 14:07	1
Methylcyclohexane	1.0	U	1.0		ug/L			10/16/14 14:07	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		63 - 129		10/16/14 14:07	1
4-Bromofluorobenzene (Surr)	85		66 - 120		10/16/14 14:07	1
Toluene-d8 (Surr)	80		74 - 120		10/16/14 14:07	1
Dibromofluoromethane (Surr)	90		75 - 121		10/16/14 14:07	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-001
Date Collected: 10/09/14 10:25
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
2,2'-oxybis[1-chloropropane]	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
2,4,5-Trichlorophenol	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
2,4,6-Trichlorophenol	4.0	U	4.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
2,4-Dichlorophenol	9.9	U	9.9		ug/L		10/13/14 07:19	10/21/14 10:11	1
2,4-Dimethylphenol	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
2,4-Dinitrophenol	20	U	20		ug/L		10/13/14 07:19	10/21/14 10:11	1
2,4-Dinitrotoluene	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
2,6-Dinitrotoluene	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
2-Chloronaphthalene	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
2-Chlorophenol	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
2-Methylnaphthalene	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
2-Methylphenol	**11**		5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
2-Nitroaniline	20	U	20		ug/L		10/13/14 07:19	10/21/14 10:11	1
2-Nitrophenol	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
3,3'-Dichlorobenzidine	0.99	U	0.99		ug/L		10/13/14 07:19	10/21/14 10:11	1
3-Nitroaniline	20	U	20		ug/L		10/13/14 07:19	10/21/14 10:11	1
4,6-Dinitro-2-methylphenol	20	U	20		ug/L		10/13/14 07:19	10/21/14 10:11	1
4-Bromophenyl phenyl ether	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
4-Chloro-3-methylphenol	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
4-Chloroaniline	9.9	U	9.9		ug/L		10/13/14 07:19	10/21/14 10:11	1
4-Chlorophenyl phenyl ether	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
4-Nitroaniline	20	U	20		ug/L		10/13/14 07:19	10/21/14 10:11	1
4-Nitrophenol	20	U	20		ug/L		10/13/14 07:19	10/21/14 10:11	1
Acenaphthene	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Acenaphthylene	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Acetophenone	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Anthracene	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Atrazine	3.0	U	3.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Benzaldehyde	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Benzo[a]anthracene	0.99	U	0.99		ug/L		10/13/14 07:19	10/21/14 10:11	1
Benzo[a]pyrene	0.99	U	0.99		ug/L		10/13/14 07:19	10/21/14 10:11	1
Benzo[b]fluoranthene	0.99	U	0.99		ug/L		10/13/14 07:19	10/21/14 10:11	1
Benzo[g,h,i]perylene	0.99	U	0.99		ug/L		10/13/14 07:19	10/21/14 10:11	1
Benzo[k]fluoranthene	0.99	U	0.99		ug/L		10/13/14 07:19	10/21/14 10:11	1
Bis(2-chloroethoxy)methane	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Bis(2-chloroethyl)ether	0.99	U	0.99		ug/L		10/13/14 07:19	10/21/14 10:11	1
Bis(2-ethylhexyl) phthalate	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Butyl benzyl phthalate	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Caprolactam	9.9	U	9.9		ug/L		10/13/14 07:19	10/21/14 10:11	1
Carbazole	9.9	U	9.9		ug/L		10/13/14 07:19	10/21/14 10:11	1
Chrysene	0.99	U	0.99		ug/L		10/13/14 07:19	10/21/14 10:11	1
Dibenz(a,h)anthracene	2.0	U	2.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Dibenzofuran	4.0	U	4.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Diethyl phthalate	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Dimethyl phthalate	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Di-n-butyl phthalate	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Di-n-octyl phthalate	5.0	U	5.0		ug/L		10/13/14 07:19	10/21/14 10:11	1
Fluoranthene	0.99	U	0.99		ug/L		10/13/14 07:19	10/21/14 10:11	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: GW-18224-100914-SR-001
Date Collected: 10/09/14 10:25
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-1
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
Hexachlorobenzene	0.20	U	0.20	ug/L		10/13/14 07:19	10/21/14 10:11	1
Hexachlorobutadiene	0.99	U	0.99	ug/L		10/13/14 07:19	10/21/14 10:11	1
Hexachlorocyclopentadiene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
Hexachloroethane	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
Indeno[1,2,3-cd]pyrene	2.0	U	2.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
Isophorone	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
Naphthalene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
Nitrobenzene	3.0	U	3.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
N-Nitrosodi-n-propylamine	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
N-Nitrosodiphenylamine	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
Pentachlorophenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
Phenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
Phenanthrene	2.0	U	2.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
Pyrene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 10:11	1
3 & 4 Methylphenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 10:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*71*		*29 - 110*	*10/13/14 07:19*	*10/21/14 10:11*	*1*
2-Fluorophenol (Surr)	*44*		*15 - 110*	*10/13/14 07:19*	*10/21/14 10:11*	*1*
2,4,6-Tribromophenol (Surr)	*92*		*21 - 128*	*10/13/14 07:19*	*10/21/14 10:11*	*1*
Nitrobenzene-d5 (Surr)	*71*		*31 - 110*	*10/13/14 07:19*	*10/21/14 10:11*	*1*
Phenol-d5 (Surr)	*26*		*10 - 110*	*10/13/14 07:19*	*10/21/14 10:11*	*1*
Terphenyl-d14 (Surr)	*86*		*31 - 115*	*10/13/14 07:19*	*10/21/14 10:11*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-002
Date Collected: 10/09/14 10:25
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-2
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
2,2'-oxybis[1-chloropropane]	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
2,4,5-Trichlorophenol	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
2,4,6-Trichlorophenol	3.9	U	3.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
2,4-Dichlorophenol	9.8	U	9.8	ug/L		10/13/14 07:19	10/21/14 10:59	1
2,4-Dimethylphenol	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
2,4-Dinitrophenol	20	U	20	ug/L		10/13/14 07:19	10/21/14 10:59	1
2,4-Dinitrotoluene	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
2,6-Dinitrotoluene	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
2-Chloronaphthalene	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
2-Chlorophenol	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
2-Methylnaphthalene	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
2-Methylphenol	**10**		4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
2-Nitroaniline	20	U	20	ug/L		10/13/14 07:19	10/21/14 10:59	1
2-Nitrophenol	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
3,3'-Dichlorobenzidine	0.98	U	0.98	ug/L		10/13/14 07:19	10/21/14 10:59	1
3-Nitroaniline	20	U	20	ug/L		10/13/14 07:19	10/21/14 10:59	1
4,6-Dinitro-2-methylphenol	20	U	20	ug/L		10/13/14 07:19	10/21/14 10:59	1
4-Bromophenyl phenyl ether	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
4-Chloro-3-methylphenol	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
4-Chloroaniline	9.8	U	9.8	ug/L		10/13/14 07:19	10/21/14 10:59	1
4-Chlorophenyl phenyl ether	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
4-Nitroaniline	20	U	20	ug/L		10/13/14 07:19	10/21/14 10:59	1
4-Nitrophenol	20	U	20	ug/L		10/13/14 07:19	10/21/14 10:59	1
Acenaphthene	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Acenaphthylene	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Acetophenone	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Anthracene	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Atrazine	2.9	U	2.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Benzaldehyde	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Benzo[a]anthracene	0.98	U	0.98	ug/L		10/13/14 07:19	10/21/14 10:59	1
Benzo[a]pyrene	0.98	U	0.98	ug/L		10/13/14 07:19	10/21/14 10:59	1
Benzo[b]fluoranthene	0.98	U	0.98	ug/L		10/13/14 07:19	10/21/14 10:59	1
Benzo[g,h,i]perylene	0.98	U	0.98	ug/L		10/13/14 07:19	10/21/14 10:59	1
Benzo[k]fluoranthene	0.98	U	0.98	ug/L		10/13/14 07:19	10/21/14 10:59	1
Bis(2-chloroethoxy)methane	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Bis(2-chloroethyl)ether	0.98	U	0.98	ug/L		10/13/14 07:19	10/21/14 10:59	1
Bis(2-ethylhexyl) phthalate	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Butyl benzyl phthalate	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Caprolactam	9.8	U	9.8	ug/L		10/13/14 07:19	10/21/14 10:59	1
Carbazole	9.8	U	9.8	ug/L		10/13/14 07:19	10/21/14 10:59	1
Chrysene	0.98	U	0.98	ug/L		10/13/14 07:19	10/21/14 10:59	1
Dibenz(a,h)anthracene	2.0	U	2.0	ug/L		10/13/14 07:19	10/21/14 10:59	1
Dibenzofuran	3.9	U	3.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Diethyl phthalate	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Dimethyl phthalate	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Di-n-butyl phthalate	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Di-n-octyl phthalate	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Fluoranthene	0.98	U	0.98	ug/L		10/13/14 07:19	10/21/14 10:59	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: GW-18224-100914-SR-002
Date Collected: 10/09/14 10:25
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-2
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Hexachlorobenzene	0.20	U	0.20	ug/L		10/13/14 07:19	10/21/14 10:59	1
Hexachlorobutadiene	0.98	U	0.98	ug/L		10/13/14 07:19	10/21/14 10:59	1
Hexachlorocyclopentadiene	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Hexachloroethane	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Indeno[1,2,3-cd]pyrene	2.0	U	2.0	ug/L		10/13/14 07:19	10/21/14 10:59	1
Isophorone	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Naphthalene	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Nitrobenzene	2.9	U	2.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
N-Nitrosodi-n-propylamine	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
N-Nitrosodiphenylamine	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Pentachlorophenol	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Phenol	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
Phenanthrene	2.0	U	2.0	ug/L		10/13/14 07:19	10/21/14 10:59	1
Pyrene	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1
3 & 4 Methylphenol	4.9	U	4.9	ug/L		10/13/14 07:19	10/21/14 10:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*77*		*29 - 110*	*10/13/14 07:19*	*10/21/14 10:59*	*1*
2-Fluorophenol (Surr)	*47*		*15 - 110*	*10/13/14 07:19*	*10/21/14 10:59*	*1*
2,4,6-Tribromophenol (Surr)	*103*		*21 - 128*	*10/13/14 07:19*	*10/21/14 10:59*	*1*
Nitrobenzene-d5 (Surr)	*77*		*31 - 110*	*10/13/14 07:19*	*10/21/14 10:59*	*1*
Phenol-d5 (Surr)	*26*		*10 - 110*	*10/13/14 07:19*	*10/21/14 10:59*	*1*
Terphenyl-d14 (Surr)	*86*		*31 - 115*	*10/13/14 07:19*	*10/21/14 10:59*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-003
Date Collected: 10/09/14 09:55
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-3
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
2,2'-oxybis[1-chloropropane]	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
2,4,5-Trichlorophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
2,4,6-Trichlorophenol	3.8	U	3.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
2,4-Dichlorophenol	9.5	U	9.5	ug/L		10/13/14 07:19	10/21/14 10:35	1
2,4-Dimethylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
2,4-Dinitrophenol	19	U	19	ug/L		10/13/14 07:19	10/21/14 10:35	1
2,4-Dinitrotoluene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
2,6-Dinitrotoluene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
2-Chloronaphthalene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
2-Chlorophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
2-Methylnaphthalene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
2-Methylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
2-Nitroaniline	19	U	19	ug/L		10/13/14 07:19	10/21/14 10:35	1
2-Nitrophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
3,3'-Dichlorobenzidine	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 10:35	1
3-Nitroaniline	19	U	19	ug/L		10/13/14 07:19	10/21/14 10:35	1
4,6-Dinitro-2-methylphenol	19	U	19	ug/L		10/13/14 07:19	10/21/14 10:35	1
4-Bromophenyl phenyl ether	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
4-Chloro-3-methylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
4-Chloroaniline	9.5	U	9.5	ug/L		10/13/14 07:19	10/21/14 10:35	1
4-Chlorophenyl phenyl ether	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
4-Nitroaniline	19	U	19	ug/L		10/13/14 07:19	10/21/14 10:35	1
4-Nitrophenol	19	U	19	ug/L		10/13/14 07:19	10/21/14 10:35	1
Acenaphthene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Acenaphthylene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Acetophenone	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Anthracene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Atrazine	2.9	U	2.9	ug/L		10/13/14 07:19	10/21/14 10:35	1
Benzaldehyde	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Benzo[a]anthracene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 10:35	1
Benzo[a]pyrene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 10:35	1
Benzo[b]fluoranthene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 10:35	1
Benzo[g,h,i]perylene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 10:35	1
Benzo[k]fluoranthene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 10:35	1
Bis(2-chloroethoxy)methane	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Bis(2-chloroethyl)ether	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 10:35	1
Bis(2-ethylhexyl) phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Butyl benzyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Caprolactam	9.5	U	9.5	ug/L		10/13/14 07:19	10/21/14 10:35	1
Carbazole	9.5	U	9.5	ug/L		10/13/14 07:19	10/21/14 10:35	1
Chrysene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 10:35	1
Dibenz(a,h)anthracene	1.9	U	1.9	ug/L		10/13/14 07:19	10/21/14 10:35	1
Dibenzofuran	3.8	U	3.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Diethyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Dimethyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Di-n-butyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Di-n-octyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Fluoranthene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 10:35	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: GW-18224-100914-SR-003
Date Collected: 10/09/14 09:55
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-3
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Hexachlorobenzene	0.19	U	0.19	ug/L		10/13/14 07:19	10/21/14 10:35	1
Hexachlorobutadiene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 10:35	1
Hexachlorocyclopentadiene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Hexachloroethane	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	ug/L		10/13/14 07:19	10/21/14 10:35	1
Isophorone	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Naphthalene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Nitrobenzene	2.9	U	2.9	ug/L		10/13/14 07:19	10/21/14 10:35	1
N-Nitrosodi-n-propylamine	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
N-Nitrosodiphenylamine	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Pentachlorophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Phenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
Phenanthrene	1.9	U	1.9	ug/L		10/13/14 07:19	10/21/14 10:35	1
Pyrene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1
3 & 4 Methylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 10:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*72*		*29 - 110*	*10/13/14 07:19*	*10/21/14 10:35*	*1*
2-Fluorophenol (Surr)	*45*		*15 - 110*	*10/13/14 07:19*	*10/21/14 10:35*	*1*
2,4,6-Tribromophenol (Surr)	*95*		*21 - 128*	*10/13/14 07:19*	*10/21/14 10:35*	*1*
Nitrobenzene-d5 (Surr)	*73*		*31 - 110*	*10/13/14 07:19*	*10/21/14 10:35*	*1*
Phenol-d5 (Surr)	*25*		*10 - 110*	*10/13/14 07:19*	*10/21/14 10:35*	*1*
Terphenyl-d14 (Surr)	*82*		*31 - 115*	*10/13/14 07:19*	*10/21/14 10:35*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-004
Date Collected: 10/09/14 11:35
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-4
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
2,2'-oxybis[1-chloropropane]	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
2,4,5-Trichlorophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
2,4,6-Trichlorophenol	3.8	U	3.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
2,4-Dichlorophenol	9.5	U	9.5	ug/L		10/13/14 07:19	10/21/14 12:12	1
2,4-Dimethylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
2,4-Dinitrophenol	19	U	19	ug/L		10/13/14 07:19	10/21/14 12:12	1
2,4-Dinitrotoluene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
2,6-Dinitrotoluene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
2-Chloronaphthalene	**5.9**		4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
2-Chlorophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
2-Methylnaphthalene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
2-Methylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
2-Nitroaniline	19	U	19	ug/L		10/13/14 07:19	10/21/14 12:12	1
2-Nitrophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
3,3'-Dichlorobenzidine	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 12:12	1
3-Nitroaniline	19	U	19	ug/L		10/13/14 07:19	10/21/14 12:12	1
4,6-Dinitro-2-methylphenol	19	U	19	ug/L		10/13/14 07:19	10/21/14 12:12	1
4-Bromophenyl phenyl ether	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
4-Chloro-3-methylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
4-Chloroaniline	9.5	U	9.5	ug/L		10/13/14 07:19	10/21/14 12:12	1
4-Chlorophenyl phenyl ether	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
4-Nitroaniline	19	U	19	ug/L		10/13/14 07:19	10/21/14 12:12	1
4-Nitrophenol	19	U	19	ug/L		10/13/14 07:19	10/21/14 12:12	1
Acenaphthene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Acenaphthylene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Acetophenone	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Anthracene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Atrazine	2.9	U	2.9	ug/L		10/13/14 07:19	10/21/14 12:12	1
Benzaldehyde	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Benzo[a]anthracene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 12:12	1
Benzo[a]pyrene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 12:12	1
Benzo[b]fluoranthene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 12:12	1
Benzo[g,h,i]perylene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 12:12	1
Benzo[k]fluoranthene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 12:12	1
Bis(2-chloroethoxy)methane	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Bis(2-chloroethyl)ether	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 12:12	1
Bis(2-ethylhexyl) phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Butyl benzyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Caprolactam	9.5	U	9.5	ug/L		10/13/14 07:19	10/21/14 12:12	1
Carbazole	9.5	U	9.5	ug/L		10/13/14 07:19	10/21/14 12:12	1
Chrysene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 12:12	1
Dibenz(a,h)anthracene	1.9	U	1.9	ug/L		10/13/14 07:19	10/21/14 12:12	1
Dibenzofuran	3.8	U	3.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Diethyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Dimethyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Di-n-butyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Di-n-octyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Fluoranthene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 12:12	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: GW-18224-100914-SR-004
Date Collected: 10/09/14 11:35
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-4
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Hexachlorobenzene	0.19	U	0.19	ug/L		10/13/14 07:19	10/21/14 12:12	1
Hexachlorobutadiene	0.95	U	0.95	ug/L		10/13/14 07:19	10/21/14 12:12	1
Hexachlorocyclopentadiene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Hexachloroethane	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	ug/L		10/13/14 07:19	10/21/14 12:12	1
Isophorone	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Naphthalene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Nitrobenzene	2.9	U	2.9	ug/L		10/13/14 07:19	10/21/14 12:12	1
N-Nitrosodi-n-propylamine	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
N-Nitrosodiphenylamine	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Pentachlorophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Phenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
Phenanthrene	1.9	U	1.9	ug/L		10/13/14 07:19	10/21/14 12:12	1
Pyrene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1
3 & 4 Methylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 12:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*64*		*29 - 110*	*10/13/14 07:19*	*10/21/14 12:12*	*1*
2-Fluorophenol (Surr)	*39*		*15 - 110*	*10/13/14 07:19*	*10/21/14 12:12*	*1*
2,4,6-Tribromophenol (Surr)	*92*		*21 - 128*	*10/13/14 07:19*	*10/21/14 12:12*	*1*
Nitrobenzene-d5 (Surr)	*66*		*31 - 110*	*10/13/14 07:19*	*10/21/14 12:12*	*1*
Phenol-d5 (Surr)	*25*		*10 - 110*	*10/13/14 07:19*	*10/21/14 12:12*	*1*
Terphenyl-d14 (Surr)	*75*		*31 - 115*	*10/13/14 07:19*	*10/21/14 12:12*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-005
Date Collected: 10/09/14 12:10
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-5
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
2,2'-oxybis[1-chloropropane]	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
2,4,5-Trichlorophenol	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
2,4,6-Trichlorophenol	3.8	U	3.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
2,4-Dichlorophenol	9.6	U	9.6		ug/L		10/13/14 07:19	10/21/14 11:23	1
2,4-Dimethylphenol	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
2,4-Dinitrophenol	19	U	19		ug/L		10/13/14 07:19	10/21/14 11:23	1
2,4-Dinitrotoluene	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
2,6-Dinitrotoluene	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
2-Chloronaphthalene	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
2-Chlorophenol	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
2-Methylnaphthalene	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
2-Methylphenol	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
2-Nitroaniline	19	U	19		ug/L		10/13/14 07:19	10/21/14 11:23	1
2-Nitrophenol	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
3,3'-Dichlorobenzidine	0.96	U	0.96		ug/L		10/13/14 07:19	10/21/14 11:23	1
3-Nitroaniline	19	U	19		ug/L		10/13/14 07:19	10/21/14 11:23	1
4,6-Dinitro-2-methylphenol	19	U	19		ug/L		10/13/14 07:19	10/21/14 11:23	1
4-Bromophenyl phenyl ether	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
4-Chloro-3-methylphenol	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
4-Chloroaniline	9.6	U	9.6		ug/L		10/13/14 07:19	10/21/14 11:23	1
4-Chlorophenyl phenyl ether	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
4-Nitroaniline	19	U	19		ug/L		10/13/14 07:19	10/21/14 11:23	1
4-Nitrophenol	19	U	19		ug/L		10/13/14 07:19	10/21/14 11:23	1
Acenaphthene	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Acenaphthylene	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Acetophenone	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Anthracene	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Atrazine	2.9	U	2.9		ug/L		10/13/14 07:19	10/21/14 11:23	1
Benzaldehyde	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Benzo[a]anthracene	0.96	U	0.96		ug/L		10/13/14 07:19	10/21/14 11:23	1
Benzo[a]pyrene	0.96	U	0.96		ug/L		10/13/14 07:19	10/21/14 11:23	1
Benzo[b]fluoranthene	0.96	U	0.96		ug/L		10/13/14 07:19	10/21/14 11:23	1
Benzo[g,h,i]perylene	0.96	U	0.96		ug/L		10/13/14 07:19	10/21/14 11:23	1
Benzo[k]fluoranthene	0.96	U	0.96		ug/L		10/13/14 07:19	10/21/14 11:23	1
Bis(2-chloroethoxy)methane	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Bis(2-chloroethyl)ether	0.96	U	0.96		ug/L		10/13/14 07:19	10/21/14 11:23	1
Bis(2-ethylhexyl) phthalate	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Butyl benzyl phthalate	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Caprolactam	9.6	U	9.6		ug/L		10/13/14 07:19	10/21/14 11:23	1
Carbazole	9.6	U	9.6		ug/L		10/13/14 07:19	10/21/14 11:23	1
Chrysene	0.96	U	0.96		ug/L		10/13/14 07:19	10/21/14 11:23	1
Dibenz(a,h)anthracene	1.9	U	1.9		ug/L		10/13/14 07:19	10/21/14 11:23	1
Dibenzofuran	3.8	U	3.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Diethyl phthalate	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Dimethyl phthalate	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Di-n-butyl phthalate	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Di-n-octyl phthalate	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 11:23	1
Fluoranthene	0.96	U	0.96		ug/L		10/13/14 07:19	10/21/14 11:23	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: GW-18224-100914-SR-005
Date Collected: 10/09/14 12:10
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-5
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:23	1
Hexachlorobenzene	0.19	U	0.19	ug/L		10/13/14 07:19	10/21/14 11:23	1
Hexachlorobutadiene	0.96	U	0.96	ug/L		10/13/14 07:19	10/21/14 11:23	1
Hexachlorocyclopentadiene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:23	1
Hexachloroethane	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:23	1
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	ug/L		10/13/14 07:19	10/21/14 11:23	1
Isophorone	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:23	1
Naphthalene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:23	1
Nitrobenzene	2.9	U	2.9	ug/L		10/13/14 07:19	10/21/14 11:23	1
N-Nitrosodi-n-propylamine	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:23	1
N-Nitrosodiphenylamine	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:23	1
Pentachlorophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:23	1
Phenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:23	1
Phenanthrene	1.9	U	1.9	ug/L		10/13/14 07:19	10/21/14 11:23	1
Pyrene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:23	1
3 & 4 Methylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*61*		*29 - 110*	*10/13/14 07:19*	*10/21/14 11:23*	*1*
2-Fluorophenol (Surr)	*44*		*15 - 110*	*10/13/14 07:19*	*10/21/14 11:23*	*1*
2,4,6-Tribromophenol (Surr)	*81*		*21 - 128*	*10/13/14 07:19*	*10/21/14 11:23*	*1*
Nitrobenzene-d5 (Surr)	*65*		*31 - 110*	*10/13/14 07:19*	*10/21/14 11:23*	*1*
Phenol-d5 (Surr)	*27*		*10 - 110*	*10/13/14 07:19*	*10/21/14 11:23*	*1*
Terphenyl-d14 (Surr)	*66*		*31 - 115*	*10/13/14 07:19*	*10/21/14 11:23*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-006
Date Collected: 10/09/14 13:15
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-6
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
2,2'-oxybis[1-chloropropane]	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
2,4,5-Trichlorophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
2,4,6-Trichlorophenol	3.8	U	3.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
2,4-Dichlorophenol	9.6	U	9.6	ug/L		10/13/14 07:19	10/21/14 11:48	1
2,4-Dimethylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
2,4-Dinitrophenol	19	U	19	ug/L		10/13/14 07:19	10/21/14 11:48	1
2,4-Dinitrotoluene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
2,6-Dinitrotoluene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
2-Chloronaphthalene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
2-Chlorophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
2-Methylnaphthalene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
2-Methylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
2-Nitroaniline	19	U	19	ug/L		10/13/14 07:19	10/21/14 11:48	1
2-Nitrophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
3,3'-Dichlorobenzidine	0.96	U	0.96	ug/L		10/13/14 07:19	10/21/14 11:48	1
3-Nitroaniline	19	U	19	ug/L		10/13/14 07:19	10/21/14 11:48	1
4,6-Dinitro-2-methylphenol	19	U	19	ug/L		10/13/14 07:19	10/21/14 11:48	1
4-Bromophenyl phenyl ether	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
4-Chloro-3-methylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
4-Chloroaniline	9.6	U	9.6	ug/L		10/13/14 07:19	10/21/14 11:48	1
4-Chlorophenyl phenyl ether	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
4-Nitroaniline	19	U	19	ug/L		10/13/14 07:19	10/21/14 11:48	1
4-Nitrophenol	19	U	19	ug/L		10/13/14 07:19	10/21/14 11:48	1
Acenaphthene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Acenaphthylene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Acetophenone	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Anthracene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Atrazine	2.9	U	2.9	ug/L		10/13/14 07:19	10/21/14 11:48	1
Benzaldehyde	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Benzo[a]anthracene	0.96	U	0.96	ug/L		10/13/14 07:19	10/21/14 11:48	1
Benzo[a]pyrene	0.96	U	0.96	ug/L		10/13/14 07:19	10/21/14 11:48	1
Benzo[b]fluoranthene	0.96	U	0.96	ug/L		10/13/14 07:19	10/21/14 11:48	1
Benzo[g,h,i]perylene	0.96	U	0.96	ug/L		10/13/14 07:19	10/21/14 11:48	1
Benzo[k]fluoranthene	0.96	U	0.96	ug/L		10/13/14 07:19	10/21/14 11:48	1
Bis(2-chloroethoxy)methane	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Bis(2-chloroethyl)ether	0.96	U	0.96	ug/L		10/13/14 07:19	10/21/14 11:48	1
Bis(2-ethylhexyl) phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Butyl benzyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Caprolactam	9.6	U	9.6	ug/L		10/13/14 07:19	10/21/14 11:48	1
Carbazole	9.6	U	9.6	ug/L		10/13/14 07:19	10/21/14 11:48	1
Chrysene	0.96	U	0.96	ug/L		10/13/14 07:19	10/21/14 11:48	1
Dibenz(a,h)anthracene	1.9	U	1.9	ug/L		10/13/14 07:19	10/21/14 11:48	1
Dibenzofuran	3.8	U	3.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Diethyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Dimethyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Di-n-butyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Di-n-octyl phthalate	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Fluoranthene	0.96	U	0.96	ug/L		10/13/14 07:19	10/21/14 11:48	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: GW-18224-100914-SR-006
Date Collected: 10/09/14 13:15
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-6
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Hexachlorobenzene	0.19	U	0.19	ug/L		10/13/14 07:19	10/21/14 11:48	1
Hexachlorobutadiene	0.96	U	0.96	ug/L		10/13/14 07:19	10/21/14 11:48	1
Hexachlorocyclopentadiene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Hexachloroethane	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	ug/L		10/13/14 07:19	10/21/14 11:48	1
Isophorone	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Naphthalene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Nitrobenzene	2.9	U	2.9	ug/L		10/13/14 07:19	10/21/14 11:48	1
N-Nitrosodi-n-propylamine	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
N-Nitrosodiphenylamine	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Pentachlorophenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Phenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
Phenanthrene	1.9	U	1.9	ug/L		10/13/14 07:19	10/21/14 11:48	1
Pyrene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1
3 & 4 Methylphenol	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 11:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*22*	*X*	*29 - 110*	*10/13/14 07:19*	*10/21/14 11:48*	*1*
2-Fluorophenol (Surr)	*23*		*15 - 110*	*10/13/14 07:19*	*10/21/14 11:48*	*1*
2,4,6-Tribromophenol (Surr)	*35*		*21 - 128*	*10/13/14 07:19*	*10/21/14 11:48*	*1*
Nitrobenzene-d5 (Surr)	*30*	*X*	*31 - 110*	*10/13/14 07:19*	*10/21/14 11:48*	*1*
Phenol-d5 (Surr)	*14*		*10 - 110*	*10/13/14 07:19*	*10/21/14 11:48*	*1*
Terphenyl-d14 (Surr)	*19*	*X*	*31 - 115*	*10/13/14 07:19*	*10/21/14 11:48*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-100914-SR-007
Date Collected: 10/09/14 14:45
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-7
Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
2,2'-oxybis[1-chloropropane]	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
2,4,5-Trichlorophenol	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
2,4,6-Trichlorophenol	19	U	19	ug/L		10/13/14 07:19	10/21/14 13:24	5
2,4-Dichlorophenol	48	U	48	ug/L		10/13/14 07:19	10/21/14 13:24	5
2,4-Dimethylphenol	**28**		24	ug/L		10/13/14 07:19	10/21/14 13:24	5
2,4-Dinitrophenol	96	U	96	ug/L		10/13/14 07:19	10/21/14 13:24	5
2,4-Dinitrotoluene	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
2,6-Dinitrotoluene	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
2-Chloronaphthalene	**44**		24	ug/L		10/13/14 07:19	10/21/14 13:24	5
2-Chlorophenol	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
2-Methylnaphthalene	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
2-Methylphenol	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
2-Nitroaniline	96	U	96	ug/L		10/13/14 07:19	10/21/14 13:24	5
2-Nitrophenol	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
3,3'-Dichlorobenzidine	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 13:24	5
3-Nitroaniline	96	U	96	ug/L		10/13/14 07:19	10/21/14 13:24	5
4,6-Dinitro-2-methylphenol	96	U	96	ug/L		10/13/14 07:19	10/21/14 13:24	5
4-Bromophenyl phenyl ether	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
4-Chloro-3-methylphenol	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
4-Chloroaniline	48	U	48	ug/L		10/13/14 07:19	10/21/14 13:24	5
4-Chlorophenyl phenyl ether	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
4-Nitroaniline	96	U	96	ug/L		10/13/14 07:19	10/21/14 13:24	5
4-Nitrophenol	96	U	96	ug/L		10/13/14 07:19	10/21/14 13:24	5
Acenaphthene	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Acenaphthylene	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Acetophenone	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Anthracene	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Atrazine	14	U	14	ug/L		10/13/14 07:19	10/21/14 13:24	5
Benzaldehyde	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Benzo[a]anthracene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 13:24	5
Benzo[a]pyrene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 13:24	5
Benzo[b]fluoranthene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 13:24	5
Benzo[g,h,i]perylene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 13:24	5
Benzo[k]fluoranthene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 13:24	5
Bis(2-chloroethoxy)methane	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Bis(2-chloroethyl)ether	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 13:24	5
Bis(2-ethylhexyl) phthalate	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Butyl benzyl phthalate	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Caprolactam	48	U	48	ug/L		10/13/14 07:19	10/21/14 13:24	5
Carbazole	48	U	48	ug/L		10/13/14 07:19	10/21/14 13:24	5
Chrysene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 13:24	5
Dibenz(a,h)anthracene	9.6	U	9.6	ug/L		10/13/14 07:19	10/21/14 13:24	5
Dibenzofuran	19	U	19	ug/L		10/13/14 07:19	10/21/14 13:24	5
Diethyl phthalate	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Dimethyl phthalate	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Di-n-butyl phthalate	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Di-n-octyl phthalate	24	U	24	ug/L		10/13/14 07:19	10/21/14 13:24	5
Fluoranthene	4.8	U	4.8	ug/L		10/13/14 07:19	10/21/14 13:24	5

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: GW-18224-100914-SR-007
Date Collected: 10/09/14 14:45
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-7
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	24	U	24		ug/L		10/13/14 07:19	10/21/14 13:24	5
Hexachlorobenzene	0.96	U	0.96		ug/L		10/13/14 07:19	10/21/14 13:24	5
Hexachlorobutadiene	4.8	U	4.8		ug/L		10/13/14 07:19	10/21/14 13:24	5
Hexachlorocyclopentadiene	24	U	24		ug/L		10/13/14 07:19	10/21/14 13:24	5
Hexachloroethane	24	U	24		ug/L		10/13/14 07:19	10/21/14 13:24	5
Indeno[1,2,3-cd]pyrene	9.6	U	9.6		ug/L		10/13/14 07:19	10/21/14 13:24	5
Isophorone	24	U	24		ug/L		10/13/14 07:19	10/21/14 13:24	5
Naphthalene	24	U	24		ug/L		10/13/14 07:19	10/21/14 13:24	5
Nitrobenzene	14	U	14		ug/L		10/13/14 07:19	10/21/14 13:24	5
N-Nitrosodi-n-propylamine	24	U	24		ug/L		10/13/14 07:19	10/21/14 13:24	5
N-Nitrosodiphenylamine	24	U	24		ug/L		10/13/14 07:19	10/21/14 13:24	5
Pentachlorophenol	24	U	24		ug/L		10/13/14 07:19	10/21/14 13:24	5
Phenol	24	U	24		ug/L		10/13/14 07:19	10/21/14 13:24	5
Phenanthrene	9.6	U	9.6		ug/L		10/13/14 07:19	10/21/14 13:24	5
Pyrene	24	U	24		ug/L		10/13/14 07:19	10/21/14 13:24	5
3 & 4 Methylphenol	24	U	24		ug/L		10/13/14 07:19	10/21/14 13:24	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*72*		*29 - 110*	*10/13/14 07:19*	*10/21/14 13:24*	*5*
2-Fluorophenol (Surr)	*45*		*15 - 110*	*10/13/14 07:19*	*10/21/14 13:24*	*5*
2,4,6-Tribromophenol (Surr)	*97*		*21 - 128*	*10/13/14 07:19*	*10/21/14 13:24*	*5*
Nitrobenzene-d5 (Surr)	*80*		*31 - 110*	*10/13/14 07:19*	*10/21/14 13:24*	*5*
Phenol-d5 (Surr)	*26*		*10 - 110*	*10/13/14 07:19*	*10/21/14 13:24*	*5*
Terphenyl-d14 (Surr)	*85*		*31 - 115*	*10/13/14 07:19*	*10/21/14 13:24*	*5*

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-100914-SR-001
Date Collected: 10/09/14 10:25
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chromium	5.0	U	5.0		ug/L		10/13/14 10:03	10/14/14 12:18	1
Lead	3.0	U	3.0		ug/L		10/13/14 10:03	10/14/14 12:18	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-100914-SR-002
Date Collected: 10/09/14 10:25
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-2
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chromium	5.0	U	5.0		ug/L		10/13/14 10:03	10/14/14 12:22	1
Lead	3.0	U	3.0		ug/L		10/13/14 10:03	10/14/14 12:22	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-100914-SR-003
Date Collected: 10/09/14 09:55
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-3
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chromium	5.0	U	5.0		ug/L		10/13/14 10:03	10/14/14 12:27	1
Lead	3.0	U	3.0		ug/L		10/13/14 10:03	10/14/14 12:27	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-100914-SR-004
Date Collected: 10/09/14 11:35
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-4
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chromium	5.0	U	5.0		ug/L		10/13/14 10:03	10/14/14 11:25	1
Lead	3.0	U	3.0		ug/L		10/13/14 10:03	10/14/14 11:25	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-100914-SR-005
Date Collected: 10/09/14 12:10
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-5
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chromium	**6.3**		5.0		ug/L		10/13/14 10:03	10/14/14 12:31	1
Lead	3.0	U	3.0		ug/L		10/13/14 10:03	10/14/14 12:31	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-100914-SR-006
Date Collected: 10/09/14 13:15
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-6
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chromium	**28**		5.0		ug/L		10/13/14 10:03	10/14/14 12:35	1
Lead	3.0	U	3.0		ug/L		10/13/14 10:03	10/14/14 12:35	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-100914-SR-007
Date Collected: 10/09/14 14:45
Date Received: 10/10/14 08:00

Lab Sample ID: 240-42958-7
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chromium	5.0	U	5.0		ug/L		10/13/14 10:03	10/14/14 12:39	1
Lead	3.0	U	3.0		ug/L		10/13/14 10:03	10/14/14 12:39	1

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

GC/MS VOA

Analysis Batch: 151923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42958-8	TB-18224-100914	Total/NA	Water	8260B	
LCS 240-151923/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-151923/5	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 152000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42958-1	GW-18224-100914-SR-001	Total/NA	Water	8260B	
240-42958-2	GW-18224-100914-SR-002	Total/NA	Water	8260B	
240-42958-3	GW-18224-100914-SR-003	Total/NA	Water	8260B	
240-42958-4	GW-18224-100914-SR-004	Total/NA	Water	8260B	
240-42958-4 MS	GW-18224-100914-SR-004	Total/NA	Water	8260B	
240-42958-4 MSD	GW-18224-100914-SR-004	Total/NA	Water	8260B	
240-42958-5	GW-18224-100914-SR-005	Total/NA	Water	8260B	
240-42958-6	GW-18224-100914-SR-006	Total/NA	Water	8260B	
240-42958-7	GW-18224-100914-SR-007	Total/NA	Water	8260B	
LCS 240-152000/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-152000/6	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 151262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42958-1	GW-18224-100914-SR-001	Total/NA	Water	3510C	
240-42958-2	GW-18224-100914-SR-002	Total/NA	Water	3510C	
240-42958-3	GW-18224-100914-SR-003	Total/NA	Water	3510C	
240-42958-4	GW-18224-100914-SR-004	Total/NA	Water	3510C	
240-42958-4 MS	GW-18224-100914-SR-004	Total/NA	Water	3510C	
240-42958-4 MSD	GW-18224-100914-SR-004	Total/NA	Water	3510C	
240-42958-5	GW-18224-100914-SR-005	Total/NA	Water	3510C	
240-42958-6	GW-18224-100914-SR-006	Total/NA	Water	3510C	
240-42958-7	GW-18224-100914-SR-007	Total/NA	Water	3510C	
LCS 240-151262/24-A	Lab Control Sample	Total/NA	Water	3510C	
MB 240-151262/23-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 152476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42958-1	GW-18224-100914-SR-001	Total/NA	Water	8270C	151262
240-42958-2	GW-18224-100914-SR-002	Total/NA	Water	8270C	151262
240-42958-3	GW-18224-100914-SR-003	Total/NA	Water	8270C	151262
240-42958-4	GW-18224-100914-SR-004	Total/NA	Water	8270C	151262
240-42958-4 MS	GW-18224-100914-SR-004	Total/NA	Water	8270C	151262
240-42958-4 MSD	GW-18224-100914-SR-004	Total/NA	Water	8270C	151262
240-42958-5	GW-18224-100914-SR-005	Total/NA	Water	8270C	151262
240-42958-6	GW-18224-100914-SR-006	Total/NA	Water	8270C	151262
240-42958-7	GW-18224-100914-SR-007	Total/NA	Water	8270C	151262
LCS 240-151262/24-A	Lab Control Sample	Total/NA	Water	8270C	151262
MB 240-151262/23-A	Method Blank	Total/NA	Water	8270C	151262

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Metals

Prep Batch: 151320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42958-1	GW-18224-100914-SR-001	Total Recoverable	Water	3005A	
240-42958-2	GW-18224-100914-SR-002	Total Recoverable	Water	3005A	
240-42958-3	GW-18224-100914-SR-003	Total Recoverable	Water	3005A	
240-42958-4	GW-18224-100914-SR-004	Total Recoverable	Water	3005A	
240-42958-4 MS	GW-18224-100914-SR-004	Total Recoverable	Water	3005A	
240-42958-4 MSD	GW-18224-100914-SR-004	Total Recoverable	Water	3005A	
240-42958-5	GW-18224-100914-SR-005	Total Recoverable	Water	3005A	
240-42958-6	GW-18224-100914-SR-006	Total Recoverable	Water	3005A	
240-42958-7	GW-18224-100914-SR-007	Total Recoverable	Water	3005A	
LCS 240-151320/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-151320/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 151465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42958-1	GW-18224-100914-SR-001	Total Recoverable	Water	6010B	151320
240-42958-2	GW-18224-100914-SR-002	Total Recoverable	Water	6010B	151320
240-42958-3	GW-18224-100914-SR-003	Total Recoverable	Water	6010B	151320
240-42958-4	GW-18224-100914-SR-004	Total Recoverable	Water	6010B	151320
240-42958-4 MS	GW-18224-100914-SR-004	Total Recoverable	Water	6010B	151320
240-42958-4 MSD	GW-18224-100914-SR-004	Total Recoverable	Water	6010B	151320
240-42958-5	GW-18224-100914-SR-005	Total Recoverable	Water	6010B	151320
240-42958-6	GW-18224-100914-SR-006	Total Recoverable	Water	6010B	151320
240-42958-7	GW-18224-100914-SR-007	Total Recoverable	Water	6010B	151320
LCS 240-151320/2-A	Lab Control Sample	Total Recoverable	Water	6010B	151320
MB 240-151320/1-A	Method Blank	Total Recoverable	Water	6010B	151320

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-151923/5
Matrix: Water
Analysis Batch: 151923

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	ug/L			10/16/14 13:44	1
Benzene	1.0	U	1.0	ug/L			10/16/14 13:44	1
Bromodichloromethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
Bromoform	1.0	U	1.0	ug/L			10/16/14 13:44	1
Bromomethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
2-Butanone (MEK)	10	U	10	ug/L			10/16/14 13:44	1
Carbon disulfide	5.0	U	5.0	ug/L			10/16/14 13:44	1
Carbon tetrachloride	1.0	U	1.0	ug/L			10/16/14 13:44	1
Chlorobenzene	1.0	U	1.0	ug/L			10/16/14 13:44	1
Chloroethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
Chloroform	1.0	U	1.0	ug/L			10/16/14 13:44	1
Chloromethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			10/16/14 13:44	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			10/16/14 13:44	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			10/16/14 13:44	1
Ethylbenzene	1.0	U	1.0	ug/L			10/16/14 13:44	1
2-Hexanone	10	U	10	ug/L			10/16/14 13:44	1
Methylene Chloride	5.0	U	5.0	ug/L			10/16/14 13:44	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			10/16/14 13:44	1
Styrene	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
Tetrachloroethene	1.0	U	1.0	ug/L			10/16/14 13:44	1
Toluene	1.0	U	1.0	ug/L			10/16/14 13:44	1
Trichloroethene	1.0	U	1.0	ug/L			10/16/14 13:44	1
Vinyl chloride	1.0	U	1.0	ug/L			10/16/14 13:44	1
Xylenes, Total	2.0	U	2.0	ug/L			10/16/14 13:44	1
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
Cyclohexane	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,2-Dibromoethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			10/16/14 13:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			10/16/14 13:44	1
Isopropylbenzene	1.0	U	1.0	ug/L			10/16/14 13:44	1
Methyl acetate	10	U	10	ug/L			10/16/14 13:44	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			10/16/14 13:44	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			10/16/14 13:44	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
Dibromochloromethane	1.0	U	1.0	ug/L			10/16/14 13:44	1
Methylcyclohexane	1.0	U	1.0	ug/L			10/16/14 13:44	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-151923/5
Matrix: Water
Analysis Batch: 151923

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		63 - 129		10/16/14 13:44	1
4-Bromofluorobenzene (Surr)	88		66 - 120		10/16/14 13:44	1
Toluene-d8 (Surr)	80		74 - 120		10/16/14 13:44	1
Dibromofluoromethane (Surr)	91		75 - 121		10/16/14 13:44	1

Lab Sample ID: LCS 240-151923/4
Matrix: Water
Analysis Batch: 151923

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	18.8		ug/L		94	43 - 136
Benzene	10.0	9.93		ug/L		99	80 - 120
Bromodichloromethane	10.0	12.0		ug/L		120	72 - 121
Bromoform	10.0	13.3	*	ug/L		133	40 - 131
Bromomethane	10.0	9.02		ug/L		90	11 - 185
2-Butanone (MEK)	20.0	19.2		ug/L		96	60 - 126
Carbon disulfide	10.0	11.2		ug/L		112	62 - 142
Carbon tetrachloride	10.0	13.5	*	ug/L		135	66 - 128
Chlorobenzene	10.0	10.1		ug/L		101	80 - 120
Chloroethane	10.0	8.33		ug/L		83	25 - 153
Chloroform	10.0	11.7		ug/L		117	79 - 120
Chloromethane	10.0	7.11		ug/L		71	44 - 126
1,1-Dichloroethane	10.0	10.9		ug/L		109	80 - 120
1,2-Dichloroethane	10.0	12.0		ug/L		120	71 - 127
1,1-Dichloroethene	10.0	11.1		ug/L		111	78 - 131
1,2-Dichloropropane	10.0	9.55		ug/L		95	80 - 120
cis-1,3-Dichloropropene	10.0	11.7		ug/L		117	61 - 120
trans-1,3-Dichloropropene	10.0	11.8		ug/L		118	58 - 120
Ethylbenzene	10.0	10.2		ug/L		102	80 - 120
2-Hexanone	20.0	14.7		ug/L		74	55 - 133
Methylene Chloride	10.0	12.0		ug/L		120	66 - 131
4-Methyl-2-pentanone (MIBK)	20.0	19.9		ug/L		100	63 - 128
Styrene	10.0	11.3		ug/L		113	79 - 120
1,1,2,2-Tetrachloroethane	10.0	9.28		ug/L		93	68 - 120
Tetrachloroethene	10.0	10.5		ug/L		105	79 - 120
Toluene	10.0	9.79		ug/L		98	80 - 120
Trichloroethene	10.0	11.4		ug/L		114	76 - 120
Vinyl chloride	10.0	8.07		ug/L		81	53 - 127
Xylenes, Total	20.0	21.0		ug/L		105	80 - 120
1,1,1-Trichloroethane	10.0	12.7	*	ug/L		127	74 - 120
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	80 - 120
Cyclohexane	10.0	9.51		ug/L		95	54 - 121
1,2-Dibromo-3-Chloropropane	10.0	11.3		ug/L		113	42 - 136
1,2-Dibromoethane	10.0	11.7		ug/L		117	79 - 120
Dichlorodifluoromethane	10.0	8.75		ug/L		87	19 - 129
cis-1,2-Dichloroethene	10.0	10.9		ug/L		109	80 - 120
trans-1,2-Dichloroethene	10.0	11.5		ug/L		115	80 - 120
Isopropylbenzene	10.0	10.8		ug/L		108	75 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-151923/4
Matrix: Water
Analysis Batch: 151923

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl acetate	50.0	46.1		ug/L		92	58 - 131
Methyl tert-butyl ether	10.0	12.4		ug/L		124	52 - 144
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	11.5		ug/L		115	74 - 151
1,2,4-Trichlorobenzene	10.0	10.7		ug/L		107	48 - 135
1,2-Dichlorobenzene	10.0	9.87		ug/L		99	80 - 120
1,3-Dichlorobenzene	10.0	9.67		ug/L		97	80 - 120
1,4-Dichlorobenzene	10.0	9.89		ug/L		99	80 - 120
Trichlorofluoromethane	10.0	10.8		ug/L		108	49 - 157
Dibromochloromethane	10.0	11.8		ug/L		118	64 - 120
Methylcyclohexane	10.0	10.5		ug/L		105	56 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*63 - 129*
4-Bromofluorobenzene (Surr)	*96*		*66 - 120*
Toluene-d8 (Surr)	*83*		*74 - 120*
Dibromofluoromethane (Surr)	*94*		*75 - 121*

Lab Sample ID: MB 240-152000/6
Matrix: Water
Analysis Batch: 152000

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	ug/L			10/16/14 17:10	1
Benzene	1.0	U	1.0	ug/L			10/16/14 17:10	1
Bromodichloromethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
Bromoform	1.0	U	1.0	ug/L			10/16/14 17:10	1
Bromomethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
2-Butanone (MEK)	10	U	10	ug/L			10/16/14 17:10	1
Carbon disulfide	5.0	U	5.0	ug/L			10/16/14 17:10	1
Carbon tetrachloride	1.0	U	1.0	ug/L			10/16/14 17:10	1
Chlorobenzene	1.0	U	1.0	ug/L			10/16/14 17:10	1
Chloroethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
Chloroform	1.0	U	1.0	ug/L			10/16/14 17:10	1
Chloromethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			10/16/14 17:10	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			10/16/14 17:10	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			10/16/14 17:10	1
Ethylbenzene	1.0	U	1.0	ug/L			10/16/14 17:10	1
2-Hexanone	10	U	10	ug/L			10/16/14 17:10	1
Methylene Chloride	5.0	U	5.0	ug/L			10/16/14 17:10	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			10/16/14 17:10	1
Styrene	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
Tetrachloroethene	1.0	U	1.0	ug/L			10/16/14 17:10	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-152000/6
Matrix: Water
Analysis Batch: 152000

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	1.0	U	1.0	ug/L			10/16/14 17:10	1
Trichloroethene	1.0	U	1.0	ug/L			10/16/14 17:10	1
Vinyl chloride	1.0	U	1.0	ug/L			10/16/14 17:10	1
Xylenes, Total	2.0	U	2.0	ug/L			10/16/14 17:10	1
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
Cyclohexane	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,2-Dibromoethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			10/16/14 17:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			10/16/14 17:10	1
Isopropylbenzene	1.0	U	1.0	ug/L			10/16/14 17:10	1
Methyl acetate	10	U	10	ug/L			10/16/14 17:10	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			10/16/14 17:10	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			10/16/14 17:10	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
Dibromochloromethane	1.0	U	1.0	ug/L			10/16/14 17:10	1
Methylcyclohexane	1.0	U	1.0	ug/L			10/16/14 17:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*63 - 129*		*10/16/14 17:10*	*1*
4-Bromofluorobenzene (Surr)	*92*		*66 - 120*		*10/16/14 17:10*	*1*
Toluene-d8 (Surr)	*98*		*74 - 120*		*10/16/14 17:10*	*1*
Dibromofluoromethane (Surr)	*98*		*75 - 121*		*10/16/14 17:10*	*1*

Lab Sample ID: LCS 240-152000/4
Matrix: Water
Analysis Batch: 152000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	21.1		ug/L		105	43 - 136
Benzene	10.0	9.98		ug/L		100	80 - 120
Bromodichloromethane	10.0	9.07		ug/L		91	72 - 121
Bromoform	10.0	8.85		ug/L		89	40 - 131
Bromomethane	10.0	8.13		ug/L		81	11 - 185
2-Butanone (MEK)	20.0	20.5		ug/L		103	60 - 126
Carbon disulfide	10.0	10.1		ug/L		101	62 - 142
Carbon tetrachloride	10.0	10.3		ug/L		103	66 - 128
Chlorobenzene	10.0	9.49		ug/L		95	80 - 120
Chloroethane	10.0	7.74		ug/L		77	25 - 153
Chloroform	10.0	9.62		ug/L		96	79 - 120
Chloromethane	10.0	8.12		ug/L		81	44 - 126
1,1-Dichloroethane	10.0	10.3		ug/L		103	80 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-152000/4
Matrix: Water
Analysis Batch: 152000

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	10.0	10.1		ug/L		101	71 - 127
1,1-Dichloroethene	10.0	10.2		ug/L		102	78 - 131
1,2-Dichloropropane	10.0	9.82		ug/L		98	80 - 120
cis-1,3-Dichloropropene	10.0	9.68		ug/L		97	61 - 120
trans-1,3-Dichloropropene	10.0	9.94		ug/L		99	58 - 120
Ethylbenzene	10.0	9.63		ug/L		96	80 - 120
2-Hexanone	20.0	19.7		ug/L		98	55 - 133
Methylene Chloride	10.0	9.96		ug/L		100	66 - 131
4-Methyl-2-pentanone (MIBK)	20.0	20.3		ug/L		101	63 - 128
Styrene	10.0	9.67		ug/L		97	79 - 120
1,1,2,2-Tetrachloroethane	10.0	8.91		ug/L		89	68 - 120
Tetrachloroethene	10.0	10.4		ug/L		104	79 - 120
Toluene	10.0	9.59		ug/L		96	80 - 120
Trichloroethene	10.0	10.4		ug/L		104	76 - 120
Vinyl chloride	10.0	8.30		ug/L		83	53 - 127
Xylenes, Total	20.0	19.4		ug/L		97	80 - 120
1,1,1-Trichloroethane	10.0	9.56		ug/L		96	74 - 120
1,1,2-Trichloroethane	10.0	8.87		ug/L		89	80 - 120
Cyclohexane	10.0	10.4		ug/L		104	54 - 121
1,2-Dibromo-3-Chloropropane	10.0	8.11		ug/L		81	42 - 136
1,2-Dibromoethane	10.0	9.43		ug/L		94	79 - 120
Dichlorodifluoromethane	10.0	5.97		ug/L		60	19 - 129
cis-1,2-Dichloroethene	10.0	9.84		ug/L		98	80 - 120
trans-1,2-Dichloroethene	10.0	10.4		ug/L		104	80 - 120
Isopropylbenzene	10.0	9.46		ug/L		95	75 - 120
Methyl acetate	50.0	50.7		ug/L		101	58 - 131
Methyl tert-butyl ether	10.0	9.78		ug/L		98	52 - 144
1,1,2-Trichloro-1,2,2-trifluoroetha ne	10.0	11.0		ug/L		110	74 - 151
1,2,4-Trichlorobenzene	10.0	8.70		ug/L		87	48 - 135
1,2-Dichlorobenzene	10.0	9.25		ug/L		92	80 - 120
1,3-Dichlorobenzene	10.0	9.19		ug/L		92	80 - 120
1,4-Dichlorobenzene	10.0	9.27		ug/L		93	80 - 120
Trichlorofluoromethane	10.0	8.83		ug/L		88	49 - 157
Dibromochloromethane	10.0	9.19		ug/L		92	64 - 120
Methylcyclohexane	10.0	10.3		ug/L		103	56 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*63 - 129*
4-Bromofluorobenzene (Surr)	*97*		*66 - 120*
Toluene-d8 (Surr)	*102*		*74 - 120*
Dibromofluoromethane (Surr)	*100*		*75 - 121*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-42958-4 MS
Matrix: Water
Analysis Batch: 152000

Client Sample ID: GW-18224-100914-SR-004
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	71	U	143	134		ug/L		94	33 - 145
Benzene	7.5		71.4	77.4		ug/L		98	72 - 121
Bromodichloromethane	7.1	U	71.4	62.4		ug/L		87	67 - 120
Bromoform	7.1	U	71.4	54.3		ug/L		76	32 - 128
Bromomethane	7.1	U	71.4	48.7		ug/L		68	10 - 186
2-Butanone (MEK)	71	U	143	135		ug/L		94	54 - 129
Carbon disulfide	36	U	71.4	71.8		ug/L		101	57 - 147
Carbon tetrachloride	7.1	U	71.4	66.0		ug/L		92	59 - 129
Chlorobenzene	190		71.4	251		ug/L		88	80 - 120
Chloroethane	7.1	U	71.4	49.1		ug/L		69	21 - 165
Chloroform	7.1	U	71.4	69.5		ug/L		97	76 - 120
Chloromethane	7.1	U	71.4	54.8		ug/L		77	33 - 132
1,1-Dichloroethane	7.1	U	71.4	71.2		ug/L		100	79 - 120
1,2-Dichloroethane	7.1	U	71.4	71.4		ug/L		100	68 - 129
1,1-Dichloroethene	7.1	U	71.4	66.6		ug/L		93	74 - 135
1,2-Dichloropropane	7.1	U	71.4	70.3		ug/L		98	78 - 120
cis-1,3-Dichloropropene	7.1	U	71.4	62.3		ug/L		87	51 - 120
trans-1,3-Dichloropropene	7.1	U	71.4	63.1		ug/L		88	46 - 120
Ethylbenzene	7.1	U	71.4	66.5		ug/L		93	75 - 120
2-Hexanone	71	U	143	129		ug/L		90	47 - 139
Methylene Chloride	36	U	71.4	69.5		ug/L		97	63 - 128
4-Methyl-2-pentanone (MIBK)	71	U	143	130		ug/L		91	56 - 131
Styrene	7.1	U	71.4	66.2		ug/L		93	71 - 120
1,1,2,2-Tetrachloroethane	7.1	U	71.4	63.1		ug/L		88	63 - 122
Tetrachloroethene	7.1	U	71.4	66.1		ug/L		93	70 - 120
Toluene	7.1	U	71.4	67.7		ug/L		95	78 - 120
Trichloroethene	7.1	U	71.4	70.2		ug/L		98	66 - 120
Vinyl chloride	7.1	U	71.4	61.3		ug/L		86	49 - 130
Xylenes, Total	14	U	143	131		ug/L		92	76 - 120
1,1,1-Trichloroethane	7.1	U	71.4	67.9		ug/L		95	68 - 121
1,1,2-Trichloroethane	7.1	U	71.4	68.0		ug/L		95	75 - 120
Cyclohexane	7.1	U	71.4	66.8		ug/L		94	49 - 123
1,2-Dibromo-3-Chloropropane	7.1	U	71.4	53.0		ug/L		74	32 - 139
1,2-Dibromoethane	7.1	U	71.4	66.1		ug/L		93	74 - 120
Dichlorodifluoromethane	7.1	U	71.4	42.6		ug/L		60	17 - 128
cis-1,2-Dichloroethene	7.1	U	71.4	68.6		ug/L		96	70 - 120
trans-1,2-Dichloroethene	7.1	U	71.4	72.0		ug/L		101	80 - 120
Isopropylbenzene	7.1	U	71.4	63.3		ug/L		89	68 - 120
Methyl acetate	71	U	357	341		ug/L		96	47 - 130
Methyl tert-butyl ether	7.1	U	71.4	67.5		ug/L		95	46 - 144
1,1,2-Trichloro-1,2,2-trifluoroethane	7.1	U	71.4	71.9		ug/L		101	70 - 152
1,2,4-Trichlorobenzene	7.1	U	71.4	59.9		ug/L		84	38 - 138
1,2-Dichlorobenzene	15		71.4	78.5		ug/L		88	75 - 120
1,3-Dichlorobenzene	15		71.4	79.0		ug/L		89	73 - 120
1,4-Dichlorobenzene	25		71.4	85.1		ug/L		85	75 - 120
Trichlorofluoromethane	7.1	U	71.4	58.7		ug/L		82	46 - 157
Dibromochloromethane	7.1	U	71.4	62.4		ug/L		87	56 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-42958-4 MS — **Client Sample ID: GW-18224-100914-SR-004**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 152000

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylcyclohexane	7.1	U	71.4	60.3		ug/L		85	49 - 127

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*63 - 129*
4-Bromofluorobenzene (Surr)	*101*		*66 - 120*
Toluene-d8 (Surr)	*100*		*74 - 120*
Dibromofluoromethane (Surr)	*98*		*75 - 121*

Lab Sample ID: 240-42958-4 MSD — **Client Sample ID: GW-18224-100914-SR-004**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 152000

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	71	U	143	128		ug/L		90	33 - 145	4	30
Benzene	7.5		71.4	77.7		ug/L		98	72 - 121	0	30
Bromodichloromethane	7.1	U	71.4	63.4		ug/L		89	67 - 120	2	30
Bromoform	7.1	U	71.4	59.3		ug/L		83	32 - 128	9	30
Bromomethane	7.1	U	71.4	65.4		ug/L		92	10 - 186	29	30
2-Butanone (MEK)	71	U	143	138		ug/L		97	54 - 129	3	30
Carbon disulfide	36	U	71.4	71.4		ug/L		100	57 - 147	1	30
Carbon tetrachloride	7.1	U	71.4	66.1		ug/L		93	59 - 129	0	30
Chlorobenzene	190		71.4	244	F1	ug/L		78	80 - 120	3	30
Chloroethane	7.1	U	71.4	68.1	F2	ug/L		95	21 - 165	32	30
Chloroform	7.1	U	71.4	69.2		ug/L		97	76 - 120	0	30
Chloromethane	7.1	U	71.4	56.5		ug/L		79	33 - 132	3	30
1,1-Dichloroethane	7.1	U	71.4	72.1		ug/L		101	79 - 120	1	30
1,2-Dichloroethane	7.1	U	71.4	71.4		ug/L		100	68 - 129	0	30
1,1-Dichloroethene	7.1	U	71.4	68.0		ug/L		95	74 - 135	2	30
1,2-Dichloropropane	7.1	U	71.4	69.9		ug/L		98	78 - 120	1	30
cis-1,3-Dichloropropene	7.1	U	71.4	62.8		ug/L		88	51 - 120	1	30
trans-1,3-Dichloropropene	7.1	U	71.4	64.9		ug/L		91	46 - 120	3	30
Ethylbenzene	7.1	U	71.4	64.6		ug/L		90	75 - 120	3	30
2-Hexanone	71	U	143	130		ug/L		91	47 - 139	1	30
Methylene Chloride	36	U	71.4	72.9		ug/L		102	63 - 128	5	30
4-Methyl-2-pentanone (MIBK)	71	U	143	135		ug/L		95	56 - 131	4	30
Styrene	7.1	U	71.4	64.4		ug/L		90	71 - 120	3	30
1,1,2,2-Tetrachloroethane	7.1	U	71.4	61.8		ug/L		87	63 - 122	2	30
Tetrachloroethene	7.1	U	71.4	66.9		ug/L		94	70 - 120	1	30
Toluene	7.1	U	71.4	67.5		ug/L		95	78 - 120	0	30
Trichloroethene	7.1	U	71.4	69.5		ug/L		97	66 - 120	1	30
Vinyl chloride	7.1	U	71.4	61.2		ug/L		86	49 - 130	0	30
Xylenes, Total	14	U	143	128		ug/L		90	76 - 120	2	30
1,1,1-Trichloroethane	7.1	U	71.4	68.3		ug/L		96	68 - 121	1	30
1,1,2-Trichloroethane	7.1	U	71.4	64.4		ug/L		90	75 - 120	5	30
Cyclohexane	7.1	U	71.4	69.6		ug/L		97	49 - 123	4	30
1,2-Dibromo-3-Chloropropane	7.1	U	71.4	61.0		ug/L		85	32 - 139	14	30
1,2-Dibromoethane	7.1	U	71.4	67.9		ug/L		95	74 - 120	3	30
Dichlorodifluoromethane	7.1	U	71.4	46.0		ug/L		64	17 - 128	8	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-42958-4 MSD — **Client Sample ID: GW-18224-100914-SR-004**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 152000

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	7.1	U	71.4	70.6		ug/L		99	70 - 120	3	30
trans-1,2-Dichloroethene	7.1	U	71.4	69.9		ug/L		98	80 - 120	3	30
Isopropylbenzene	7.1	U	71.4	63.7		ug/L		89	68 - 120	1	30
Methyl acetate	71	U	357	358		ug/L		100	47 - 130	5	30
Methyl tert-butyl ether	7.1	U	71.4	69.7		ug/L		98	46 - 144	3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	7.1	U	71.4	76.4		ug/L		107	70 - 152	6	30
1,2,4-Trichlorobenzene	7.1	U	71.4	59.3		ug/L		83	38 - 138	1	30
1,2-Dichlorobenzene	15		71.4	80.4		ug/L		91	75 - 120	2	30
1,3-Dichlorobenzene	15		71.4	78.2		ug/L		88	73 - 120	1	30
1,4-Dichlorobenzene	25		71.4	85.0		ug/L		85	75 - 120	0	30
Trichlorofluoromethane	7.1	U	71.4	65.2		ug/L		91	46 - 157	11	30
Dibromochloromethane	7.1	U	71.4	62.9		ug/L		88	56 - 120	1	30
Methylcyclohexane	7.1	U	71.4	66.4		ug/L		93	49 - 127	9	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*63 - 129*
4-Bromofluorobenzene (Surr)	*98*		*66 - 120*
Toluene-d8 (Surr)	*101*		*74 - 120*
Dibromofluoromethane (Surr)	*97*		*75 - 121*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-151262/23-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 152476 — **Prep Batch: 151262**

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
2,2'-oxybis[1-chloropropane]	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
2,4,5-Trichlorophenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
2,4,6-Trichlorophenol	4.0	U	4.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
2,4-Dichlorophenol	10	U	10	ug/L		10/13/14 07:19	10/21/14 08:34	1
2,4-Dimethylphenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
2,4-Dinitrophenol	20	U	20	ug/L		10/13/14 07:19	10/21/14 08:34	1
2,4-Dinitrotoluene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
2,6-Dinitrotoluene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
2-Chloronaphthalene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
2-Chlorophenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
2-Methylnaphthalene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
2-Methylphenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
2-Nitroaniline	20	U	20	ug/L		10/13/14 07:19	10/21/14 08:34	1
2-Nitrophenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
3,3'-Dichlorobenzidine	1.0	U	1.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
3-Nitroaniline	20	U	20	ug/L		10/13/14 07:19	10/21/14 08:34	1
4,6-Dinitro-2-methylphenol	20	U	20	ug/L		10/13/14 07:19	10/21/14 08:34	1
4-Bromophenyl phenyl ether	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
4-Chloro-3-methylphenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-151262/23-A
Matrix: Water
Analysis Batch: 152476

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 151262

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	10	U	10	ug/L		10/13/14 07:19	10/21/14 08:34	1
4-Chlorophenyl phenyl ether	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
4-Nitroaniline	20	U	20	ug/L		10/13/14 07:19	10/21/14 08:34	1
4-Nitrophenol	20	U	20	ug/L		10/13/14 07:19	10/21/14 08:34	1
Acenaphthene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Acenaphthylene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Acetophenone	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Anthracene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Atrazine	3.0	U	3.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Benzaldehyde	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Benzo[a]anthracene	1.0	U	1.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Benzo[a]pyrene	1.0	U	1.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Benzo[b]fluoranthene	1.0	U	1.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Benzo[g,h,i]perylene	1.0	U	1.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Benzo[k]fluoranthene	1.0	U	1.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Bis(2-chloroethoxy)methane	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Bis(2-chloroethyl)ether	1.0	U	1.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Bis(2-ethylhexyl) phthalate	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Butyl benzyl phthalate	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Caprolactam	10	U	10	ug/L		10/13/14 07:19	10/21/14 08:34	1
Carbazole	10	U	10	ug/L		10/13/14 07:19	10/21/14 08:34	1
Chrysene	1.0	U	1.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Dibenz(a,h)anthracene	2.0	U	2.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Dibenzofuran	4.0	U	4.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Diethyl phthalate	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Dimethyl phthalate	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Di-n-butyl phthalate	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Di-n-octyl phthalate	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Fluoranthene	1.0	U	1.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Fluorene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Hexachlorobenzene	0.20	U	0.20	ug/L		10/13/14 07:19	10/21/14 08:34	1
Hexachlorobutadiene	1.0	U	1.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Hexachlorocyclopentadiene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Hexachloroethane	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Indeno[1,2,3-cd]pyrene	2.0	U	2.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Isophorone	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Naphthalene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Nitrobenzene	3.0	U	3.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
N-Nitrosodi-n-propylamine	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
N-Nitrosodiphenylamine	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Pentachlorophenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Phenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Phenanthrene	2.0	U	2.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
Pyrene	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1
3 & 4 Methylphenol	5.0	U	5.0	ug/L		10/13/14 07:19	10/21/14 08:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*69*		*29 - 110*	*10/13/14 07:19*	*10/21/14 08:34*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-151262/23-A
Matrix: Water
Analysis Batch: 152476

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 151262

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	50		15 - 110	10/13/14 07:19	10/21/14 08:34	1
2,4,6-Tribromophenol (Surr)	91		21 - 128	10/13/14 07:19	10/21/14 08:34	1
Nitrobenzene-d5 (Surr)	74		31 - 110	10/13/14 07:19	10/21/14 08:34	1
Phenol-d5 (Surr)	30		10 - 110	10/13/14 07:19	10/21/14 08:34	1
Terphenyl-d14 (Surr)	88		31 - 115	10/13/14 07:19	10/21/14 08:34	1

Lab Sample ID: LCS 240-151262/24-A
Matrix: Water
Analysis Batch: 152476

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 151262

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	20.0	14.1		ug/L		71	52 - 120
2,2'-oxybis[1-chloropropane]	20.0	11.6		ug/L		58	42 - 120
2,4,5-Trichlorophenol	20.0	15.9		ug/L		80	47 - 120
2,4,6-Trichlorophenol	20.0	16.8		ug/L		84	43 - 120
2,4-Dichlorophenol	20.0	15.3		ug/L		77	46 - 120
2,4-Dimethylphenol	20.0	12.5		ug/L		62	38 - 120
2,4-Dinitrophenol	40.0	30.7		ug/L		77	10 - 120
2,4-Dinitrotoluene	20.0	19.4		ug/L		97	52 - 120
2,6-Dinitrotoluene	20.0	17.3		ug/L		87	52 - 120
2-Chloronaphthalene	20.0	13.8		ug/L		69	47 - 120
2-Chlorophenol	20.0	13.4		ug/L		67	43 - 120
2-Methylnaphthalene	20.0	13.1		ug/L		66	52 - 120
2-Methylphenol	20.0	11.0		ug/L		55	38 - 120
2-Nitroaniline	20.0	17.2	J	ug/L		86	48 - 127
2-Nitrophenol	20.0	16.7		ug/L		83	42 - 120
3,3'-Dichlorobenzidine	40.0	33.2		ug/L		83	29 - 120
3-Nitroaniline	20.0	15.3	J	ug/L		77	52 - 120
4,6-Dinitro-2-methylphenol	40.0	36.2		ug/L		90	33 - 120
4-Bromophenyl phenyl ether	20.0	16.4		ug/L		82	47 - 120
4-Chloro-3-methylphenol	20.0	14.9		ug/L		75	45 - 120
4-Chloroaniline	20.0	4.47	J	ug/L		22	15 - 120
4-Chlorophenyl phenyl ether	20.0	15.5		ug/L		78	47 - 120
4-Nitroaniline	20.0	17.7	J	ug/L		89	48 - 120
4-Nitrophenol	40.0	12.8	J	ug/L		32	16 - 120
Acenaphthene	20.0	14.3		ug/L		72	55 - 120
Acenaphthylene	20.0	14.3		ug/L		72	55 - 120
Acetophenone	20.0	15.1		ug/L		76	50 - 120
Anthracene	20.0	15.9		ug/L		79	56 - 120
Atrazine	40.0	37.7		ug/L		94	65 - 161
Benzaldehyde	40.0	42.9		ug/L		107	40 - 122
Benzo[a]anthracene	20.0	15.3		ug/L		76	46 - 120
Benzo[a]pyrene	20.0	15.4		ug/L		77	24 - 120
Benzo[b]fluoranthene	20.0	14.8		ug/L		74	24 - 120
Benzo[g,h,i]perylene	20.0	16.6		ug/L		83	24 - 126
Benzo[k]fluoranthene	20.0	15.9		ug/L		79	30 - 120
Bis(2-chloroethoxy)methane	20.0	14.4		ug/L		72	48 - 120
Bis(2-chloroethyl)ether	20.0	13.1		ug/L		65	43 - 120

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-151262/24-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 152476 — **Prep Batch: 151262**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-ethylhexyl) phthalate	20.0	15.2		ug/L		76	21 - 125
Butyl benzyl phthalate	20.0	16.3		ug/L		81	51 - 120
Caprolactam	40.0	5.09	J	ug/L		13	10 - 120
Carbazole	20.0	17.9		ug/L		89	57 - 120
Chrysene	20.0	15.2		ug/L		76	49 - 120
Dibenz(a,h)anthracene	20.0	16.3		ug/L		82	24 - 125
Dibenzofuran	20.0	15.3		ug/L		77	56 - 120
Diethyl phthalate	20.0	16.5		ug/L		82	58 - 120
Dimethyl phthalate	20.0	16.9		ug/L		85	59 - 120
Di-n-butyl phthalate	20.0	17.0		ug/L		85	57 - 122
Di-n-octyl phthalate	20.0	15.8		ug/L		79	21 - 122
Fluoranthene	20.0	15.9		ug/L		79	57 - 120
Fluorene	20.0	15.2		ug/L		76	56 - 120
Hexachlorobenzene	20.0	15.8		ug/L		79	52 - 120
Hexachlorobutadiene	20.0	11.9		ug/L		60	38 - 120
Hexachlorocyclopentadiene	20.0	10.1		ug/L		50	4 - 120
Hexachloroethane	20.0	10.3		ug/L		52	42 - 120
Indeno[1,2,3-cd]pyrene	20.0	16.3		ug/L		82	25 - 120
Isophorone	20.0	14.9		ug/L		74	48 - 123
Naphthalene	20.0	12.7		ug/L		63	52 - 120
Nitrobenzene	20.0	14.4		ug/L		72	41 - 120
N-Nitrosodi-n-propylamine	20.0	15.0		ug/L		75	48 - 123
N-Nitrosodiphenylamine	40.0	31.2		ug/L		78	51 - 120
Pentachlorophenol	40.0	28.1		ug/L		70	14 - 120
Phenol	20.0	5.34		ug/L		27	16 - 120
Phenanthrene	20.0	15.8		ug/L		79	57 - 120
Pyrene	20.0	15.7		ug/L		79	50 - 120
3 & 4 Methylphenol	20.0	10.8		ug/L		54	34 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*72*		*29 - 110*
2-Fluorophenol (Surr)	*44*		*15 - 110*
2,4,6-Tribromophenol (Surr)	*99*		*21 - 128*
Nitrobenzene-d5 (Surr)	*78*		*31 - 110*
Phenol-d5 (Surr)	*28*		*10 - 110*
Terphenyl-d14 (Surr)	*81*		*31 - 115*

Lab Sample ID: 240-42958-4 MS — **Client Sample ID: GW-18224-100914-SR-004**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 152476 — **Prep Batch: 151262**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	4.8	U	19.0	13.0		ug/L		68	46 - 110
2,2'-oxybis[1-chloropropane]	4.8	U	19.0	11.7		ug/L		61	26 - 110
2,4,5-Trichlorophenol	4.8	U	19.0	14.8		ug/L		78	53 - 110
2,4,6-Trichlorophenol	3.8	U	19.0	15.0		ug/L		79	50 - 110
2,4-Dichlorophenol	9.5	U	19.0	14.2		ug/L		74	48 - 110
2,4-Dimethylphenol	4.8	U	19.0	14.0		ug/L		73	27 - 110

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-42958-4 MS | **Client Sample ID: GW-18224-100914-SR-004**
Matrix: Water | **Prep Type: Total/NA**
Analysis Batch: 152476 | **Prep Batch: 151262**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dinitrophenol	19	U	38.1	33.7		ug/L		88	10 - 110
2,4-Dinitrotoluene	4.8	U	19.0	18.0		ug/L		95	56 - 110
2,6-Dinitrotoluene	4.8	U	19.0	16.2		ug/L		85	55 - 110
2-Chloronaphthalene	5.9		19.0	22.0		ug/L		84	46 - 110
2-Chlorophenol	4.8	U	19.0	13.7		ug/L		68	35 - 110
2-Methylnaphthalene	4.8	U	19.0	12.5		ug/L		66	50 - 110
2-Methylphenol	4.8	U	19.0	11.2		ug/L		59	31 - 110
2-Nitroaniline	19	U	19.0	19	U	ug/L		83	42 - 110
2-Nitrophenol	4.8	U	19.0	14.4		ug/L		76	47 - 110
3,3'-Dichlorobenzidine	0.95	U	38.1	13.6		ug/L		36	10 - 110
3-Nitroaniline	19	U	19.0	19	U	ug/L		74	31 - 110
4,6-Dinitro-2-methylphenol	19	U	38.1	33.8		ug/L		89	10 - 110
4-Bromophenyl phenyl ether	4.8	U	19.0	14.6		ug/L		77	51 - 110
4-Chloro-3-methylphenol	4.8	U	19.0	14.1		ug/L		74	42 - 110
4-Chloroaniline	9.5	U	19.0	9.5	U	ug/L		31	20 - 110
4-Chlorophenyl phenyl ether	4.8	U	19.0	14.5		ug/L		76	51 - 110
4-Nitroaniline	19	U	19.0	19	U	ug/L		85	26 - 110
4-Nitrophenol	19	U	38.1	19	U	ug/L		36	10 - 110
Acenaphthene	4.8	U	19.0	14.4		ug/L		71	49 - 110
Acenaphthylene	4.8	U	19.0	16.3		ug/L		73	49 - 110
Acetophenone	4.8	U	19.0	14.3		ug/L		75	45 - 110
Anthracene	4.8	U	19.0	14.7		ug/L		76	50 - 110
Atrazine	2.9	U	38.1	30.3		ug/L		80	55 - 110
Benzaldehyde	4.8	U	38.1	42.4		ug/L		111	24 - 119
Benzo[a]anthracene	0.95	U	19.0	13.9		ug/L		73	34 - 110
Benzo[a]pyrene	0.95	U	19.0	13.0		ug/L		68	17 - 110
Benzo[b]fluoranthene	0.95	U	19.0	13.2		ug/L		69	21 - 110
Benzo[g,h,i]perylene	0.95	U	19.0	13.6		ug/L		71	18 - 110
Benzo[k]fluoranthene	0.95	U	19.0	12.5		ug/L		66	24 - 110
Bis(2-chloroethoxy)methane	4.8	U	19.0	13.5		ug/L		71	45 - 110
Bis(2-chloroethyl)ether	0.95	U	19.0	13.2		ug/L		68	30 - 110
Bis(2-ethylhexyl) phthalate	4.8	U	19.0	12.7		ug/L		67	10 - 110
Butyl benzyl phthalate	4.8	U	19.0	14.8		ug/L		78	48 - 110
Caprolactam	9.5	U	38.1	9.5	U	ug/L		13	10 - 126
Carbazole	9.5	U	19.0	16.7		ug/L		85	50 - 110
Chrysene	0.95	U	19.0	13.8		ug/L		72	36 - 110
Dibenz(a,h)anthracene	1.9	U	19.0	13.2		ug/L		69	14 - 110
Dibenzofuran	3.8	U	19.0	14.6		ug/L		74	51 - 110
Diethyl phthalate	4.8	U	19.0	15.8		ug/L		83	53 - 110
Dimethyl phthalate	4.8	U	19.0	15.8		ug/L		83	54 - 110
Di-n-butyl phthalate	4.8	U	19.0	13.9		ug/L		73	50 - 110
Di-n-octyl phthalate	4.8	U	19.0	12.4		ug/L		65	10 - 110
Fluoranthene	0.95	U	19.0	14.1		ug/L		73	54 - 110
Fluorene	4.8	U	19.0	14.8		ug/L		78	51 - 110
Hexachlorobenzene	0.19	U	19.0	14.5		ug/L		76	49 - 110
Hexachlorobutadiene	0.95	U	19.0	11.5		ug/L		61	36 - 110
Hexachlorocyclopentadiene	4.8	U	19.0	9.63		ug/L		51	4 - 110
Hexachloroethane	4.8	U	19.0	10.4		ug/L		54	40 - 110

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-42958-4 MS — **Client Sample ID: GW-18224-100914-SR-004**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 152476 — **Prep Batch: 151262**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Indeno[1,2,3-cd]pyrene	1.9	U	19.0	13.5		ug/L		71	16 - 110
Isophorone	4.8	U	19.0	14.6		ug/L		77	45 - 110
Naphthalene	4.8	U	19.0	12.2		ug/L		64	35 - 110
Nitrobenzene	2.9	U	19.0	13.6		ug/L		71	43 - 110
N-Nitrosodi-n-propylamine	4.8	U	19.0	14.8		ug/L		78	42 - 110
N-Nitrosodiphenylamine	4.8	U	38.1	28.7		ug/L		75	41 - 110
Pentachlorophenol	4.8	U	38.1	29.5		ug/L		77	24 - 110
Phenol	4.8	U	19.0	5.48		ug/L		29	10 - 125
Phenanthrene	1.9	U	19.0	14.4		ug/L		76	52 - 110
Pyrene	4.8	U	19.0	14.8		ug/L		77	50 - 110
3 & 4 Methylphenol	4.8	U	19.0	10.3		ug/L		54	26 - 110

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*69*		*29 - 110*
2-Fluorophenol (Surr)	*45*		*15 - 110*
2,4,6-Tribromophenol (Surr)	*98*		*21 - 128*
Nitrobenzene-d5 (Surr)	*76*		*31 - 110*
Phenol-d5 (Surr)	*28*		*10 - 110*
Terphenyl-d14 (Surr)	*74*		*31 - 115*

Lab Sample ID: 240-42958-4 MSD — **Client Sample ID: GW-18224-100914-SR-004**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 152476 — **Prep Batch: 151262**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	4.8	U	19.0	13.0		ug/L		68	46 - 110	0	36
2,2'-oxybis[1-chloropropane]	4.8	U	19.0	12.6		ug/L		66	26 - 110	8	63
2,4,5-Trichlorophenol	4.8	U	19.0	14.9		ug/L		78	53 - 110	1	30
2,4,6-Trichlorophenol	3.8	U	19.0	15.5		ug/L		81	50 - 110	3	30
2,4-Dichlorophenol	9.5	U	19.0	14.9		ug/L		77	48 - 110	5	35
2,4-Dimethylphenol	4.8	U	19.0	14.7		ug/L		77	27 - 110	5	62
2,4-Dinitrophenol	19	U	38.1	35.7		ug/L		94	10 - 110	6	99
2,4-Dinitrotoluene	4.8	U	19.0	18.5		ug/L		97	56 - 110	3	30
2,6-Dinitrotoluene	4.8	U	19.0	17.0		ug/L		89	55 - 110	5	30
2-Chloronaphthalene	5.9		19.0	21.9		ug/L		84	46 - 110	0	34
2-Chlorophenol	4.8	U	19.0	14.2		ug/L		71	35 - 110	4	57
2-Methylnaphthalene	4.8	U	19.0	13.4		ug/L		70	50 - 110	7	37
2-Methylphenol	4.8	U	19.0	11.6		ug/L		61	31 - 110	3	61
2-Nitroaniline	19	U	19.0	19	U	ug/L		87	42 - 110	5	30
2-Nitrophenol	4.8	U	19.0	15.8		ug/L		83	47 - 110	9	44
3,3'-Dichlorobenzidine	0.95	U	38.1	14.2		ug/L		37	10 - 110	4	99
3-Nitroaniline	19	U	19.0	19	U	ug/L		72	31 - 110	3	47
4,6-Dinitro-2-methylphenol	19	U	38.1	35.2		ug/L		93	10 - 110	4	92
4-Bromophenyl phenyl ether	4.8	U	19.0	14.4		ug/L		76	51 - 110	1	30
4-Chloro-3-methylphenol	4.8	U	19.0	15.5		ug/L		81	42 - 110	9	30
4-Chloroaniline	9.5	U	19.0	9.5	U F1 F2	ug/L		16	20 - 110	65	50
4-Chlorophenyl phenyl ether	4.8	U	19.0	15.3		ug/L		80	51 - 110	5	30
4-Nitroaniline	19	U	19.0	19	U	ug/L		84	26 - 110	1	50

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-42958-4 MSD | **Client Sample ID: GW-18224-100914-SR-004**
Matrix: Water | **Prep Type: Total/NA**
Analysis Batch: 152476 | **Prep Batch: 151262**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Nitrophenol	19	U	38.1	19	U	ug/L		36	10 - 110	0	74
Acenaphthene	4.8	U	19.0	15.0		ug/L		74	49 - 110	4	30
Acenaphthylene	4.8	U	19.0	16.9		ug/L		76	49 - 110	3	37
Acetophenone	4.8	U	19.0	15.4		ug/L		81	45 - 110	7	42
Anthracene	4.8	U	19.0	15.0		ug/L		78	50 - 110	2	30
Atrazine	2.9	U	38.1	30.8		ug/L		81	55 - 110	1	30
Benzaldehyde	4.8	U	38.1	43.8		ug/L		115	24 - 119	3	74
Benzo[a]anthracene	0.95	U	19.0	13.5		ug/L		71	34 - 110	3	52
Benzo[a]pyrene	0.95	U	19.0	13.1		ug/L		69	17 - 110	1	68
Benzo[b]fluoranthene	0.95	U	19.0	13.1		ug/L		69	21 - 110	1	64
Benzo[g,h,i]perylene	0.95	U	19.0	13.6		ug/L		71	18 - 110	0	87
Benzo[k]fluoranthene	0.95	U	19.0	12.7		ug/L		66	24 - 110	1	75
Bis(2-chloroethoxy)methane	4.8	U	19.0	14.0		ug/L		74	45 - 110	4	39
Bis(2-chloroethyl)ether	0.95	U	19.0	14.0		ug/L		72	30 - 110	6	56
Bis(2-ethylhexyl) phthalate	4.8	U	19.0	11.9		ug/L		63	10 - 110	6	85
Butyl benzyl phthalate	4.8	U	19.0	14.7		ug/L		77	48 - 110	1	30
Caprolactam	9.5	U	38.1	9.5	U	ug/L		11	10 - 126	10	59
Carbazole	9.5	U	19.0	16.2		ug/L		83	50 - 110	3	30
Chrysene	0.95	U	19.0	13.2		ug/L		70	36 - 110	4	49
Dibenz(a,h)anthracene	1.9	U	19.0	12.8		ug/L		67	14 - 110	2	92
Dibenzofuran	3.8	U	19.0	14.9		ug/L		76	51 - 110	2	30
Diethyl phthalate	4.8	U	19.0	16.1		ug/L		85	53 - 110	2	30
Dimethyl phthalate	4.8	U	19.0	16.1		ug/L		85	54 - 110	2	30
Di-n-butyl phthalate	4.8	U	19.0	13.8		ug/L		73	50 - 110	0	30
Di-n-octyl phthalate	4.8	U	19.0	11.9		ug/L		62	10 - 110	4	95
Fluoranthene	0.95	U	19.0	14.2		ug/L		73	54 - 110	1	30
Fluorene	4.8	U	19.0	15.5		ug/L		81	51 - 110	5	30
Hexachlorobenzene	0.19	U	19.0	14.2		ug/L		75	49 - 110	2	30
Hexachlorobutadiene	0.95	U	19.0	12.0		ug/L		63	36 - 110	4	60
Hexachlorocyclopentadiene	4.8	U	19.0	9.50		ug/L		50	4 - 110	1	68
Hexachloroethane	4.8	U	19.0	11.2		ug/L		59	40 - 110	8	52
Indeno[1,2,3-cd]pyrene	1.9	U	19.0	13.1		ug/L		69	16 - 110	3	89
Isophorone	4.8	U	19.0	14.9		ug/L		78	45 - 110	2	37
Naphthalene	4.8	U	19.0	12.6		ug/L		66	35 - 110	3	58
Nitrobenzene	2.9	U	19.0	14.3		ug/L		75	43 - 110	5	42
N-Nitrosodi-n-propylamine	4.8	U	19.0	15.2		ug/L		80	42 - 110	2	39
N-Nitrosodiphenylamine	4.8	U	38.1	28.8		ug/L		76	41 - 110	0	30
Pentachlorophenol	4.8	U	38.1	29.1		ug/L		76	24 - 110	1	64
Phenol	4.8	U	19.0	5.40		ug/L		28	10 - 125	2	62
Phenanthrene	1.9	U	19.0	14.6		ug/L		77	52 - 110	2	30
Pyrene	4.8	U	19.0	15.1		ug/L		78	50 - 110	2	30
3 & 4 Methylphenol	4.8	U	19.0	10.6		ug/L		56	26 - 110	3	57

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*70*		*29 - 110*
2-Fluorophenol (Surr)	*47*		*15 - 110*
2,4,6-Tribromophenol (Surr)	*102*		*21 - 128*
Nitrobenzene-d5 (Surr)	*98*		*31 - 110*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-42958-4 MSD — **Client Sample ID: GW-18224-100914-SR-004**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 152476 — **Prep Batch: 151262**

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Phenol-d5 (Surr)	*28*		*10 - 110*
Terphenyl-d14 (Surr)	*70*		*31 - 115*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-151320/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 151465 — **Prep Batch: 151320**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chromium	5.0	U	5.0		ug/L		10/13/14 10:03	10/14/14 11:09	1
Lead	3.0	U	3.0		ug/L		10/13/14 10:03	10/14/14 11:09	1

Lab Sample ID: LCS 240-151320/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 151465 — **Prep Batch: 151320**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chromium			200	209		ug/L		104	80 - 120		
Lead			500	518		ug/L		104	80 - 120		

Lab Sample ID: 240-42958-4 MS — **Client Sample ID: GW-18224-100914-SR-004**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 151465 — **Prep Batch: 151320**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chromium	5.0	U	200	205		ug/L		102	75 - 125		
Lead	3.0	U	500	501		ug/L		100	75 - 125		

Lab Sample ID: 240-42958-4 MSD — **Client Sample ID: GW-18224-100914-SR-004**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 151465 — **Prep Batch: 151320**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	5.0	U	200	205		ug/L		102	75 - 125	0	20
Lead	3.0	U	500	500		ug/L		100	75 - 125	0	20

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(63-129)	(66-120)	(74-120)	(75-121)
240-42958-1	GW-18224-100914-SR-001	97	93	101	103
240-42958-2	GW-18224-100914-SR-002	98	95	99	99
240-42958-3	GW-18224-100914-SR-003	96	98	100	99
240-42958-4	GW-18224-100914-SR-004	95	98	98	98
240-42958-4 MS	GW-18224-100914-SR-004	96	101	100	98
240-42958-4 MSD	GW-18224-100914-SR-004	96	98	101	97
240-42958-5	GW-18224-100914-SR-005	97	100	100	99
240-42958-6	GW-18224-100914-SR-006	99	94	97	100
240-42958-7	GW-18224-100914-SR-007	93	97	99	96
240-42958-8	TB-18224-100914	101	85	80	90
LCS 240-151923/4	Lab Control Sample	96	96	83	94
LCS 240-152000/4	Lab Control Sample	97	97	102	100
MB 240-151923/5	Method Blank	96	88	80	91
MB 240-152000/6	Method Blank	95	92	98	98

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	TBP	NBZ	PHL	TPH
Lab Sample ID	Client Sample ID	(29-110)	(15-110)	(21-128)	(31-110)	(10-110)	(31-115)
240-42958-1	GW-18224-100914-SR-001	71	44	92	71	26	86
240-42958-2	GW-18224-100914-SR-002	77	47	103	77	26	86
240-42958-3	GW-18224-100914-SR-003	72	45	95	73	25	82
240-42958-4	GW-18224-100914-SR-004	64	39	92	66	25	75
240-42958-4 MS	GW-18224-100914-SR-004	69	45	98	76	28	74
240-42958-4 MSD	GW-18224-100914-SR-004	70	47	102	98	28	70
240-42958-5	GW-18224-100914-SR-005	61	44	81	65	27	66
240-42958-6	GW-18224-100914-SR-006	22 X	23	35	30 X	14	19 X
240-42958-7	GW-18224-100914-SR-007	72	45	97	80	26	85
LCS 240-151262/24-A	Lab Control Sample	72	44	99	78	28	81
MB 240-151262/23-A	Method Blank	69	50	91	74	30	88

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPH = Terphenyl-d14 (Surr)

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Client Sample ID: GW-18224-100914-SR-001 — Lab Sample ID: 240-42958-1

Date Collected: 10/09/14 10:25 — **Matrix: Water**
Date Received: 10/10/14 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	152000	10/16/14 22:30	RJQ	TAL CAN
Total/NA	Prep	3510C			151262	10/13/14 07:19	JDR	TAL CAN
Total/NA	Analysis	8270C		1	152476	10/21/14 10:11	MRU	TAL CAN
Total Recoverable	Prep	3005A			151320	10/13/14 10:03	WAL	TAL CAN
Total Recoverable	Analysis	6010B		1	151465	10/14/14 12:18	KLC	TAL CAN

Client Sample ID: GW-18224-100914-SR-002 — Lab Sample ID: 240-42958-2

Date Collected: 10/09/14 10:25 — **Matrix: Water**
Date Received: 10/10/14 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	152000	10/16/14 22:53	RJQ	TAL CAN
Total/NA	Prep	3510C			151262	10/13/14 07:19	JDR	TAL CAN
Total/NA	Analysis	8270C		1	152476	10/21/14 10:59	MRU	TAL CAN
Total Recoverable	Prep	3005A			151320	10/13/14 10:03	WAL	TAL CAN
Total Recoverable	Analysis	6010B		1	151465	10/14/14 12:22	KLC	TAL CAN

Client Sample ID: GW-18224-100914-SR-003 — Lab Sample ID: 240-42958-3

Date Collected: 10/09/14 09:55 — **Matrix: Water**
Date Received: 10/10/14 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		13.33	152000	10/16/14 23:16	RJQ	TAL CAN
Total/NA	Prep	3510C			151262	10/13/14 07:19	JDR	TAL CAN
Total/NA	Analysis	8270C		1	152476	10/21/14 10:35	MRU	TAL CAN
Total Recoverable	Prep	3005A			151320	10/13/14 10:03	WAL	TAL CAN
Total Recoverable	Analysis	6010B		1	151465	10/14/14 12:27	KLC	TAL CAN

Client Sample ID: GW-18224-100914-SR-004 — Lab Sample ID: 240-42958-4

Date Collected: 10/09/14 11:35 — **Matrix: Water**
Date Received: 10/10/14 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		7.14	152000	10/16/14 23:39	RJQ	TAL CAN
Total/NA	Prep	3510C			151262	10/13/14 07:19	JDR	TAL CAN
Total/NA	Analysis	8270C		1	152476	10/21/14 12:12	MRU	TAL CAN
Total Recoverable	Prep	3005A			151320	10/13/14 10:03	WAL	TAL CAN
Total Recoverable	Analysis	6010B		1	151465	10/14/14 11:25	KLC	TAL CAN

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Client Sample ID: GW-18224-100914-SR-005 — Lab Sample ID: 240-42958-5

Date Collected: 10/09/14 12:10 — **Matrix: Water**
Date Received: 10/10/14 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	152000	10/17/14 00:01	RJQ	TAL CAN
Total/NA	Prep	3510C			151262	10/13/14 07:19	JDR	TAL CAN
Total/NA	Analysis	8270C		1	152476	10/21/14 11:23	MRU	TAL CAN
Total Recoverable	Prep	3005A			151320	10/13/14 10:03	WAL	TAL CAN
Total Recoverable	Analysis	6010B		1	151465	10/14/14 12:31	KLC	TAL CAN

Client Sample ID: GW-18224-100914-SR-006 — Lab Sample ID: 240-42958-6

Date Collected: 10/09/14 13:15 — **Matrix: Water**
Date Received: 10/10/14 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	152000	10/17/14 00:24	RJQ	TAL CAN
Total/NA	Prep	3510C			151262	10/13/14 07:19	JDR	TAL CAN
Total/NA	Analysis	8270C		1	152476	10/21/14 11:48	MRU	TAL CAN
Total Recoverable	Prep	3005A			151320	10/13/14 10:03	WAL	TAL CAN
Total Recoverable	Analysis	6010B		1	151465	10/14/14 12:35	KLC	TAL CAN

Client Sample ID: GW-18224-100914-SR-007 — Lab Sample ID: 240-42958-7

Date Collected: 10/09/14 14:45 — **Matrix: Water**
Date Received: 10/10/14 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		22.22	152000	10/17/14 00:47	RJQ	TAL CAN
Total/NA	Prep	3510C			151262	10/13/14 07:19	JDR	TAL CAN
Total/NA	Analysis	8270C		5	152476	10/21/14 13:24	MRU	TAL CAN
Total Recoverable	Prep	3005A			151320	10/13/14 10:03	WAL	TAL CAN
Total Recoverable	Analysis	6010B		1	151465	10/14/14 12:39	KLC	TAL CAN

Client Sample ID: TB-18224-100914 — Lab Sample ID: 240-42958-8

Date Collected: 10/09/14 00:00 — **Matrix: Water**
Date Received: 10/10/14 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	151923	10/16/14 14:07	LEE	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224-003, Arkema Halowax Area

TestAmerica Job ID: 240-42958-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-15
Connecticut	State Program	1	PH-0590	12-31-14
Florida	NELAP	4	E87225	06-30-15
Georgia	State Program	4	N/A	06-30-15
Illinois	NELAP	5	200004	07-31-15
Kansas	NELAP	7	E-10336	01-31-15
Kentucky (UST)	State Program	4	58	06-30-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-14
Nevada	State Program	9	OH-000482008A	07-31-15
New Jersey	NELAP	2	OH001	06-30-15
New York	NELAP	2	10975	03-31-15
Ohio VAP	State Program	5	CL0024	10-31-15
Pennsylvania	NELAP	3	68-00340	08-31-15
Texas	NELAP	6		08-31-15
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-15
Washington	State Program	10	C971	01-12-15
West Virginia DEP	State Program	3	210	12-31-14
Wisconsin	State Program	5	999518190	08-31-15

* Certification renewal pending - certification considered valid.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS

240-42958 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

CHAIN OF CUSTODY RECORD

CONESTOGA-ROVERS & ASSOCIATES
14496 Sheldon Road, Suite #200, Plymouth, Michigan 48170
Phone: (734) 453-5123 Fax: (734) 453-5201 2.6, 3.2, 1.6

COC NO.: PL- 13218
PAGE 1 OF 1
(See Reverse Side for Instructions)

Project No/ Phase/Task Code: 018224-003	Laboratory Name: Test America	Lab Location: N. Canton, OH	SSOW ID: 18224-003
Project Name: Arkema Malonex Area	Lab Contact: D. Heckler	Lab Quote No:	Cooler No:
Project Location: Wyandotte, MI			Carrier: Fedex
Chemistry Contact: R. Fleisher			Airbill No:
Sampler(s): D. Canfield / S. Rapai			Date Shipped: 1/9/14

Item	Sample Identification (Containers for each sample may be combined on one line)	Date (mm/dd/yy)	Time (hh:mm)	Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO_3)	Sulfuric Acid (H_2SO_4)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5-g, 1x25-g	Other:	Total Containers/Sample	TCL VOCs	TCL SVOCs	Pb, Cr	MS/MSD Request	Comments/ Special Instructions:
1	GW-18224-100914-SR-001	10/02/14	10:25	GW	G	2	3	1						6	X	X	X		
2	-002		10:25			2	3	1						6					
3	-003		9:55			2	3	1						6					
	-004		11:35			4	9	2						15					MS/MSD
	-005		12:10			2	3	1						6					
	-006		13:15			2	3	1						6					
	-007		14:45			2	3	1						6					
8	TB-18224-100914						1							1					
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Sample Type / Container Quantity & Preservation / Analysis Requested (See Back of COC for Definitions)

TAT Required in business days (use separate COCs for different TATs):
☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 1 Week ☒ 2 Week ☐ Other:

Total Number of Containers: 52
All Samples in Cooler must be on COC

Notes/ Special Requirements: 3 coolers total

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
1. [signature]	CRA	10/2/14 ~~1:14~~	15:45	1. Terry Burns	TA Can	10/10/14	0800
2.				2.			
3.				3.			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT – ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution: WHITE – Fully Executed Copy (CRA) YELLOW – Receiving Laboratory Copy PINK – Shipper GOLDENROD – Sampling Crew

CRA Form: COC-10A (20110804)

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 42958

Client CRA Site Name Arkema

Cooler unpacked by: Terry Bruno

Cooler Received on 10/10/14 Opened on 10/10/14

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Foam Box Client Cooler Box Other Multiple

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A	(CF +2 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	
IR GUN# 4	(CF -2 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	☒ See Multiple Cooler Form
IR GUN# 5	(CF 0 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	
IR GUN# 8	(CF 0 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity_____ Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC412469
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative
Canton Facility

Login # : 42958

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
Client	8	2.6	2.6	ICE
MICH	⊥	3.2	3.2	⊥
Client	⊥	1.6	1.6	⊥

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
GW-18224-100914-SR-001	240-42958-D-1	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-100914-SR-002	240-42958-D-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-100914-SR-003	240-42958-D-3	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-100914-SR-004	240-42958-J-4	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-100914-SR-004	240-42958-K-4	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-100914-SR-005	240-42958-D-5	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-100914-SR-006	240-42958-D-6	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-100914-SR-007	240-42958-D-7	Plastic 500ml - with Nitric Acid	<2	_____	_____