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McKesson Bear Street

Data Usability Summary Report (DUSR)

SYRACUSE, NEW YORK

Volatile, Semivolatile and Methanol Analyses

SDG #s: 460-74353 and 460-74446

Analyses Performed By:
TestAmerica Laboratories
Edison, New Jersey

Report #: 21689R
Review Level: Tier III
Project: B0026003.2014.00010

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Groups (SDGs) #s 460-74353 and 460-74446 for samples collected in association with the McKesson Bear Street site in Syracuse, New York. The review was conducted as a Tier III evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Field documentation was not included in this review. Included with this assessment are the validation annotated sample result sheets, and chain of custody. Analyses were performed on the following samples:

SDG	Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
						VOC	SVOC	PCB	METH	MISC
460-74353	TB41414	460-74353-1	Water	04/14/2014		X				
	MW-23S	460-74353-2	Water	04/14/2014		X	X			X
	MW-23I	460-74353-3	Water	04/14/2014		X	X			X
460-74446	TB041514	460-74446-1	Water	04/15/2014		X				
	MW-3S	460-74446-2	Water	04/15/2014		X	X			X
	MW-17R	460-74446-3	Water	04/15/2014		X	X			X
	MW-29	460-74446-4	Water	04/15/2014		X	X			X
	MW-30	460-74446-5	Water	04/15/2014		X	X			X
	MW-18	460-74446-6	Water	04/15/2014		X	X			X

Notes:
1. MISC - Miscellaneous analysis includes methanol.
2. The matrix spike /matrix spike duplicate (MS/MSD) analysis was performed on sample location MW-17R.

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Methods 8260C, 8270D and 8015D as referenced in NYSDEC-ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999 and USEPA Region II SOPs associated with USEPA SW-846 Validating Volatile Organic Compounds by GC/MS SW-846 Method 8260B (SOP HW-24 Revision 2, October 2006) and Validating Semivolatile Organic Compounds by GC/MS SW-846 Method 8270C (SOP HW-22 Revision 3, October 2006).

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected as unusable. The compound may or may not be present in the sample.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260C	Water	14 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from collection to analysis	Cool to <6°C

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e. laboratory method blanks, trip blanks, and equipment rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure sample storage contamination. Rinse blanks also measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99, and a RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within the control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC analysis exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

Sample locations associated with internal standards exhibiting responses outside of the control limits are presented in the following table.

Sample Locations	Internal Standard	Response
MW-18	tert-Butyl Alcohol	>UL
	Fluorobenzene	AC
	Chlorobenzene-d5	
	1,4-Dichlorobenzene-d4	

AC Acceptable

The criteria used to evaluate the internal standard responses are presented in the following table. In the case of an internal standard deviation, the compounds quantitated under the deviant internal standard are qualified as documented in the table below.

Control limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No action
	Detect	J
< the lower control limit (LL) but > 25%	Non-detect	UJ
	Detect	J
< 25%	Non-detect	R
	Detect	J

Sample location MW-18 was reanalyzed with similar internal standard results. The internal standard, tert-butyl alcohol is associated with acetone. Since acetone is non-detect, there is no effect on the data.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The spiked compounds used in the MS/MSD analysis must exhibit recoveries within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS and MSD results must be within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSDs performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD spiking concentration by a factor of four or greater. Sample results associated with MS/MSD exceedances where the parent samples are not site-specific are not qualified.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The spiked compounds used in the LCS analysis must exhibit recoveries within the laboratory-established acceptance limits.

All compounds associated with the LCS analyses exhibited recoveries within the control limits.

9. Field Duplicate Analysis

The field duplicate analysis is used to assess the precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to five times the reporting limit (RL), a control limit for the difference between the results of two times the RL is applied for water matrices.

A field duplicate was not collected for a sample location associated with these SDGs.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260C	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment/Field blanks					X
C. Trip blanks		X		X	
Laboratory Control Sample (LCS) Accuracy (%R)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R		X		X	
MS/MSD Precision RPD		X		X	
Field Duplicate RPD					X
Surrogate Spike %R		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X	X		
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculations acceptable		X		X	
E. Reporting limits adjusted for sample dilutions		X		X	

%R Percent recovery
RPD Relative percent difference
%RSD Relative standard deviation
%D Percent difference

SEMIVOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270D	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cool to <6°C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	

All samples were extracted and analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e. laboratory method blanks and equipment rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Target compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution are acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits, and that all SVOC surrogate recoveries be greater than ten percent.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC analysis exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within the control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit recoveries within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS and MSD results must be within the laboratory-established or analytical method-referenced acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater. Sample results associated with MS/MSD exceedances where the parent samples are not site-specific are not qualified.

The MS/MSD exhibited acceptable recoveries and RPD between the MS/MSD recoveries.

8. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit recoveries and relative percent differences (RPDs) between the LCS and LCSD results within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analyses exhibited recoveries and RPDs within the control limits.

9. Field Duplicate Analysis

The field duplicate analysis is used to assess the precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to five times the reporting limit (RL), a control limit for the difference between the results of two times the RL is applied for water matrices.

A field duplicate was not collected for a sample location associated with these SDGs.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270D	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding Times		X		X	
Reporting Limits (units)		X		X	
Blanks					
A. Method Blanks		X		X	
B. Equipment/Field Blanks					X
Laboratory Control Sample (LCS) Accuracy (%R)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate (MSD) %R		X		X	
MS/MSD RPD		X		X	
Field Duplicate RPD					X
Surrogate Spike %R		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System Performance and Column Resolution		X		X	
Initial Calibration %RSDs		X		X	
Continuing Calibration RRFs		X		X	
Continuing Calibration %Ds		X		X	
Instrument Tune and Performance Check		X		X	
Ion Abundance Criteria for Each Instrument Used		X		X	
Internal Standards		X		X	
Compound Identification and Quantitation					
A. Reconstructed Ion Chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of Sample Compounds Within the Established RT Windows		X		X	
D. Transcription/calculations acceptable		X		X	
E. Reporting Limits Adjusted for Sample Dilutions		X		X	

%R Percent Recovery
RPD Relative Percent Difference
%RSD Relative Standard Deviation
%D Percent Difference

METHANOL ANALYSIS

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Methanol SW-846 8015D	Soil	14 days from collection to analysis	Cool to <6°C
	Water		

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e. laboratory method blanks and equipment rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected analyte in an associated blank is calculated for QA blanks containing concentrations greater than the reporting limit (RL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Methanol was not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. System Performance

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

A maximum RSD of 20% or a correlation coefficient of greater than 0.99 is allowed.

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (15%).

All calibration criteria were within the control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. The analysis requires surrogate compounds exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within the control limits.

6. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The spiked analytes used in the MS/MSD analysis must exhibit recoveries within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS and MSD results must be within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSDs performed on sample locations where the analyte concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater. Sample results associated with MS/MSD exceedances where the parent samples are not site-specific are not qualified.

A MS/MSD analysis was not requested for this parameter.

7. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The spiked compounds used in the LCS analysis must exhibit recoveries within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

8. Field Duplicate Analysis

The field duplicate analysis is used to assess the precision of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to five times the reporting limit (RL), a control limit for the difference between the results of two times the RL is applied for water matrices.

A field duplicate was not collected for a sample location associated with these SDGs.

9. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows.

All identified compounds met the specified criteria.

10. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR METHANOL

Methanol: SW-846 8015D	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding Times		X		X	
Reporting Limits (Units)		X		X	
Blanks					
A. Method Blanks		X		X	
B. Equipment Blanks					X
C. Trip Blanks					X
Laboratory Control Sample (LCS) Accuracy (%R)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R					X
Matrix Spike Duplicate (MSD) %R					X
MS/MSD RPD					X
Field Duplicate RPD					X
Surrogate Spike %R		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
Initial Calibration %RSDs		X		X	
Continuing Calibration %Ds		X		X	
System Performance and Column Resolution		X		X	
Compound Identification and Quantitation					
A. Quantitation Reports		X		X	
B. RT of Sample Compounds Within Established RT Windows		X		X	
C. Pattern Identification					X
D. Transcription/calculations acceptable		X		X	
E. Reporting Limits adjusted for Sample Dilutions		X		X	

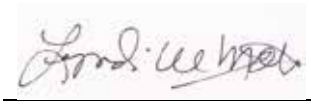
%R Percent Recovery
RPD Relative Percent Difference
%RSD Relative Standard Deviation
%D Percent Difference

SAMPLE COMPLIANCE REPORT

Sample Delivery Group (SDG)	Sampling Date	Protocol	Sample ID	Matrix	Compliancy[1]					Noncompliance
					VOC	SVOC	PCB	METH	MISC	
460-74353	04/14/2014	SW846	TB41414	Water	yes	--	--	--	--	
	04/14/2014		MW-23S	Water	yes	yes	--	yes	--	
	04/14/2014		MW-23I	Water	yes	yes	--	yes	--	
460-74446	04/15/2014		TB041514	Water	yes	--	--	--	--	
	04/15/2014		MW-3S	Water	yes	yes	--	yes	--	
	04/15/2014		MW-17R	Water	yes	yes	--	yes	--	
	04/15/2014		MW-29	Water	yes	yes	--	yes	--	
	04/15/2014		MW-30	Water	yes	yes	--	yes	--	
	04/15/2014		MW-18	Water	no	yes	--	yes	--	Internal standard %R

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

Validation Performed By: Lyndi Mott

Signature: 

Date: May 8, 2014

Peer Review: Dennis Capria

Date: May 16, 2014

CHAIN OF CUSTODY/LABORAOTRY QUALIFIER DEFINITIONS/ CORRECTED SAMPLE ANALYSIS DATA SHEETS

DATA REPORTING QUALIFIERS

Client: ARCADIS U.S. Inc Job Number: 460-74446-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Indicates the analyte was analyzed for but not detected.
	*	ISTD response or retention time outside acceptable limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	X	Surrogate is outside control limits
GC VOA		
	U	Indicates the analyte was analyzed for but not detected.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Kelley Roe/Nicole Monroe	Lab PM: Chang, Grace	Carrier Tracking No(s):	COC No: 460-45501-28639.1
Client Contact: Accounts Payable	Phone: 315-382-4934	E-Mail: grace.chang@testamericainc.com		Page: Page 1 of 5
Company: ARCADIS U.S. Inc				Job #: 74353
Address: 630 Plaza Drive, Suite 600	Due Date Requested:			
City: Highlands Ranch	TAT Requested (days): Standard			
State, Zip: CO, 80129				
Phone:	PO #: Purchase Order Requested			
Email: accountspayable.administration@arcadis-us.com	WO #:			
Project Name: McKesson Former Bear Street Facility	Project #: 46003506 ARCADIS # B0026003.2014			
Site: Bear Street, Syracuse, NY	SSOW#:			

Analysis Requested

460-74353 Chain of Custody

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D - 8270D-Special Compound List	8260C - (MOD) 8260-Special Compound List	8015D_DAI - Methanol	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	A	N		
TB041414	4/14/14	1125	G	Water		N		X		2	1
MW-23S	4/14/14	1335	G	Water		N	X	X	X	8	2
MW-23I	4/14/14	1520	G	Water		N	X	X	X	8	3
				Water							
				Water							
				Water							
				Water							
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				Water							
				Water							

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Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, (IV), Other (specify) Per Subcontractor Agreement

Special Instructions/QC Requirements:

Empty Kit Relinquished by: TestAmerica/Syracuse Date: 4/14/14 Time: 1000 Method of Shipment: Client Pickup

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Kelley Roe	4/14/14, 17:20	ARCADIS	Relinquished	4-14-14, 17:20	
Relinquished by: Relinquished	Date/Time: 4-14-14, 19:00	Company SyR	Received by: [illegible] VIA FEDEX	Date/Time: 4/15/14 9:40	Company TA EDSON
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☒ No Custody Seal No.: 736331 NO CE

Cooler Temperature(s) °C and Other Remarks: 2.5/2.6 ~~1.5/1.6 °C~~ SG CE

Client: ARCADIS U.S. Inc

Job Number: 460-74353-1

Client Sample ID: **TB041414**

Lab Sample ID: 460-74353-1
Client Matrix: WQ

Date Sampled: 04/14/2014 1125
Date Received: 04/15/2014 0940

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-219421	Instrument ID:	CVOAMS9
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	K26228.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/17/2014 1506			Final Weight/Volume:	5 mL
Prep Date:	04/17/2014 1506				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	2.7	10
Benzene	1.0	U	0.080	1.0
Ethylbenzene	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.18	1.0
Toluene	1.0	U	0.15	1.0
Trichloroethene	1.0	U	0.090	1.0
Xylenes, Total	3.0	U	0.13	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		70 - 130
Bromofluorobenzene	100		64 - 135
Dibromofluoromethane (Surr)	122		72 - 137
Toluene-d8 (Surr)	96		70 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74353-1

Client Sample ID: **MW-23S**

Lab Sample ID: 460-74353-2
Client Matrix: Water

Date Sampled: 04/14/2014 1335
Date Received: 04/15/2014 0940

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-219421	Instrument ID:	CVOAMS9
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	K26239.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/17/2014 2045			Final Weight/Volume:	5 mL
Prep Date:	04/17/2014 2045				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	2.7	10
Benzene	1.0	U	0.080	1.0
Ethylbenzene	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.18	1.0
Toluene	1.0	U	0.15	1.0
Trichloroethene	1.0	U	0.090	1.0
Xylenes, Total	3.0	U	0.13	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	117		70 - 130
Bromofluorobenzene	98		64 - 135
Dibromofluoromethane (Surr)	128		72 - 137
Toluene-d8 (Surr)	96		70 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74353-1

Client Sample ID: **MW-23I**

Lab Sample ID: 460-74353-3
Client Matrix: Water

Date Sampled: 04/14/2014 1520
Date Received: 04/15/2014 0940

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-219421	Instrument ID:	CVOAMS9
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	K26240.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/17/2014 2109			Final Weight/Volume:	5 mL
Prep Date:	04/17/2014 2109				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	2.7	10
Benzene	1.0	U	0.080	1.0
Ethylbenzene	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.18	1.0
Toluene	1.0	U	0.15	1.0
Trichloroethene	1.0	U	0.090	1.0
Xylenes, Total	3.0	U	0.13	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	117		70 - 130
Bromofluorobenzene	94		64 - 135
Dibromofluoromethane (Surr)	123		72 - 137
Toluene-d8 (Surr)	96		70 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74353-1

Client Sample ID: **MW-23S**

Lab Sample ID: 460-74353-2
Client Matrix: Water

Date Sampled: 04/14/2014 1335
Date Received: 04/15/2014 0940

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-222005	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-219211	Lab File ID:	M79097.D
Dilution:	1.0			Initial Weight/Volume:	250 mL
Analysis Date:	05/02/2014 0034			Final Weight/Volume:	2 mL
Prep Date:	04/16/2014 1259			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	10	U	0.19	10
n,n'-Dimethylaniline	1.0	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	64		50 - 120
Nitrobenzene-d5 (Surr)	75		60 - 114
Terphenyl-d14 (Surr)	88		72 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74353-1

Client Sample ID: **MW-23I**

Lab Sample ID: 460-74353-3
Client Matrix: Water

Date Sampled: 04/14/2014 1520
Date Received: 04/15/2014 0940

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-222005	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-219211	Lab File ID:	M79098.D
Dilution:	1.0			Initial Weight/Volume:	250 mL
Analysis Date:	05/02/2014 0056			Final Weight/Volume:	2 mL
Prep Date:	04/16/2014 1259			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	10	U	0.19	10
n,n'-Dimethylaniline	1.0	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	68		50 - 120
Nitrobenzene-d5 (Surr)	71		60 - 114
Terphenyl-d14 (Surr)	92		72 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74353-1

Client Sample ID: **MW-23S**

Lab Sample ID: 460-74353-2
Client Matrix: Water

Date Sampled: 04/14/2014 1335
Date Received: 04/15/2014 0940

8015D Nonhalogenated Organic Compounds - Direct Injection (GC)

Analysis Method:	8015D	Analysis Batch:	480-176358	Instrument ID:	HP5890-4
	N/A		N/A	Initial Weight/Volume:	1 mL
Dilution:	1.0			Final Weight/Volume:	
Analysis Date:	04/17/2014 1001			Injection Volume:	1 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methanol	500	U	410	500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Hexanone	87		62 - 129

Client: ARCADIS U.S. Inc

Job Number: 460-74353-1

Client Sample ID: **MW-23I**

Lab Sample ID: 460-74353-3
Client Matrix: Water

Date Sampled: 04/14/2014 1520
Date Received: 04/15/2014 0940

8015D Nonhalogenated Organic Compounds - Direct Injection (GC)

Analysis Method:	8015D	Analysis Batch:	480-176358	Instrument ID:	HP5890-4
	N/A		N/A	Initial Weight/Volume:	1 mL
Dilution:	1.0			Final Weight/Volume:	
Analysis Date:	04/17/2014 1029			Injection Volume:	1 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methanol	500	U	410	500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Hexanone	98		62 - 129

Chain of Custody Record

TestAmerica

Client Information	Sampler: Kelley Roe/Nicole Monroe	Lab PM: Chang, Grace	Carrier Tracking No(s):	COC No: 460-45501-28639.2
Client Contact: Accounts Payable	Phone: 315-382-4934	E-Mail: grace.chang@testamericainc.com		Page: Page 2 of 5
Company: ARCADIS U.S. Inc		Analysis Requested		Job #: 74446
Address: 630 Plaza Drive, Suite 600	Due Date Requested:			Preservation Codes:
City: Highlands Ranch	TAT Requested (days): Standard			
State, Zip: CO, 80129				
Phone:	PO #: Purchase Order Requested			
Email: accountspayable.administration@arcadis-us.com	WO #			
Project Name: McKesson Former Bear Street Facility	Project #: 46003506 ARCADIS PROJ# B00360003.2014.00010			
Site: Bear Street, Syracuse, NY	SSOW#:			

460-74446 Chain of Custody

hexane
one
sNaO2
2O4S
a2SO3
a2S2SO3
2SO4
P Dodecahydrate
cetone

J - DI Water
K - EDTA
L - EDA
V - MCAA
W - ph 4-5
Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D - 8270D-Special Compound List	8260C - (MOD) 8260-Special Compound List	8015D_DAI - Methanol	Total Number of containers	Special Instructions/Note
			Preservation Code:				N	A	N		
TB041514	4/14/14	1200	G	Water		N		X		2	
MW-35	4/15/14	1055	G	Water		N	X	X		5	
MW-17R	4/15/14	1055	G	Water		Y	X	X	X	18	MS/MSD only on VOC+SVOC
MW-29	4/15/14	1325	G	Water		N	X	X		5	
MW-30	4/15/14	1340	G	Water		N	X	X		5	
MW-18	4/15/14	1445	G	Water		N	X	X	X	8	
				Water							
				Water							
				Water							
				Water							
				Water							

SUB Work

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Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) per subcontract agreement

Special Instructions/QC Requirements:

Empty Kit Relinquished by: TestAmerica/Syracuse Date: 4/14/14 Time: 1000 Method of Shipment: Client Pickup

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Kelley Roe	4/15/14 16:35	ARCADIS	RENG/11/16	4-15-14 16:35	SyR
RENG/11/16	4-15-14, 19:00	SyR	Lon Lucas (Fedex)	4/16/14 9:25	TAEd

Custody Seals Intact: ☐ Yes ☐ No Custody Seal No.: 136747

Cooler Temperature(s) °C and Other Remarks: IR#5 0.5/0.6°C

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **TB041514**

Lab Sample ID: 460-74446-1
Client Matrix: Water

Date Sampled: 04/15/2014 1445
Date Received: 04/16/2014 0925

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-219421	Instrument ID:	CVOAMS9
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	K26226.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/17/2014 1418			Final Weight/Volume:	5 mL
Prep Date:	04/17/2014 1418				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	2.7	10
Benzene	1.0	U	0.080	1.0
Ethylbenzene	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.18	1.0
Toluene	1.0	U	0.15	1.0
Trichloroethene	1.0	U	0.090	1.0
Xylenes, Total	3.0	U	0.13	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		70 - 130
Bromofluorobenzene	100		64 - 135
Dibromofluoromethane (Surr)	119		72 - 137
Toluene-d8 (Surr)	96		70 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-3S**

Lab Sample ID: 460-74446-2
Client Matrix: Water

Date Sampled: 04/15/2014 1055
Date Received: 04/16/2014 0925

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-219421	Instrument ID:	CVOAMS9
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	K26235.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/17/2014 1910			Final Weight/Volume:	5 mL
Prep Date:	04/17/2014 1910				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	2.7	10
Benzene	1.0	U	0.080	1.0
Ethylbenzene	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.18	1.0
Toluene	1.0	U	0.15	1.0
Trichloroethene	1.0	U	0.090	1.0
Xylenes, Total	3.0	U	0.13	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	114		70 - 130
Bromofluorobenzene	95		64 - 135
Dibromofluoromethane (Surr)	124		72 - 137
Toluene-d8 (Surr)	93		70 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-17R**

Lab Sample ID: 460-74446-3
Client Matrix: Water

Date Sampled: 04/15/2014 1055
Date Received: 04/16/2014 0925

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-219421	Instrument ID:	CVOAMS9
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	K26221.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/17/2014 1217			Final Weight/Volume:	5 mL
Prep Date:	04/17/2014 1217				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	2.7	10
Benzene	1.0	U	0.080	1.0
Ethylbenzene	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.18	1.0
Toluene	1.0	U	0.15	1.0
Trichloroethene	1.0	U	0.090	1.0
Xylenes, Total	3.0	U	0.13	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		70 - 130
Bromofluorobenzene	95		64 - 135
Dibromofluoromethane (Surr)	120		72 - 137
Toluene-d8 (Surr)	96		70 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-29**

Lab Sample ID: 460-74446-4
Client Matrix: Water

Date Sampled: 04/15/2014 1325
Date Received: 04/16/2014 0925

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-219421	Instrument ID:	CVOAMS9
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	K26236.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/17/2014 1934			Final Weight/Volume:	5 mL
Prep Date:	04/17/2014 1934				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	2.7	10
Benzene	1.0	U	0.080	1.0
Ethylbenzene	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.18	1.0
Toluene	1.0	U	0.15	1.0
Trichloroethene	1.0	U	0.090	1.0
Xylenes, Total	3.0	U	0.13	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		70 - 130
Bromofluorobenzene	93		64 - 135
Dibromofluoromethane (Surr)	125		72 - 137
Toluene-d8 (Surr)	97		70 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-30**

Lab Sample ID: 460-74446-5
Client Matrix: Water

Date Sampled: 04/15/2014 1340
Date Received: 04/16/2014 0925

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-219421	Instrument ID:	CVOAMS9
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	K26237.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/17/2014 1958			Final Weight/Volume:	5 mL
Prep Date:	04/17/2014 1958				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	2.7	10
Benzene	0.37	J	0.080	1.0
Ethylbenzene	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.18	1.0
Toluene	1.0	U	0.15	1.0
Trichloroethene	1.0	U	0.090	1.0
Xylenes, Total	3.0	U	0.13	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	117		70 - 130
Bromofluorobenzene	99		64 - 135
Dibromofluoromethane (Surr)	129		72 - 137
Toluene-d8 (Surr)	96		70 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-18**

Lab Sample ID: 460-74446-6
Client Matrix: Water

Date Sampled: 04/15/2014 1445
Date Received: 04/16/2014 0925

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-219421	Instrument ID:	CVOAMS9
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	K26238.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	04/17/2014 2022			Final Weight/Volume:	5 mL
Prep Date:	04/17/2014 2022				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Acetone	10	U	2.7	10
Benzene	1.0	U	0.080	1.0
Ethylbenzene	1.0	U	0.10	1.0
Methylene Chloride	1.0	U	0.18	1.0
Toluene	1.0	U	0.15	1.0
Trichloroethene	1.0	U	0.090	1.0
Xylenes, Total	3.0	U	0.13	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	122		70 - 130
Bromofluorobenzene	91		64 - 135
Dibromofluoromethane (Surr)	125		72 - 137
Toluene-d8 (Surr)	93		70 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-3S**

Lab Sample ID: 460-74446-2
Client Matrix: Water

Date Sampled: 04/15/2014 1055
Date Received: 04/16/2014 0925

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-220911	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-219568	Lab File ID:	M78800.D
Dilution:	1.0			Initial Weight/Volume:	250 mL
Analysis Date:	04/25/2014 2326			Final Weight/Volume:	2 mL
Prep Date:	04/17/2014 2027			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	10	U	0.19	10
n,n'-Dimethylaniline	1.0	U	0.17	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	82		50 - 120
Nitrobenzene-d5 (Surr)	84		60 - 114
Terphenyl-d14 (Surr)	108		72 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-17R**

Lab Sample ID: 460-74446-3
Client Matrix: Water

Date Sampled: 04/15/2014 1055
Date Received: 04/16/2014 0925

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-219666	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-219568	Lab File ID:	M78440.D
Dilution:	1.0			Initial Weight/Volume:	240 mL
Analysis Date:	04/18/2014 1608			Final Weight/Volume:	2 mL
Prep Date:	04/17/2014 2027			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	10	U	0.20	10
n,n'-Dimethylaniline	1.0	U	0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	77		50 - 120
Nitrobenzene-d5 (Surr)	80		60 - 114
Terphenyl-d14 (Surr)	80		72 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-29**

Lab Sample ID: 460-74446-4
Client Matrix: Water

Date Sampled: 04/15/2014 1325
Date Received: 04/16/2014 0925

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-220911	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-219568	Lab File ID:	M78801.D
Dilution:	1.0			Initial Weight/Volume:	240 mL
Analysis Date:	04/25/2014 2347			Final Weight/Volume:	2 mL
Prep Date:	04/17/2014 2027			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	10	U	0.20	10
n,n'-Dimethylaniline	1.0	U	0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	80		50 - 120
Nitrobenzene-d5 (Surr)	82		60 - 114
Terphenyl-d14 (Surr)	91		72 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-30**

Lab Sample ID: 460-74446-5
Client Matrix: Water

Date Sampled: 04/15/2014 1340
Date Received: 04/16/2014 0925

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-220911	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-219568	Lab File ID:	M78802.D
Dilution:	1.0			Initial Weight/Volume:	240 mL
Analysis Date:	04/26/2014 0007			Final Weight/Volume:	2 mL
Prep Date:	04/17/2014 2027			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	10	U	0.20	10
n,n'-Dimethylaniline	0.43	J	0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	73		50 - 120
Nitrobenzene-d5 (Surr)	80		60 - 114
Terphenyl-d14 (Surr)	95		72 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-18**

Lab Sample ID: 460-74446-6
Client Matrix: Water

Date Sampled: 04/15/2014 1445
Date Received: 04/16/2014 0925

8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method:	8270D	Analysis Batch:	460-220911	Instrument ID:	CBNAMS6
Prep Method:	3510C	Prep Batch:	460-219568	Lab File ID:	M78803.D
Dilution:	1.0			Initial Weight/Volume:	240 mL
Analysis Date:	04/26/2014 0027			Final Weight/Volume:	2 mL
Prep Date:	04/17/2014 2027			Injection Volume:	5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	10	U	0.20	10
n,n'-Dimethylaniline	1.0	U	0.18	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	70		50 - 120
Nitrobenzene-d5 (Surr)	77		60 - 114
Terphenyl-d14 (Surr)	96		72 - 130

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-17R**

Lab Sample ID: 460-74446-3
Client Matrix: Water

Date Sampled: 04/15/2014 1055
Date Received: 04/16/2014 0925

8015D Nonhalogenated Organic Compounds - Direct Injection (GC)

Analysis Method:	8015D	Analysis Batch:	480-177397	Instrument ID:	HP5890-4
	N/A		N/A	Initial Weight/Volume:	1 mL
Dilution:	1.0			Final Weight/Volume:	
Analysis Date:	04/22/2014 1149			Injection Volume:	1 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methanol	2700		410	500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Hexanone	106		62 - 129

Client: ARCADIS U.S. Inc

Job Number: 460-74446-1

Client Sample ID: **MW-18**

Lab Sample ID: 460-74446-6
Client Matrix: Water

Date Sampled: 04/15/2014 1445
Date Received: 04/16/2014 0925

8015D Nonhalogenated Organic Compounds - Direct Injection (GC)

Analysis Method:	8015D	Analysis Batch:	480-177397	Instrument ID:	HP5890-4
	N/A		N/A	Initial Weight/Volume:	1 mL
Dilution:	1.0			Final Weight/Volume:	
Analysis Date:	04/22/2014 1202			Injection Volume:	1 uL
Prep Date:	N/A			Result Type:	PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methanol	500	U	410	500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Hexanone	102		62 - 129