

Transmitted via Federal Express

Mr. Thomas Reamon, P.E.

Albany, NY 12233-7014

Bureau of Hazardous Site Control New York State Department of

Environmental Conservation 625 Broadway, 11th Floor

Transmittal

Blasland Bouck & Lee, Inc. 6723 Towpath Road/Box 66 Syracuse, New York13214-0066 (315) 446-9120

Date: March 29, 2002

File: 0260.26003 #2

Re: McKesson Envirosystems

Bear Street Facility Syracuse, New York

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	drawings

letters

\boxtimes	other	

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If material received is not as listed, please notify us at once.

Quantity	Title
1	Validated Analytical Laboratory Reports

Remarks:

Please find enclosed a copy of the validated analytical laboratory reports listed below for groundwater samples collected at the McKesson, Bear Street facility. These reports are associated with the anaerobic bioremediation treatment activities conducted at the site during July 2001 through December 2001.

- Validated analytical laboratory reports for groundwater samples collected by Blasland, Bouck & Lee, Inc. (BBL) during the biannual process control monitoring event conducted during September 2001.
- Validated analytical laboratory report for the groundwater sample collected from monitoring well MW-3S during the November 2001 resampling event. As presented in the Biannual Process Control Monitoring Report, July 2001 through December 2001, monitoring well MW-3S was resampled for aniline on November 8, 2001 due to detection of 690 parts per billion of aniline in the groundwater sample collected from this well during the September 2001 sampling event. The Biannual Process Control Monitoring Report has been transmitted to you under separate cover.

If you have any questions or require additional information, please do not hesitate to call me at (315) 446-2570, ext. 210.

Sincerely,

BLASLAND, BOUCK & LEE, INC.

Senior Vice President

cc:

Mr. Reginald Parker, P.E., New York State Department of Environmental Conservation (w/o enclosure)

Ms. Henriette Hamel, R.S., New York State Department of Health (w/o enclosure)

Ms. Jean A. Mescher, McKesson Corporation (w/o enclosure)

Ms. Susan Anton-Switka, Bristol-Myers Squibb Company (w/o enclosure)

Mr. Christopher R. Young, P.G., de maximis, inc. (w/o enclosure)

MS/mbg Enclosure

DATA REVIEW FOR MCKESSON - BEAR STREET SITE

SDG# L74986

VOLATILE AND SEMIVOLATILE ANALYSES

Analyses performed by:

Galson Laboratories East Syracuse, New York

Review performed by:



Blasland, Bouck & Lee, Inc. Syracuse, New York

Summary

The following is an assessment of the data package for SDG # L74986 for sampling at the McKesson - Bear Street Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample 1D	Lab ID	Matrix	Sample Date	Analysis Metho		od	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			8260¹	8015 ^{2,3}	8270 ⁴	
MW-1	L7498 <u>6-1</u>	water	9/24/01	X	x	x	
MW-3S	L74986-2	water	9/24/01	x	x	x	
TRIP BLANK 1	L74986-3	water			x		
TRIP BLANK 2	L74986-4	water		×			
TW-01	L75034-1	water	9/25/01	x	x	x	
MW-9S	L750 <u>3</u> 4-2	water	9/25/01	x	x	×	
MW-31 ⁵	L75034-3	water	9/25/01	x	x	×	
MW-32	L75034-6	water	9/25/01	×	x	x	
DUP-1	L750 <u>3</u> 4-7	water	9/25/01	x	x	x	
MW-33	L75034-8	water	9/25/01	х	х	x	
TW-02R	L75034-9	water	9/25/01	X	X	x	
MW-18	L75106-1	water	9/27/01	х	x	x	
MW-19	L75106-2	water	9/27/01	x	x	x	
MW-23S	L75106-3	water	9/27/01	x	x	x	
MW-231	L75106-4	water	9/27/01	×	х	x	
MW-25S	L75106-5	water	9/27/01	x	x	x	
MW-34	L75106-6	water	9/26/01	x	x	х	
MW-35_	L75106-7	water	9/26/01	x	x	х	
MW-36	L75106-8	water	9/26/01	x	x	x	
MW-8S	L75106-9	water	9/26/01	x	<u>x</u>	x	
MW-27	L75106-10	water	9/26/01	х	x	х	
MW-28	L75106-11	water	9/26/01	x	x	x	
TRIP BLANK (CLR1)	L75106-12	water		х	х		
TRIP BLANK (CLR3)	L75106-13	water		x	х		

compounds include: methylene chloride, acetone, trichloroethene, benzene, toluene, ethylbenzene, and xylenes 1

compounds include: methanol

² 3 4 Subcontracted to Columbia Analytical Services, Inc. of Rochester, New York.

compounds include: aniline and N,N'-dimethylaniline

MS/MSD analyses performed on sample

	·			

VOLATILE ANALYSES METHOD 8260

Introduction

Analyses were performed according to USEPA method 8260 as referenced in the NYSDEC ASP.

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 National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- 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.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- 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.
- R The sample results are rejected.

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 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 test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding time for volatile analyses under the Quality Assurance Project Plan (QAPP) is 7 days from sample receipt.

All samples were analyzed within the specified holding time.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, or 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 contamination of samples during shipment. Field and rinse blanks measure contamination of samples during field operations.

Methylene chloride was detected in the method and trip blanks. Data for methylene chloride have been qualified as undetected in samples MW-1, MW-32, MW-33 and MW-3S based on the blank content. Since the levels of methylene chloride present in samples MW-28, MW-8S and TW-02R were greater than ten times that in the blanks, its presence is deemed site-related and no further action has been taken.

3. Mass Spectrometer Tuning

Mass spectrometer performance was 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 various percent relative standard deviation (%RSD) limits for select compounds and allows two outliers. A technical review of the data applies a RSD limit of 30% to all compounds with no exceptions.

The %RSD were less than 30% and the response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

All continuing calibration standards were within 25% difference (%D) of the initial calibration, with the following exceptions:

Instrument MSC 9/25/01 10:35

Acetone 28.6%

Instrument MSC 9/28/01 10:10

Acetone 32.7%

Since no acetone was detected in the associated samples and since the compound response was increasing, no data have been qualified based on the %D.

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.

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 experimental run.

All internal standard areas and retention times were within established limits.

7. Compound Identification

Target compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits. All matrix spike blank recoveries were also within control limits.

9. Field Duplicates

Results for duplicate samples are summarized as follows:

	Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
M	1W-32 / DUP-1	benzene	91	10	10.5%

The duplicate results are acceptable.

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 listed in the analytical method.



Volatile Organics Data Validation Checklist

	<u>YES</u>	NO	NA_
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Was one or more surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			<u>X</u>
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	<u>X</u>		
How many spike recoveries were outside of QC limits?			
out of6			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
<u>Blanks</u>			
Is the method blank summary form present?	<u>X</u>		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every twelve hours for each system used?	X		
Do any method/reagent/instrument blanks have positive results?	X		
Are there trip/field/rinse/equipment blanks associated with every sample?	X		
Do any trip/field/rinse blanks have positive results?	X	 	

Volatile Organics Data Validation Checklist - Page 2

	YES	NO _	NA_
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	<u>X</u>		
Are the bar graph spectrum and mass/charge listing provided for each $\ensuremath{BFB?}$	X		
Has a BFB been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	<u>X</u>		
Matrix spikes	<u>X</u>		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	<u>X</u>		
Blanks	X		
Is the chromatographic performance acceptable?	_X_		
Are the mass spectra of the identified compounds present?	_X_		
Is the RRT of each reported compound within 0.06 RRT units of the continuing calibration standard?	X_		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and there associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ion present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X

Volatile Organics Data Validation Checklist - Page 3

	YES	NO	NA_
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within specified limits?	<u>X</u>		
Are the average RRF equal to or greater than minimum requirements?	<u>x</u>		
Are there any transcription/calculation errors in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	_ <u>X</u> _		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		_X_	
Are all RF equal to or greater than minimum requirements?	_X_		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of every sample and blank within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Volatile Qualifier Summary Holding Time, Surrogates, Internal Standards

Sample ID	Holding	Surrogates*			Internal Standards*			
Sample ID	Time*	TOL	BFB	DCE	DFB	DCB	CBZ	
MW-1								
MW-3S					_			
TRIP BLANK 2								
TW-01								
MW-9S								
MW-31_								
MW-31 MS								
MW-31 MSD								
MW-32								
DUP-1								
MW-33				_				
_TW-02R								
MW-18								
MW- <u>19</u>								
MW-23 <u>S</u>								
MW-231						,		
MW-25S								
MW-34				_				
MW-35								
MW-36							_	
MW-8S								
MW-8S DL								
MW-27								
MW-28	_							
TRIP BLANK (CLR1)								
TRIP BLANK (CLR3)								
		<u></u>						

Surrogates: TOL Toluene-d8 BFB Bromofluorobenzene DCE 1,4-Dichloroethane-d4 Internal Standards:
DCB 1,4-Difluorobenzene
DFB 1,4-Dichlorobenzene-d4

CBZ Chlorobenzene-d5

Qualifiers:

Recovery high
Recovery low

^{*} Unless otherwise specified, all parameters are within acceptable limits.

Volatile Calibration Outliers

Instrument: <u>MSC</u>
Matrix: <u>water</u>
Level: <u>low</u>

Date/Time	9/1	7/01	9/25/0	1 1035	9/26/0	1 0921	9/27/	01 0937	9/28/0	1 1010
	Initia	l Cal.	- Cont	. Cal.	Cont	. Cal.	Con	t. Cal.	Con	. Cal.
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Methylene chloride	_									
Acetone				28.6						32.7
Trichloroethene										
Benzene										
Toluene										
Ethylbenzene										
Xylene (total)										
Affected Samples:			MW1						MW8S	
			MW3S						MW28	
			TRIP BI	ANK 2					TRIPB	LANKC
	<u></u>			_						
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	<u> </u>								<u> </u>	
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										_

Volatile Calibration Outliers - Page 2

Instrument: <u>MSC</u> Matrix: <u>water</u> Level: <u>low</u>

Date/Time			9/28/0	1 1953	10/1/0	1 1012	1.0				
	Initia	Initial Cal:		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D	
Methylene chloride							ļ				
Acetone			_								
Trichloroethene							ļ.				
Benzene				_							
Toluene											
Ethylbenzene											
Xylene (total)											
Affected Samples:											
			_		<u> </u>						
					<u> </u>						
				_							
			 								



Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) Water Lab Sample ID: L75034-7

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE092609

Level: (low/med) LOW Date Received: 09/26/01

%Moisture: not dec. Date Analyzed: 09/26/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

75-09-2Methylene Chloride	10 10 10 9 10 10	u u u u u
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Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) Water Lab Sample ID: L74986-1

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE092508

Level: (low/med) LOW Date Received: 09/24/01

%Moisture: not dec. Date Analyzed: 09/25/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

75-09-2	10 10 10 10 10 10	7736 (-) U U U U U U
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Lab Name:	GALSON LABORATORIES	Contract: Blasland,	MW-18
Lab Code:	Case No.: 1	SAS No.:	SDG No.: L74986

Matrix: (soil/water) Water Lab Sample ID: L75106-1

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE092819

Level: (low/med) LOW Date Received: 09/27/01

%Moisture: not dec. Date Analyzed: 09/28/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l

75-09-2	10 10 10 10 10 10	ט ט ט ט
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MW-19

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) Water

Lab Sample ID: L75106-2

Sample wt/vol: 5

(g/mL) mL

Lab File ID: CE092820

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Level: (low/med) LOW

Date Received: 09/27/01

%Moisture: not dec.

Date Analyzed: 09/28/01

GC Column: DB-624

ID: .25 (mm)

Dilution Factor: 1

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

CAS NO. COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l Q

75-09-2Methylene Chloride 67-64-1	10 10 10 10 10 10	U U U U U
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VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-23I

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

SDG No.: L74986

Lab Code:

Case No.: 1 SAS No.:

Q

Matrix: (soil/water) Water

Lab Sample ID: L75106-4

Sample wt/vol: 5

(g/mL) mL

Lab File ID: CE092822

Level: (low/med) T₁OW Date Received: 09/27/01

%Moisture: not dec.

Date Analyzed: 09/29/01

GC Column: DB-624

ID: .25 (mm)

Dilution Factor: 1

(uL)

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.

COMPOUND

U 10 4 J

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) Water Lab Sample ID: L75106-3

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE092821

Level: (low/med) LOW Date Received: 09/27/01

%Moisture: not dec. Date Analyzed: 09/29/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kq) ug/l Q

75-09-2-----Methylene Chloride 10 U 67-64-1-----Acetone 10 U 79-01-6-----Trichloroethene 10 U 71-43-2-----Benzene U 10 108-88-3-----Toluene U 10 100-41-4-----Ethylbenzene 10 U 1330-20-7-----Xylene (total) 10 U

	MW-25S	
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Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Case No.: 1 SAS No.: SDG No.: L74986

Q

U

U

Matrix: (soil/water) Water

Lab Sample ID: L75106-5

Sample wt/vol: 5

(d/mL) mL

Lab File ID: CE092823

Level: (low/med)

ាab Code:

LOW

Date Received: 09/27/01

%Moisture: not dec.

Date Analyzed: 09/29/01

GC Column: DB-624 ID: .25 (mm)

Dilution Factor: 1

Soil Extract Volume:

(uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.

COMPOUND

75-09-2-----Methylene Chloride U 10 10 U 10 U 10 U 10 U

10

10

MW - 27

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

SDG No.: L74986

Lab Code:

Case No.: 1

SAS No.:

Matrix: (soil/water) Water

Sample wt/vol: 5

(g/mL) mL

Lab File ID: CE100106

Level: (low/med)

LOW

Date Received: 09/27/01

Lab Sample ID: L75106-10

%Moisture: not dec.

Date Analyzed: 10/01/01

GC Column: DB-624 ID: .25 (mm)

Dilution Factor: 1

Soil Extract Volume: (uL)

Soil Aliquot Volume:

(uL)

CONCENTRATION UNITS:

CAS	NO.	(
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COMPOUND

(ug/L or ug/Kg) ug/l

75-09-2	10 10 10 5 10 2	U J U
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MW-28

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code:

Case No.: 1 SAS No.:

SDG No.: L74986

Matrix: (soil/water) Water

Lab Sample ID: L75106-11

Sample wt/vol: 0.125 (g/mL) mL

Lab File ID: CE092810

Level: (low/med)

Date Received: 09/27/01

%Moisture: not dec.

Date Analyzed: 09/28/01

GC Column: DB-624

ID: .25 (mm)

Dilution Factor: 40

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

CAS NO.

COMPOUND

75-09-2-----Methylene Chloride

79-01-6-----Trichloroethene

1330-20-7-----Xylene (total)

100-41-4----Ethylbenzene

67-64-1-----Acetone

71-43-2-----Benzene

108-88-3-----Toluene

LOW

CONCENTRATION UNITS:

(uq/L or uq/Kg) ug/l Q

4700

400

400

400

400

400

400

В IJ U IJ TT

U

U

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MW-31

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) Water

Lab Sample ID: L75034-3

Sample wt/vol: 5

(g/mL) mL

Lab File ID: CE092606

Level: (low/med)

LOW

Date Received: 09/26/01

%Moisture: not dec.

Date Analyzed: 09/26/01

GC Column: DB-624

ID: .25 (mm)

Dilution Factor: 1

(uL)

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

Q

75-09-2	10 10 10 14 10 10	ם ט ט ט
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MW-32

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

SDG No.: L74986

Lab Code:

Case No.: 1

SAS No.:

SDG NO.: L/43

Matrix: (soil/water) Water

Lab Sample ID: L75034-6

Sample wt/vol: 5

(g/mL) mL

Lab File ID: CE092705

Level: (low/med)

LOW

Date Received: 09/26/01

%Moisture: not dec.

Date Analyzed: 09/27/01

GC Column: DB-624

ID: .25 (mm)

Dilution Factor: 1

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/l Q

75-09-2	10 10 10 10 10 10	U U U U
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MW-33

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Case No.: 1

SDG No.: L74986

Lab Code:

SAS No.:

Matrix: (soil/water) Water

Lab Sample ID: L75034-8

Sample wt/vol: 5

(g/mL) mL

Lab File ID: CE092613

Level: (low/med)

Date Received: 09/26/01

%Moisture: not dec.

Date Analyzed: 09/26/01

GC Column: DB-624

ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

CAS NO.

COMPOUND

LOW

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

Q

75-09-2Methylene Chloride 67-64-1	18 21 10 5 10 10	n n n
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MW - 34

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1 SAS No.:

SDG No.: L74986

Q

Matrix: (soil/water) Water

Lab Sample ID: L75106-6

Sample wt/vol: 5

(g/mL) mL

Lab File ID: CE092824

Level: (low/med)

LOW

Date Received: 09/27/01

%Moisture: not dec.

Date Analyzed: 09/29/01

GC Column: DB-624

ID: .25 (mm)

Dilution Factor: 1

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (uq/L or uq/Kq) uq/l

75-09-2-----Methylene Chloride 10 U 67-64-1-----Acetone 7 J 79-01-6-----Trichloroethene 10 U 71-43-2----Benzene 2 J 108-88-3-----Toluene 2 J 100-41-4-----Ethylbenzene 10 U 1330-20-7-----Xylene (total) 2 J

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-35

Lab Name: GALSON LABORATORIES Contract: Blasland, B Lab Code: Case No.: SDG No.: L74986

Matrix: (soil/water) Water Lab Sample ID: L75106-7

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE092825

Level: (low/med) LOW Date Received: 09/27/01

%Moisture: not dec. Date Analyzed: 09/29/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

75-09-2Methylene Chloride 67-64-1	10 10 10 10 10 10	U U U U U
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MW-36

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) Water

Lab Sample ID: L75106-8

Sample wt/vol: 5

(q/mL) mL

Lab File ID: CE092826

Level: (low/med) LOW Date Received: 09/27/01

%Moisture: not dec.

Date Analyzed: 09/29/01

GC Column: DB-624

ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

Q

75-09-2Methylene Chloride	10	U
67-64-1Acetone	54	
79-01-6Trichloroethene	10	\ U
71-43-2Benzene	10	\ ប
108-88-3Toluene	10	U
100-41-4Ethylbenzene	10	U
1330-20-7Xylene (tota I)	10	U
<u> </u>		1

MW-3S

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

i | _____

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) Water

Lab Sample ID: L74986-2

Sample wt/vol: 5

(g/mL) mL

Lab File ID: CE092507

- Company

(3/112/112

LOW

COMPOUND

Date Received: 09/24/01

Level: (low/med)

%Moisture: not dec.

ID: .25 (mm)

Date Analyzed: 09/25/01

Soil Aliquot Volume:

GC Column: DB-624

D: 105 (......

Dilution Factor: 1

(uL)

Soil Extract Volume:

CAS NO.

(uL)

<u>-</u>

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

(41

75-09-2Methylene Chloride 67-64-1	10 10 10 3 8 1 2	AAB A
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Lab Name: GALSON LABORATORIES Contract: Blasland, B _______

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) Water Lab Sample ID: L75106-9

Sample wt/vol: 0.125 (g/mL) mL Lab File ID: CE092807

Level: (low/med) LOW Date Received: 09/27/01

%Moisture: not dec. Date Analyzed: 09/28/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 40

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO. COMPOUND CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/l Q

200000 4400¢Ö ÉЕ 75-09-2-----Methylene Chloride 67-64-1-----Acetone 400 U 79-01-6-----Trichloroethene 2003/0006 71-43-2-----Benzene 400 108-88-3-----Toluene 430 100-41-4-----Ethylbenzene 170 J 1330-20-7-----Xylene (total) 680

VOLATILE ORGANICS ANALYSIS DATA SHEET

100-41-4-----Ethylbenzene

1330-20-7-----Xylene (tota \overline{I})

SAMPLE NO.

UD

UD

MW-8S DL Lab Name: GALSON LABORATORIES Contract: Blasland, B Case No.: 1 SAS No.: SDG No.: L74986 Lab Code: Matrix: (soil/water) Water Lab Sample ID: L75106-9DX Sample wt/vol: .001 (g/mL) mL Lab File ID: CE092811 Date Received: 09/27/01 Level: (low/med) LOW Date Analyzed: 09/28/01 %Moisture: not dec. Dilution Factor: 5000 GC Column: DB-624 ID: .25 (mm) Soil Aliquot Nolume: Soil Extract Volume: (uL) (uL) CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/K/g) ug/l Q (440000) 75-09-2-----Methylene Chloride DB 67-64-1------Acetone U D 50000 79-01-6-----Trichloroethene 18000 JD 71-43-2-----Benzene 50000 U D 108-88-3-----Toluene 50000 U D

50000

50000

			MW-9S
Lab Name: G	ALSON LABORATORIES	Contract: Blasland, B	

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) Water Lab Sample ID: L75034-2

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE092608

Level: (low/med) LOW Date Received: 09/26/01

%Moisture: not dec. Date Analyzed: 09/26/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

COMPOUND

CAS NO.

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

75-09-2Methylene Chloride	10	U
67-64-1Acetone		ี บ
79-01-6Trichloroethene		ប
71-43-2Benzene	1 10	
108-88-3Toluene	3	J
100-41-4Ethylbenzene	 7	J
1330-20-7Xylene (total)	35	

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

TRIP BLANK (CLR

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code:

Case No.: 1 SAS No.:

SDG No.: L74986

Matrix: (soil/water) Water

Lab Sample ID: L75106-12

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE092812

Level: (low/med) LOW

Date Received: 09/27/01

%Moisture: not dec.

Date Analyzed: 09/28/01

GC Column: DB-624 ID: .25 (mm)

Dilution Factor: 1

Soil Extract Volume:

(uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/l	Q
	(ug/L or ug/Kg) ug/l

75-09-2Methylene Chloride	10 10 10 10 10 10	ח ח ח ח ח
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SAMPLE NO.

TRIP BLANK (CLR 3)

0

U

U

U

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code:

CAS NO.

Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) Water Lab Sample ID: L75106-13

Sample wt/vol: 5 Lab File ID: CE092818 (q/mL) mL

Level: (low/med) Date Received: 09/27/01 LOW

%Moisture: not dec. Date Analyzed: 09/28/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

COMPOUND

Soil Aliquot Volume: (uL) Soil Extract Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/l

75-09-2-----Methylene Chloride_____ U 10 67-64-1------Acetone 79-01-6------Trichloroethene 10 U 10 U 71-43-2-----Benzene U 10

SAMPLE NO.

Q

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) Water Lab Sample ID: L74986-4

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE092506

Level: (low/med) LOW Date Received: 09/24/01

Moisture: not dec. Date Analyzed: 09/25/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l

75-09-2-----Methylene Chloride 4 JB 67-64-1------Acetone 10 U 79-01-6-----Trichloroethene 10 U

71-43-2-----Benzene 10 U
108-88-3-----Toluene 10 U
100-41-4-----Ethylbenzene 10 U
1330-20-7-----Xylene (total) 10 U

VOLATILE ORGANICS ANALYSIS DATA SHEET

TW-01

Dab Name: Grabon habotationable contract. Brabiana, b

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) Water Lab Sample ID: L75034-1

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE092607

Level: (low/med) LOW Date Received: 09/26/01

Moisture: not dec. Date Analyzed: 09/26/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

75-09-2-----Methylene Chloride 10 U 67-64-1-----Acetone 10 U 79-01-6-----Trichloroethene U 10 71-43-2-----Benzene 10 108-88-3-----Toluene U 10 100-41-4-----Ethylbenzene 10 U 1330-20-7-----Xylene (total) U 10

SAMPLE NO.

TW-02R

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) Water

Lab File ID: CE092614

Sample wt/vol: 2.5

(q/mL) mL

Level: (low/med)

LOW

Date Received: 09/26/01

Lab Sample ID: L75034-9

%Moisture: not dec.

Date Analyzed: 09/26/01

GC Column: DB-624

ID: .25 (mm) Dilution Factor: 2

(uL)

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

CAS NO.

COMPOUND -

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

Q

75-09-2Methylene Chloride 67-64-1Acetone 79-01-6Trichloroethene 71-43-2Benzene	48 57 20 25	B
108-88-3Toluene 100-41-4Ethylbenzene 1330-20-7Xylene (total)	70 31 140	

VOLATILE ANALYSES METHOD 8015

Introduction

Analyses were performed according to USEPA method 8015 as referenced in the NYSDEC ASP.

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 National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- 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.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- 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.
- R The sample results are rejected.

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 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 test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding time for volatile analyses under the Quality Assurance Project Plan (QAPP) is 7 days from sample receipt. The technical holding time is 14 days from sample collection to analysis.

Samples MW-1, MW-3S, TRIP BLANK, TW-01, MW-9S, MW-31, DUP-1, MW-33, TW-02R, MW-32, MW-34, MW-35, MW-36, MW-8S, MW-27 and MW-28 were analyzed over the specified holding time. All methanol data for the listed samples have been qualified as estimated based on the holding time violation. All other samples were analyzed within the specified holding time.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, or 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 contamination of samples during shipment.

No target compounds were detected in the method or trip blanks.

3. 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.

3.1 Initial Calibration

The method specifies a percent relative standard deviation (%RSD) limit of 20% or, alternately, a correlation coefficient of 0.99 or greater.

The initial calibration was acceptable.

3.2 Continuing Calibration

All continuing calibration standards were within 15%D of the initial calibration.

4. Compound Identification

Target compounds are identified by using the analyte's retention time.

All identified compounds fell within the established retention time windows.

5. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

All matrix spike and matrix spike duplicate recoveries and the relative percent difference between recoveries were within control limits. The matrix spike blank recovery was also within control limits.

6. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID <i>I</i> Duplicate ID	Ahalyte	Sample Result	Duplicate Result	RPD -
MW-32 / DUP-1	methanol	ND	ND	NA

ND Not detected.

NA Analyte not detected in sample and/or duplicate. RPD not applicable.

The duplicate results are acceptable.

7. System Performance and Overall Assessment

Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.



Organic Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?	X		
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
<u> </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
<u> </u>			
Blanks			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every twelve hours for each system used?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Are there trip/field/rinse/equipment blanks associated with every sample?	X		
Do any trip/field/rinse blanks have positive results?		X	
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	Х		

Organic Data Validation Checklist - Page 2

	YES	NO	NA
Are the chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs or correlation coefficients within acceptable limits?	X		
Are there any transcription/calculation errors in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Field Duplicates			
Were field duplicates submitted with the samples?	Х		

Calibration Outliers

Instrument: <u>V2-Varian 3300</u> Matrix: <u>water</u>

Date Ex 3	10/11/01	10/11/01	10/16/01	10/16/01	10/17/01	10/17/01
Time		1644	1008	1534	-1107	1607
	Initial Cal.	Cont. Cal.				
	RSD	%D	%D	%D	%D	%D
methanol	ok	ok	ok	ok	ok	ok
Affected Samples:						
						_
		_				
					_	



VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L74986 Client Sample ID : MW-1

Date Sampled: 09/24/01 Order #: 496456 Sample Matrix: WATER

Date Received: 09/26/01 Submission #: R2108803 Analytical Run 70232

, ,		-	
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/16 ANALYTICAL DILUTION:	/01 1.00		
METHANOL	1000	1000 \$15	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	117	ક

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L74986 Client Sample ID : MW-3S

Date Sampled: 09/24/01 Date Received: 09/26/01		Sample Matrix: WATER Analytical Run 70232
ANALYTE	PQL	RESULT UNITS
DATE ANALYZED : 10 ANALYTICAL DILUTION:	/16/01 1.00	
METHANOL	1000	1000 % UJ UG/L
SURROGATE RECOVERIES	QC LIMITS	
ISOPROPYL ETHER	(50 - 150 %)	113 %

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L74986-3

Client Sample ID : TRIP BLANK - \

Date Sampled: 09/24/01 Order #: 496458 Sample Matrix: WATER Date Received: 09/26/01 Submission #: R2108803 Analytical Run 70232

			_
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/16, ANALYTICAL DILUTION:	/01 1.00		
METHANOL	1000	1000 p 45	UG/L
SURROGATE RECOVERIES	QC LIMITS	er.	
ISOPROPYL ETHER	(50 - 150 %)	109	8

VOLATILE ORGANICS
METHOD 8015B METHANOL

Reported: 10/22/01

Galson Laboratories

ISOPROPYL ETHER

Project Reference: L75106 Client Sample ID: MW-8S

Date Sampled: 09/26/01 Date Received: 10/02/01 Su	Order #: 497380 bmission #: R2108803	Sample Matrix: Analytical Run	
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/17 ANALYTICAL DILUTION:	/01 1.00		
METHANOL	1000	J 8900 J	UG/L
SURROGATE RECOVERIES	QC LIMITS		

(50 - 150 %) 122 %

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75034 Client Sample ID: MW-9S

Date Sampled: 09/25/01 Date Received: 09/26/01 Su	Order #: 496460 bmission #: R2108803	Sample Matrix: WATER Analytical Run 70232
ANALYTE	PQL	RESULT UNITS
DATE ANALYZED : 10/16 ANALYTICAL DILUTION:	/01 1.00	
METHANOL	1000	1000 UT UG/L
SURROGATE RECOVERIES	QC LIMITS	
ISOPROPYL ETHER	(50 - 150 %)	125 %

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75106 Client Sample ID: MW-18

Date Sampled: 09/27/01 Order #: 497372 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108803 Analytical Run 70223

		"		
ANALYTE	PQL	RESULT	UNITS	
DATE ANALYZED : 10/11/ ANALYTICAL DILUTION:	'01 1.00		 	
METHANOL	1000	1000 U	UG/L	
SURROGATE RECOVERIES	QC LIMITS			
ISOPROPYL ETHER	(50 - 150 %)	95	ક	

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75106 Client Sample ID: MW-19

Date Sampled: 09/27/01 Order #: 497373 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108803 Analytical Run 70223

		•	
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/11, ANALYTICAL DILUTION:	/01 1.00		
METHANOL	1000	1000 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	102	ફ

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75106 Client Sample ID: MW-23S

Date Sampled: 09/27/03 Date Received: 10/02/03		Sample Matrix: WATER Analytical Run 70223
ANALYTE	PQL	RESULT UNITS

DATE ANALYZED : 10/11/01 ANALYTICAL DILUTION: 1.00

METHANOL 1000 U UG/L

SURROGATE RECOVERIES QC LIMITS

ISOPROPYL ETHER (50 - 150 %) 74 %

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75106 Client Sample ID: MW-23I

Date Sampled: 09/27/01 Order #: 497375 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108803 Analytical Run 70223

		=	
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/11 ANALYTICAL DILUTION:	1.00		
METHANOL	1000	1000 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	103	ફ

VOLATILE ORGANICS
METHOD 8015B METHANOL

Reported: 10/22/01

Galson Laboratories

Project Reference: L75106 Client Sample ID: MW-25S

Date Sampled: 09/27/01 Order #: 497376 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108803 Analytical Run 70223

ANALYTE PQL RESULT UNITS : 10/11/01 DATE ANALYZED ANALYTICAL DILUTION: 1.00 **METHANOL** 1000 UG/L 1000 U SURROGATE RECOVERIES QC LIMITS (50 - 150 %)ISOPROPYL ETHER 113 용

VOLATILE ORGANICS
METHOD 8015B METHANOL

Reported: 10/22/01

Galson Laboratories

Project Reference: L75106 Client Sample ID: MW-27

Date Sampled: 09/26/01 Order #: 497381 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108803 Analytical Run 70331

			
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/17, ANALYTICAL DILUTION:	/01 1.00		
METHANOL	1000	1000 XVJ	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	121	8

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75106 Client Sample ID : MW-28

Date Sampled: 09/26/01 Order #: 497382 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108803 Analytical Run 70331

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/17/0 ANALYTICAL DILUTION: 1	1.00		
METHANOL	1000	1000 y W	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	115	ફ

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75034 Client Sample ID: MW-31

Date Sampled: 09/25/01 Date Received: 09/26/01	Order #: 496461 Submission #: R2108803	Sample Matrix: WATER Analytical Run 70331
ANALYTE	PQL	RESULT UNITS
DATE ANALYZED : 10/	17/01 1.00	· ·
METHANOL	1000	1000 X V UG/L
SURROGATE RECOVERIES	QC LIMITS	•
ISOPROPYL ETHER	(50 - 150 %)	108 %

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75034 Client Sample ID: MW-32

Date Sampled : Date Received:		 496469 R2108803	Sample Matrix: Analytical Run	
ANALYTE		PQL	RESULT	UNITS
DATE ANALYZED	/17/01	 		

ANALYTICAL DILUTION: 1.00

METHANOL 1000 1000 1000 UG/L

SURROGATE RECOVERIES QC LIMITS

ISOPROPYL ETHER (50 - 150 %) 75 %

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

120

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Galson Laboratories

ISOPROPYL ETHER

Project Reference: L75034 Client Sample ID: MW-33

Date Sampled: 09/25/01 Date Received: 09/26/01 S	Order #: 496463 ubmission #: R2108803	Sample Matrix: WATER Analytical Run 70331	
ANALYTE	PQL	RESULT UNITS	
DATE ANALYZED : 10/1 ANALYTICAL DILUTION:	7/01 1.00	:	
METHANOL	1000	1000 🌿 W UG/L	
SURROGATE RECOVERIES	QC LIMITS		

(50 - 150 %)

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75106 Client Sample ID: MW-34

Date Sampled: 09/26/01 Order #: 497377 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108803 Analytical Run 70331

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/17 ANALYTICAL DILUTION:	7/01 1.00		
METHANOL	1000	1000 DUJ	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	118	ફ

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75106 Client Sample ID: MW-35

Date Sampled: 09/26/01 Date Received: 10/02/01 St	Order #: 497378 ubmission #: R2108803	Sample Matrix: WATER Analytical Run 70331
ANALYTE	PQL	RESULT UNITS
DATE ANALYZED : 10/17 ANALYTICAL DILUTION:	7/01 1.00	
METHANOL	1000	1000 X VJ UG/L
SURROGATE RECOVERIES	QC LIMITS	
ISOPROPYL ETHER	(50 - 150 %)	113 %

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75106 Client Sample ID: MW-36

Date Sampled: 09/26/01 Date Received: 10/02/01 Subm	Order #: 497379 hission #: R2108803	Sample Matrix: Analytical Run	
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/17/0 ANALYTICAL DILUTION:	00		

DATE ANALYZED : 10/17/01
ANALYTICAL DILUTION: 1.00

METHANOL 1000 1000 UG/L

SURROGATE RECOVERIES QC LIMITS

ISOPROPYL ETHER (50 - 150 %) 116 %

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75034 Client Sample ID : TW-01

Sample Matrix: WATER Date Sampled: 09/25/01 Order #: 496459

Date Received: 09/26/01 Submission #: R2108803 Analytical Run 70232

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/16/ ANALYTICAL DILUTION:	/01 1.00		
METHANOL	1000	1000 y VJ	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	128	%

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75034 Client Sample ID : TW-02R

Date Sampled: 09/25/01 Order #: 496464
Date Received: 09/26/01 Submission #: R2108803 Sample Matrix: WATER

Analytical Run 70331

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/17/ ANALYTICAL DILUTION:	'01 1.00		
METHANOL	1000	1000 BVJ	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	126	ફ

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75034 Client Sample ID: DUP-1

Date Sampled: 09/25/01 Order #: 496462 Sample Matrix: WATER Date Received: 09/26/01 Submission #: R2108803 Analytical Run 70331

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/17 ANALYTICAL DILUTION:	7/01 1.00		
METHANOL	1000	1000 XUT	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	115	8

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75106-12

Client Sample ID : TRIP BLANK (CLR-1)

Date Sampled: 09/27/01 Order #: 497383 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108803 Analytical Run 70223

ANALYTE PQL RESULT UNITS DATE ANALYZED : 10/11/01 ANALYTICAL DILUTION: 1.00 **METHANOL** 1000 1000 U UG/L SURROGATE RECOVERIES QC LIMITS (50 - 150 %) 107 옿 ISOPROPYL ETHER

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75106 ~\3 Client Sample ID : TRIP BLANK (CLR3)

Date	Sampled:	09/27/01	Order	#:	497384	Sample Matrix:	WATER
Date	Received:	10/02/01	Submission	#:	R2108803	Analytical Run	70223

		-	
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/11 ANALYTICAL DILUTION:	1.00	:	
METHANOL	1000	1000 U	UG/L
SURROGATE RECOVERIES	QC LIMITS	· · · · · · · · · · · · · · · · · · ·	
ISOPROPYL ETHER	(50 - 150 %)	103	ફ

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SEMIVOLATILE ANALYSES METHOD 8270

Introduction

Analyses were performed according to USEPA SW-846 Method 8270 as referenced in NYSDEC ASP.

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 National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- 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.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- 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.
- R The sample results are rejected.

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 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 test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for semi-volatile analyses under the Quality Assurance Project Plan (QAPP) are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, field, or 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. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was 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 various percent relative standard deviation (%RSD) limits for select compounds and allows two outliers. A technical review of the data applies a RSD limit of 30% to all compounds with no exceptions.

The %RSD was less than 30% for all compounds.

4.2 Continuing Calibration

All continuing calibration standards were within 25% difference (%D) of the initial calibration.

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.

Surrogates were diluted beyond the range of quantitation in samples TW-02DL and MW-8S. No data have been qualified based on diluted surrogates. All other 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 experimental run.

All internal standard areas and retention times were within established limits.

7. Compound Identification

Target compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

The matrix spike recoveries were within control limits. The matrix spike duplicate recovery was, however, above control limits for aniline. Since all matrix spike and matrix spike blank recoveries were within control limits, no data have been qualified based on the deviation. The end-user should be aware that the difference in spiked results may indicate a lack of precision in the data.

9. Field Duplicates

Results for duplicate samples are summarized as follows:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
MW-32 / DUP-1	aniline	1100	1200	8.7%
	N,N-dimethylaniline	2J	2J	0.0%

ND Not detected.

NA Analyte not detected in sample and/or duplicate. RPD not applicable.

The duplicate results are acceptable.

10. System Performance and Overall Assessment

The laboratory used a reporting limit of 5 μ g/l for aniline in this report; however, the lowest calibration standard analyzed was the equivalent of 10 μ g/l. Based on the lowest calibration standard analyzed, the reporting limit for aniline has been raised to 10 μ g/L for all samples.

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



Semivolatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	 ,
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were two or more surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits?			
<u>1</u> out of <u>4</u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
1 out of2			
<u>Blanks</u>			
Is the method blank summary form present?	<u> X</u>		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each GC/MS system used?	X		
Do any method/reagent/instrument blanks have positive results?		x	
Are there field/rinse/equipment blanks associated with every sample?		X	

Semivolatile Organics Data Validation Checklist - Page 2

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	<u> X</u>		
Has GPC cleanup been performed on all soil/sediment sample extracts?			X
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?	X	***	
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra			~
Are any target compounds listed as TICs?			
Are any target compounds listed as TICs?			

Semivolatile Organics Data Validation Checklist - Page 4

	YES	NO	NA
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Semi-Volatile Qualifier Summary Holding Time, Surrogates, Internal Standards

									- -		MW-28DL
											82-WM
											72-WM
											S8-WM
											MW-36DL
											98-WM
											96-WM
											48-WM
											MW-25S
											182-WM
											SEZ-WM
											61-WM
											81-WM
											TM-02RDL
											AS0-WT
_											MW-33DL
											£6-WM
											DUP-1DL
											r-qua
											MW-32DL
											26-WM
											MW-31DL
											MW-31 MSD
	. ==										SM 18-WM
											18-WM
			-								S6-MW
											10-WT
											MM-32DF
	 				-						SE-WM
											SI-WM
794	CBA	ьни	TNA	TGN	DCB	DCB	HdL.	F8P	Zan		
				1						DnibloH *9miT	Sample ID
	**		iternalı	1			• • • • • • • • • • • • • • • • • • • •	·u		- eibieii	Wi 7)7-70

Surrogates:		Intern	al Standards:	Qualifiers:		
NBZ	Nitrobenzene-d5	DCB	1,4-Dichlorobenzene-d4	D	Diluted	
FBP	2-Fluorobiphenyl	NPT	Naphthalene-d8	1	Recovery low	
TPH	Terphenyl-d14	ANT	Acenaphthene-d10	1	Recovery high	
DCB	1,2-Dichlorobenzene-d4	PHN	Phenanthrene-d10			
		CRY	Chrysene-d12			
		PRY	Perylene-d12			

^{*} Unless otherwise specified, all parameters are within acceptable limits.

Semivolatile Calibration Outliers

Instrument	: <u>MSE</u>
Level:	low

Date/Time	9/	28/01	10/1/0	1 0744	10/2/0	01 0809	10/3/0	1 0729	10/4/	01 0844
	Initi	al Cal.	Cont	Cal.	Con	t. Cal.	- Cont.	. Cal.	Con	t, Cal.
	RF	%RSD	RF	%D	RF	- %D	RF	%D	RF	%D
aniline										
n,n'-dimethylaniline										
Affected Samples:										

Corrected Sample Analysis Data Sheets

SAMPLE NO.

DUP-1

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Sample wt/vol:

1050 (g/mL) mL

Lab File ID: EF100208

Level: (low/med)

LOW

Date Received: 09/26/01

Lab Sample ID: L75034-7

% Moisture:

decanted: (Y/N) N

Date Extracted:10/01/01

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/02/01

Injection Volume: 2.0 (uL)

CAS NO.

COMPOUND

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

62-53-3-----Aniline 121-69-7----N, N-Dimethylaniline

850-1200 2

K.J J

SAMPLE NO.

Lab Name: GALSON LABORATORIES

Matrix: (soil/water) WATER

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG/No.: L74986

Lab Sample ID: L75034-7DL

Sample wt/vol:

1050 (g/mL) mL

COMPOUND

121-69-7----N, N-Dimethylaniline

Lab File ID: EF/100218

Level: (low/med) LOW

% Moisture:

Date Received: 09/26/01

decanted: (Y/N) N

Date Extracted:10/01/01

Concentrated Extract Volume:1000 (uL)

Date Analyzed: 10/02/01

Injection Volume: 2.0 (uL)

Dilution/Factor:

20.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

CONCENTRATION UNITS: $(ug/L \phi r ug/Kg) ug/l$

62-53-3-----Aniline

1200 190

D UD

FORM I SV-I

SAMPLE NO.

MW-1

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code:

Case No.: 1 SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L74986-1

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF100113

Level: (low/med) LOW

Date Received: 09/24/01

% Moisture: decanted: (Y/N) N Date Extracted:09/28/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/01/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	N UNITS: (/Kg) ug/l	Q		
62-53-3	Aniline N,N-Dimethylar	niline	10 g	U	

SAMPLE NO.

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) WATER Lab Sample ID: L75106-1

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF100311

Level: (low/med) LOW Date Received: 09/27/01

% Moisture: decanted: (Y/N) N Date Extracted:10/02/01

Concentrated Extract Volume:1000 (uL) Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (uq/L or ug/Kg) ug/l Q

SAMPLE NO.

MW-19

Lab Name: GALSON LABORATORIES

Matrix: (soil/water) WATER

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Sample wt/vol:

1050 (g/mL) mL

Lab File ID: EF100312

Lab Sample ID: L75106-2

Level: (low/med) LOW

% Moisture:

Date Received: 09/27/01

decanted: (Y/N) N

Date Extracted:10/02/01

Concentrated Extract Volume:1000 (uL)

Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL)

CAS NO.

COMPOUND

121-69-7----N, N-Dimethylaniline

Dilution Factor:

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

Q

62-53-3-----Aniline

108 10

U U

SAMPLE NO.

MW-23T

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L75106-4

Sample wt/vol:

1050 (g/mL) mL

Lab File ID: EF100314

Level: (low/med)

LOW

Date Received: 09/27/01

% Moisture:

decanted: (Y/N) N

COMPOUND

Date Extracted:10/02/01

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL)

CAS NO.

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/l

62-53-3Aniline 121-69-7N, N-Dimethylaniline	10 g	U
121-05 / Was -N, N-Dimethylaniiline	10	

SAMPLE NO.

MW-23S

Lab Name: GALSON LABORATORIES Contract: Blasland, B

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L75106-3

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF100313

Case No.: 1 SAS No.:

Level: (low/med) LOW

CAS NO.

Date Received: 09/27/01

Lab Code:

% Moisture: decanted: (Y/N) N

Date Extracted:10/02/01

Concentrated Extract Volume:1000 (uL) Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL)

Dilution Factor:

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

COMPOUND

(ug/L or ug/Kg) ug/l

Q

62-53-3	10 g	ŭ
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SAMPLE NO.

MW-25S

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code:

Case No.: 1 SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L75106-5

Sample wt/vol: 1050 (g/mL) mL

Lab File ID: EF100315

Level: (low/med)

LOW

Date Received: 09/27/01

% Moisture: decanted: (Y/N) N

Date Extracted:10/02/01

Concentrated Extract Volume:1000 (uL) Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l

62-53-3Aniline 121-69-7N, N-Dimethylaniline	to \$ 10	U
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SAMPLE NO.

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) WATER Lab Sample ID: L75106-10

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF100319

Level: (low/med) LOW Date Received: 09/27/01

% Moisture: decanted: (Y/N) N Date Extracted:10/02/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (uq/L or ug/Kg) ug/l Q

62-53-3------Aniline 26 121-69-7-----N,N-Dimethylaniline 10

SAMPLE NO.

MW - 28

Lab Name: GALSON LABORATORIES

Matrix: (soil/water) WATER

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Lab Sample ID: L75106-11

Sample wt/vol:

1050 (g/mL) mL

Lab File ID: EF100320

Level: (low/med) LOW Date Received: 09/27/01

% Moisture:

decanted: (Y/N) N

Date Extracted:10/02/01

Concentrated Extract Volume:1000 (uL) Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

CAS NO.

COMPOUND

U

570 1000 62-53-3-----Aniline 121-69-7-----N, N-Dimethylaniline 10

SAMPLE NO.

MW-28

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1 SAS No.:

SDG No.: L74986

Lab Sample ID: L75106-11DL

Sample wt/vol:

1050 (g/mL) mL

Lab File ID: EF/100414

Level: (low/med)

Matrix: (soil/water) WATER

LOW

Date Received: 09/27/01

% Moisture:

Date Extracted:10/02/01

decanted: (Y/N) N

Date Anal/zed: 10/04/01

Injection Volume: 2.0 (uL)

Dilution Factor:

20.0

GPC Cleanup: (Y/N) N pH: 7.0

Concentrated Extract Volume:1000 (uL)

CONCENTRATION UNITS: (ug/I/or ug/Kg) ug/l

CAS NO.

COMPOUND

62-53-3-----Aniline 1000 D 121-69-7----N, N-Dimethylaniline 190 UD

SAMPLE NO.

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) WATER Lab Sample ID: L75034-3

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF100210

Level: (low/med) LOW Date Received: 09/26/01

% Moisture: decanted: (Y/N) N Date Extracted:10/01/01

Concentrated Extract Volume:1000 (uL) Date Analyzed: 10/02/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

SAMPLE NO.

MW-31 DL

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code:

Case No.: 1 SAS No.:

SDG No.: 174986

Matrix: (soil/water) WATER

Lab Sample ID: L75034/3DL

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF1002/19

Level: (low/med) LOW

Date Received: 09/26/01

% Moisture:

decanted: (Y/N) N Date Extracted/10/01/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/02/01 Injection Volume: 2.0 (uL)

Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS: (ug/L of ug/Kg) ug/l

CAS NO.

COMPOUND

62-53-3-----Aniline 91 D 121-69-7----N, N-Dimethylaniline 3 JD

SAMPLE NO.

MW - 32

Lab Name: GALSON LABORATORIES

Matrix: (soil/water) WATER

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Sample wt/vol: 1050 (g/mL) mL

Level: (low/med) LOW

Lab File ID: EF100213

Date Received: 09/26/01

Lab Sample ID: L75034-6

% Moisture:

decanted: (Y/N) N

Date Extracted:10/01/01

Dilution Factor: 1.0

Concentrated Extract Volume:1000 (uL)

Date Analyzed: 10/02/01

Injection Volume: 2.0 (uL)

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

62-53-3-----Aniline

121-69-7-----N, N-Dimethylaniline

770-1100 2

E Z

SAMPLE NO.

MW-32 DL/

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code:

Case No.: 1 SAS No.:

SDG No/: L74986

Matrix: (soil/water) WATER

1050 (g/mL) mL

Lab Sample ID: L75934-6DL

Sample wt/vol:

Level: (low/med) LOW Lab File ID: EF100220

Date Received: 09/26/01

% Moisture:

decanted: (Y/N) N

Date Extracted:10/01/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/02/01

Injection Volume: 2.0 (uL)

Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L/or ug/Kg) ug/l

62-53-3-----Aniline 121-69-7-----N, N-Dimethylaniline

1100 190

D U D

SAMPLE NO.

MW-33

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Tab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L75034-8

Sample wt/vol: 1050 (g/mL) mL

Lab File ID: EF100206

Level: (low/med)

LOW

% Moisture:

decanted: (Y/N) N

COMPOUND

Date Received: 09/26/01

Date Extracted:10/01/01

Concentrated Extract Volume: 1000 (uL)

Injection Volume: 2.0 (uL)

Date Analyzed: 10/02/01

Dilution Factor:

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

E I

62-53-3-----Aniline

1300 1900

12

121-69-7----N, N-Dimethylaniline

SAMPLE NO.

MW-33 D/L

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Tab Code:

Case No.: 1

SAS No.:

SDG Nø.: L74986

Matrix: (soil/water) WATER

Sample wt/vol: 1050 (g/mL) mL

Lab File ID: EF1Ø0217

Lab Sample ID: L75\(\pi 34-8DL \)

Level: (low/med) LOW Date Received: 09/26/01

% Moisture: decanted: (Y/N) N

Date Extracted:10/01/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/02/01

Injection Volume: 2.0 (uL)

Dilution Factor: 25.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS: (ug/k/ or ug/kg) ug/l

CAS NO.

COMPOUND

1900 62-53-3-----Aniline D 121-69-7----N, N-Dimethylaniling 240 U D

SAMPLE NO.

MW - 34

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1 SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L75106-6

Sample wt/vol:

1050 (g/mL) mL Lab File ID: EF100316

Level: (low/med) LOW

Date Received: 09/27/01

% Moisture:

decanted: (Y/N) N

Date Extracted:10/02/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS: (uq/L or uq/Kg) ug/l

Q

J

76 62-53-3-----Aniline 121-69-7----N, N-Dimethylaniline 3

SAMPLE NO.

MW-35

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L75106-7

Sample wt/vol:

1050 (g/mL) mL

Lab File ID: EF100317

Level: (low/med)

LOW

Date Received: 09/27/01

% Moisture:

decanted: (Y/N) N

COMPOUND

Date Extracted:10/02/01

Concentrated Extract Volume:1000 (uL)

Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/l

0

62-53-3Aniline
121-69-7N, N-Dimethylaniline
121-03-7N,N-Dimethylanililie

÷ 5 2

IJ J

SAMPLE NO.

MW-36

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1 SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L75106-8

Sample wt/vol:

1050 (g/mL) mL

Lab File ID: EF100318

Level: (low/med)

LOW

Date Received: 09/27/01

% Moisture:

decanted: (Y/N) N

Date Extracted:10/02/01

Concentrated Extract Volume:1000 (uL) Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/l

270 350 62-53-3-----Aniline 121-69-7----N, N-Dimethylaniline

SAMPLE NO.

Lab Name: GALSON LABORATORIES Contract: Blasland, B

MW-36 DL/

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L751/06-8DL

Sample wt/vol:

1050 (g/mL) mL Lab File ID: EF100415

Case No.: 1 SAS No.:

Level: (low/med)

Lab Code:

LOW

Date Received: /09/27/01

% Moisture: decanted: (Y/N) N Date Extracted:10/02/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/01

Injection Volume: 2.0 (uL)

Dilution Factor:

8.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS: $(ug/L \ pr \ ug/Kg) \ ug/l$

62-53-3-----Aniline 350 D 121-69-7----N, N-Dimethylaniline 76 U D

SAMPLE NO.

MW - 3S

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L74986-2

Sample wt/vol: 1050 (g/mL) mL

Lab File ID: EF100116

Level: (low/med) LOW

Date Received: 09/24/01

% Moisture:

decanted: (Y/N) N

Date Extracted: 09/28/01

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/01/01

Injection Volume: 2.0 (uL)

Dilution Factor:

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

480 SO 62-53-3-----Aniline 121-69-7----N, N-Dimethylaniline

SAMPLE NO.

MW-35 101

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L74986-2DL

Sample wt/vol: 1050 (q/mL) mL

Lab File ID: EF100205

Level: (low/med) LOW

Date Received: 09/24/01

% Moisture:

decanted: (Y/N) N

COMPOUND

121-69-7-----N, N-Dimethylaniline

Date Extracted: 09/28/01

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/02/01

Injection Volume: 2.0 (uL)

Dilution Factor:

10.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

CONCENTRATION UNITS: (ug/I/ or ug/Kg) ug/l

62-53-3-----Aniline

690 95

UD

SAMPLE NO.

MW-8S

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) WATER Lab Sample ID: L75106-9

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF100321

Level: (low/med) LOW Date Received: 09/27/01

% Moisture: decanted: (Y/N) N Date Extracted:10/02/01

Concentrated Extract Volume:1000 (uL) Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL) Dilution Factor: 1000.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

CAS NO. COMPOUND (ug/L or ug/kg) ug/l Q

SAMPLE NO.

MW-9S

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L75034-2

Sample wt/vol:

1050 (q/mL) mL

Lab File ID: EF100209

Level: (low/med)

LOW

Date Received: 09/26/01

% Moisture:

decanted: (Y/N) N

Date Extracted:10/01/01

Concentrated Extract Volume:1000 (uL)

62-53-3-----Aniline

Date Analyzed: 10/02/01

Injection Volume: 2.0 (uL)

Dilution Factor:

Q

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/l

10

CAS NO.

COMPOUND

121-69-7-----N,N-Dimethylaniline

(०५

U

SAMPLE NO.

TW-01 Contract: Blasland, B Lab Name: GALSON LABORATORIES

Lab Code: Case No.: 1 SAS No.: SDG No.: L74986

Matrix: (soil/water) WATER Lab Sample ID: L75034-1

Lab File ID: EF100207 Sample wt/vol: 1050 (g/mL) mL

Date Received: 09/26/01 Level: (low/med) LOW

decanted: (Y/N) N Date Extracted:10/01/01 % Moisture:

Concentrated Extract Volume:1000 (uL) Date Analyzed: 10/02/01

Injection Volume: 2.0 (uL) Dilution Factor:

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

10 s 62-53-3-----Aniline U 121-69-7-----N, N-Dimethylaniline 2 J

SAMPLE NO.

TW-02R

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74986

Matrix: (soil/water) WATER

Lab Sample ID: L75034-9

Sample wt/vol:

1050 (g/mL) mL

Lab File ID: EF100214

Level: (low/med) LOW Date Received: 09/26/01

% Moisture:

decanted: (Y/N) N

Date Extracted:10/01/01

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/02/01

Injection Volume: 2.0 (uL)

CAS NO.

COMPOUND

Dilution Factor:

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/l

E

62-53-3-----Aniline 121-69-7----N, N-Dimethylaniline

56000 (300P) 32

SAMPLE NO.

TW-02R DL

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L74988

Matrix: (soil/water) WATER

Lab Sample ID: L75034-9DL

Sample wt/vol: 1050 (g/mL) mL

Lab File ID: EF100221

Level: (low/med) LOW

Date Received: 09/26/01/

% Moisture: decanted: (Y/N) N

COMPOUND

Date Extracted: 10/01/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/02/01

Injection Volume: 2.0 (uL)

Dilution Factor 1000.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

62-53-3-----Aniline 121-69-7----N, N-Dimethylaniline

63000

9500

D UD



Chain of Custody

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Received For Laboratory By:

DATE

TIME

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AIDIII# 100/K-1N

DATA REVIEW FOR MCKESSON - BEAR STREET SITE

SDG# L76429

SEMIVOLATILE ANALYSES

Analyses performed by:

Galson Laboratories East Syracuse, New York

Review performed by:



Blasland, Bouck & Lee, Inc. Syracuse, New York

Summary

The following is an assessment of the data package for SDG # L76429 for sampling at the McKesson - Bear Street Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Ar	ialysis Metho	Method		
And the second s	100.00	Matrix		8260	8015	8270		
MW-3S	L76429-1	water	11/8/01			x		
-								
-				P				
	N.							
	_							

1 compounds include: aniline

SEMIVOLATILE ANALYSES METHOD 8270

Introduction

Analyses were performed according to USEPA SW-846 Method 8270 as referenced in NYSDEC ASP.

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 National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- 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.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- 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.
- R The sample results are rejected.

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 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 test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for semi-volatile analyses under the Quality Assurance Project Plan (QAPP) are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

The sample was extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, field, or 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. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blank.

3. Mass Spectrometer Tuning

Mass spectrometer performance was 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 various percent relative standard deviation (%RSD) limits for select compounds and allows two outliers. A technical review of the data applies a RSD limit of 30% to all compounds with no exceptions.

The %RSD was less than 30% for all compounds.

4.2 Continuing Calibration

All continuing calibration standards were within 25% difference (%D) of the initial calibration.

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.

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 experimental run.

All internal standard areas and retention times were within established limits.

7. Compound Identification

Target compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

No matrix spike/matrix spike duplicate analysis was performed on the sample in this data set. All matrix spike blank recoveries were, however, within control limits.

9. Field Duplicates

No field duplicates were included in this data set.

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 listed in the analytical method.



Semivolatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were two or more surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Matrix Spikes			
Is there a matrix spike recovery form present?		X	
Were matrix spikes analyzed at the required frequency		X	
How many spike recoveries were outside of QC limits?			
NA out ofNA		-	
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
<u>NA</u> out of <u>NA</u>			
<u>Blanks</u>			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each GC/MS system used?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?		X	

Semivolatile Organics Data Validation Checklist - Page 2

Do any field/rinse blanks have positive results?	X
Tuning and Mass Calibration	
Are the GC/MS tuning forms present for DFTPP? X	
Are the bar graph spectrum and mass/charge listing provided for each DFTPP? XX	
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	
Have the ion abundance criteria been met for each instrument used?	
Target Analytes	
Is an organics analysis data sheet present for each of the following:	
Samples XX	
Matrix spikes X	
Blanks X	
Has GPC cleanup been performed on all soil/sediment sample extracts?	X
Are the reconstructed ion chromatograms present for each of the following:	
Samples XX	. <u>-</u>
Matrix spikes X	
Blanks	
Is the chromatographic performance acceptable? X	
Are the mass spectra of the identified compounds present? X	
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum? X	- <u>-</u>
Do the samples and standard relative ion intensities agree within 20%?	
Tentatively Identified Compounds	
Are all the TIC summary forms present?X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X
Are any target compounds listed as TICs?	X

Semivolatile Organics Data Validation Checklist - Page 3

	YES	NO	NA
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		•
Are the response factor RSDs within acceptable limits?	<u>X</u>		
Are the average RRF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF equal to or greater than minimum requirements?	<u> </u>		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of the samples and blanks within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		

Semivolatile Organics Data Validation Checklist - Page 4

	YES	NO	NA
Field Duplicates			
Were field duplicates submitted with the samples?		X	

Semi-Volatile Qualifier Summary Holding Time, Surrogates, Internal Standards

Holding		Surro	gates*		Internal Standards*								
Time*	NBZ	FBP	TPH	DCB	DCB	NPT	ANT	PHN	CRY	PRY			
					_								
	_												
	_												
		_								_			
					-								
	Holding Time !	Holding Time* NBZ	Holding Surroy Time* NBZ FBP	Holding Surrogates* NBZ FBP TPH NBZ FBP TPH	Holding Time* NBZ FBP TPH DCB	Holding NBZ FBP TPH DCB DCB NBZ FBP TPH DCB NBZ FBP T	Holding Surrogates* II Time* NBZ FBP TPH DCB DCB NPT NBZ FBP TPH DCB	Holding Time* NBZ FBP TPH DCB DCB NPT ANT NBZ	Holding Time! NBZ FBP TPH DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB DCB DCB DCB NPT ANT PHN NBZ FBP TPH DCB	Holding Surrogates* Internal Standards* Ime* NB2 FBP TPH DCB DCB NPT ANT PHN CRY			

Surrogates:
NBZ Nitrobenzene-d5
FBP 2-Fluorobiphenyl

TPH Terphenyl-d14 DCB 1,2-Dichlorobenzene-d4 Internal Standards:

DCB 1,4-Dichlorobenzene-d4

NPT Naphthalene-d8 ANT Acenaphthene-d10

PHN Phenanthrene-d10
CRY Chrysene-d12

PRY Perylene-d12

* Unless otherwise specified, all parameters are within acceptable limits.

Qualifiers:

D Diluted

Recovery low Recovery high

Semivolatile Calibration Outliers

Instrument: <u>MSE</u> Level: <u>low</u>											
Date/Time	11	/12/01	11/14/0	1 0723							
	Init	Initial Cal.		Cal.	Con	Cal.	Cont	Cal.	Cont. Cal.		
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D	
aniline	_										
Affected Samples:]	_				

Corrected Sample Analysis Data Sheets

SAMPLE NO.

MW-3S

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Matrix: (soil/water) WATER

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L76429

Sample wt/vol: 1050 (g/mL) mL

Lab File ID: EF111408

Lab Sample ID: L76429-1

Level: (low/med) LOW

Date Received: 11/08/01

% Moisture: decanted: (Y/N) N

Date Extracted:11/13/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/14/01

Injection Volume: 2.0 (uL)

Dilution Factor:

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO.

COMPOUND

(ug/L or ug/Kg) ug/l

Q

62-53-3------Aniline

69

Chain of Custody

NAME: SIGNATURE:	SIGNATURE X	MPLES	SAMPLER'S NAME: Jerry 5	* Need BARR	* Cat B dely	REMARKS:			Mw-35	SAMPLE ID	6723 (315)	Send Report to: Marg	6601 Kirkville Road East E. Syracuse, New York 13057 315 437-7252 • 888-577-5227	Laboratories	Losied
DATE: TIME:	DATE:	/-/-	Shi / Betherine,	batch	meadly for				11/86	Date Time	Towarth Ro	argret Skwarn			
DATE: TIME:	10/8/11	NAME: DATE:	Mus rasjanature:	Q C	Briline				\ \ \ \ \	Chain of Custody R	3214.006P.O.# A SAME AS	, L	Project Name / Number Ph # (3/5) - 446- 2570 Mc & \$ 5	Blastend, Bouch & Las - * Rush Service	X E
Airbill # walk-	Temp (9 °C	Custody Seal Intact? Shipment Complete?	VOC Pres			Total Co				Record 2	line (EPI		1 1	ט
),\(\frac{1}{2}\)	TS TB TM	☐ Yes ☐ No ☐ Yes ☐ No	U P AU			Total Containers -								PARAMETERS FOR ANALYSIS	Page (of 1
	(43)	□ N.A.	Z										7	SIS	i

DATA REVIEW FOR MCKESSON - BEAR STREET SITE

SDG# L75107

VOLATILE AND SEMIVOLATILE ANALYSES

Analyses performed by:

Galson Laboratories East Syracuse, New York

Review performed by:



Blasland, Bouck & Lee, Inc. Syracuse, New York

Summary

The following is an assessment of the data package for SDG # L75107 for sampling at the McKesson - Bear Street Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis Method		
				8260 ¹	8015 ^{2,3}	82704
MW-29	L75107-1	water	9/26/01	x	x	x
MW-30 ⁵	L75107-2	water	9/27/01	x	x	x
DUP-2	L75107-5	water	8/27/01	x	x	x
MW-17R	L75107-6	water	9/27/01	x	x	x
TRIP BLANK (C2)	L75107-7	water		x	x	
MW-24SR	L75149-1	water	9/28/01	x	x	x
MW-24DR	L75149-2	water	9/28/01	х	x	x
PZ-5S	L75149-3	water	9/28/01	х	x	x
PZ-5D	L75149-4	water	9/28/01	х	X	x
TRIP BLANK 1	L75149-5	water		х	х	
		·				
		_		_		
_						
						-

compounds include: methylene chloride, acetone, trichloroethene, benzene, toluene, ethylbenzene, and xylenes 1 2 3 4 5

compounds include: methanol

Subcontracted to Columbia Analytical Services, Inc. of Rochester, New York.

compounds include: aniline and N,N -dimethylaniline

MS/MSD analyses performed on sample

	•	
•		

VOLATILE ANALYSES METHOD 8260

Introduction

Analyses were performed according to USEPA method 8260 as referenced in the NYSDEC ASP.

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 National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- 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.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- 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.
- R The sample results are rejected.

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 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 test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding time for volatile analyses under the Quality Assurance Project Plan (QAPP) is 7 days from sample receipt.

All samples were analyzed within the specified holding time.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, or 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 contamination of samples during shipment. Field and rinse blanks measure contamination of samples during field operations.

Methylene chloride was detected in the method and trip blanks. Since no methylene chloride was detected in the samples, no data have been qualified based on the blank content.

3. Mass Spectrometer Tuning

Mass spectrometer performance was 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 various percent relative standard deviation (%RSD) limits for select compounds and allows two outliers. A technical review of the data applies a RSD limit of 30% to all compounds with no exceptions.

The %RSD were less than 30% and the response factors were greater than 0.05 for all compounds.

4.2 Continuing Calibration

All continuing calibration standards were within 25% difference (%D) of the initial calibration, with the following exceptions: Instrument MSC 9/28/01 10:10

Acetone 32.7%

Data for acetone has been qualified as estimated in the associated sample MW-30. Since no acetone was detected in the remaining associated samples and since the compound response was increasing, no additional data have been qualified based on the %D.

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.

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 experimental run.

All internal standard areas and retention times were within established limits.

7. Compound Identification

Target compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits. All matrix spike blank recoveries were also within control limits.

9. Field Duplicates

Results for duplicate samples are summarized as follows:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
MW-30 / DUP-2	acetone	4 J	ND	NA ´
	benzene	2J	1J	66.7%

ND Not detected.

NA Analyte not detected in sample and/or duplicate. RPD not applicable.

The duplicate results are acceptable.

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 listed in the analytical method.



Volatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	<u>X</u>		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	_X_		
Was one or more surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			<u>X</u>
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	_X_		
How many spike recoveries were outside of QC limits?			
<u> </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
<u>0</u> out of <u>3</u>			
Blanks			
Is the method blank summary form present?	<u>X</u>		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every twelve hours for each system used?	X		
Do any method/reagent/instrument blanks have positive results?	X		
Are there trip/field/rinse/equipment blanks associated with every sample?	X		
Do any trip/field/rinse blanks have positive results?	X		

Volatile Organics Data Validation Checklist - Page 2

	YES	NO	NA
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for BFB?	<u>X</u>		
Are the bar graph spectrum and mass/charge listing provided for each $\ensuremath{BFB?}$	X		
Has a BFB been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	<u> </u>		
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	<u>X</u>		
Matrix spikes	<u>X</u>		
Blanks	X		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	<u> </u>		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?	X		
Is the RRT of each reported compound within 0.06 RRT units of the continuing calibration standard?	X_		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and there associated "best match" spectra present?			X
Are any target compounds listed as TICs?			X
Are all ion present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X

Volatile Organics Data Validation Checklist - Page 3

	YES	<u>NO</u>	NA_
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within specified limits?	X		
Are the average RRF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	_X_		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	_ <u>X</u> _		
All %D within acceptable limits?		<u> X</u>	
Are all RF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		_x_	
Internal Standards			
Are internal standard areas of every sample and blank within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
Field Duplicates			
Were field duplicates submitted with the samples?	Х		

Volatile Qualifier Summary Holding Time, Surrogates, Internal Standards

Sample ID	Holding	Surrogates* TOL BFB DCE		Internal Standards*			
Sample ID	Time*	TOL	BFB	DCE	DFB	DCB	CBZ
MW-29	·						
MW-30MS					_		
MW-30MSD				l			
DUP-2	_						
MW-17R							
TRIP BLANK (C2)			_				
MW-24SR						_	
MW-24DR						_	
PZ-5S							
PZ-5D							
TRIP BLANK 1		_					
				_			
						_	
	_						

Surrogates: TOL Toluene-d8 BFB Bromofluorobenzene DCE 1,4-Dichloroethane-d4 Internal Standards: Internal Standards: Qualifiers:
DCB 1,4-Difluorobenzene I Recovery high
DFB 1,4-Dichlorobenzene-d4 I Recovery low

CBZ Chlorobenzene-d5

Qualifiers:

^{*} Unless otherwise specified, all parameters are within acceptable limits.

Volatile Calibration Outliers

Instrument: MSC
Matrix: water
Level: low

Date/Time	9/17/01		9/28/0	1 1010	1010 10/1/01 1012		10/2/01 1115			
	Initia	l Cal.	Cont	Cont. Cal. Cont. Cal		. Cal.	Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Methylene chloride									_	
Acetone				32.7						
Trichloroethene										
Benzene										
Toluene										
Ethylbenzene										
Xylene (total)	<u></u>									
Affected Samples:	<u> </u>		dup2							
			mw30							
									_	
	1		 		+					



Lab Name: GALSON LABORATORIES Contract: Blasland, B _______

Lab Code: Case No.: 1 SAS No.: SDG No.: L75107

Matrix: (soil/water) Water Lab Sample ID: L75107-5

Sample wt/vol: 5 (q/mL) mL Lab File ID: CE092809

Level: (low/med) LOW Date Received: 09/27/01

%Moisture: not dec. Date Analyzed: 09/28/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

75-09-2-----Methylene Chloride 10 U 67-64-1-----Acetone 10 U 79-01-6-----Trichloroethene 10 U 71-43-2-----Benzene 1 J 108-88-3----Toluene 10 U 100-41-4-----Ethylbenzene U 10 1330-20-7-----Xylene (total) U 10

MW-17R

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L75107

Matrix: (soil/water) Water

Lab Sample ID: L75107-6

Sample wt/vol: 5

(g/mL) mL

Lab File ID: CE100110

Level: (low/med) LOW Date Received: 09/27/01

%Moisture: not dec.

Date Analyzed: 10/01/01

GC Column: DB-624

ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

CAS NO. COMPOUND CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/l

75-09-2	10 10 10 5 10 10	מממ מממ מממ
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Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L75107

Matrix: (soil/water) Water Lab Sample ID: L75149-2

Sample wt/vol: 5 (q/mL) mL Lab File ID: CE100113

Level: (low/med) LOW Date Received: 09/28/01

%Moisture: not dec. Date Analyzed: 10/01/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

75-09-2-----Methylene Chloride 10 U 67-64-1------Acetone 10 U 79-01-6-----Trichloroethene 10 U 71-43-2-----Benzene U 10 108-88-3-----Toluene U 10 100-41-4-----Ethylbenzene U 10 1330-20-7-----Xylene (total) U 10

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.:

SDG No.: L75107

Matrix: (soil/water) Water

Lab Sample ID: L75149-1

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE100112

Level: (low/med) LOW

Date Received: 09/28/01

%Moisture: not dec.

Date Analyzed: 10/01/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume:

(uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND	(ug/L or ug/Kg) ug/l $$ Q
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75-09-2Methylene Chloride 67-64-1	10 10 10 10 10 10	מממממ
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Tah Name:	CALSON	I.ARORATORIES	Contract	Placland		MW-29
Lab Name:	GALSON	LABORATORIES	Contract:	Blasland,	В	

Lab Code: Case No.: 1 SAS No.: SDG No.: L75107

Matrix: (soil/water) Water Lab Sample ID: L75107-1

Sample wt/vol: 5 (q/mL) mL Lab File ID: CE100107

Level: (low/med) LOW Date Received: 09/27/01

%Moisture: not dec. Date Analyzed: 10/01/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

75-09-2-----Methylene Chloride__ 10 U 67-64-1-----Acetone 10 U 79-01-6-----Trichloroethene U 10 71-43-2-----Benzene U 10 108-88-3-----Toluene 100-41-4----Ethylbenzene U 10 U 10 1330-20-7-----Xylene (total)_ U 10

MW-30

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L75107

Matrix: (soil/water) Water

Lab Sample ID: L75107-2

Sample wt/vol: 5

(g/mL) mL

Lab File ID: CE092806

Level: (low/med)

LOW

75-09-2-----Methylene Chloride

79-01-6-----Trichloroethene

1330-20-7-----Xylene (totaI)_

100-41-4-----Ethylbenzene

Date Received: 09/27/01

%Moisture: not dec.

Date Analyzed: 09/28/01

GC Column: DB-624 ID: .25 (mm)

Dilution Factor: 1

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND

67-64-1-----Acetone

71-43-2-----Benzene

108-88-3-----Toluene

(ug/L or ug/Kg) ug/l Q

> 10 U 4 J 10 U 2 J 10 U U 10 U 10

						PZ-5D
Lab Name:	GALSON	LABORATORIES	Contract:	Blasland,	В	

Lab Code: Case No.: 1 SAS No.: SDG No.: L75107

Matrix: (soil/water) Water Lab Sample ID: L75149-4

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE100115

Level: (low/med) LOW Date Received: 09/28/01

%Moisture: not dec. Date Analyzed: 10/01/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l

75-09-2	10 10 10 10 10 10 10	U U U U U
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Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L75107

Matrix: (soil/water) Water Lab Sample ID: L75149-3

Sample wt/vol: 5 (g/mL) mL Lab File ID: CE100114

Level: (low/med) LOW Date Received: 09/28/01

%Moisture: not dec. Date Analyzed: 10/01/01

GC Column: DB-624 ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

75-09-2-----Methylene Chloride 10 U 67-64-1-----Acetone 7 J 79-01-6-----Trichloroethene U 10 71-43-2----Benzene 10 U 108-88-3-----Toluene U 10 100-41-4-----Ethylbenzene U 10 1330-20-7-----Xylene (total) U 10

TRIP BLANK (CLR 2)

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L75107

Matrix: (soil/water) Water

Lab Sample ID: L75107-7

0

Sample wt/vol: 5

(g/mL) mL

Lab File ID: CE100111

Level: (low/med)

LOW

Date Received: 09/27/01

%Moisture: not dec.

Date Analyzed: 10/01/01

GC Column: DB-624

ID: .25 (mm) Dilution Factor: 1

Soil Extract Volume:

(uL)

Soil Aliquot Volume:

(uL)

CAS NO.

COMPOUND

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

75-09-2	1 10 10 10 10 10	J U U U
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TRIP BLANK 1

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.:

SDG No.: L75107

Matrix: (soil/water) Water

Lab Sample ID: L75149-5

....,,

Lab File ID: CE100209

Sample wt/vol: 5

(g/mL) mL Lab File ID

Level: (low/med) LOW

Date Received: 09/28/01

%Moisture: not dec.

Date Analyzed: 10/02/01

GC Column: DB-624

ID: .25 (mm)

COMPOUND

Dilution Factor: 1

Soil Extract Volume:

CAS NO.

(uL)

Soil Aliquot Volume:

(uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/l

108-88-3			υ υ υ υ
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VOLATILE ANALYSES METHOD 8015

Introduction

Analyses were performed according to USEPA method 8015 as referenced in the NYSDEC ASP.

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 National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- 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.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- 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.
- R The sample results are rejected.

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 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 test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding time for volatile analyses under the Quality Assurance Project Plan (QAPP) is 7 days from sample receipt. The technical holding time is 14 days from sample collection to analysis.

Samples MW-30 and TRIP BLANK(C2) were analyzed over the specified holding time. All methanol data for the listed samples have been qualified as estimated based on the holding time violation. All other samples were analyzed within the specified holding time.

2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, or 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 contamination of samples during shipment.

No target compounds were detected in the method or trip blanks.

3. 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.

3.1 Initial Calibration

The method specifies a percent relative standard deviation (%RSD) limit of 20% or, alternately, a correlation coefficient of 0.99 or greater.

The initial calibration was acceptable.

3.2 Continuing Calibration

All continuing calibration standards were within 15%D of the initial calibration.

4. Compound Identification

Target compounds are identified by using the analyte's retention time.

All identified compounds fell within the established retention time windows.

5. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

All matrix spike and matrix spike duplicate recoveries and the relative percent difference between recoveries were within control limits. The matrix spike blank recovery was also within control limits.

6. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID/ Duplicate ID	Analyte ii	Sample Result	Duplicate Result	RPD
MW-30 / DUP-2	methanol	ND	ND	NA

ND Not detected.

NA Analyte not detected in sample and/or duplicate. RPD not applicable.

The duplicate results are acceptable.

7. System Performance and Overall Assessment

Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines listed in the analytical method.



Organic Data Validation Checklist

	YES	NO	NA_
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
Holding Times			
Have any holding times been exceeded?	X		
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency?	X		
How many spike recoveries were outside of QC limits?			
<u>0</u> out of <u>2</u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
<u> </u>			
<u>Blanks</u>			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed at least once every twelve hours for each system used?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Are there trip/field/rinse/equipment blanks associated with every sample?) X		_
Do any trip/field/rinse blanks have positive results?		X	
Target Analytes			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		

Organic Data Validation Checklist - Page 2

	YES	NO	NA_
Are the chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X	<u>-</u>	
Is the chromatographic performance acceptable?	X		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs or correlation coefficients within acceptable limits?	X		
Are there any transcription/calculation errors in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?		X	
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Calibration Outliers

Instrument: <u>V2-Varian 3300</u> Matrix: <u>water</u>

Date	10/11/01	10/11/01	10/12/01	10/16/01		
Time *		1644	0944	1534		沙里语
	Initial Cal.	Cont. Cal.				
	RSD	%D	%D:	, %p.	%D	_%D
methanol	ok	ok	ok	_ok		
Affected Samples:					_	
		_				



VOLATILE ORGANICS
METHOD 8015B METHANOL

Reported: 10/22/01

Galson Laboratories

Project Reference: L75107 Client Sample ID: MW-29

Date Sampled: 09/27/01 Date Received: 10/02/01	Order #: 497385 Submission #: R2108850	Sample Matrix: Analytical Run	
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10 ANALYTICAL DILUTION:	/11/01 1.00		
METHANOL	1000	1000 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	101	ક

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75107 Client Sample ID: MW-30

Date Sampled: 09/27/01 Date Received: 10/02/01	Order #: 497386 Submission #: R2108850	Sample Matrix: Analytical Run	
ANALYTE	PQL	RESULT	UNITS

DATE ANALYZED : 10/16/01
ANALYTICAL DILUTION: 1.00

METHANOL 1000 1000 ÚUT UG/L

SURROGATE RECOVERIES QC LIMITS

ISOPROPYL ETHER (50 - 150 %) 100 %

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75107 Client Sample ID : DUP-2

Date Sampled: 09/27/01 Order #: 497387 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108850 Analytical Run 70223

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/11 ANALYTICAL DILUTION:	/01 1.00		
METHANOL	1000	1000 ប	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	99	ફ

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75107
Client Sample ID : MW-17R

Date Sampled: 09/27/01 Order #: 497388 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108850 Analytical Run 70223

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/11/ ANALYTICAL DILUTION:	01 1.00		
METHANOL	1000	1000 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	81	૪

VOLATILE ORGANICS
METHOD 8015B METHANOL

Reported: 10/22/01

Galson Laboratories

Project Reference: L75107

Client Sample ID : TRIP BLANK (CLR2)

Date	Sampled:	09/27/01	Order	#:	497389	Sample Matrix	:	WATER
Date	Received:	10/02/01	Submission	#:	R2108850	Analytical Ru	n	70232

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/16, ANALYTICAL DILUTION:	/01 1.00	-	
METHANOL	1000	1000 KUT	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	134	8

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75107 Client Sample ID: MW-24SR

Date Sampled: 09/28/01 Order #: 497390 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108850 Analytical Run 70099

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/12 ANALYTICAL DILUTION:	2/01 1.00		
METHANOL	1000	1000 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	114	ફ

VOLATILE ORGANICS METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

ISOPROPYL ETHER

Project Reference: L75107 Client Sample ID : MW-24DR

Date Sampled: 09/28/01 Order #: 497391 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108850 Analytical Run 70099

ANALYTE PQL RESULT UNITS

DATE ANALYZED : 10/12/01
ANALYTICAL DILUTION: 1.00

METHANOL 1000 1000 U UG/L

SURROGATE RECOVERIES QC LIMITS

(50 - 150 %)

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VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75107 Client Sample ID : PZ-5S

Date Sampled: 09/28/01 Order #: 497392 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108850 Analytical Run 70099

ANALYTE PQL RESULT UNITS DATE ANALYZED : 10/12/01 1.00 ANALYTICAL DILUTION: METHANOL 1000 1000 U UG/L SURROGATE RECOVERIES QC LIMITS (50 - 150 %) 113 윻 ISOPROPYL ETHER

VOLATILE ORGANICS

METHOD 8015B METHANOL

Reported: 10/22/01

Galson Laboratories

Project Reference: L75107

Client Sample ID : TRIP BLANK 1

Date Sampled: 09/28/01 Order #: 497393 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108850 Analytical Run 70099

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/12 ANALYTICAL DILUTION:	2/01 1.00		,
METHANOL	1000	1000 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	117	ક

VOLATILE ORGANICS

METHOD 8015B METHANOL Reported: 10/22/01

Galson Laboratories

Project Reference: L75107 Client Sample ID: PZ-5D

Date Sampled: 09/28/01 Order #: 497394 Sample Matrix: WATER Date Received: 10/02/01 Submission #: R2108850 Analytical Run 70099

' '		•	
ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/12/ ANALYTICAL DILUTION:	01 1.00		
METHANOL	1000	1000 U	UG/L
SURROGATE RECOVERIES	QC LIMITS		
ISOPROPYL ETHER	(50 - 150 %)	104	8

SEMIVOLATILE ANALYSES METHOD 8270

<u>Introduction</u>

Analyses were performed according to USEPA SW-846 Method 8270 as referenced in NYSDEC ASP.

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 National Functional Guidelines:

- U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
- J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
- B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
- 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.
- E The compound was quantitated above the calibration range.
- D Concentration is based on a diluted sample analysis.
- 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.
- R The sample results are rejected.

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 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 test, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

Data Assessment

1. Holding Time

The specified holding times for semi-volatile analyses under the Quality Assurance Project Plan (QAPP) are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times are 7 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance blanks (i.e., method, field, or 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. Field and rinse blanks measure contamination of samples during field operations.

No target compounds were detected in the method blanks.

3. Mass Spectrometer Tuning

Mass spectrometer performance was 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 various percent relative standard deviation (%RSD) limits for select compounds and allows two outliers. A technical review of the data applies a RSD limit of 30% to all compounds with no exceptions.

The %RSD was less than 30% for all compounds.

4.2 Continuing Calibration

All continuing calibration standards were within 25% difference (%D) of the initial calibration.

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.

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 experimental run.

All internal standard areas and retention times were within established limits.

7. Compound Identification

Target compounds are identified on the GC/MS by using the analyte's relative retention time and ion spectra.

All identified compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate/Matrix Spike Blank

Matrix and matrix spike duplicate (MS/MSD) data are used to assess the precision and accuracy of the analytical method relative to the sample matrix. Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

All matrix spike and matrix spike duplicate recoveries and relative percent differences between recoveries were within control limits. All matrix spike blank recoveries were also within control limits.

9. Field Duplicates

Results for duplicate samples are summarized as follows:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
MW-30 / DUP-2	aniline	8J	10	22.2%
	N,N-dimethylaniline	1 J	2J	66.7%

The duplicate results are acceptable.

10. System Performance and Overall Assessment

The laboratory used a reporting limit of 5 μ g/l for aniline in this report; however, the lowest calibration standard analyzed was the equivalent of 10 μ g/l. Based on the lowest calibration standard analyzed, the reporting limit for aniline has been raised to 10 μ g/L for all samples.

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



Semivolatile Organics Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		X	
Is there a narrative or cover letter present?	X		
Are the sample numbers included in the narrative?		X	
Are the sample chain-of-custodies present?	X		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	
<u>Holding Times</u>			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	X		
Were two or more surrogate recoveries outside of specified limits for any sample or blank?		X	
If yes, were the samples reanalyzed?			X
Matrix Spikes			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits?			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of2			
<u>Blanks</u>			
Is the method blank summary form present?	X		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X		
Has a blank been analyzed for each GC/MS system used?	X		
Do any method/reagent/instrument blanks have positive results?		X	
Are there field/rinse/equipment blanks associated with every sample?		Х	

Semivolatile Organics Data Validation Checklist - Page 2

	YES	NO	NA
Do any field/rinse blanks have positive results?			X
Tuning and Mass Calibration			
Are the GC/MS tuning forms present for DFTPP?	X		
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X		
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	X		
Have the ion abundance criteria been met for each instrument used?	X		
<u>Target Analytes</u>			
Is an organics analysis data sheet present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Has GPC cleanup been performed on all soil/sediment sample extracts?			X
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	X		
Blanks	X		
Is the chromatographic performance acceptable?	X		
Are the mass spectra of the identified compounds present?	X		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	X		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?		X	
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?			X
Are any target compounds listed as TICs?			
The any larger compounds noted as 1105:			

Semivolatile Organics Data Validation Checklist - Page 3

	YES	NO	NA
Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
Do the TIC and "best match" spectrum agree within 20%?			X
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		X	
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	X		
Standard Data			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	X		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	X		
Are the response factor RSDs within acceptable limits?	X		
Are the average RRF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting the RRF or RSD?		X	
Continuing Calibration			
Are the continuing calibration forms present for each day and each instrument?	X		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?	X		
Are all RF equal to or greater than minimum requirements?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
Internal Standards			
Are internal standard areas of the samples and blanks within the upper and lower limits for each continuing calibration?	X		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		

Semivolatile Organics Data Validation Checklist - Page 4

	YES	NO	NA
Field Duplicates			
Were field duplicates submitted with the samples?	X		

Semi-Volatile Qualifier Summary Holding Time, Surrogates, Internal Standards

Sample ID	Holding		Surro	jates*		li	nternal:	Standard	ls*	
	Time*	NBZ	FBP	*****	DCB_	NPT		PHN		PRY
MW-29										
MW-30										
MW-30MS										
MW-30MSD										
DUP-2										
MW-17R										
MW-24SR										
MW-24DR										
PZ-5S										
PZ-5D										
								_		
								_		

Surrogates:
NBZ Nitrobenzene-d5
FBP 2-Fluorobiphenyl
TPH Terphenyl-d14
DCB 1,2-Dichlorobenzene-d4

Internal Standards: DCB 1,4-Dichlorobenzene-d4

NPT Naphthalene-d8
ANT Acenaphthene-d10
PHN Phenanthrene-d10
CRY Chrysene-d12

Perylene-d12

Qualifiers:

D Diluted
1 Recovery low
1 Recovery high

* Unless otherwise specified, all parameters are within acceptable limits.

PRY

Corrected Sample Analysis Data Sheets

1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET SAMPLE NO.

DUP-2

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code:

Case No.: 1 SAS No.:

SDG No.: L75107

Sample wt/vol:

Matrix: (soil/water) WATER

Lab Sample ID: L75107-5

1050 (g/mL) mL

Lab File ID: EF100309

Level: (low/med)

LOW

Date Received: 09/27/01

% Moisture:

decanted: (Y/N) N

Date Extracted:10/02/01

Dilution Factor:

Concentrated Extract Volume:1000 (uL)

Injection Volume: 2.0 (uL)

Date Analyzed: 10/03/01

GPC Cleanup:

(Y/N) N

pH: 7.0

CAS NO.

COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/l

Q

62-53-3-----Aniline 121-69-7----N, N-Dimethylaniline

10 2

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1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET SAMPLE NO.

MW-17R

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L75107

Matrix: (soil/water) WATER

Lab Sample ID: L75107-6

Sample wt/vol:

1050 (q/mL) mL

Lab File ID: EF100310

Level: (low/med) LOW Date Received: 09/27/01

% Moisture:

decanted: (Y/N) N

Date Extracted:10/02/01

Concentrated Extract Volume:1000 (uL)

Date Analyzed: 10/03/01

0

Injection Volume: 2.0 (uL)

Dilution Factor:

1.0

GPC Cleanup:

(Y/N) N pH: 7.0

CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) ug/l

108 62-53-3-----Aniline U 121-69-7----N, N-Dimethylaniline 10 U

SAMPLE NO.

Lab Name: GALSON LABORATORIES Contract: Blasland, B

Lab Code: Case No.: 1 SAS No.: SDG No.: L75107

Matrix: (soil/water) WATER Lab Sample ID: L75149-2

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF100406

Level: (low/med) LOW Date Received: 09/28/01

% Moisture: decanted: (Y/N) N Date Extracted:10/03/01

Concentrated Extract Volume:1000 (uL) Date Analyzed: 10/04/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

injection volume. 2.0 (db) bildtion ractor. 1.

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET SAMPLE NO.

Lab Name: GALSON LABORATORIES Contract: Blasland, B MW-24SR

Lab Code: Case No.: 1 SAS No.: SDG No.: L75107

Matrix: (soil/water) WATER Lab Sample ID: L75149-1

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF100405

Level: (low/med) LOW Date Received: 09/28/01

% Moisture: decanted: (Y/N) N Date Extracted:10/03/01

Concentrated Extract Volume:1000 (uL) Date Analyzed: 10/04/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

62-53-3------Aniline U 108 U 121-69-7----N,N-Dimethylaniline 10 U

1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET SAMPLE NO.

Lab Name: GALSON LABORATORIES Contract: Blasland, B _____

Lab Code: Case No.: 1 SAS No.: SDG No.: L75107

Matrix: (soil/water) WATER Lab Sample ID: L75107-1

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF100305

Level: (low/med) LOW Date Received: 09/27/01

% Moisture: decanted: (Y/N) N Date Extracted:10/02/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET SAMPLE NO.

Lab Name: GALSON LABORATORIES Contract: Blasland, B MW-30

Lab Code: Case No.: 1 SAS No.: SDG No.: L75107

Matrix: (soil/water) WATER Lab Sample ID: L75107-2

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF100306

Level: (low/med) LOW Date Received: 09/27/01

% Moisture: decanted: (Y/N) N Date Extracted:10/02/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/03/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

1C SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET SAMPLE NO.

			PZ-5D
Lab Name:	GALSON LABORATORIES	Contract: Blasland, I	3

Lab Code: Case No.: 1 SAS No.: SDG No.: L75107

Matrix: (soil/water) WATER Lab Sample ID: L75149-4

Sample wt/vol: 1050 (g/mL) mL Lab File ID: EF100408

Level: (low/med) LOW Date Received: 09/28/01

% Moisture: decanted: (Y/N) N Date Extracted:10/03/01

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/04/01

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) ug/l Q

1B SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET SAMPLE NO.

	PZ-5S	
 _		

Lab Name: GALSON LABORATORIES

Contract: Blasland, B

Lab Code:

Case No.: 1

SAS No.:

SDG No.: L75107

Matrix: (soil/water) WATER

Lab Sample ID: L75149-3

Sample wt/vol:

1050 (g/mL) mL

Lab File ID: EF100407

Level: (low/med) LOW

Date Received: 09/28/01

% Moisture:

decanted: (Y/N) N

Date Extracted:10/03/01

Concentrated Extract Volume:1000 (uL) Date Analyzed: 10/04/01

Injection Volume: 2.0 (uL)

CAS NO.

Dilution Factor:

GPC Cleanup: (Y/N) N pH: 7.0

COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/l

Q

62-53-3Aniline	\ひゟ゙ 10	ט
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