

# <u>Transmittal</u>

Transmitted via Federal Express		Blaslar 6723 T Syracu (315) 4	nd, Bouck & Lee, Inc. Fowpath Road/Box 66 Ise, New York 13214- I46-9120	0068				
То:	Fo: Mr. Thomas Reamon, P.E. Bureau of Hazardous Site Control New York State Department of		Date: File:	October 21, 2003 0260.26003 #5		OCT	22	
Environmental Conservation 625 Broadway, 11 <sup>th</sup> Floor Albany, NY 12233-7014		Re:	McKesson Envirosys Bear Street Facility Syracuse, New York	stems	Benar N. REMA	FOR CELLURA DIAL AUTION		
We a	re sending you:	➢ herewith ☐ drawings	unde lette	er separate cover rs	her	-		

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

	Quantity	ldentifying Number		Title		Action*
	1		Valida	ated Analytical Laboratory F	Reports	
\ct	ion letter cod	e: R – for y S - resub	our review omit	N - reviewed and noted J - rejected	l - for your information Y - for your approval	

Remarks:

Please find enclosed a copy of the validated analytical laboratory reports for groundwater samples collected by Blasland, Bouck & Lee, Inc. (BBL) and analyzed for the chemicals of concern during the May 2003 biannual process control monitoring event at the McKesson Bear Street facility. The reports are provided in two sample delivery groups: SDG # BEL0308 and SDG # BEL0309. These validated analytical laboratory reports are associated with the October 2003 biannual report submitted to the New York State Department of Environmental Conservation under separate cover, covering the anaerobic bioremediation treatment activities conducted at the site during January 2003 through June 2003.

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 & LEF, INC.

David J. Ultr Senior Vice President

CWS/jlc Enclosure

- cc: Mr. Jim Burke, P.E., New York State Department of Environmental Conservation (w/o enclosure)
  - Ms. Cynthia Whitfield, 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)
  - Mr. Christopher R. Young, P.G., de maximis, inc. (w/o enclosure)

#### DATA REVIEW FOR

#### MCKESSON - BEAR STREET SITE

SDG# BEL0308

#### VOLATILE AND SEMIVOLATILE ANALYSES

Analyses performed by:

Buck Environmental Laboratories, Inc. Cortland, New York

Review performed by:



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

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#### Summary

The following is an assessment of the data package for SDG # BEL0308 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			
				82601	8015 <sup>2</sup>	8270 <sup>3</sup>	
MW-1	0305065-01A	water	5/05/03	x	x	x	
MW-3S	03050 <u>6</u> 5-02A	water	5/05/03	x	x	X	
TRIP BLANK	0305065-03A	water		x	x	_	
MW-31	0305076-01A	water	5/06/03	×	x	×	
MW-95	0305076-02A	water	5/06/03	x	X	x	
MW-32	0305076-03A	water	5/06/03	x	X	x	
<u>TW-01</u>	0305076-04A	water	5/06/03	x	X	x	
MW-33⁴	0305076-05A	water	5/06/03	x	x	x	
TW-02R	0305076-08A	water	5/06/03	x	x	x	
MW-35	0305079-09A	water	5/06/03	x	x	x	
DUP-1	0305076-10A	water	5/06/03	X	x	x	
TRIP BLANK	030507 <u>6-11A</u>	water		x			
MW-34	0305076-12A	water	5/06/03	x	x	x	

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

2 compounds include: methanol

3 compounds include: aniline and N,N'-dimethylaniline

4 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.

#### 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.

All samples were analyzed within the technical 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.

No compounds were detected in the method or trip 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 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.

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.

Samples MW-33 and DUP-1 contained methylene chloride above the linear range. Data for methylene chloride in these samples have been replaced with data from the dilution analyses. All other 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 and matrix spike duplicate recoveries and the matrix spike blank recoveries were 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-33 / DUP-1	Acetone	88	80	9.5%
	Benzene	13	13	0.0%
	Methylene Chloride	2800	2600	7.4%

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.

Data Validation Checklist

# Volatile Organics Data Validation Checklist

	YES_	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		<u> </u>	
Is there a narrative or cover letter present?	<u>    X    </u>		
Are the sample numbers included in the narrative?	<u>    X    </u>		
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_	
<u>Holding Times</u>			
Have any holding times been exceeded?		<u>    X    </u>	
Surrogate Recovery			
Are surrogate recovery forms present?	<u>    X     </u>		
Are all the samples listed on the appropriate surrogate recovery form?	<u>    X    </u>		
Was one or more surrogate recoveries outside of specified limits for any sample or blank?		<u> </u>	
If yes, were the samples reanalyzed?			<u> </u>
<u>Matrix Spikes</u>			
Is there a matrix spike recovery form present?	<u>    X    </u>		
Were matrix spikes analyzed at the required frequency?	<u> </u>		<u></u>
How many spike recoveries were outside of QC limits?			
<u>0</u> out of <u>10</u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
out of <u>5</u>			
<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?	<u> </u>		
Has a blank been analyzed at least once every twelve hours for each system used?	<u> </u>		
Do any method/reagent/instrument blanks have positive results?		_ <u>X</u>	
Are there trip/field/rinse/equipment blanks associated with every sample?	_ <u>X</u>		
Do any trip/field/rinse blanks have positive results?		<u>X</u>	

# 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 BFB?	<u>_X</u>		
Has a BFB been analyzed for each twelve hours of analysis per instrument?	_ <u>X</u>		
Have the ion abundance criteria been met for each instrument used?	<u> </u>		
<u>Target Analytes</u>			
ls an organics analysis data sheet present for each of the following:			
Samples	<u>    X    </u>		
Matrix spikes	<u> </u>	<u></u>	
Blanks	<u> </u>		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	<u> </u>		
Matrix spikes	<u> </u>		
Blanks	<u> </u>		
Is the chromatographic performance acceptable?	<u> </u>		
Are the mass spectra of the identified compounds present?	<u>_X</u>		
Is the RRT of each reported compound within 0.06 RRT units of the continuing calibration standard?	<u>_x</u>		
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%?	_ <u>x</u> _		
Tentatively Identified Compounds			
Are all the TIC summary forms present?	<u> </u>		
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 <b>s</b> pectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	_ <u>×</u> _		

# Volatile Organics Data Validation Checklist - Page 3

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

#### Volatile Qualifier Summary Holding Time, Surrogates, Internal Standards

Sample ID	Holding		Surrogates*		Inte	rnal Standa	ds*
	Lime.	TOL	BFB	DBF	PFB	DFB	CBZ
MW-1							
MW-3S						_	
TRIP BLANK							
MW-31							
MW-9S							
MW-32							
TW-01							
MW-33							
MW-33 MS							
MW-33 MSD							
TW-02R							
MW-35							
DUP-1							
TRIP BLANK							
MW-34							
	-						

Surrogates:

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TOL Toluene-d8 BFB Bromofluorobenzene

DBF Dibromofluoromethane

Internal Standards: PFB Pentafluorobenzene

DFB 1,4-Difluorobenzene

CBZ Chlorobenzene-d5

Qualifiers:

Recovery high Recovery low

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

## Volatile Calibration Outliers

Instrument: <u>MSD3</u> Matrix: <u>water</u> Level: <u>low</u>

Date/Time	5/1	6/03	5/16/0	3 1318					3	
	Initia	l Cal.	Cont	. Cal.	Cont	. Cal.	Con	t. Cal.	Cont	. Cal.
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Methylene chloride										
Acetone										
Trichloroethene										
Benzene										
Toluene										
Ethylbenzene										
Xylene (total)										
Affected Samples:										

# Volatile Calibration Outliers - Page 2

Instrument: <u>MSD4</u> Matrix: <u>water</u> Level: <u>low</u>

Date/Time*	5/1	6/03	5/16/0	3 1408	1000			1 - 2		1.50
	Initia	l Cal.	Cont	. Cal.	Cont	. Cal.	Con	t. Cal.	Cont	. Cal.
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Methylene chloride										
Acetone										
Trichloroethene										
Benzene										
Toluene										
Ethylbenzene										
Xylene (total)	 	 		 					ļ	
Affected Samples:				_						
						-				
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								×		
				_						

# Corrected Sample Analysis Data Sheets

#### 1B

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VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name:Buck Environmental Labs, Inc. Contract:BBL-McKessonLab Code:10795Case No.:SAS No.:SDG No.:BEL0308Matrix:(soil/water)WATERLab Sample ID:0305065-01ASample wt/vol:5(g/mL) MLLab File ID:0901009.DLevel:(low/med)LOWDate Received:05/06/03% Moisture:not dec.Date Analyzed:05/16/03GC Column:J&W,DB624ID:.18mm)Dilution Factor:1.00Soil Extract Volume:(µL)Soil Aliquot Volume(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		55	U

#### EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-35

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Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

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Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0308
Matrix: (soil/water)	NATER	Lab Sample ID:	0305065-02A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	1001010.D
Level: (low/med)	LOW	Date Received:	05/06/03
<pre>% Moisture: not dec.</pre>		Date Analyzed:	05/16/03
GC Column: J&W, DB624	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	me (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

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## Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS	No.:	SDG No.:	BEL0308
Matrix: (soil/water) <u>W</u>	ATER		Lab Sample ID:	0305065-03	A
Sample wt/vol: <u>5</u>	(g/mL) <u>ML</u>		Lab File ID:	<u>1101011.D</u>	
Level: (low/med) L	OW		Date Received:	05/06/03	
% Moisture: not dec.			Date Analyzed:	05/16/03	
GC Column: <u>J&amp;W,DB624</u>	ID: <u>.18</u> (mm)		Dilution Factor:	1.00	
Soil Extract Volume:	(µL)		Soil Aliquot Volu	me	(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	<u> </u>
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-31

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# Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

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Lab Code: <u>10795</u> Case	No.: <u>C</u>	SAS	No.:	SDG No.: BEL0308
Matrix: (soil/water) <u>WATER</u>			Lab Sample ID:	0305076-01A
Sample wt/vol: 5 (g	ʃ/mL) <u>ML</u>		Lab File ID:	0901009.D
Level: (low/med) LOW			Date Received:	05/07/03
% Moisture: not dec.			Date Analyzed:	05/16/03
GC Column: <u>J&amp;W,DB624</u>	ID: <u>.18</u> (mm)		Dilution Factor:	1.00
Soil Extract Volume:	(µL)		Soil Aliquot Volu	ume(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		9	
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-9S

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Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0308
Matrix: (soil/water) <u>W</u>	ATER	Lab Sample ID:	0305076-02A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	1001010.D
Level: (low/med) Level:	OW	Date Received:	05/07/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: J&W,DB624	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		11	
100-41-4	Ethylbenzene	<u>,                                     </u>	7	
75-09-2	Methylene chloride		5	υ
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	υ
1330-20-7	m,p~Xylene		12	
95-47-6	o-Xylene		6	

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#### VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-32

Lab Name: <u>Buck Environmental Labs, Inc.</u> Contra	act: BBL-McKesson	
Lab Code: <u>10795</u> Case No.: <u>C</u> SAS	No.: SD	G No.: <u>BEL0308</u>
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: 03	05076-03A
Sample wt/vol: $5$ (g/mL) <u>ML</u>	Lab File ID: <u>11</u>	.01011.D
Level: (low/med) LOW	Date Received: 05	07/03
% Moisture: not dec.	Date Analyzed: 05	0/16/03
GC Column: J&W,DB624 ID: 18 (mm)	Dilution Factor: <u>1.</u>	00
Soil Extract Volume: (µL)	Soil Aliquot Volume	(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		12	υ
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS	No.:	SDG No.:	BEL0308
Matrix: (soil/water) WA	TER		Lab Sample ID:	0305076-04	A
Sample wt/vol: 5	(g/mL) <u>ML</u>		Lab File ID:	<u>1201012.D</u>	
Level: (low/med) LC	W		Date Received:	05/07/03	
<pre>% Moisture: not dec.</pre>			Date Analyzed:	05/16/03	
GC Column: J&W, DB624	ID: <u>.18</u> (mm)		Dilution Factor:	1.00	
Soil Extract Volume:	(uL)		Soil Aliguot Volu	me	(uL)

CAS NO.	COMPOUND	(µg∕L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		7	
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

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# Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u> C	Case No.: <u>C</u>	SAS	No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water) WA	TER		Lab Sample ID:	0305076-05A
Sample wt/vol: 5	(g/mL) ML		Lab File ID:	1901019.D
Level: (low/med) LO	W		Date Received:	05/07/03
% Moisture: not dec.			Date Analyzed:	05/16/03
GC Column: J&W, DB624	ID: <u>.18</u> (mm)		Dilution Factor:	1.00
Soil Extract Volume:	(µL)		Soil Aliquot Volu	me (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		88	
71-43-2	Benzene		13	
100-41-4	Ethylbenzene		5.	U
75-09-2	Methylene chloride		1600-2500	.ZD
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

EPA SAMPLE NO.

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#### VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-33DL

# Lab Name:Buck Environmental Labs, Inc. Contract:BBL-McKessonLab Code:10795Case No.:SAS No.:SDG No.:BEL0308Matrix:(soil/water)WATERLab Sample ID:0305076-05ASample wt/vol:5(g/mL) MLLab File ID:0701007.DLevel:(low/med)LOWDate Received:05/07/03% Moisture:not dec.Date Analyzed:05/20/03GC Column:J&W,DB624ID:.18(mm)Dilution Factor:Soil Extract Volume:(µL)Soil Aliquot Volume(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		1200	U
71-43-2	Benzene		500	U
100-41-4	Ethylbenzene		500	Ū
75-09-2	Methylene chloride		2800	
108-88-3	Toluene		500	U
79-01-6	Trichloroethene		500	U
1330-20-7	m,p-Xylene		1000	<u> </u>
95-47-6	o-Xylene		500	U

EPA SAMPLE NO.

#### VOLATILE ORGANICS ANALYSIS DATA SHEET

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# Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

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Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water)	NATER	Lab Sample ID:	0305076-08A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	<u>1301013.D</u>
Level: (low/med)	LOW	Date Received:	05/07/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: J&W, DB624	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ıme (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		240	
71-43-2	Benzene		30	
100-41-4	Ethylbenzene		49	
75-09-2	Methylene chloride		97	
108-88-3	Toluene		130	
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		150	
95-47-6	o-Xylene		76	

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VOLATILE ORGANICS ANALYSIS DATA SHEET

TW-02RDL

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#### Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u> Cas	e No.: <u>C</u>	SAS No.:	SDG No.: BEL0308
Matrix: (soil/water) <u>WATE</u>	R	Lab Sample ID:	<u>0305076-08A</u>
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	0801008.D
Level: (low/med) LOW		Date Received:	05/07/03
% Moisture: not dec.		Date Analyzed:	05/20/03
GC Column: J&W,DB624	ID: <u>.18</u> (mm)	Dilution Factor:	100.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume (µL)

#### CONCENTRATION UNITS:

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CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		420	J
71-43-2	Benzene		500	υ
100-41-4	Ethylbenzene		500	U
75-09-2	Methylene chloride		230	J
108-88-3	Toluene		220	J
79-01-6	Trichloroethene		500	U
1330-20-7	m,p-Xylene		190	J
95-47-6	o-Xylene		110	J

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VOLATILE ORGANICS ANALYSIS DATA SHEET

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MW-35

والمحققينية والمحقوبية وأواله فالمطلب مشتوه بحربات والمحادي والمحادي

Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS	No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water)	WATER		Lab Sample ID:	0305076-09A
Sample wt/vol: 5	(g/mL) ML		Lab File ID:	1401014.D
Level: (low/med)	LOW		Date Received:	05/07/03
% Moisture: not dec.			Date Analyzed:	05/16/03
GC Column: <u>J&amp;W</u> , DB624	ID: <u>.18</u> (mm)		Dilution Factor:	<u>1.00</u>
Soil Extract Volume:	(µL)		Soil Aliquot Volu	ume (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		5	U
79-01-6	Tríchloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

#### EPA SAMPLE NO.

#### VOLATILE ORGANICS ANALYSIS DATA SHEET

DUP-1

Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

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Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0308
Matrix: (soil/water)	WATER	Lab Sample ID:	0305076-10A
Sample wt/vol: $5$	(g/mL) ML	Lab File ID:	<u>1501015.D</u>
Level: (low/med)	LOW	Date Received:	05/07/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: J&W, DB624	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	me (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		80	
71-43-2	Benzene		13	
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		1600-2600	ΕĐ
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

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DUP-1DL

# Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0308
Matrix: (soil/water)	WATER	Lab Sample ID:	0305076-10A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	0901009.D
Level: (low/med)	LOW	Date Received:	05/07/03
% Moisture: not dec.		Date Analyzed:	05/20/03
GC Column: J&W, DB624	ID: <u>.18</u> (mm)	Dilution Factor:	100.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		1200	0
71-43-2	Benzene		500	Ū
100-41-4	Ethylbenzene		500	U
75-09-2	Methylene chloride		2600	
108-88-3	Toluene		500	U
79-01-6	Trichloroethene		500	U
1330-20-7	m,p-Xylene		1000	U
95-47-6	o-Xylene		500	U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

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Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0308
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305076-11A</u>
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	<u>1601016.D</u>
Level: (low/med)	LOW	Date Received:	05/07/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: J&W, DB62	<u>1</u> ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume (µL)

CONCENTRATION UNITS:

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CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	Ū
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

EPA SAMPLE NO.

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#### VOLATILE ORGANICS ANALYSIS DATA SHEET

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# Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u> Case	e No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water) WATER		Lab Sample ID:	0305076-12A
Sample wt/vol: 5 (9	g/mL) <u>ML</u>	Lab File ID:	1701017.D
Level: (low/med) LOW		Date Received:	05/07/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: J&W,DB624	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	me(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone	_	16	
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	Ū
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	υ
95-47-6	o-Xylene		5	U

# VOLATILE ANALYSES

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### 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.

All samples were analyzed within the technical 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 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.

No target compounds were identified in the samples.

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.

The matrix spike and matrix spike duplicate recoveries and 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	Sample Result	Duplicate Result	RPD
MW-33 / 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.
# Data Validation Checklist

	YES	NO	NA
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		<u>X</u>	
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> </u>		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		<u> </u>	
Holding Times			
Have any holding times been exceeded?		<u> </u>	
<u>Matrix Spikes</u>			
Is there a matrix spike recovery form present?	<u> </u>	. <u> </u>	
Were matrix spikes analyzed at the required frequency?	<u> </u>		
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>0</u> out of <u>1</u>			
<u>Blanks</u>			
Is the method blank summary form present?	<u> </u>		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	<u> </u>		
Has a blank been analyzed at least once every twelve hours for each system used?	_ <u>x</u>		
Do any method/reagent/instrument blanks have positive results?		<u> </u>	
Are there trip/field/rinse/equipment blanks associated with every sample?	_ <u>x</u> _		
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	<u> </u>		
Matrix spikes	_ <u>X</u>		
Blanks	<u> </u>	·	

# Organic Data Validation Checklist

	YES	NO	<u> </u>
Are the chromatograms present for each of the following:			
Samples	X		
Matrix spikes	<u> </u>		
Blanks	_X		
Is the chromatographic performance acceptable?	<u>    X     </u>		
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?	<u> </u>		
Standard Data			
Are the quantitation reports and chromatograms present for the initial and continuing calibration standards?	<u> </u>		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	<u> </u>		
Are the response factor RSDs or correlation coefficients within acceptable limits?	<u> </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?	_X_		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	X		
All %D within acceptable limits?	<u>    X     </u>		
Are there any transcription/calculation errors in reporting of RF or %D?		X	
<u>Field Duplicates</u>			
Were field duplicates submitted with the samples?	<u> </u>		

# Organic Data Validation Checklist - Page 2

# **Calibration Outliers**

Instrument: <u>GC-03</u> Matrix: <u>water</u>

Date Date A second second	5/16/03	5/16/03	5/16/03			Å
Time		1400	1449			
	Initial Cal.	Cont. Cal.				
	RSD	%D	%D	%D	%D	%D
methanol						
Affected Samples:						

Corrected Sample Analysis Data Sheets

EPA SAMPLE NO.

DUP-1

Lab Name:	Buck Envir	onmental Labs, In	c.Contract:			
Lab Code:	10795	Case No.: C	SAS No.:	SDG No.:	BEL0308	
Matrix: (s	oil/water)	WATER	Lab Sample ID:	0305076-10	<u>c</u>	
Sample wt/	vol: <u>5</u>	(g/mL) <u>uL</u>	Lab File ID:	2501025.D		
Level:	(low/med)	LOW	Date Received:	05/07/03		
% Moisture	: not dec.		Date Analyzed:	05/16/03		
GC Column:	J&W, DB-V	<u>RX</u> ID: <u>.45</u> (m	m) Dilution Factor:	1.00		
Soil Extra	ct Volume:	(µL)	Soil Aliquot Volu		(µL)	
			CONCENTRATION UNIT	S :		
CAS NO.		COMPOUND	(µg/L or µg/Kg)	<u>MG/L</u>		Q
	67-56-1	Methanol		1	τ	J

EPA SAMPLE NO.

MW-1

Lab Name: <u>Buck Envi</u>	ronmental Labs, Inc.	Contract:		
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BELC	308
Matrix: (soil/water)	WATER	Lab Sample ID:	0305065-01C	
Sample wt/vol: 5	(g/mL) <u>uL</u>	Lab File ID:	<u>0701007.D</u>	
Level: (low/med)	LOW	Date Received:	05/06/03	
% Moisture: not dec.		Date Analyzed:	05/16/03	
GC Column: J&W, DB-	VRX ID: <u>.45</u> (mm)	Dilution Factor:	<u>1.00</u>	
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL	)
		CONCENTRATION UNIT	'S:	
CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>MG/L</u>	Q
67-56-1	Methanol		1	U

MW-3S

Lab Name: Buck Envi	ronmental Labs, Inc.C	Contract:		
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BELC</u>	0308
Matrix: (soil/water)	WATER	Lab Sample ID:	0305065-02C	
Sample wt/vol: <u>5</u>	(g/mL) <u>uL</u>	Lab File ID:	<u>0801008.D</u>	
Level: (low/med)	LOW	Date Received:	05/06/03	
% Moisture: not dec.		Date Analyzed:	05/16/03	
GC Column: J&W, DB-	<u>VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00	
Soil Extract Volume:	(µL)	Soil Aliquot Vol	ען) (ען	)
		CONCENTRATION UNIT	IS:	
CAS NO.	COMPOUND	(µg/L or µg/Kg)	MG/L	Q
67-56-1	Methanol		1	Ŭ

### EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

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MW-9S

Lab Name: <u>Buck Envi</u>	ronmental Labs, Inc.(	Contract:	
Lab Code: <u>10795</u>	Case No.: C	SAS No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305076-02C
Sample wt/vol: <u>5</u>	(g/mL) <u>uL</u>	Lab File ID:	<u>1101011.D</u>
Level: (low/med)	LOW	Date Received:	05/07/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB-</u>	<u>VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Vol	ume (µL)
		CONCENTRATION UNI	IS:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	MG/L Q
67-56-1	Methanol		1 U

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EPA SAMPLE NO.

MW-31

Lab Name: Buck Envi	conmental Labs, Inc.	_Contract:		
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BELC	308
Matrix: (soil/water)	WATER	Lab Sample ID:	0305076-01C	
Sample wt/vol: <u>5</u>	(g/mL) <u>uL</u>	Lab File ID:	<u>1001010.D</u>	
Level: (low/med)	LOW	Date Received:	05/07/03	
% Moisture: not dec.		Date Analyzed:	05/16/03	
GC Column: J&W, DB-	VRX ID: <u>.45</u> (mm)	) Dilution Factor:	1.00	
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL	)
		CONCENTRATION UNIT	'S:	
CAS NO.	COMPOUND	(µg/L or µg/Kg)	MG/L	Q
67-56-1	Methanol		1	U

EPA SAMPLE NO.

MW-32

Lab Name: Buck Envir	conmental Labs, Inc.Co	ontract:		
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL03	28
Matrix: (soil/water)	WATER	Lab Sample ID:	0305076-03C	
Sample wt/vol: 5	(g/mL) <u>uL</u>	Lab File ID:	<u>1201012.D</u>	
Level: (low/med)	LOW	Date Received:	05/07/03	
<pre>% Moisture: not dec.</pre>		Date Analyzed:	05/16/03	
GC Column: J&W, DB-1	<u>VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00	
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(μL)	
		CONCENTRATION UNIT	'S :	
CAS NO.	COMPOUND	(µg/L or µg/Kg)	MG/L	Q
67-56-1	Methanol		1	U

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EPA SAMPLE NO.

MW-33

Lab Name: Buck Environmental Labs, I	nc.Contract:		
Lab Code: <u>10795</u> Case No.: <u>C</u>	SAS No.:	SDG No.:	BEL0308
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	0305076-05	<u>C</u>
Sample wt/vol: <u>5</u> (g/mL) <u>uL</u>	Lab File ID:	2201022.D	
Level: (low/med) LOW	Date Received:	05/07/03	
% Moisture: not dec.	Date Analyzed:	05/16/03	
GC Column: J&W, DB-VRX ID: .45	(mm) Dilution Factor:	1.00	
Soil Extract Volume: (µL)	Soil Aliquot Volu		(µL)
	CONCENTRATION UNIT	'S:	
CAS NO. COMPOUND	(µg/L or µg/Kg)	MG/L	Q
67-56-1 Methanol		1	U

EPA SAMPLE NO.

MW-34

Lab Name: <u>Buck Envir</u>	conmental Labs, Inc.(	Contract:		
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL03</u>	308
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305076-12C</u>	
Sample wt/vol: 5	(g/mL) <u>uL</u>	Lab File ID:	<u>2601026.D</u>	
Level: (low/med)	LOW	Date Received:	05/07/03	
% Moisture: not dec.		Date Analyzed:	05/16/03	
GC Column: <u>J&amp;W</u> , DB-V	<u>VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00	
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL)	
		CONCENTRATION UNIT	'S :	
CAS NO.	COMPOUND	(µg/L or µg/Kg)	MG/L	Q
67-56-1	Methanol		1	U

EPA SAMPLE NO.

MW-35

Lab Name: <u>Buck Envir</u>	onmental Labs, Inc	.Contract:		
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BELC	308
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305076-09C</u>	
Sample wt/vol: <u>5</u>	(g/mL) <u>ul</u>	Lab File ID:	2401024.D	
Level: (low/med)	LOW	Date Received:	05/07/03	
% Moisture: not dec.		Date Analyzed:	05/16/03	
GC Column: <u>J&amp;W, DB-V</u>	<u>VRX</u> ID: <u>.45</u> (mm	a) Dilution Factor:	1.00	
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL	)
		CONCENTRATION UNIT	'S:	
CAS NO.	COMPOUND	(µg/L or µg/Kg)	MG/L	Q
67-56-1	Methanol		1	Ŭ

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EPA SAMPLE NO.

TRIP BLANK

Lab Name: <u>Buck Envir</u>	onmental Labs, Inc.Co	ontract:		
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>B</u>	EL0308
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305065-03B</u>	1
Sample wt/vol: 5	(g/mL) <u>uL</u>	Lab File ID:	<u>0901009.D</u>	
Level: (low/med)	LOW	Date Received:	05/06/03	
% Moisture: not dec.		Date Analyzed:	05/16/03	
GC Column: <u>J&amp;W, DB-V</u>	<u>RX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00	
Soil Extract Volume:	(µL)	Soil Aliquot Volu		(µL)
		CONCENTRATION UNIT	S:	
CAS NO.	COMPOUND	(µg/L or µg/Kg)	MG/L	Q
67-56-1	Methanol		1.	U

EPA SAMPLE NO.

TW-01

Lab Name: <u>Buck Environmental Labs, Inc.</u> Contract:								
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL03</u>	08				
Matrix: (soil/water)	WATER	Lab Sample ID:	0305076-04C					
Sample wt/vol: 5	(g/mL) <u>uL</u>	Lab File ID:	<u>1301013.D</u>					
Level: (low/med)	LOW	Date Received:	05/07/03					
% Moisture: not dec.		Date Analyzed:	05/16/03					
GC Column: J&W, DB-	VRX ID: <u>.45</u> (mm)	Dilution Factor:	1.00					
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL)					
		CONCENTRATION UNIT	?S:					
CAS NO.	COMPOUND	(µg/L or µg/Kg)	MG/L	Q				
67-56-1	Methanol		1	U				

EPA SAMPLE NO.

TW-02R

Lab Name: <u>Buck Envi</u>	ronmental Labs, Inc. Co	ontract:		
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BELC	308
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305076-08C</u>	
Sample wt/vol: 5	(g/mL) <u>uL</u>	Lab File ID:	2301023.D	
Level: (low/med)	LOW	Date Received:	05/07/03	
% Moisture: not dec.		Date Analyzed:	05/16/03	
GC Column: <u>J&amp;W</u> , DB-	<u>VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00	
Soil Extract Volume:	(µL)	Soil Aliquot Volt	ume(µL	)
		CONCENTRATION UNIT	'S :	
CAS NO.	COMPOUND	(µg/L or µg/Kg)	MG/L	Q
67-56-1	Methanol		1	U

## 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.

#### 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 MW-35 and TW-02R. 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.

Samples DUP-1 and TW-02R contained aniline above the linear range. Data for aniline in these samples have been replaced with data from the dilution analyses. All other 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 and relative percent difference between recoveries for aniline were above control limits due to dilution of the unspiked sample. The matrix spike blank was, however, within control limits for aniline. Since the matrix spike blank recovery was within control limits, no data have been qualified based on the deviation.

9. Field Duplicates

Results for duplicate samples are summarized as follows:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
MW-33 / DUP-1	Aniline	2000	2500	22.2%
	N,N-Dimethylaniline	35J	31	12.1%

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.

Data Validation Checklist

# 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?	<u> </u>		
Are the sample numbers included in the narrative?	<u> </u>		
Are the sample chain-of-custodies present?	<u> </u>		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		X	<del></del>
<u>Holding Times</u>			
Have any holding times been exceeded?		X	
Surrogate Recovery			
Are the surrogate recovery forms present?	<u> </u>		
Are all the samples listed on the appropriate surrogate recovery form?	<u>X</u>		
Were two or more surrogate recoveries outside of specified limits for any sample or blank?		<u>X</u>	<del>.</del>
If yes, were the samples reanalyzed?			X
<u>Matrix Spikes</u>			
is there a matrix spike recovery form present?	<u> </u>		
Were matrix spikes analyzed at the required frequency	X		
How many spike recoveries were outside of QC limits?			
<u>0</u> out of <u>4</u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
<u>0</u> out of <u>2</u>			
<u>Blanks</u>			
Is the method blank summary form present?	<u> </u>		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	<u> </u>		
Has a blank been analyzed for each GC/MS system used?	<u> </u>		
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?			<u> </u>
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?	<u> </u>		
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	X		
Matrix spikes	<u> </u>		
Blanks	X	·	. <u></u>
Has GPC cleanup been performed on all soil/sediment sample extracts?			<u>    X     </u>
Are the reconstructed ion chromatograms present for each of the following:			
Samples	X		
Matrix spikes	<u>_x</u>		
Blanks	<u>X</u>		
Is the chromatographic performance acceptable?	_ <u>X</u>		
Are the mass spectra of the identified compounds present?	<u>X</u>		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	<u>X</u>		
Do the samples and standard relative ion intensities agree within 20%?	X		
Tentatively Identified Compounds			
Are all the TIC summary forms present?	<u> </u>		A.81
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		<u> </u>	

# 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?	<u> </u>		۰ 
Do the TIC and "best match" spectrum agree within 20%?	<u>X</u>		
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?	<u>X</u>		
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		<b>.</b>
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?	<u> </u>	×.	
All %D within acceptable limits?	<u>X</u>		
Are all RF equal to or greater than minimum requirements?	<u> </u>		
Are there any transcription/calculation errors in reporting of RF or %D?		<u>X</u>	
Internal Standards			
Are internal standard areas of the samples and blanks within the upper and lower limits for each continuing calibration?	<u>X</u>		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	_ <u>X_</u>		

# Semivolatile Organics Data Validation Checklist - Page 4

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# Field Duplicates

Were field duplicates submitted with the samples? X

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

Sample ID	Holding	Sı	urrogate	s*		In	iternal S	tandard	s*	
- 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997	Time*	NBZ	FBP	TPH	DCB	NPT_	ANT	PHN	CRY	PRY
<u>MW-1</u>				_						
MW-3S										
MW-31										
MW-9S										
MW-32										
TW-01										
MW-33										
MW-33 MS										
MW-33 MSD					II					
TW-02R		D								
MW-35		D	D	D_						
DUP-1										
MW-34										
_										
l										
					-					
	<u> </u>					,				

Surrogates: NBZ Nitrobenzene-d5 FBP 2-Fluorobiphenyl TPH Terphenyl-d14 Internal Standards: DCB 1,4-Dichlorobenzene-d4 NPT Naphthalene-d8 ANT Acenaphthene-d10 PHN Phenanthrene-d10 CRY Chrysene-d12 PRY Perylene-d12

Qualifiers: Diluted

D

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Recovery low

Recovery high

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

# Semivolatile Calibration Outliers

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# Instrument: <u>MSD2</u> Level: <u>low</u>

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Date/Time	6/	03/03	6/04/03	3 1040	6/05/0	3 1523	6/06/0	3 1044	n set set	
	Initi	al Cal.	Cont.	Cal.	Cont	. Cal.	Cont.	Cal.	Со	nt. Cal.
·	RF	%RSD	RF_	%D	RF	%D	RF	%D	RF	%D
aniline										
n,n'-dimethylaniline										
Affected Samples:										

# Corrected Sample Analysis Data Sheets

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	EPA SAMPLE NO.			
SEMIVOLAT	ILE ORGANICS ANALYSIS	DATA SHEET	DUP-1	
Lab Name: Buck Envir	onmental Labs, In Cont	ract:		
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0308</u>	
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305076-10B</u>	
Sample wt/vcl:	<u>980</u> (g/mL) grl	Lab File ID:	0401004.D	
Level: (low/med)	LOW	Date Received:	05/07/03	
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	05/09/03	
Concentrated Extract	Volume: $1000$ (µL)	Date Analyzed:	06/04/03	
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00	
GPC Cleanup: (Y/N)	<u>N</u> H:	Extraction: (Type)		
		CONCEN	NTRATION UNITS:	
CAS NO.	COMPOUND	(µg/L	or µg/Kg) <u>UG/L</u> Q	
62-53-3 121-69-7	Aniline N,N-Dimethylaniline		10000 2511 E 72 31	

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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

			DUP-1DL
Lab Name: Buck Envir	onmental Labs, In	Contract:	<u></u>
Lab Code: <u>10795</u>	Case Nc.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305076-10B
Sample wt/vol:	<u>980</u> (g/mL)	Filoffos Lab File ID:	0401004.D
Level: (low/med)	LOW	🧭 Date Received:	05/07/03
% Moisture:	Decanted:(Y/N)	N Date Extracted:	05/09/03
Concentrated Extract	Volume: <u>1000</u> ()	μL) Date Analyzed:	06/05/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	200.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q ,
62-5	3-3 Aniline	2500	
			:

	1C		EPA SAMPLE NO.
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET			MW~1
Lab Name: Buck Envir	L		
Lab Code: <u>10795</u>	Case No.: CS	AS NO.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305065-01B</u>
Sample wt/vol:	<u>945</u> (g/mL) <u>G</u> d	03 Lab File ID:	A0401004.
Level: (low/med)	LOW	Date Received:	05/06/03
% Moisture:	Decanted: $(Y/N)$ <u>N</u>	Date Extracted:	05/09/03
Concentrated Extract	Volume: $1000$ (µL)	Date Analyzed:	06/03/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	)
		CONCEN	NTRATION UNITS:
CAS NO.	COMPOUND	(µg/L	or µg/Kg) <u>UG/L</u> Q
62-53-3	Aniline		5 U
121-69-7	N,N-Dimethylaniline		5 U .

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	1C		EPA SAMPLE NO.
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET			MW-3S
Lab Name: Buck Envir	·		
Lab Code: <u>10795</u>	Case No.: <u>C</u> S	SAS No.:	SDG No.: <u>Bel0308</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305065-02B
Sample wt/vol:	990 (g/mL) gr 0	Jab File ID:	<u>A0501005.</u>
Level. (low/med)	LOW	Date Received:	05/06/03
% Moisture:	Decanted: (Y/N) <u>N</u>	Date Extracted:	05/09/03
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/03/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	
		CONCEN	TRATION UNITS:
CAS NO.	COMPOUND	(µg/L	or µg/Kg) <u>UG/L</u> Q
	Aniline		5 3
121-69-7	N,N-Dimethylaniline		5

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1CEPA SAMPLE NO. SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET MW-9S Lab Name: Buck Environmental Labs, In Contract: Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: <u>BEL0308</u> Lab Sample ID: 0305076-02B Matrix: (soil/water) WATER Sample wt/vol: <u>960</u> (g/mL)  $\frac{1}{10}$  (g/mL) Lab File ID: A0701007. Level: (low/med) LOW Date Received: 05/07/03 % Moisture: Decanted:(Y/N) N Date Extracted: 05/09/03 Date Analyzed: 06/03/03 Concentrated Extract Volume: 1000 (µL) Dilution Factor: 1.00 Injection Volume: <u>1</u> (µL) Extraction: (Type) GPC Cleanup: (Y/N) N pH: \_\_\_\_ CONCENTRATION UNITS: COMPOUND

 CAS NO.
 COMPOUND
 (µg/L or µg/Kg)
 UG/L
 Q

 62-53-3
 Aniline
 0.9
 J

 121-69-7
 N,N-Dimethylaniline
 3
 J

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EPA SAMPLE NO.

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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				MW-31
Lab Name: Buck Envir	conmental Labs, In	<u>n</u> Contrac	t:	<u> </u>
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS	5 No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water)	WATER		Lab Sample ID:	0305076-01B
Sample wt/vol:	<u>990</u> (g/mL)	Et all y	Lab File ID:	A0601006.
Level: (low/med)	LOW	e	Date Received:	05/07/03
% Moisture:	Decanted:(Y/N)	<u>N</u>	Date Extracted:	05/09/03
Concentrated Extract	Volume: <u>1000</u>	(µL)	Date Analyzed:	06/03/03
Injection Volume:	<u>1</u> (µL)		Dilution Factor:	<u>1.00</u>
GPC Cleanup: (Y/N)	<u>N</u> pH: _		Extraction: (Type)	

CONCENTRATION UNITS:

CAS NO.	COMPOUND	. (	µg∕L or	µg/Kg)	<u>UG/L</u>	Q	
6	2-53-3 Aniline			0.9		J	
12	1-69-7 N, N-Dimethylaniline			3		J	1

	IC			EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYS	IS DATA	SHEET	MW-32
Lab Name: Buck Envir	conmental Labs, In C	ontract		L
Lab Code: <u>10795</u>	Case No.: C	SAS	No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water)	WATER		Lab Sample ID:	0305076-03B
Sample wt/vol:	<u>985</u> (g/mL) 4	al offor	Lab File ID:	<u>A0801008.</u>
Level: (low/med)	LOW	(Eur	Date Received:	05/07/03
% Moisture:	Decanted:(Y/N) <u>N</u>	I	Date Extracted:	05/09/03
Concentrated Extract	Volume: <u>1000</u> (µ1	L)	Date Analyzed:	06/03/03
Injection Volume:	<u>1</u> (µL)		Dilution Factor:	1.00
GFC Cleanup: (Y/N)	<u>N</u> pH:	-	Extraction: (Type)	
			CONCEN	TRATION UNITS:
CAS NO.	COMPOUND		(µg/L	or µg/Kg) UG/L - Q

62-53-3 Aniline	0.5	J
121-69-7 N,N-Dimethylaniline	0.7	J

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	1C			EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALY:	SIS DATA	SHEET	MW-33
Lab Name: Buck Envir	onmental Labs, In	Contract	: ·	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS	No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water)	WATER		Lab Sample ID:	<u>0305076-058</u>
Sample wt/vol:	970 (g/mL)	mil 0/18/3	Lab File ID:	A1001010.
Level: (low/med)	LOW	(eu)	Date Received:	05/07/03
% Moisture:	Decanted:(Y/N)	N	Date Extracted:	05/09/03
Concentrated Extract	Volume: <u>1000</u> ()	μL)	Date Analyzed:	06/03/03
Injection Volume:	<u>1</u> (µL)		Dilution Factor:	20.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	_	Extraction: (Type)	$\mathcal{T}_{\mathcal{T}}^{(1)} = \mathcal{T}_{\mathcal{T}}^{(1)} \mathcal{T}_{\mathcal{T}}^{(1)}$
		·	CONCEN	TRATION UNITS:

CAS NO.	COMPOUND		(μς	J/L or µg/Kg	) <u>UG/L</u> Q
62-53-3	Aniline			2.000	
121-69-7	N,N-Dimethylaniline	• • •		35	J

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·	1C		EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYSIS DATA	A SHEET	MW-34
Lab Name: <u>Buck Envir</u>	<u>conmental Labs, In</u> Contrac	t:	
Lab Code: <u>10795</u>	Case No.: <u>C</u> SA	S No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305076-12B
Sample wt/vol:	985 (g/mL) g/	Lab File ID:	0501005.D
Level: (low/med)	LOW 04403	Date Received:	05/07/03
% Moisture:	Decanted:(Y/N) N	Date Extracted:	05/09/03
Concentrated Extract	Volume: $1000$ (µL)	Date Analyzed:	06/04/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	
		CONCEN	TRATION UNITS:
CAS NO.	COMPOUND	. (μg/L	orµg/Kg) <u>UG/L</u> Q

CAS NO.	COMPOUND		(µg/L or µg/Kg) [	UG/L Q
	62-53-3 Aniline		140	
	121-69-7 N,N-Dimethylaniline	·	3	J
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	1C			EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYS	ÍS DATA	SHEET	MW-35
Lab Name: Buck Envir	<u>onmental Labs, In</u> C	ontract	:	(au)
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS	No.:	SDG No.: BEL0308
Matrix: (soil/water)	WATER		Lab Sample ID:	<u>0305076-09B</u>
Sample wt/vol:	<u>980</u> (g/mL)	el of	Lab File ID:	0301003.D
Lavel. (low/med)	LOW	/1903 fer	Date Received:	05/07/03
% Moisture:	Decanted:(Y/N) N		Date Extracted:	05/09/03
Concentrated Extract	Volume: <u>1000</u> (µI	_)	Date Analyzed:	06/04/03
Injection Volume:	<u>1</u> (µL)		Dilution Factor:	20.00
CPC Cleanup: (Y/N)	<u>N</u> рн:		Extraction: (Type)	
			CONCEN	TRATION UNITS:
CAS NO.	COMPOUND		(µg/L	or µg/Kg) <u>UG/L</u> Q

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02-55-5 ANITIME	 	LUUU	 i
121-59-7 N,N-Dimethylaniline		100	 U
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	10			EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS AN	ALYSIS DATA	A SHEET	TW-01
Lab Name: Buck Envir	onmental Labs,	<u>In</u> Contrac	t:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS	8 No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water) :	WATER		Lab Sample ID:	0305076-04B
Sample wt/vol:	<u>990</u> (g/mI	) met chija	Lab File ID:	A0901009.
Level: (low/med)	LOW	(A)	Date Received:	05/07/03
% Moisture:	Decanted:(Y/N)	N	Date Extracted:	05/09/03
Concentrated Extract	Volume: 1000	(µL)	Date Analyzed:	06/03/03
Injection Volume:	<u>1</u> (µL)		Dilution Factor:	<u>1.00</u>
GPC Cleanup: (Y/N)	<u>N</u> pH:	· <u> </u>	Extraction: (Type)	
		•	CONCEN	TRATION UNITS:

CAS NO.		COMPOUNI	)		(µg/L or µ	g/Kg) <u>UG/L</u>	Q.	
	62-53-3	Aniline		 		5	. U	
	121-69-7	N,N-Dimeth	ylaniline			1	Ű	
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EPA SAMPLE NO.

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

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			TW-02R
Lab Name: Buck Envir	conmental Labs, In Contrac	ct:	L
Lab Code: <u>10795</u>	Case No.: <u>C</u> SA	S No.:	SDG No.: <u>BEL0308</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305076-09B</u>
Sample wt/vol:	960 (g/mL) - Sullie	Lab File ID:	<u>0201002.D</u>
Level: (low/med)	LOW	Date Received:	05/07/03
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	05/09/03
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/04/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	20.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>UG/L</u>	Q
62	-53-3 Aniline	450000 With 1	E S
121	-69-7 N,N-Dimethylaniline	230	

OLM04.2

	1C		EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYSIS DAT	TA SHEET	TW-02R <b>D</b> /
Lab Name: Buck Envir	onmental Labs, In Contra	ct:	
Lab Code: <u>10795</u>	Case No.: <u>C</u> SF	AS No.:	SDG No.: BEL0308
Matrix: (soil/water)	WATER	Lab Sample ID:	0305076-08B
Sample wt/vol:	960 (g/mL)	Lab File ID:	0201002.D
Level: (low/med)	LOW 74 05	Date Received:	05/07/03
% Moisture:	Decanted:(Y/N) N	Date Extracted:	05/09/03
Concentrated Extract	Volume: $1000$ (µL)	Date Analyzed:	06/06/03
Injection Volume:	<u>1</u> (μL)	Dilution Factor:	2,000.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	
		. CONCEN	TRATION UNITS:

CAS NO.	COMPOUND	(	µg∕L o	r μg/Kg)	<u>UG/L</u>	Q
62-5	3-3 Aniline			160000		
121-6	59-7 N,N-Dimethylaniline			10000		U

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Chain of Custody

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Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

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### DATA REVIEW FOR

### MCKESSON - BEAR STREET SITE

SDG# BEL0309

VOLATILE AND SEMIVOLATILE ANALYSES

.

Analyses performed by:

Buck Environmental Laboratories, Inc. Cortland, New York

Review performed by:



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

#### Summary

The following is an assessment of the data package for SDG # BEL0309 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	An	alysis Metho	d marked and
				8260 <sup>1</sup>	8015²	8270 <sup>3</sup>
MW-36	0305101-01A	water	5/07/03	x	x	x
MW-8S	0305101-02A	water	5/07/03	x	x	x
MW-274	0305101-03A	water	5/07/03	X	x	x
MW-28	0305101-06A	water	5/07/03	x	x	x
DUP-2	0305101-07A	water	5/07/03	x	X	x
Trip Blank	0305 <u>101-08</u> A	water	5/07/03	×	x	
MW-29	0305101-09A	water	5/07/03	x	x	x
MW-30	0305120-01A	water	5/08/03	x	x	x
MW-17R	0305120-02A	water	5/08/03	X	x	x
MW-255	0305120-03A	water	5/08/03	x	x	x
MW-25D	0305120-04A	water	5/08/03	x	x	x
MW-231	0305120-05A	water	5/08/03	x	x	x
MW-235	0305120-06A	water	5/08/03	x	x	x
MW-18	0305120-07A	water	5/08/03	x	x	x
Trip Blank	0305120-08 <u>A</u>	water	5/08/03	x	x	
MW-19	0305124-01A	water	5/09/03	x	x	x
PZ-4D	0305124-02A	water	5/09/03	x	x	x
PZ-4S	0305124-03A	water	5/09/03	x	x	x
Trip Blank	0305124-04A	water	5/09/03	x	x	

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

compounds include: methanol

3 compounds include: aniline and N,N'-dimethylaniline

4 MS/MSD analyses performed on sample

## Chain of Custody

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Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files



### DATA REVIEW FOR

### MCKESSON - BEAR STREET SITE

SDG# BEL0309

### VOLATILE AND SEMIVOLATILE ANALYSES

Analyses performed by:

Buck Environmental Laboratories, Inc. Cortland, New York

Review performed by:



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

#### Summary

The following is an assessment of the data package for SDG # BEL0309 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	An	alysis Metho	ď
				8260 <sup>1</sup>	8015 <sup>2</sup>	8270 <sup>3</sup>
MW-36	0305101-01A	water	5/07/03	X	X	x
MW-8S	0305101-02A	water	5/07/03	X	x	x
MW-274	0305101-03A	water	5/07/03	x	x	X
MW-28	0305101-06A	water	5/07/03	x	X	X
DUP-2	0305101-07A	water	5/07/03	x	<u>x</u>	X
Trip Blank	0305101-08A	water	5/07/03	x	<u>x</u>	
MW-29	0305101-09A	water	5/07/03	x	X	×
MW-30	0305120-01A	water	5/08/03	X	X	X
MW-17R	0305120-02A	water	5/08/03	x	X	X
MW-25S	0305120-03A	water	5/08/03	x	X	X
MW-25D	0305120-04A	water	5/08/03	x	x	X
MW-231	0305120-05A	water	5/08/03	x	X	x
MW-235	0305120-06A	water	5/08/03	x	x	X
MW-18	0305120-07A	water	5/08/03	<u>x</u>	X	x
Trip Blank	0305120-08A	water	5/08/03	X	<u>x</u>	
MW-19	0305124-01A	water	5/09/03	X	x	x
PZ-4D	0305124-02A	water	5/09/03	<u>x</u>	x	x
PZ-4S	0305124-03A	water	5/09/03	x	X	x
Trip Blank	0305124-04A	water	5/09/03	- <b>x</b>	x	

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

3 compounds include: aniline and N.N'-dimethylaniline

4 MS/MSD analyses performed on sample

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## 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. The technical holding time is 14 days from sample collection to analysis.

All samples were analyzed within the technical 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.

No compounds were detected in the method blanks. Methylene chloride was, however, detected in one of the trip blanks. Based on the blank content, data for methylene chloride have been qualified as undetected in samples Dup-2 and MW-29.

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.

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.

The response for one internal standard was above control limits in sample MW-8S. Positive compounds quantitated under the deviant internal standard have been qualified as estimated based on the deviation. All other 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.

Sample MW-8S contained methylene chloride above the linear range. Data for methylene chloride has been replaced with data from the dilution analyses. All other 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 recoveries, however, were above control limits for benzene, chlorobenzene, 1,1-dichloroethene and toluene. Since the matrix spike recoveries and the matrix spike blank recoveries were within control limits, no data have been qualified based on the deviations.

#### 9. Field Duplicates

Results for duplicate samples are summarized as follows:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
MW-27 / DUP-2	Acetone	ND	7 J	NA
	Benzene	8	6	28.6%

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
MW-27 / DUP-2	Ethylbenzene	23	20	14.0%
	Methylene Chloride	43	ND	NA
	Toluene	11	7	44.4%
	m,p-Xylene	26	21	21.3%
_	o-Xylene	25	22	12.8%

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.

Data Validation Checklist

# Volatile Organics Data Validation Checklist

	YES	<u>NO</u>	<u>NA</u>
Data Completeness and Deliverables			
Have any missing deliverables been received and added to the data package?		_ <u>X</u> _	
Is there a narrative or cover letter present?	<u>    X     </u>		
Are the sample numbers included in the narrative?	<u> </u>		
Are the sample chain-of-custodies present?	<u>    X     </u>		
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		<u> </u>	
Holding Times			
Have any holding times been exceeded?		<u> </u>	
Surrogate Recovery			
Are surrogate recovery forms present?	<u>    X     </u>		
Are all the samples listed on the appropriate surrogate recovery form?	<u> </u>		
Was one or more surrogate recoveries outside of specified limits for any sample or blank?	<u> </u>	<u> </u>	
If yes, were the samples reanalyzed?			<u>X</u>
<u>Matrix Spikes</u>			
Is there a matrix spike recovery form present?	<u>X</u>		
Were matrix spikes analyzed at the required frequency?	<u>    X     </u>		
How many spike recoveries were outside of QC limits?			
out of <u>10</u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
_ <u>1</u> out of <u>5</u>			
<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?	<u>_X</u>		
Has a blank been analyzed at least once every twelve hours for each system used?	_ <u>X</u> _		
Do any method/reagent/instrument blanks have positive results?		_ <u>X</u> _	
Are there trip/field/rinse/equipment blanks associated with every sample?	_ <u>X</u>		
Do any trip/field/rinse blanks have positive results?	_ <u>X</u> _		

# 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 BFB?	<u></u>	<u>-</u>	
Has a BFB been analyzed for each twelve hours of analysis per instrument?	<u> </u>		
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	<u>X</u>		
Are the reconstructed ion chromatograms present for each of the following:			
Samples	<u>    X    </u>		
Matrix spikes	_ <u>X</u>		
Blanks	<u> </u>		
Is the chromatographic performance acceptable?	<u> </u>		
Are the mass spectra of the identified compounds present?	<u>    X     </u>		
Is the RRT of each reported compound within 0.06 RRT units of the continuing calibration standard?	_ <u>X</u> _		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	<u> </u>		
Do the samples and standard relative ion intensities agree within 20%?	<u> </u>		
Tentatively Identified Compounds			
Are all the TIC summary forms present?	<u>X</u>		
Are the mass spectra for the tentatively identified compounds and there associated "best match" spectra present?	X		
Are any target compounds listed as TICs?		Х	
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%?	<u>    X     </u>		
Quantitation and Detection Limits			
Are there any transcription/calculation errors in the Form 1 results?		_ <u>X</u> _	
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?	<u> </u>		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	<u> </u>		
Are the response factor RSDs within specified limits?	<u>    X    </u>		
Are the average RRF equal to or greater than minimum requirements?	<u> </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?	<u> </u>		
All %D within acceptable limits?	<u> </u>		
Are all RF equal to or greater than minimum requirements?	<u> </u>		
Are there any transcription/calculation errors in reporting of RF or %D?		<u> </u>	
Internal_Standards			
Are internal standard areas of every sample and blank within the upper and lower limits for each continuing calibration?		_ <u>X</u>	
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	_ <u>X_</u>		
Field Duplicates			
Were field duplicates submitted with the samples?	<u> </u>		

### Volatile Qualifier Summary Holding Time, Surrogates, Internal Standards

Sample ID	Holding		Surrogates*		Inte	rnal Standa	rds*
	Time*	TOL	BFB	DBF	PFB	DFB	CBZ
MW-36							
MW-8S							
MW-27					1		
MW-27 MS							
MW-27 MSD							
MW-28				<u> </u>			 
DUP-2							
Trip_Blank	 						
MW-29				· · · · ·	<u>-</u>		
MW-17R	ļ=						
MW-25S							
MW-25D							
MW-231							<del></del>
MW-23S							
MW-18							
Blank							
MW-19			 				
PZ-4D							
PZ-4S							
Trip Blank							

Surrogates:

TOL Toluene-d8

BFB Bromofluorobenzene

DBF Dibromofluoromethane Internal Standards:

PFB Pentafluorobenzene DFB 1,4-Difluorobenzene

CBZ Chlorobenzene-d5

Qualifiers:

Recovery high
Recovery low

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

# Volatile Calibration Outliers

Instrument: <u>MSD3</u> Matrix: <u>water</u> Level: <u>low</u>

Date/Time	5/1	6/03	5/16/0	3 1318	5/19/0	03 0911	5/20/	03 1649		
	Initia	al Cal.	Cont	. Cal.	Cont	. Cal.	Con	t. Cal.	Cont	. Cal.
	RF	%RSD	RF_	%D	RF	%D	RF	%D	RF	%D
Methylene chloride										
Acetone										
Trichloroethene										
Benzene										
Toluene		_								
Ethylbenzene										
Xylene (total)										
Affected Samples:										
					_					
		_								

# Volatile Calibration Outliers - Page 2

Instrument: <u>MSD4</u> Matrix: <u>water</u> Level: <u>low</u>

\_\_\_\_

5/1	6/03	5/16/(	03 1408						
Initia	al Cal.	Con	t. Cal.	Cont	. Cal.	Con	t. Cal.	Cont	. Cal.
RF	%RSD	RF	%D	RF	<u>%D</u>	RF	%D	RF	%D
			ļ						
			<u> </u>				I		
			<u>.</u>		<u> </u>				
			_						
	5/1 Initia RF	5/16/03 Initial Cal. RF %RSD	5/16/03 5/16/0 Initial Cal. Con RF %RSD RF 	5/16/03   5/16/03   1408     Initial Cal.   Cont. Cal.     RF   %RSD   RF   %D     Initial Cal.   Initial Cal.   Initial Cal.     RF   %RSD   RF   %D     Initial Cal.   Initial Cal.   Initial Cal.     RF   %RSD   RF   %D     Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initi	5/16/03   5/16/03   1408     Initial Cal.   Cont. Cal.   Cont     RF   %RSD   RF   %D   RF     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     RF   %RSD   RF   %D   RF     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   RF   %D   RF     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial	5/16/03   5/16/03 1408     Initial Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D     Initial Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D     Initial Cal.   Initial Cal.   Cont. Cal.   Cont. Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal. <t< td=""><td>5/16/03   5/16/03 1408     Initial Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D   RF     Initial Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D   RF     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Cont.   Cont.     Initial Cal.   Initial Cal.</td><td>5/16/03   5/16/03 1408     Initial Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D     Initial Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D     Initial Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     RF   %RSD   RF   %D   RF   %D     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.<!--</td--><td>5/16/03   5/16/03 1408     Initial Cal.   Cont.   Cal.   Cal.</td></td></t<>	5/16/03   5/16/03 1408     Initial Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D   RF     Initial Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D   RF     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Cont.   Cont.     Initial Cal.   Initial Cal.	5/16/03   5/16/03 1408     Initial Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D     Initial Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D     Initial Cal.   Cont. Cal.   Cont. Cal.   Cont. Cal.     RF   %RSD   RF   %D   RF   %D     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     RF   %RSD   RF   %D   RF   %D     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.   Initial Cal.     Initial Cal. </td <td>5/16/03   5/16/03 1408     Initial Cal.   Cont.   Cal.   Cal.</td>	5/16/03   5/16/03 1408     Initial Cal.   Cont.   Cal.   Cal.

# Corrected Sample Analysis Data Sheets

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-36

Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305101-01A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	1201012.D
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W,DB624</u>	ID: <u>.18</u> (mm)	Dilution Facto	or: 1.00
Soil Extract Volume:	(µL)	Soil Aliquot V	Volume (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		9	J
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride	· · · · · · · · · · · · · · · · · · ·	5	U
108-88-3	Toluene		5	Ū
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

1A

EPA SAMPLE NO.

#### VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-8S

## Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0309
Matrix: (soil/water)	WATER	Lab Sample ID:	0305101-02A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	<u>1301013.D</u>
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB624</u>	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume (µL)

#### CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		20	T
100-41-4	Ethylbenzene		81	
75-09-2	Methylene chloride		820000 910000	Ĕ1)
108-88-3	Toluene		230 600	ΖD
79-01-6	Trichloroethene		2400/0700	Þο
1330-20-7	m,p-Xylene		210	
95-47-6	o-Xylene		90	
EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-8SDL

Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS	No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER		Lab Sample ID:	0305101-02A
Sample wt/vol: 5	(g/mL) ML		Lab File ID:	1801018.D
Level: (low/med)	LOW		Date Received:	05/08/03
% Moisture: not dec.			Date Analyzed:	05/19/03
GC Column: <u>J&amp;W, DB624</u>	ID: <u>.18</u> (mm)		Dilution Factor:	100.00
Soil Extract Volume:	(µL)		Soil Aliquot Volu	ume (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		1200	U
71-43-2	Benzene		500	U
100-41-4	Ethylbenzene		500	Ū
75-09-2	Methylene chloride		660000	E
108-88-3	Toluene		600	
79-01-6	Trichloroethene		6700	
1330-20-7	m,p-Xylene		500	U
95-47-6	o-Xylene		500	Ŭ

EPA SAMPLE NO.

#### VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-8SDL

Lab Name:Buck Environmental Labs, Inc. Contract:BBL-McKessonLab Code:10795Case No.:SAS No.:SDG No.:BEL0309Matrix:(soil/water)WATERLab Sample ID:0305101-02ASample wt/vol:5(g/mL)MLLab File ID:1001010.DLevel:(low/med)LOWDate Received:05/08/03% Moisture:not dec.Date Analyzed:05/20/03GC Column:J&W,DB624ID:.18(mm)Dilution Factor:10,000.00Soil Extract Volume:(µL)Soil Aliquot Volume(µL)

#### CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		120000	U
71-43-2	Benzene		50000	U
100-41-4	Ethylbenzene		50000	U
75-09-2	Methylene chloride		910000	
108-88-3	Toluene		50000	U
79-01-6	Trichloroethene		50000	U
1330-20-7	m,p-Xylene		100000	U
95-47-6	o-Xylene		50000	U

#### FORM I VOA - 1

EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-8SDL

Lab Name: Buck Environmental Labs, Inc.C	Contract: BBL-McKesson	
Lab Code: <u>10795</u> Case No.: <u>C</u>	SAS No.: SDG No.: BEL030	<u>9</u>
Matrix: (soil/water)	Lab Sample ID: <u>0305101-02A</u>	
Sample wt/vol: $5$ (g/mL) <u>ML</u>	Lab File ID: <u>1101011.D</u>	
Level: (low/med) LOW	Date Received: 05/08/03	
% Moisture: not dec.	Date Analyzed: 05/20/03	
GC Column: <u>J&amp;W,DB624</u> ID: <u>.18</u> (mm)	Dilution Factor: 1,000.00	
Soil Extract Volume: (µL)	Soil Aliquot Volume (µL)	

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12000	U
71-43-2	Benzene		5000	U
100-41-4	Ethylbenzene		5000	U
75-09-2	Methylene chloride		950000	E
108-88-3	Toluene		5000	U
79-01-6	Trichloroethene		5600	
1330-20-7	m,p-Xylene		10000	. U
95-47-6	o-Xylene		5000	U

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EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-27

## Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u> Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water) WATER	Lab Sample ID:	0305101-03A
Sample wt/vol: <u>5</u> (g/mL) <u>ML</u>	Lab File ID:	1901019.D
Level: (low/med) LOW	Date Received:	05/08/03
<pre>% Moisture: not dec.</pre>	Date Analyzed:	05/19/03
GC Column: J&W, DB624 ID: .18	(mm) Dilution Factor:	1.00
Soil Extract Volume: (µL)	Soil Aliquot Volu	ne(µL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		8	
100-41-4	Ethylbenzene		23	
75-09-2	Methylene chloride		43	
108-88-3	Toluene		11	
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		26	
95-47-6	o-Xylene		25	

## FORM I VOA - 1

110

EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-28

Lab Name: Buck Environmental Labs, Inc. Contra	act: <u>BBL-McKesson</u>	
Lab Code: 10795 Case No.: C SAS	No.:	SDG No.: BEL0309
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	<u>0305101-06A</u>
Sample wt/vol: <u>5</u> (g/mL) <u>ML</u>	Lab File ID:	1401014.D
Level: (low/med) LOW	Date Received:	05/08/03
% Moisture: not dec.	Date Analyzed:	05/16/03
GC Column: J&W, DB624 ID: .18 (mm)	Dilution Factor:	1.00
Soil Extract Volume: (µL)	Soil Aliquot Volu	ume (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		13	
71-43-2	Benzene		4	J
100-41-4	Ethylbenzene		2	J
75-09-2	Methylene chloride		52	
108-88-3	Toluene		2	J
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		4	J
95-47-6	o-Xylene		4	J

CONCENTRATION UNITS:

## FORM I VOA - 1

## 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

DUP-2

Lab Name: Buck Environmental Labs, Inc	c.Contract: <u>BBL-McKesson</u>
Lab Code: <u>10795</u> Case No.: <u>C</u>	SAS No.: SDG No.: <u>BEL0309</u>
Matrix: (soil/water) WATER	Lab Sample ID: 0305101-07A
Sample wt/vol: <u>5</u> (g/mL) <u>ML</u>	Lab File ID: <u>1501015.D</u>
Level: (low/med) LOW	Date Received: 05/08/03
% Moisture: not dec.	Date Analyzed: 05/16/03
GC Column: <u>J&amp;W, DB624</u> ID: <u>.18</u> (mr	m) Dilution Factor: <u>1.00</u>
Soil Extract Volume: (µL)	Soil Aliquot Volume(µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		7	J
71-43-2	Benzene		6	
100-41-4	Ethylbenzene		20	· · ·
75-09-2	Methylene chloride		34	_ 11
108-88-3	Toluene		7	
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		21	
95-47-6	o-Xylene		22	

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151

EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK

Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u> Cas	se No.: <u>C</u>	SAS	No.:	SDG No.: BEL0309
Matrix: (soil/water) <u>WATE</u>	R		Lab Sample ID:	0305101-08A
Sample wt/vol: 5	(g/mL) <u>ML</u>		Lab File ID:	1601016.D
Level: (low/med) <u>LOW</u>			Date Received:	05/08/03
% Moisture: not dec.			Date Analyzed:	05/16/03
GC Column: J&W, DB624	ID: <u>.18</u> (mm)		Dilution Factor:	1.00
Soil Extract Volume:	(111)		Soil Aliquot Volu	ume(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone	·	12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-29

Lab Name: Buck Enviro	onmental Labs,	<u>Inc.</u> Contract:	BBL-McKesson	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.	:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab	Sample ID:	0305101-09A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab	File ID:	<u>1701017.D</u>
Level: (low/med)	LOW	Dat	e Received:	05/08/03
% Moisture: not dec.		Dat	e Analyzed:	05/16/03
GC Column: J&W, DB624	ID: <u>.18</u>	(mm) Dil	ution Factor:	1.00
Soil Extract Volume:	(µL)	Soi	l Aliquot Volu	me(µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		3	JU.
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	
1330-20-7	m,p-Xylene		10	υ
95-47-6	o-Xylene		5	U

## FORM I VOA - 1

## 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-30

Lab	Name:	Buck Envir	onmental	Labs,	Inc. Contract:	BBL_McKesson
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Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305120-01A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	1201012.D
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture: not dec.		Date Analyzed:	05/20/03
GC Column: J&W,DB624	ID: <u>.18</u> (mm)	Dilution Factor:	5.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume (µL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		62	U
71-43-2	Benzene		25	U
100-41-4	Ethylbenzene		25	U
75-09-2	Methylene chloride		8	J
108-88-3	Toluene		25	U
79-01-6	Trichloroethene		25	U
1330-20-7	m,p-Xylene		50	U
95-47-6	o-Xylene		25	U

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EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-17R

Lab Name: Buck Envir	conmental Labs,	<u>Inc.</u> Contract:	-BBL-McKesson	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.	:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab	Sample ID:	0305120-02A
Sample wt/vol: <u>5</u>	(g/mL) <u>ML</u>	Lab	File ID:	0901009.D
Level: (low/med)	LOW	Dat	e Received:	05/09/03
% Moisture: not dec.		Dat	e Analyzed:	05/19/03
GC Column: J&W, DB62	4 ID: <u>.18</u>	(mm) Dil	ution Factor:	1.00
Soil Extract Volume:	(µL)	Soi	l Aliquot Volu	ume(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		8	
100-41-4	Ethylbenzene		5	Ŭ
75-09-2	Methylene chloride		5	υ
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		5	U
95-47-6	o-Xylene		5	U

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## 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-25S

Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u> Case No	.: <u>c</u> s	AS No.:	SDG No.: BEL0309
Matrix: (soil/water) <u>WATER</u>		Lab Sample ID:	0305120-03A
Sample wt/vol: <u>5</u> (g/mI	) <u>ML</u>	Lab File ID:	0701007.D
Level: (low/med) LOW		Date Received:	05/09/03
% Moisture: not dec.		Date Analyzed:	05/19/03
GC Column: J&W, DB624 ID:	<u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		5	U
95-47-6	o-Xylene		5	U

EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-25D

# Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u> Case	No.: <u>C</u>	SAS	No.:	SDG No.: I	BEL0309
Matrix: (soil/water) <u>WATER</u>			Lab Sample ID:	0305120-041	Ŧ
Sample wt/vol: 5 (g	/mL) <u>ML</u>		Lab File ID:	<u>0601006.D</u>	
Level: (low/med) LOW			Date Received:	05/09/03	
% Moisture: not dec.			Date Analyzed:	05/19/03	
GC Column: J&W,DB624	ID: <u>.18</u> (mm)		Dilution Factor:	1.00	
Soil Extract Volume:	(µL)		Soil Aliquot Volu	me	(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12	υ
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		5	Ŭ
95-47-6	o-Xylene		5	U

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1A VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-23I

Lab Name: Buck Environmental Lab	bs, Inc. Contra	ct: <u>_BBL-McKesson</u>	
Lab Code: 10795 Case No.:	<u>c</u> sas	No.:	SDG No.: BEL0309
Matrix: (soil/water) WATER		Lab Sample ID:	0305120-05A
Sample wt/vol: 5 (g/mL)	ML	Lab File ID:	1401014.D
Level: (low/med) LOW		Date Received:	05/09/03
<pre>% Moisture: not dec.</pre>		Date Analyzed:	05/19/03
GC Column: J&W, DB624 ID:	<u>18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	me (µL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene	_	5	U
95-47-6	o-Xylene		5	U

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## 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-23S

Lab Name: Buck Environmental Labs, Inc. Contr	act: <u>BBL-McKesso</u> n	
Lab Code: <u>10795</u> Case No.: <u>C</u> SAS	S No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	0305120-06A
Sample wt/vol: $5$ (g/mL) <u>ML</u>	Lab File ID:	1401014.D
Level: (low/med) LOW	Date Réceived:	05/09/03
% Moisture: not dec.	Date Analyzed:	05/21/03
GC Column: J&W, DB624 ID: <u>.18</u> (mm)	Dilution Factor:	5.00
Soil Extract Volume: (µL)	Soil Aliquot Volu	ume(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	<u>UG/L</u>	Q
67-64-1	Acetone		62	U
71-43-2	Benzene		25	U
100-41-4	Ethylbenzene		25	U
75-09-2	Methylene chloride		25	U
108-88-3	Toluene		25	U
79-01-6	Trichloroethene		25	U
1330-20-7	m,p-Xylene		50	U
95-47-6	o-Xylene		25	U

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1A VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-18

Lab Name: Buck Environmental Labs, Inc. Contr	act: <u>_BBL-McKesso</u> n	
Lab Code: <u>10795</u> Case No.: <u>C</u> SAS	S No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID:	0305120-07A
Sample wt/vol: 5 (g/mL) ML	Lab File ID:	0801008.D
Level: (low/med) LOW	Date Received:	05/09/03
% Moisture: not dec.	Date Analyzed:	05/19/03
GC Column: J&W, DB624 ID: .18 (mm)	Dilution Factor:	1.00
Soil Extract Volume: (µL)	Soil Aliquot Volu	

	CONCENTRATION UNITS:					
CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q		
67-64-1	Acetone		12	U		
71-43-2	Benzene		5	U		
1.00-41-4	Ethylbenzene		5	U		
75-09-2	Methylene chloride		5	U		
108-88-3	Toluene		5	U		
79-01-6	Trichloroethene		5	U		
1330-20-7	m,p-Xylene		5	U		
95-47-6	o-Xylene		5	U		

## VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: Buck Environmental Labs, Inc. Contract: BBI-McKesson

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0309
Matrix: (soil/water) WA	TER	Lab Sample ID:	0305120-08A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	0501005.D
Level: (low/med) LO	W	Date Received:	05/09/03
% Moisture: not dec.		Date Analyzed:	05/19/03
GC Column: J&W, DB624	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	me (µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
57-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		_ 5	U
95-47-6	o-Xylene		5	U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-19

Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u> Case N	o.: <u>C</u>	SAS	No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water) <u>WATER</u>			Lab Sample ID:	0305124-01A
Sample wt/vol: $5 \qquad (g/\pi)$	L) <u>ML</u>		Lab File ID:	<u>1101011.D</u>
Level: (low/med) LOW			Date Received:	05/09/03
% Moisture: not dec.			Date Analyzed:	05/19/03
GC Column: J&W, DB624 ID	: <u>.18</u> (mm)		Dilution Factor:	1.00
Soil Extract Volume:	(µL)		Soil Aliquot Volu	me(μL)

CONCENTRATION UNITS:

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CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	υ
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		5	U
95-47-6	o-Xylene		5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

PZ-4D

Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS	No.:	SDG No.: BEL0309
Matrix: (soil/water) <u>W</u>	ATER		Lab Sample ID:	0305124-02A
Sample wt/vol: 5	(g/mL) <u>ML</u>		Lab File ID:	<u>1301013.D</u>
Level: (low/med) L	OW		Date Received:	05/09/03
% Moisture: not dec.			Date Analyzed:	05/19/03
GC Column: J&W, DB624	ID: <u>.18</u> (mm)		Dilution Factor:	1.00
Soil Extract Volume:	(µL)		Soil Aliquot Volu	me (µL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		.5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		5	U
95-47-6	o-Xylene		5	U

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1A VOLATILE ORGANICS ANALYSIS DATA SHEET

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PZ-4S

Lab Name: Buck Environmental Labs, Inc. Contra	act:BRL-McKesson
Lab Code: <u>10795</u> Case No.: <u>C</u> SAS	No.: SDG Nc.: <u>BEL0309</u>
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: 0305124-03A
Sample wt/vol: 5 (g/mL) ML	Lab File ID: <u>1201012.D</u>
Level: (low/med) LOW	Date Received: 05/09/03
% Moisture: not dec.	Date Analyzed: 05/19/03
GC Column: J&W, DB624 ID: .18 (mm)	Dilution Factor: <u>1.00</u>
Scil Extract Volume: (µL)	Soil Aliquot Volume (µL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µġ/Kg)	UG/L	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride	_	_5	U
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		5	U
95-47-6	o-Xylene		5	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: Buck Environmental Labs, Inc. Contract: BBL-McKesson

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Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0309
Matrix: (soil/water) W	ATER	Lab Sample ID:	0305124-04A
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	1001010.D
Level: (low/med) L	OW	Date Received:	05/09/03
% Moisture: not dec.		Date Analyzed:	05/19/03
GC Column: <u>J&amp;W,DB624</u>	ID: <u>.18</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	me(µL)

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
67-64-1	Acetone		12	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		5	U
108-88-3	Toluene		5	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		5	U
95-47-6	o-Xylene		5	U

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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.

All samples were analyzed within the technical 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 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 met the specified criteria.

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.

The matrix spike and matrix spike duplicate recoveries and 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	Sample Result	Duplicate Result	RPD
MW-27 / 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. The sample result units were originally reported as ug/l. The units have been corrected to mg/l.
- 8. 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.

## Data Validation Checklist

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	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?			
Are the sample chain-of-custodies present?	_ <u>X</u>		_
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?		<u> </u>	
Holding Times			
Have any holding times been exceeded?		X	
<u>Matrix Spikes</u>			
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 of			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
0 out of1			
<u>Blanks</u>			
Is the method blank summary form present?	<u> </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?	_ <u>X</u>		
Do any method/reagent/instrument blanks have positive results?		<u>X</u>	
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	<u> </u>	<u> </u>	
Matrix spikes	X		
Blanks	<u> </u>		

## **Organic Data Validation Checklist**

	YES	NO	NA
Are the chromatograms present for each of the following:			
Samples	<u> </u>		
Matrix spikes	<u>X</u>		
Blanks	<u> </u>		
Is the chromatographic performance acceptable?	_ <u>X</u>	<u></u>	
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?	_ <u>X</u>		
<u>Standard Data</u>			
Are the quantitation reports and chromatograms present for the initial and continuing calibration standards?	_ <u>x</u> _		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	_ <u>X</u>		
Are the response factor RSDs or correlation coefficients within acceptable limits?	_ <u>_</u> X		<u></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?	_ <u></u> X		
All %D within acceptable limits?	X		
Are there any transcription/calculation errors in reporting of RF or %D?		<u> </u>	
<u>Field Duplicates</u>			
Were field duplicates submitted with the samples?	<u>    X     </u>		

# Organic Data Validation Checklist - Page 2

## **Calibration Outliers**

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## Instrument: <u>GC-03</u> Matrix: <u>water</u>

Date	5/16/03	- ∽∽ 5/16/03	5/16/03	5/16/03	5/16/03	
Time		1400	1449	1529	1550	
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	RSD	%D	%D	**.>> %D	%D	%D
methanol						
Affected Samples:						

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Corrected Sample Analysis Data Sheets

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

DUP-2

Lab Name: Buck Envir	conmental Labs, Inc.Co	ontract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305101-07C
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	<u>3101031.D</u>
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB-</u> V	<u>JRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL)
		CONCENTRATION UNIT	S:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	LIGHT Mill Q
67-56-1	Methanol		1 U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-85

Lab Name: Buck Environmental Labs, Inc.	Contract:
Lab Code: <u>10795</u> Case No.: <u>C</u>	SAS No.: SDG No.: BEL0309
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: 0305101-02C
Sample wt/vol: $5$ (g/mL) <u>ML</u>	Lab File ID: <u>2801028.D</u>
Level: (low/med) LOW	Date Received: 05/08/03
<pre>% Moisture: not dec.</pre>	Date Analyzed: 05/16/03
GC Column: J&W, DB-VRX ID: .45 (mm)	Dilution Factor: 1.00
Soil Extract Volume: (µL)	Soil Aliquot Volume(µL)
	CONCENTRATION UNITS:
CAS NO. COMPOUND	$(\mu g/L \text{ or } \mu g/Kg) \qquad \underline{UG/L} (\mathcal{P}) : \downarrow L Q$
67-56-1 Methanol	1 0

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-17R

Lab Name: <u>Buck Envir</u>	conmental Labs, Inc.	Contract:	
Lab Code: <u>10795</u>	Case No.: C	SAS No.:	SDG No.: BEL0309
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305120-02C</u>
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	4201042.D
Level: (low/med)	LOW	Date Received:	05/09/03
<pre>% Moisture: not dec.</pre>		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB-</u>	VRX ID: .45 (mm)	) Dilution Factor:	1.00
Soil Extract Volume:	(JL)	Soil Aliquot Volu	me(µL)
		CONCENTRATION UNIT	S:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L Mj/L Q
67-56-1	Methanol		1 U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-18

Lab Name: Buck Envir	onmental Labs, Inc.Co	ontract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305120-07C
Sample wt/vol: $5$	(g/mL) <u>ML</u>	Lab File ID:	4701047.D
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: J&W, DB-V	/RX ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL)
		CONCENTRATION UNIT	S:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/I mill Q
67-56-1	Methanol		0.28 J

EPA SAMPLE NO. VOLATILE ORGANICS ANALYSIS DATA SHEET MW-19 Lab Name: Buck Environmental Labs, Inc. Contract:

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305124-01C
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	5301053.D
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: J&W, DB-	VRX ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL)
		CONCENTRATION UNIT	rs:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	LIGHE My C Q
67-56-1	Methanol		1. U

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-23I

Lab Name: Buck Envir	conmental Labs, Inc.Co	ontract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305120-05c</u>
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	4501045.D
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB-</u>	VRX ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL)
		CONCENTRATION UNIT	s: i.
CAS NO.	COMPOUND	(µg/L or µg/Kg)	UGHE Myll Q
67-56-1	Methanol		1 U
EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-23S

Lab Name: <u>Buck En</u>	vironmental Labs, Inc. (	Contract:		
Lab Code: <u>10795</u>	Case No.: C	SAS No.:	SDG No.: BELO	309
Matrix: (soil/wate	r) <u>WATER</u>	Lab Sample ID:	0305120-06C	
Sample wt/vol: $5$	(g/mL) <u>ML</u>	Lab File ID:	<u>4601046.D</u>	
Level: (low/mec	LOW	Date Received:	05/09/03	
% Moisture: not de	c.	Date Analyzed:	05/16/03	
GC Column: J&W, D	<u>B-VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00	
Soil Extract Volum	e: (µL)	Soil Aliquot Volu	ume(µL)	
		CONCENTRATION UNIT	s: 1/	
CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/I 1)M/L	- Q
67-56-	L Methanol		0.38	J

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

M₩-25D

Lab Name:	Buck Enviro	onmental Labs,	<u>Inc.</u> Cont	cract:	
Lab Code:	10795	Case No.: <u>C</u>	S.	AS No.:	SDG No.: <u>BEL0309</u>
Matrix: (so	oil/water)	WATER		Lab Sample ID:	0305120-04C
Sample wt/	vol: <u>5</u>	(g/mL) <u>ML</u>		Lab File ID:	<u>4401044.D</u>
Level:	(low/med)	LOW		Date Received:	05/09/03
% Moisture	: not dec.			Date Analyzed:	05/16/03
GC Column:	J&W, DB-V	RX ID: <u>.45</u>	( mm )	Dilution Factor:	1.00
Soil Extra	ct Volume:	(µL)		Soil Aliquot Vol	ume(µL)
				CONCENTRATION UNI	TS:
CAS NO.		COMPOUND		(µg/L or µg/Kg)	UGAE mille Q
	67-56-1	Methanol			1 U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-255

Lab Name: <u>Buck Env</u>	ironmental Labs, Inc	_Contract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.: SDG No.;	BEL0309
Matrix: (soil/wate	) <u>WATER</u>	Lab Sample ID: 0305120-	-03C
Sample wt/vol: $5$	(g/mL) <u>ML</u>	Lab File ID: <u>4301043</u>	D
Level: (low/med)	LOW	Date Received: 05/09/03	3
% Moisture: not dec	2.	Date Analyzed: 05/16/03	3
GC Column: J&W, DF	<u>3-VRX</u> ID: <u>.45</u> (mm	) Dilution Factor: <u>1.00</u>	
Soil Extract Volume	e: (μL)	Soil Aliquot Volume	(µL)
		CONCENTRATION UNITS:	,
CAS NO.	COMPOUND	(µg/L or µg/Kg)	ingle a
67-56-1	Methanol	1	U U

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EPA SAMPLE NO. 1A VOLATILE ORGANICS ANALYSIS DATA SHEET MW-27 Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_ Lab Code: <u>10795</u> Case No.: <u>C</u> SAS No.: <u>SDG No.: BEL0309</u> Matrix: (soil/water) <u>WATER</u> Lab Sample ID: 0305101-03C Sample wt/vol: 5 (g/mL) ML Lab File ID: <u>2901029.D</u> Date Received: 05/08/03 Level: (low/med) LOW Date Analyzed: 05/16/03 % Moisture: not dec. GC Column: J&W, DB-VRX ID: .45 (mm) Dilution Factor: 1.00 Soil Extract Volume: (µL) Soil Aliquot Volume (µL) CONCENTRATION UNITS: UG/I/1) / CAS NO. (µg/L or µg/Kg) Q COMPOUND 67-56-1 Methanol U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-28

Lab Name: <u>Buck Envi</u>	conmental Labs, Inc.Co	ontract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305101-06C</u>
Sample wt/vol: <u>5</u>	(g/mL) <u>ML</u>	Lab File ID:	<u>3001030.D</u>
Level: (low/med)	LOW	Date Received:	05/08/03
<pre>% Moisture: not dec.</pre>		Date Analyzed:	05/16/03
GC Column: J&W, DB-	VRX ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	(μL)
		CONCENTRATION UNIT	'S:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L/Dell Q
67-56-1	Methanol		1 U

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-29

Lab Name: <u>Buck Envir</u>	conmental Labs, Inc.C	ontract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305101-09C
Sample wt/vol: <u>5</u>	(g/mL) <u>ML</u>	Lab File ID:	4001040.D
Level: (low/med)	LOW	Date Received:	05/08/03
<pre>% Moisture: not dec.</pre>		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB-</u>	<u>VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:		Soil Aliquot Volu	נגן)
		CONCENTRATION UNIT	'S:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	UGAL My IL Q
67-56-1	Methanol		U

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## 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-30

Lab Name: <u>Buck Envir</u>	conmental Labs, Inc.Co	ontract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305120-01C</u>
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	<u>4101041.D</u>
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB-'</u>	<u>VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL)
		CONCENTRATION UNIT	S:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	UGHE MILL Q
67-56-1	Methanol		1 U

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-36

Lab Name: Buck Envir	ronmental Labs, Inc.Co	ontract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305101-01C</u>
Sample wt/vol: 5	(g/mL) ML	Lab File ID:	2701027.D
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB-'</u>	VRX ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL)
		CONCENTRATION UNIT	S:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	JUGTE MAJL Q
67-56-1	Methanol		1 U

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

PZ-4D

Lab Name: <u>Buck Envi</u>	ronmental Labs, Inc. C	ontract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0309
Matrix: (soil/water)	WATER	Lab Sample ID:	0305124-02C
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	<u>5401054.D</u>
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB</u> -	<u>VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL)
		CONCENTRATION UNIT	S: /.
CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/I DX L Q
67-56-1	Methanol		U

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	1A		EPA SAMPLE NO.
VOLATI	LE ORGÀNICS ANALYSIS D	ATA SHEET	PZ-4S
Lab Name: Buck Envi	conmental Labs, Inc.Co	ntract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305124-03C
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	<u>5501055.D</u>
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB-</u>	<u>VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	<u>1.00</u>
Soil Extract Volume:	(µL)	Soil Aliquot Vol	Lume (µL)
		CONCENTRATION UNI	TS: ;
CAS NO.	COMPOUND	(µg/L or µg/Kg)	METERNY/L Q
67-56-1	Methanol		1 U

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EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

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Lab Name: Buck Envi	ronmental Labs, Inc. (	Contract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305101-08B
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	<u>3901039.D</u>
Level: (low/med)	LOW	Date Received:	05/08/03
<pre>% Moisture: not dec.</pre>		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB-</u>	<u>VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Vola	ume(µL)
		CONCENTRATION UNIT	2S:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	USTEMATL Q
67-56-1	Methanol		1 U

## 1A VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

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Lab Name: Buck Envir	onmental Labs, Inc.Co	ontract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305120-08B</u>
Sample wt/vol: 5	(g/mL) <u>ML</u>	Lab File ID:	4801048.D
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture: not dec.		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB-V</u>	<u>TRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(בנ)
		CONCENTRATION UNIT	S:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	JEH Myle Q
67-56-1	Methanol		1 U

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK

Lab Name: Buck Environmental Labs, Inc. Contract:

Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305124-04B</u>
Sample wt/vol: <u>5</u>	(g/mL) <u>ML</u>	Lab File ID:	5601056.D
Level: (low/med)	LOW	Date Received:	05/09/03
<pre>% Moisture: not dec.</pre>		Date Analyzed:	05/16/03
GC Column: <u>J&amp;W, DB-</u>	<u>VRX</u> ID: <u>.45</u> (mm)	Dilution Factor:	1.00
Soil Extract Volume:	(µL)	Soil Aliquot Volu	ume(µL)
		CONCENTRATION UNIT	s:
CAS NO.	COMPOUND	(µg/L or µg/Kg)	UGAT / MUL Q
. 67-56-1	Methanol		1 U

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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 sample 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.

Samples MW8S, MW-27, DUP-2 and MW-28 contained aniline above the linear range. Data for aniline in these samples have been replaced with data from the dilution analyses. All other 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 and matrix spike duplicate recoveries and relative percent difference between recoveries for aniline were outside control limits. The matrix spike blank was, however, within control limits for aniline. No data have been qualified based on the deviations.

#### 9. Field Duplicates

Results for duplicate samples are summarized as follows:

Sample ID/ Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
MW-27 / DUP-2	Aniline	15000	11000	30.8%
	N,N-Dimethylaniline	11	3J	NA

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.

Data Validation Checklist

## 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?	<u>X</u>		
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?		<u> </u>	
<u>Holding Times</u>			
Have any holding times been exceeded?		<u>X</u>	
Surrogate Recovery			
Are the surrogate recovery forms present?	X		
Are all the samples listed on the appropriate surrogate recovery form?	<u> </u>		
Were two or more surrogate recoveries outside of specified limits for any sample or blank?		<u> </u>	
If yes, were the samples reanalyzed?			X
<u>Matrix Spikes</u>			
Is there a matrix spike recovery form present?	X		
Were matrix spikes analyzed at the required frequency	<u> </u>		
How many spike recoveries were outside of QC limits?			
<u>2</u> out of <u>4</u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
<u>1</u> out of <u>2</u>			
<u>Blanks</u>			
Is the method blank summary form present?	<u> </u>		
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	<u>_x</u> _		
Has a blank been analyzed for each GC/MS system used?	<u>X</u>		
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?	<u> </u>		
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?			<u> </u>
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?	_ <u>_X</u>		
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	<u>X</u>		
Do the samples and standard relative ion intensities agree within 20%?	<u>X</u>		
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?	х		
Are any target compounds listed as TICs?		X	

# Semivolatile Organics Data Validation Checklist - Page 3

	YES	NO	<u>NA</u>
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?	<u> </u>		
<u>Standard Data</u>			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	<u>X</u>		
Initial Calibration			
Are the initial calibration forms present for each instrument used?	<u> </u>		
Are the response factor RSDs within acceptable limits?	X	<u> </u>	
Are the average RRF equal to or greater than minimum requirements?	<u> </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> </u>		
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	<u> </u>		
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?		<u> </u>	
Internal Standards			
Are internal standard areas of the samples and blanks within the upper and lower limits for each continuing calibration?	<u>X</u>		
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	<u> </u>		

## Semivolatile Organics Data Validation Checklist - Page 4

## <u>Field Duplicates</u>

Were field duplicates submitted with the samples? X\_\_\_\_\_

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

Sample ID	Holding	Sı	urrogate	s*		l <u>n</u>	iternal S	tandard	s*	24 
	Time*	NBZ	FBP	ТРН	DCB	NPT	ANT	PHN ·	CRY	PRY
MW-36										
MW-8S		D								
MW-27										
MW-27 MS										
MW-27 MSD										
MW-28										
DUP-2										
MW-29			_							
MW-30										
MW-17R										
MW-25S										
MW-25D										
MW-231										
MW-23S										
MW-18										
MW-19										
PZ-4D										
PZ-4S										

Surrogates: NBZ Nitrobenzene-d5 FBP 2-Fluorobiphenyl TPH Terphenyl-d14

Internal Standards:

DCB 1,4-Dichlorobenzene-d4 NPT Naphthalene-d8

ANT Acenaphthene-d10

PHN Phenanthrene-d10 Chrysene-d12 Perylene-d12 CRY

PRY

Qualifiers:

D

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Diluted

Recovery low Recovery high

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

## Semivolatile Calibration Outliers

## Instrument: <u>MSD2</u> Level: <u>low</u>

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Date/Time	6/	03/03	6/04/03	3 <u>1</u> 040	6/05/0	3 1523	6/06/0	3 1044		
	Initi	al Cal.	Cont.	Cal.	Cont	. Cal.	Cont.	Cal.	Сог	nt. Cal.
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
aniline										
n,n'-dimethylaniline										
Affected Samples:										
								_		

Corrected Sample Analysis Data Sheets

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	1C		EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYSIS [	DATA SHEET	DUP-2
Lab Name: Buck Envir	onmental Labs, In Cont	ract:	
Lab Code: <u>10795</u>	Case No.: C	SAS No.:	SDG No.: BEL0309
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305101-07B</u>
Sample wt/vol:	<u>935</u> (g/mL) <u>ML</u>	Lab File ID:	<u>1401014.D</u>
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	05/12/03
Concentrated Extract	Volume: $\underline{1000}$ (µL)	Date Analyzed:	06/04/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: $(Y/N)$	<u>N</u> pH:	Extraction: (Type)	
		CONCEN	TRATION UNITS:
CAS NO.	COMPOUND	(µg/L	or μg/Kg) <u>UG/L</u> Q

62-53-3	Aniline	66000	E
121-69-7	N,N-Dimethylaniline	3	」の年下

	10		EPA SAMPLE NO.
SEMIVOLAT	DUP-2DL		
Lab Name: Buck Envir	conmental Labs, In Cont	ract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305101-07B</u>
Sample wt/vol:	<u>935</u> (g/mL) <u>ML</u>	Lab File ID:	<u>1001010.D</u>
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	05/12/03
Concentrated Extract	Volume: $1000 (\mu L)$	Date Analyzed:	06/05/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	200.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	
		CONCEN	TRATION UNITS:
CAS NO.	COMPOUND	(µg/L	or μg/Kg) <u>UG/L</u> Q
62-53-3	Aniline		11000

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	1C		EPA SAMPLE NO.
SEMIVOLAT	MW-85		
Lab Name: <u>Buck Envir</u>	conmental Labs, In Cont	ract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0309
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305101-02B</u>
Sample wt/vol:	<u>995</u> (g/mL) <u>ML</u>	Lab File ID:	0901009.D
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	05/12/03
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/04/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	20.00
GPC Cleanup: (Y/N)	<u>м</u> рн:	Extraction: (Type)	
		CONCEN	TRATION UNITS:
CAS NO.	COMPOUND	(µg/L	or µg/Kg) <u>UG/L</u> Q
62-53-3	Aniline		220000 ( E )

121-69-7

N,N-Dimethylaniline

29

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	1C		EPA SAMPLE NO.
SEMIVOLAT	MW-85		
Lab Name: <u>Buck Envir</u>	L		
Lab Code: <u>10795</u>	Case No.: C	SAS No.:	SDG No.: BEL0309
Matrix: (soil/water)	WATER	Lab Sample ID:	0305101-02B
Sample wt/vol:	<u>995</u> (g/mL) <u>M</u>	L Lab File ID:	0301003.D
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture:	Decanted: $(Y/N)$ <u>N</u>	Date Extracted:	05/12/03
Concentrated Extract	Volume: <u>1000</u> (µL	) Date Analyzed:	06/06/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	2,000.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	
		CONCEN	TRATION UNITS:
CAS NO.	COMPOUND	(µg/L	or µg/Kg) <u>UG/L</u> Q

62-53-3	Aniline	79000	
121-69-7	N,N-Dimethylaniline	23000	

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	1C		EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYSIS DA	ATA SHEET	MW-17R
Lab Name: Buck Envir	conmental Labs, In Contra	act:	L
Lab Code: <u>10795</u>	Case No.: <u>C</u> S	CAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305120-02B</u>
Sample wt/vol:	<u>960</u> (g/mL) <u>ML</u>	Lab File ID:	<u>0601006.D</u>
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture:	Decanted:( $Y/N$ ) <u>N</u>	Date Extracted:	05/13/03
Concentrated Extract	Volume: $1000$ (µL)	Date Analyzed:	06/06/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	
		CONCER	VTRATION UNITS:
CAS NO.	COMPOUND	(µg/L	or μg/Kg) <u>UG/L</u> Q

62-53-3	Aniline	5	U
121-69-7	N,N-Dimethylaniline	5	U

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	1C			EPA SAMPLE NO.
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET			MW-18	
Lab Name: Buck Envir	conmental Labs,	In Contrac	:t:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SA	S No.:	SDG No.: BEL0309
Matrix: (soil/water)	WATER		Lab Sample ID:	0305120-07B
Sample wt/vol:	<u>980</u> (g/mI	L) <u>ML</u>	Lab File ID:	<u>1101011.D</u>
Level: (low/med)	LOW		Date Received:	05/09/03
% Moisture:	Decanted: $(Y/N)$	N	Date Extracted:	05/13/03
Concentrated Extract	Volume: <u>1000</u>	(µL)	Date Analyzed:	06/06/03
Injection Volume:	<u>1</u> (µL)		Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:		Extraction: (Type)	
			CONCEN	TRATION UNITS:
CAS NO.	COMPOUND		(µg/L	or µg/Kg) <u>UG/L</u> Q

	62-53-3	Aniline	5	U
•	121-69-7	N,N-Dimethylaniline	5	U

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EPA SAMPLE NO.

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

			MW-19
Lab Name: <u>Buck Envir</u>	conmental Labs, In Cont	ract:	L
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0309
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305124-01B</u>
Sample wt/vol:	<u>985</u> (g/mL) <u>ML</u>	Lab File ID:	1301013.D
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture:	Decanted: $(Y/N)$ <u>N</u>	Date Extracted:	05/14/03
Concentrated Extract	Volume: $1000 (\mu L)$	Date Analyzed:	06/06/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	()	ıg∕L or	µg∕Kg)	UG/L	, Q	
62-53-3	Aniline			5		IJ	I
121-69-7	N,N-Dimethylaniline			5		υ	

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	1C		EPA SAMPLE NO.
SEMIVOLAT	TLE ORGANICS ANALYSIS	DATA SHEET	MW-23I
Lab Name: Buck Envir	ronmental Labs, In Con	tract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305120-05B</u>
Sample wt/vol:	<u>970</u> (g/mL) <u>ML</u>	Lab File ID:	<u>0901009.D</u>
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	05/13/03
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/06/03
Injection Volume:	<u>1</u> (μL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Typ	e)
		CONC	CENTRATION UNITS:
CAS NO.	COMPOUND	(µg/	'L or μg/Kg) <u>UG/L</u> Q
62-53-3	Aniline		5 U
121-69-7	N,N-Dimethylaniline		5U

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	1C		EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYSIS	DATA SHEET	MW-23S
Lab Name: Buck Envir	conmental Labs, In Cor	ntract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305120-06B
Sample wt/vol:	<u>975</u> (g/mL) <u>ML</u>	Lab File ID:	1001010.D
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted	: 05/13/03
Concentrated Extract	Volume: $1000$ (µL)	Date Analyzed:	06/06/03
Injection Volume:	<u>1</u> (µL)	Dilution Facto	or: <u>1.00</u>
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (T	ype)
		CC	NCENTRATION UNITS:
CAS NO.	COMPOUND	<b>μ</b> )	g/L or µg/Kg) <u>UG/L</u> Q
62-53-3	Aniline		5 U
121-69-7	N, N-Dimethylaniline		5 U

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	1C		EPA SAMPLE NO.
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SEMIVOLAT	MW-25D		
Lab Name: <u>Buck Envir</u>	conmental Labs, In Contr	act:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305120-04B
Sample wt/vol:	<u>990</u> (g/mL) <u>ML</u>	Lab File ID:	0801008.D
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	05/13/03
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/06/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	
		CONCEN	TRATION UNITS:
CAS NO.	COMPOUND	(µg/L	or µg/Kg) <u>UG/L</u> Q
(0 [ 2 ] 2 ]	<b>A</b>		E

62-53-3	Aniline	5	U
121-69-7	N,N-Dimethylaniline	5	U

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EPA SAMPLE NO.

SEMIVOLAT	ILE ORGANICS ANALYSIS DA	TA SHEET	MW-255				
Lab Name: <u>Buck Envir</u>	ab Name: Buck Environmental Labs, In Contract:						
Lab Code: <u>10795</u>	Case No.: <u>C</u> S	AS No.:	SDG No.: BEL0309				
Matrix: (soil/water)	WATER	Lab Sample ID:	0305120-03B				
Sample wt/vol:	<u>990</u> (g/mL) <u>ML</u>	Lab File ID:	<u>0701007.D</u>				
Level: (low/med)	LOW	Date Received:	05/09/03				
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	05/13/03				
Concentrated Extract	Volume: $1000$ (µL)	Date Analyzed:	06/06/03				
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00				
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)					
		CONCEN	TRATION UNITS:				

(µg/L or µg/Kg) UG/L Q

CAS NO.	COMPOUND	(µg/L	or	µg/Kg)	<u>UG/L</u>	Q	
62-53-3	Aniline			5		U	
121-69-7	N,N-Dimethylaniline			5		U	

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	1C		EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYSIS	DATA SHEET	MW-27
Lab Name: Buck Envir	onmental Labs, In Cont	ract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305101-03B
Sample wt/vol:	<u>990</u> (g/mL) <u>ML</u>	Lab File ID:	1001010.D
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture:	Decanted: $(Y/N)$ <u>N</u>	Date Extracted:	05/12/03
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/04/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>м</u> рН:	Extraction: (Type)	
		CONCEN	TRATION UNITS:
CAS NO.	COMPOUND	(µg/L	or µg/Kg) <u>UG/L</u> Q

62-53-3	Aniline	.63000 / 🛼 👝	E
121-69-7	N,N-Dimethylaniline	11	-T

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	lC		EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYSIS	DATA SHEET	MW-27DI.
Lab Name: <u>Buck Envir</u>	conmental Labs, In Cont	cract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305101-03B
Sample wt/vol:	<u>990</u> (g/mL) <u>ML</u>	Lab File ID:	0601006.D
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	05/12/03
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/05/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	200.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	)
		CONCEN	NTRATION UNITS:

CAS NO.	COMPOUND	µg/L or µg/Kg) <u>UG/</u>	Ľ Q
62-53-3	Aniline	15000	
121-69-7	N,N-Dimethylaniline	1000	U

	1C		EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYSIS	DATA SHEET	MW-28
Lab Name: <u>Buck Envir</u>	conmental Labs, In Cont	tract:	L
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305101-06B
Sample wt/vol:	<u>985</u> (g/mL) <u>ML</u>	Lab File ID:	1301013.D
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture:	Decanted:(Y/N) N	Date Extracted	d: <u>05/12/03</u>
Concentrated Extract	Volume: $1000 (\mu L)$	Date Analyzed:	06/04/03
Injection Volume:	<u>1</u> (µL)	Dilution Facto	or: <u>1.00</u>
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (1	ype)
х.		CC	NCENTRATION UNITS:
CAS NO.	COMPOUND	٦)	ng/L or µg/Kg) <u>UG/L</u> Q
62-53-3	Aniline		21000 E 5
121-69-7	N,N-Dimethylaniline		ر: -تر. 3



	1C		EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYSIS DE	ATA SHEET	MW-28DL
Lab Name: <u>Buck Envir</u>	conmental Labs, In Contra	act:	······································
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	0305101-06B
Sample wt/vol:	<u>985</u> (g/mL) <u>ML</u>	Lab File ID:	<u>0901009.D</u>
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture:	Decanted: $(Y/N)$ <u>N</u>	Date Extracted:	05/12/03
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/05/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	200.00
GFC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type	)
		CONCE	NTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or	µg/Kg)	<u>UG/L</u>	Q
62-53-3	Aniline		1000		J
121-69-7	N, N-Dimethylaniline		1000		U

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	1C		EPA SAMPLE NO.
SEMIVOLAT	ILE ORGANICS ANALYSIS	DATA SHEET	MW-29
Lab Name: <u>Buck Envir</u>	conmental Labs, In Cont	cract:	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305101-09B</u>
Sample wt/vol:	<u>990</u> (g/mL) <u>ML</u>	Lab File ID:	1501015.D
Level: (low/med)	LOW	Date Received:	05/08/03
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	05/12/03
Concentrated Extract	Volume: $1000 (\mu L)$	Date Analyzed:	06/04/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type	)
		CONCE	NTRATION UNITS:
CAS NO.	COMPOUND	(µg/L	or µg/Kg) <u>UG/L</u> Q
62-53-3	Aniline		19
121-69-7	N,N-Dimethylaniline		1 05

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## 1C

EPA SAMPLE NO.

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

			MW~30
Lab Name: <u>Buck Envir</u>	conmental Labs, In Cont	ract:	L
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: BEL0309
Matrix: (soil/water)	WATER	Lab Sample ID:	0305120-01B
Sample wt/vol:	<u>980</u> (g/mL) <u>ML</u>	Lab File ID:	0501005.D
Level: (low/med)	LOW	Date Received:	05/09/03
% Moisture:	Decanted:(Y/N) N	Date Extracted:	05/13/03
Concentrated Extract	Volume: $1000$ (µL)	Date Analyzed:	06/06/03
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)	)

### CONCENTRATION UNITS:

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CAS NO.	COMPOUND	(µg/L or µg/Kg) <u>U</u>	G/L Q
62-53-3	Aniline	18	
121-69-7	N,N-Dimethylaniline	0.6	7 ستد



(ug/L or ug/Kg) HG/L ()

	1C		EPA SAMPLE NO.	
SEMIVOLAT	MW-36			
Lab Name: <u>Buck Envir</u>	<u>conmental Labs, In</u> Cont:	ract:	L	
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>	
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305101-01B</u>	
Sample wt/vol:	<u>990</u> (g/mL) <u>ML</u>	Lab File ID:	<u>0801008.D</u>	
Level: (low/med)	LOW	Date Received:	05/08/03	
% Moisture:	Decanted: $(Y/N)$ <u>N</u>	Date Extracted:	05/12/03	
Concentrated Extract	Volume: $1000 (\mu L)$	Date Analyzed:	06/04/03	
Injection Volume:	· <u>1</u> (μL)	Dilution Factor:	1.00	
GPC Cleanup: (Y/N)	<u>N</u> pH:	Extraction: (Type)		
		CONCEN	TRATION UNITS:	
CAS NO	COMPOUND	(ug/L	or ug/Kg) UG/L O	

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CAS NO.		COMPOUND	(µg/L or	µg/Kġ)	UG/L	Q
	62-53-3	Aniline		67		
1	.21-69-7	N,N-Dimethylaniline		4		35

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	EPA SAMPLE NO.						
SEMIVOLAT	PZ-4D						
Lab Name: <u>Buck Envir</u>							
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS No.:	SDG No.: <u>BEL0309</u>				
Matrix: (soil/water)	WATER	Lab Sample ID:	<u>0305124-02B</u>				
Sample wt/vol:	<u>955</u> (g/mL) <u>ML</u>	Lab File ID:	1401014.D				
Level: (low/med)	LOW	Date Received:	05/09/03				
% Moisture:	Decanted:(Y/N) <u>N</u>	Date Extracted:	05/14/03				
Concentrated Extract	Volume: <u>1000</u> (µL)	Date Analyzed:	06/06/03				
Injection Volume:	<u>1</u> (µL)	Dilution Factor:	1.00				
GPC Cleanup: (Y/N)	<u>й</u> рн:	Extraction: (Type)					
		CONCENTRATION UNITS:					
CAS NO.	COMPOUND	(µg/L	or µg/Kg) <u>UG/L</u> Q				

62-53-3	Aniline	5	U
121-69-7	N,N-Dimethylaniline	5	U

EPA SAMPLE NO.

PZ-4S

#### SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: Buck Envir	onmental Labs, Ir			
Lab Code: <u>10795</u>	Case No.: <u>C</u>	SAS	5 No.:	SDG No.: <u>BEL0309</u>
Matrix: (soil/water)	WATER		Lab Sample ID:	<u>0305124-03B</u>
Sample wt/vol:	<u>965</u> (g/mL)	MI,	Lab File ID:	<u>1501015.D</u>
Level: (low/med)	LOW		Date Received:	05/09/03
% Moisture:	Decanted:(Y/N)	N	Date Extracted:	05/14/03
Concentrated Extract	Volume: <u>1000</u>	(µL)	Date Analyzed:	06/06/03
Injection Volume:	<u>1</u> (µL)		Dilution Factor:	1.00
GPC Cleanup: (Y/N)	N pH:		Extraction: (Type)	

## CONCENTRATION UNITS:

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CAS NO.	COMPOUND	(μg/L or μg/Kg) <u>UG/I</u>	Ë Q
62-53-3	Aníline	5	U
121-69-7	N,N-Dimethylaniline	5	U

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# Chain of Custody



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6723 Tow Syracuse, TEL: (315	path Roa , New Yo 5) 446-91	nd, P.O. rk 1321 I20	Box 4-00	66 66			CHAIN O	FCUS	TOE	DY F	REC	OR	D		3000	/ /	/	300	> / 4	0300	/			
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10/23/95 5951188L.CDR Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files





6723 Towpath Road, P.O. Box 66 Syracuse, New York 13214-0066 TEL: (315) 446-9120

CHAIN OF CUSTODY RECORD

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