

## Transmittal

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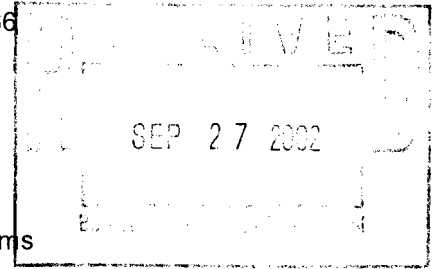
Blasland, Bouck & Lee, Inc.  
6723 Towpath Road/Box 66  
Syracuse, New York 13214-0066  
(315) 446-9120

To: Mr. Thomas Reamon, P.E.  
Bureau of Hazardous Site Control  
New York State Department of  
Environmental Conservation  
625 Broadway, 11<sup>th</sup> Floor  
Albany, NY 12233-7014

Date: September 26, 2002

File: 0260.26003 #2

Re: McKesson EnviroSystems  
Bear Street Facility  
Syracuse, New York



We are sending you: ☒ herewith ☐ under separate cover  
☐ drawings ☐ letters ☒ other \_\_\_\_\_

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

Quantity	Title
1	Validated Analytical Laboratory Reports

Remarks:

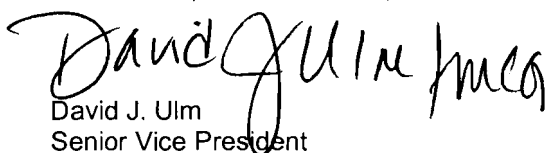
Please find enclosed a copy of the validated analytical laboratory reports listed below for groundwater samples collected at the McKesson, Bear Street facility. These reports are associated with the anaerobic bioremediation treatment activities conducted at the site during January 2002 through June 2002.

- Validated analytical laboratory reports for groundwater samples collected by Blasland, Bouck & Lee, Inc. (BBL) and analyzed for the chemicals of concern during the April 2002 biannual process control monitoring event.
- Validated analytical laboratory report for the groundwater samples collected from monitoring wells MW-17R, MW-18, PZ-4S, MW-24SR, and MW-24DR during the June 2002 resampling event. As presented in the *Biannual Process Control Monitoring Report* (January 2002 through June 2002), these select monitoring wells were resampled for aniline and N,N-dimethylaniline on June 18, 2002. The *Biannual Process Control Monitoring Report* has been transmitted to you under separate cover.

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

Sincerely,

BLASLAND, BOUCK & LEE, INC.

  
David J. Ulm  
Senior Vice President

cc: Mr. Reginald Parker, P.E., New York State Department of  
Environmental Conservation (w/o enclosure)  
Ms. Henriette Hamel, R.S., New York State Department of  
Health (w/o enclosure)  
Ms. Jean A. Mescher, McKesson Corporation (w/o  
enclosure)  
Mr. Christopher R. Young, P.G., de maximis, inc. (w/o  
enclosure)

CWS/kah  
Enclosure

DATA REVIEW FOR  
MCKESSON - BEAR STREET SITE

SDG# BEL0207

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 # BEL0207 for sampling at the McKesson - Bear Street Site. Included with this assessment are the data review check sheets used in the review of the package and corrected sample results. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Date	Analysis Method		
				8260 <sup>1</sup>	8015 <sup>2</sup>	8270 <sup>3</sup>
COLLECTION SUMP	0204286-03A	water	4/19/02	x	x	x
DUP-2	0204281-10A	water	4/18/02	x	x	x
MW-17R	0204281-01A	water	4/18/02	x	x	x
MW-18	0204281-02A	water	4/18/02	x	x	x
MW-19	0204281-03A	water	4/18/02	x	x	x
MW-23I	0204281-05A	water	4/18/02	x	x	x
MW-23S <sup>4</sup>	0204281-04A	water	4/18/02	x	x	x
MW-25D	0204281-07A	water	4/18/02	x	x	x
MW-25S	0204281-06A	water	4/18/02	x	x	x
PZ-4D	0204286-02A	water	4/19/02	x	x	x
PZ-4S	0204286-01A	water	4/19/02	x	x	x
TRENCH B	0204286-04A	water	4/19/02	x	x	x
TRIP BLANK 4	0204281-11A	water	4/18/02	x	x	
TRIP BLANK 5	0204286-05A	water	4/19/02	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.

## Data Assessment

### 1. Holding Time

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

All samples were analyzed within the specified holding time.

### 2. Blank Contamination

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

Acetone was detected in the trip blanks and acetone and methylene chloride was detected in the method blanks. Data for acetone have been qualified as undetected in samples DUP-2, COLLECTION SUMP, MW-17R, MW-18, MW-19, MW-23I, MW-23S, MW-25D, MW-25S, PZ-4D, PZ-4S, and TRENCH B based on the blank content.

### 3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

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

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

#### 4.2 Continuing Calibration

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

5. Surrogates / System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

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

7. Compound Identification

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

All identified compounds met the specified criteria.

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

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

The matrix spike and matrix spike duplicate recoveries were above control limits for trichloroethene. Matrix spike blank recovery for trichloroethene was also above control limits. Since no trichloroethene was detected in the samples, the high recoveries have no impact on the reported data. All other matrix spike, matrix spike duplicate and 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-23S / DUP-2	ND	--	--	NA

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	NO	NA
<b><u>Data Completeness and Deliverables</u></b>			
Have any missing deliverables been received and added to the data package?	<u>      </u>	<u>  X  </u>	<u>      </u>
Is there a narrative or cover letter present?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are the sample numbers included in the narrative?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are the sample chain-of-custodies present?	<u>  X  </u>	<u>      </u>	<u>      </u>
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	<u>  X  </u>	<u>      </u>	<u>      </u>
<b><u>Holding Times</u></b>			
Have any holding times been exceeded?	<u>      </u>	<u>  X  </u>	<u>      </u>
<b><u>Surrogate Recovery</u></b>			
Are surrogate recovery forms present?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are all the samples listed on the appropriate surrogate recovery form?	<u>  X  </u>	<u>      </u>	<u>      </u>
Was one or more surrogate recoveries outside of specified limits for any sample or blank?	<u>      </u>	<u>  X  </u>	<u>      </u>
If yes, were the samples reanalyzed?	<u>      </u>	<u>      </u>	<u>  X  </u>
<b><u>Matrix Spikes</u></b>			
Is there a matrix spike recovery form present?	<u>  X  </u>	<u>      </u>	<u>      </u>
Were matrix spikes analyzed at the required frequency?	<u>  X  </u>	<u>      </u>	<u>      </u>
How many spike recoveries were outside of QC limits?			
<u>  2  </u> out of <u> 16 </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
<u>  0  </u> out of <u>  8 </u>			
<b><u>Blanks</u></b>			
Is the method blank summary form present?	<u>  X  </u>	<u>      </u>	<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>	<u>      </u>	<u>      </u>
Has a blank been analyzed at least once every twelve hours for each system used?	<u>  X  </u>	<u>      </u>	<u>      </u>
Do any method/reagent/instrument blanks have positive results?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are there trip/field/rinse/equipment blanks associated with every sample?	<u>  X  </u>	<u>      </u>	<u>      </u>
Do any trip/field/rinse blanks have positive results?	<u>  X  </u>	<u>      </u>	<u>      </u>

## Volatile Organics Data Validation Checklist - Page 2

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

## Volatile Organics Data Validation Checklist - Page 3

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

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

[illegible]

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: MSD3

Matrix: water

Level: low

Date/Time	4/19/02		4/23/02 1014		4/24/02 1414					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Methylene chloride										
Acetone										
Trichloroethene										
Benzene										
Toluene										
Ethylbenzene										
Xylene (total)										
Affected Samples:										

## Corrected Sample Analysis Data Sheets



1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

COLLECTION SUMP

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204286-03A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 0601006.D

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/24/02

GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00

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		<u>10</u>	<u>U</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

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

COLLECTION SUMP

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204286-03A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 0601006.D

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/24/02

GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µl)

## CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
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## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP-2

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207Matrix: (soil/water) WATERLab Sample ID: 0204281-10ASample wt/vol: 5 (g/mL) MLLab File ID: 1701017.DLevel: (low/med) LOWDate Received: 04/19/02

% Moisture: not dec.

Date Analyzed: 04/23/02GC Column: J&W, DB624ID: .18 (mm)Dilution Factor: 1.00

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		<u>108</u>	<u>AKU</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

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DUP-2

Lab Name: Buck Environmental Labs, Inc.

Contract: \_\_\_\_\_

Lab Code: 10795

Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207

Matrix: (soil/water)

WATER

Lab Sample ID: 0204281-10A

Sample wt/vol: 5

(g/mL) ML

Lab File ID: 1701017.D

Level: (low/med) LOW

Date Received: 04/19/02

% Moisture: not dec.

Date Analyzed: 04/23/02

GC Column: J&W,DB624

ID: .18 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl)

Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found:

2

(µg/L or µg/Kg)

UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.75-29-6	Propane, 2-chloro-	1.85	9	
2.	<del>Extra Surrogate</del>	<del>14.58</del>	<del>16</del>	<del>X</del>

1B

EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-17R

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-01ASample wt/vol: 5 (g/mL) ML Lab File ID: 1001010.DLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/23/02GC Column: J&W, DB624 ID: .18 (mm) Dilution Factor: 1.00

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		<u>10</u>	<u>100</u>
71-43-2	Benzene		<u>6</u>	<u>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

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-17R

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_  
Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207  
Matrix: (soil/water) WATER Lab Sample ID: 0204281-01A  
Sample wt/vol: 5 (g/mL) ML Lab File ID: 1001010.D  
Level: (low/med) LOW Date Received: 04/19/02  
% Moisture: not dec. Date Analyzed: 04/23/02  
GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00  
Soil Extract Volume: \_\_\_\_\_ (μl) Soil Aliquot Volume: 0 (μL)

CONCENTRATION UNITS:

Number TICs found: 3 (μg/L or μg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.75-29-6	Propane, 2-chloro-	1.84	9	
2.7446-09-5	Sulfur dioxide(DOT)	3.50	8	
3.	<del>Extra Surrogate</del>	<del>14.57</del>	<del>46</del>	<input checked="" type="checkbox"/>

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204281-02A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 1101011.D

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/23/02

GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00

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		10	<del>U</del> U
71-43-2	Benzene		10	U
100-41-4	Ethylbenzene		10	U
75-09-2	Methylene chloride		10	U
108-88-3	Toluene		10	U
79-01-6	Trichloroethene		10	U
1330-20-7	m,p-Xylene		20	U
95-47-6	o-Xylene		10	U

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

MW-18

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204281-02A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 1101011.D

Level: (low/med) LOW Date Received: 04/19/02


% Moisture: not dec. Date Analyzed: 04/23/02

GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

## CONCENTRATION UNITS:

Number TICs found: 2 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.7446-09-5	Sulfur dioxide(DOT)	3.97	6	
2.	<del>Extra Surrogate</del>	<del>14.58</del>	<del>42</del>	



1A

## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-03ASample wt/vol: 5 (g/mL) ML Lab File ID: 1201012.DLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/23/02GC Column: J&W,DB624 ID: .13 (mm) Dilution Factor: 1.00

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		10	<del>U</del> <b>U</b>
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

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-19

Lab Name: Buck Environmental Labs, Inc.

Contract: \_\_\_\_\_

Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207

Matrix: (soil/water)

WATERLab Sample ID: 0204281-03ASample wt/vol: 5(g/mL) MLLab File ID: 1201012.DLevel: (low/med) LOWDate Received: 04/19/02

% Moisture: not dec.

Date Analyzed: 04/23/02GC Column: J&W,DB624ID: .18 (mm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μL)

Soil Aliquot Volume: 0 (μL)

## CONCENTRATION UNITS:

Number TICs found:

1

(μg/L or μg/Kg)

UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.	<del>Extra Surrogate</del>	<del>14.58</del>	<del>41</del>	<del>12</del>

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-23I

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204281-05A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 1401014.D

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/23/02

GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00

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		10	U
71-43-2	Benzene		5	U
100-41-4	Ethylbenzene		5	U
75-09-2	Methylene chloride		2	J
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

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-23I

Lab Name: Buck Environmental Labs, Inc.

Contract: \_\_\_\_\_

Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207

Matrix: (soil/water)

WATER

Lab Sample ID:

0204281-05ASample wt/vol: 5(g/mL) ML

Lab File ID:

1401014.DLevel: (low/med) LOW

Date Received:

04/19/02

% Moisture: not dec.

Date Analyzed:

04/23/02GC Column: J&W,DB624ID: .18 (mm)

Dilution Factor:

1.00

Soil Extract Volume:

(μl)

Soil Aliquot Volume:

0 (μL)

## CONCENTRATION UNITS:

Number TICs found:

1

(μg/L or μg/Kg)

UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.	<del>Extra Surrogate</del>	<del>14.58</del>	<del>45</del>	<u>12</u>

1A

## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-23S

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-04ASample wt/vol: 5 (g/mL) ML Lab File ID: 1301013.DLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/23/02GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00

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		10	AKU
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

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-23S

Lab Name: Buck Environmental Labs, Inc.

Contract: \_\_\_\_\_

Lab Code: 10795

Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207

Matrix: (soil/water)

WATER

Lab Sample ID: 0204281-04A

Sample wt/vol: 5

(g/mL) ML

Lab File ID: 1301013.D

Level: (low/med) LOW

Date Received: 04/19/02

% Moisture: not dec.

Date Analyzed: 04/23/02

GC Column: J&W,DB624

ID: .18 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl)


Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 2

(µg/L or µg/Kg)

UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.75-29-6	Propane, 2-chloro-	1.85	8	
2.	<del>Extra Surrogate</del>	<del>14.58</del>	<del>46</del>	

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-25D

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204281-07A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 1601016.D

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/23/02

GC Column: J&W, DB624 ID: .18 (mm) Dilution Factor: 1.00

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		10	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

1F

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

MW-25D

Lab Name: Buck Environmental Labs, Inc.

Contract: \_\_\_\_\_

Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207

Matrix: (soil/water)

WATERLab Sample ID: 0204281-07ASample wt/vol: 5(g/mL) MLLab File ID: 1601016.DLevel: (low/med) LOWDate Received: 04/19/02

% Moisture: not dec.

Date Analyzed: 04/23/02GC Column: J&W, DB624ID: .18 (mm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl)

Soil Aliquot Volume: 0 (µL)

## CONCENTRATION UNITS:

Number TICs found:

1

(µg/L or µg/Kg)

UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.	<del>Extra Surrogate</del>	<del>14.52</del>	<del>45</del>	<input checked="" type="checkbox"/>



## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-25S

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-06ASample wt/vol: 5 (g/mL) ML Lab File ID: 1501015.DLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/23/02GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µL) Soil Aliquot Volume \_\_\_\_\_ (µL)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
67-64-1	Acetone		10	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

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS


EPA SAMPLE NO.

MW-25S

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_  
Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207  
Matrix: (soil/water) WATER Lab Sample ID: 0204281-06A  
Sample wt/vol: 5 (g/mL) ML Lab File ID: 1501015.D  
Level: (low/med) LOW Date Received: 04/19/02  
% Moisture: not dec. Date Analyzed: 04/23/02  
GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00  
Soil Extract Volume: \_\_\_\_\_ (µL) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 1 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	<del>Extra Surrogate</del>	<del>14.52</del>	<del>47</del>	

## VOLATILE ORGANICS ANALYSIS DATA SHEET

PZ-4D

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204286-02ASample wt/vol: 5 (g/mL) ML Lab File ID: 0501005.DLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/24/02GC Column: J&W, DB624 ID: .18 (mm) Dilution Factor: 1.00

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		<u>108</u>	<u>MSU</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

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

PZ-4D

Lab Name: Buck Environmental Labs, Inc.

Contract: \_\_\_\_\_

Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207

Matrix: (soil/water)

WATERLab Sample ID: 0204286-02ASample wt/vol: 5(g/mL) MLLab File ID: 0501005.DLevel: (low/med) LOWDate Received: 04/19/02

% Moisture: not dec.

Date Analyzed: 04/24/02GC Column: J&W,DB624ID: .18 (mm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl)

Soil Aliquot Volume: 0 (µL)

## CONCENTRATION UNITS:

Number TICs found: 0

(µg/L or µg/Kg)

UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
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1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PZ-4S

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204286-01A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 2201022.D

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/23/02

GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00

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		14	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

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

PZ-4S

Lab Name: Buck Environmental Labs, Inc.

Contract: \_\_\_\_\_

Lab Code: 10795

Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207

Matrix: (soil/water)

WATER

Lab Sample ID: 0204286-01A

Sample wt/vol: 5

(g/mL) ML

Lab File ID: 2201022.D

Level: (low/med) LOW

Date Received: 04/19/02

% Moisture: not dec.

Date Analyzed: 04/23/02

GC Column: J&W, DB624

ID: .18 (mm)

Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl)

Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found:

2

(µg/L or µg/Kg)

UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.	<del>Extra Surrogate</del>	<del>14.58</del>	<del>47</del>	<del>Y</del>
2.	Trichlorobenzene Isomer	18.93	7	

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRENCH B

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204286-04A

Sample wt/vol: 5 (g/mL) ML Lab File ID: 0701007.D

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/24/02

GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00

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		10	J
71-43-2	Benzene		2	J
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

1F  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRENCH B

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_  
Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207  
Matrix: (soil/water) WATER Lab Sample ID: 0204286-04A  
Sample wt/vol: 5 (g/mL) ML Lab File ID: 0701007.D  
Level: (low/med) LOW Date Received: 04/19/02  
% Moisture: not dec. Date Analyzed: 04/24/02  
GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00  
Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

CONCENTRATION UNITS:

Number TICs found: 0 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
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## VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK 4

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-11ASample wt/vol: 5 (g/mL) ML Lab File ID: 1801018.DLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/23/02GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00

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		7	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	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

## VOLATILE ORGANICS ANALYSIS DATA SHEET

## TENTATIVELY IDENTIFIED COMPOUNDS

TRIP BLANK 4

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_  
 Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207  
 Matrix: (soil/water) WATER Lab Sample ID: 0204281-11A  
 Sample wt/vol: 5 (g/mL) ML Lab File ID: 1801018.D  
 Level: (low/med) LOW Date Received: 04/19/02  
 % Moisture: not dec. Date Analyzed: 04/23/02  
 GC Column: J&W,DB624 ID: .18 (mm) Dilution Factor: 1.00  
 Soil Extract Volume: \_\_\_\_\_ (µl) Soil Aliquot Volume: 0 (µL)

## CONCENTRATION UNITS:

Number TICs found: 1 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.	Extra Surrogate	14.58	45	

1A

## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 5

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207Matrix: (soil/water) WATERLab Sample ID: 0204286-05ASample wt/vol: 5 (g/mL) MLLab File ID: 0401004.DLevel: (low/med) LOWDate Received: 04/19/02

% Moisture: not dec.

Date Analyzed: 04/24/02GC Column: J&W,DB624 ID: .18 (mm)Dilution Factor: 1.00

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		10	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	U
79-01-6	Trichloroethene		5	U
1330-20-7	m,p-Xylene		10	U
95-47-6	o-Xylene		5	U

VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK 5

Lab Name: Buck Environmental Labs, Inc.

Contract: \_\_\_\_\_

Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207

Matrix: (soil/water)

WATERLab Sample ID: 0204286-05ASample wt/vol: 5(g/mL) MLLab File ID: 0401004.DLevel: (low/med) LOWDate Received: 04/19/02

% Moisture: not dec.

Date Analyzed: 04/24/02GC Column: J&W,DB624ID: .18 (mm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µl)

Soil Aliquot Volume: 0 (µL)

## CONCENTRATION UNITS:

Number TICs found:

0

(µg/L or µg/Kg)

UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
------------	---------------	----	-----------	---



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 fell within the established retention time windows.

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

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



Matrix spike blank (MSB) data is used to assess the precision and accuracy of the analytical method independent of matrix interferences.

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-23S / DUP-2	methanol	ND	0.48J	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

## Organic Data Validation Checklist

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

## Organic Data Validation Checklist - Page 2

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

## Calibration Outliers

Instrument: MSD2

Matrix: water

Date	4/26/02	4/29/02	4/29/02			
Time		1041	1627			
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	RSD	%D	%D	%D	%D	%D
methanol						
Affected Samples:						

Corrected Sample Analysis Data Sheets

1A

## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

COLLECTION SUMP

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204286-03CSample wt/vol: 5 (g/mL) ML Lab File ID: 1701017.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/29/02GC Column: SP-1000, 1% ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μL) Soil Aliquot Volume \_\_\_\_\_ (μL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (μg/L or μg/Kg)	<u>mg/L</u>	<u>Q</u>
67-56-1	Methanol		1	U

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP-2

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204281-10C

Sample wt/vol: 5 (g/mL) ML Lab File ID: 1101011.d

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/29/02

GC Column: SP-1000, 1 $\frac{3}{4}$  ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μL) Soil Aliquot Volume \_\_\_\_\_ (μL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(μg/L or μg/Kg)	
67-56-1	Methanol	0.48	J



1B  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-17R

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204281-01C

Sample wt/vol: 5 (g/mL) ML Lab File ID: 0401004.d

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/29/02

GC Column: SP-1000, 1% ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µL) Soil Aliquot Volume \_\_\_\_\_ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg)		
67-56-1	Methanol	0.62	J	Q

1A

EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-18

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-02CSample wt/vol: 5 (g/mL) ML Lab File ID: 0501005.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/29/02GC Column: SP-1000, 1 1/2 ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µL) Soil Aliquot Volume \_\_\_\_\_ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg)	<u>mg/L</u> <u>UG/L</u>	Q
67-56-1	Methanol		0.72	J

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-19

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204281-03C

Sample wt/vol: 5 (g/mL) ML Lab File ID: 1301013.d

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/29/02

GC Column: SP-1000, 1% ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μL) Soil Aliquot Volume \_\_\_\_\_ (μL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (μg/L or μg/Kg)	<i>ng/L</i> <u>US/L</u>	<u>Q</u>
67-56-1	Methanol		1	U

## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-23I

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-05CSample wt/vol: 5 (g/mL) ML Lab File ID: 0801008.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/29/02GC Column: SP-1000, 1% ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μL) Soil Aliquot Volume \_\_\_\_\_ (μL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (μg/L or μg/Kg)	Q
67-56-1	Methanol	<u>1</u>	<u>U</u>

## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-23S

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-04CSample wt/vol: 5 (g/mL) ML Lab File ID: 0701007.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/29/02GC Column: SP-1000, 1 $\frac{3}{4}$  ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μL) Soil Aliquot Volume \_\_\_\_\_ (μL)

		CONCENTRATION UNITS:	
CAS NO.	COMPOUND	(μg/L or μg/Kg)	Q
67-56-1	Methanol	<u>3872</u>	U

1A

## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-25D

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-07CSample wt/vol: 5 (g/mL) ML Lab File ID: 1401014.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/29/02GC Column: SP-1000, 1% ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µL) Soil Aliquot Volume \_\_\_\_\_ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg)	<u>ng/l</u>	<u>Q</u>
67-56-1	Methanol		1	U

1A

EPA SAMPLE NO.

## VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-25S

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-06CSample wt/vol: 5 (g/mL) ML Lab File ID: 0901009.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/29/02GC Column: SP-1000; 1% ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μL) Soil Aliquot Volume \_\_\_\_\_ (μL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(μg/L or μg/Kg)	
67-56-1	Methanol	<u>ng/l</u> <u>UG/L</u>	<u>Q</u> <u>U</u>

## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PZ-4D

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204286-02CSample wt/vol: 5 (g/mL) ML Lab File ID: 1601016.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/29/02GC Column: SP-1000; 1% ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μL) Soil Aliquot Volume \_\_\_\_\_ (μL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (μg/L or μg/Kg)	<u>ng/l</u> <u>ug/l</u>	<u>Q</u>
67-56-1	Methanol		1	U



1A

## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PZ-4S

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204286-01CSample wt/vol: 5 (g/mL) ML Lab File ID: 1501015.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: not dec. Date Analyzed: 04/29/02GC Column: SP-1000, 1% ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μL) Soil Aliquot Volume \_\_\_\_\_ (μL)

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(μg/L or μg/Kg)	Q
67-56-1	Methanol	1	U

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRENCH B

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204286-04C

Sample wt/vol: 5 (g/mL) ML Lab File ID: 1801018.d

Level: (low/med) LCW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/29/02

GC Column: SP-1000, 1% ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μL) Soil Aliquot Volume \_\_\_\_\_ (μL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (μg/L or μg/Kg)	<u>ng/L</u>	<u>Q</u>
67-56-1	Methanol		1	U

1A

## VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 4

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BELO207Matrix: (soil/water) WATERLab Sample ID: 0204281-11BSample wt/vol: 5 (g/mL) MLLab File ID: 1201012.dLevel: (low/med) LOWDate Received: 04/19/02

% Moisture: not dec.

Date Analyzed: 04/29/02GC Column: SP-1000, 1% ID: Pack (mm)Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (μL)

Soil Aliquot Volume \_\_\_\_\_ (μL)

CAS NO.

COMPOUND

CONCENTRATION UNITS:

(μg/L or μg/Kg)

ng/l  
μg/l

Q

67-56-1 Methanol

1

U

1A  
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRIP BLANK 5

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204286-05B

Sample wt/vol: 5 (g/mL) ML Lab File ID: 1901019.d

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: not dec. Date Analyzed: 04/29/02

GC Column: SP-1000; 1% ID: Pack (mm) Dilution Factor: 1.00

Soil Extract Volume: \_\_\_\_\_ (µL) Soil Aliquot Volume \_\_\_\_\_ (µL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (µg/L or µg/Kg)	<u>mg/l</u> <u>ug/L</u>	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.

## 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.

Recovery for one surrogate was below control limits in samples MW-23I and MW-23I RA. Since recoveries for the remaining surrogates were within control limits, no data have been qualified based on the deviations. Surrogates were diluted beyond the range of quantitation in sample TRENCH BDL. No data have been qualified based on diluted surrogates. All other surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

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

7. Compound Identification

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

All identified compounds met the specified criteria.

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

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

The matrix spike recoveries and relative percent difference between recoveries were within control limits, the matrix spike duplicate recovery was, however, below control limits for aniline. Since the matrix spike and matrix spike blank recoveries were 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-23S / DUP-2	Aniline	ND	2.5J	NA

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
<b><u>Data Completeness and Deliverables</u></b>			
Have any missing deliverables been received and added to the data package?	<u>          </u>	<u>  X  </u>	<u>          </u>
Is there a narrative or cover letter present?	<u>  X  </u>	<u>          </u>	<u>          </u>
Are the sample numbers included in the narrative?	<u>          </u>	<u>  X  </u>	<u>          </u>
Are the sample chain-of-custodies present?	<u>  X  </u>	<u>          </u>	<u>          </u>
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	<u>  X  </u>	<u>          </u>	<u>          </u>
<b><u>Holding Times</u></b>			
Have any holding times been exceeded?	<u>          </u>	<u>  X  </u>	<u>          </u>
<b><u>Surrogate Recovery</u></b>			
Are the surrogate recovery forms present?	<u>  X  </u>	<u>          </u>	<u>          </u>
Are all the samples listed on the appropriate surrogate recovery form?	<u>  X  </u>	<u>          </u>	<u>          </u>
Were two or more surrogate recoveries outside of specified limits for any sample or blank?	<u>          </u>	<u>  X  </u>	<u>          </u>
If yes, were the samples reanalyzed?	<u>          </u>	<u>          </u>	<u>  X  </u>
<b><u>Matrix Spikes</u></b>			
Is there a matrix spike recovery form present?	<u>  X  </u>	<u>          </u>	<u>          </u>
Were matrix spikes analyzed at the required frequency	<u>  X  </u>	<u>          </u>	<u>          </u>
How many spike recoveries were outside of QC limits?			
<u>  1  </u> out of <u>  4  </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits?			
<u>  0  </u> out of <u>  2  </u>			
<b><u>Blanks</u></b>			
Is the method blank summary form present?	<u>  X  </u>	<u>          </u>	<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>	<u>          </u>	<u>          </u>
Has a blank been analyzed for each GC/MS system used?	<u>  X  </u>	<u>          </u>	<u>          </u>
Do any method/reagent/instrument blanks have positive results?	<u>          </u>	<u>  X  </u>	<u>          </u>
Are there field/rinse/equipment blanks associated with every sample?	<u>          </u>	<u>  X  </u>	<u>          </u>

## Semivolatile Organics Data Validation Checklist - Page 2

	YES	NO	NA
Do any field/rinse blanks have positive results?	<u>      </u>	<u>      </u>	<u>  X  </u>
<b><u>Tuning and Mass Calibration</u></b>			
Are the GC/MS tuning forms present for DFTPP?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	<u>  X  </u>	<u>      </u>	<u>      </u>
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	<u>  X  </u>	<u>      </u>	<u>      </u>
Have the ion abundance criteria been met for each instrument used?	<u>  X  </u>	<u>      </u>	<u>      </u>
<b><u>Target Analytes</u></b>			
Is an organics analysis data sheet present for each of the following:			
Samples	<u>  X  </u>	<u>      </u>	<u>      </u>
Matrix spikes	<u>  X  </u>	<u>      </u>	<u>      </u>
Blanks	<u>  X  </u>	<u>      </u>	<u>      </u>
Has GPC cleanup been performed on all soil/sediment sample extracts?	<u>      </u>	<u>      </u>	<u>  X  </u>
Are the reconstructed ion chromatograms present for each of the following:			
Samples	<u>  X  </u>	<u>      </u>	<u>      </u>
Matrix spikes	<u>  X  </u>	<u>      </u>	<u>      </u>
Blanks	<u>  X  </u>	<u>      </u>	<u>      </u>
Is the chromatographic performance acceptable?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are the mass spectra of the identified compounds present?	<u>  X  </u>	<u>      </u>	<u>      </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>	<u>      </u>	<u>      </u>
Do the samples and standard relative ion intensities agree within 20%?	<u>  X  </u>	<u>      </u>	<u>      </u>
<b><u>Tentatively Identified Compounds</u></b>			
Are all the TIC summary forms present?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are the mass spectra for the tentatively identified compounds and their associated "best match" spectra present?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are any target compounds listed as TICs?	<u>      </u>	<u>  X  </u>	<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>  X  </u>	<u>      </u>	<u>      </u>
Do the TIC and "best match" spectrum agree within 20%?	<u>  X  </u>	<u>      </u>	<u>      </u>
<b><u>Quantitation and Detection Limits</u></b>			
Are there any transcription/calculation errors in the Form 1 results?	<u>      </u>	<u>  X  </u>	<u>      </u>
Are the reporting limits adjusted to reflect sample dilutions, and for soils, sample moisture?	<u>  X  </u>	<u>      </u>	<u>      </u>
<b><u>Standard Data</u></b>			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	<u>  X  </u>	<u>      </u>	<u>      </u>
<b><u>Initial Calibration</u></b>			
Are the initial calibration forms present for each instrument used?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are the response factor RSDs within acceptable limits?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are the average RRF equal to or greater than minimum requirements?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are there any transcription/calculation errors in reporting the RRF or RSD?	<u>      </u>	<u>  X  </u>	<u>      </u>
<b><u>Continuing Calibration</u></b>			
Are the continuing calibration forms present for each day and each instrument?	<u>  X  </u>	<u>      </u>	<u>      </u>
Has a continuing calibration standard been analyzed for each twelve hours of analysis per instrument?	<u>  X  </u>	<u>      </u>	<u>      </u>
All %D within acceptable limits?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are all RF equal to or greater than minimum requirements?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are there any transcription/calculation errors in reporting of RF or %D?	<u>      </u>	<u>  X  </u>	<u>      </u>
<b><u>Internal Standards</u></b>			
Are internal standard areas of the samples and blanks within the upper and lower limits for each continuing calibration?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	<u>  X  </u>	<u>      </u>	<u>      </u>

# Semivolatile Organics Data Validation Checklist - Page 4

	YES	NO	NA
<b><u>Field Duplicates</u></b>			
Were field duplicates submitted with the samples?	<u>  X  </u>	<u>      </u>	<u>      </u>

### Semi-Volatile Qualifier Summary

#### Holding Time, Surrogates, Internal Standards

[illegible]

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

DCB 1,4-Dichlorobenzene-d4  
NPT Naphthalene-d8  
ANT Acenaphthene-d10  
PHN Phenanthrene-d10  
CRY Chrysene-d12  
PRY Perylene-d12

D	Diluted
↓	Recovery low
↑	Recovery high

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



# Semivolatile Calibration Outliers

Instrument: MSD1

Level: low

Date/Time	4/30/02		5/01/02 0925		5/01/02 1654		5/02/02 1028			
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
aniline										
n,n'-dimethylaniline										
Affected Samples:										

## Corrected Sample Analysis Data Sheets

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

COLLECTION SUMP

Lab Name: Buck Environmental Labs, In Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204286-03BSample wt/vol: 970 (g/mL) ML Lab File ID: a0301003.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02Concentrated Extract Volume: 1000 (µL) Date Analyzed: 05/01/02Injection Volume: 1 (µL) Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
62-53-3	Aniline	2	2.5	J
	N,N-Dimethylaniline	5		U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

COLLECTION SUMP

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204286-03B

Sample wt/vol: 970 (g/mL) ML Lab File ID: a0301003.d

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: \_\_\_\_\_ Decanted: (Y/N) N Date Extracted: 04/22/02

Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/01/02

Injection Volume: 1 (µl) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) \_\_\_\_\_

## CONCENTRATION UNITS:

Number TICs found: 7 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.	Unknown (13.835)	13.84	5	
2.	Unknown (14.467)	14.47	6	
3.	Unknown (14.527)	14.53	5	
4.	Unknown (15.149)	15.15	5	
5.	Unknown (15.184)	15.18	38	
6.	Unknown (15.328)	15.33	11	
7.	Unknown (16.785)	16.79	30	

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DUP-2

Lab Name: Buck Environmental Labs, In Contract:Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-10BSample wt/vol: 950 (g/mL) ML Lab File ID: 1201012.dLevel: (low/med) LCW Date Received: 04/19/02% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02Concentrated Extract Volume: 1000 (µL) Date Analyzed: 05/01/02Injection Volume: 1 (µL) Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
62-53-3	Aniline	1 <del>4.3</del>	J
	N,N-Dimethylaniline	5	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

DUP-2

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_  
 Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207  
 Matrix: (soil/water) WATER Lab Sample ID: 0204281-10B  
 Sample wt/vol: 950 (g/mL) ML Lab File ID: 1201012.d  
 Level: (low/med) LOW Date Received: 04/19/02  
 % Moisture: \_\_\_\_\_ Decanted: (Y/N) N Date Extracted: 04/22/02  
 Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/01/02  
 Injection Volume: 1 (µl) Dilution Factor: 1.00  
 GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) \_\_\_\_\_

## CONCENTRATION UNITS:

Number TICs found: 6 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1. 84-64-0	1,2-Benzenedicarboxylic ac (13.	13.45	4	
2. 84-74-2	1,2-Benzenedicarboxylic ac (13.	13.85	5	
3.	Unknown (14.526)	14.53	4	
4.	Unknown (15.185)	15.19	35	
5.	Unknown (15.341)	15.34	19	
6.	Unknown (16.787)	16.79	28	

1D

EPA SAMPLE NO.

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW-17R

Lab Name: Buck Environmental Labs, In Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-01BSample wt/vol: 960 (g/mL) ML Lab File ID: 0301003.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02Concentrated Extract Volume: 1000 (µL) Date Analyzed: 05/01/02Injection Volume: 1 (µL) Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
62-53-3	Aniline	150	153
	N,N-Dimethylaniline	110	

1G  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-17R

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_  
Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207  
Matrix: (soil/water) WATER Lab Sample ID: 0204281-01B  
Sample wt/vol: 960 (g/mL) ML Lab File ID: 0301003.d  
Level: (low/med) LOW Date Received: 04/19/02  
% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02  
Concentrated Extract Volume: 1000 (ul) Date Analyzed: 05/01/02  
Injection Volume: 1 (ul) Dilution Factor: 1.00  
GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) \_\_\_\_\_

CONCENTRATION UNITS:

Number TICs found: 2 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.100-61-8	Benzenamine, N-methyl-	4.57	12	
2.	Unknown	15.19	14	



1C

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18

Lab Name: Buck Environmental Labs, In Contract:Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207Matrix: (soil/water) WATERLab Sample ID: 0204281-02BSample wt/vol: 990 (g/mL) MLLab File ID: 0401004.dLevel: (low/med) LOWDate Received: 04/19/02% Moisture: Decanted: (Y/N) NDate Extracted: 04/22/02Concentrated Extract Volume: 1000 (µL)Date Analyzed: 05/01/02Injection Volume: 1 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type)

## CONCENTRATION UNITS:

CAS NO.

COMPOUND

(µg/L or µg/Kg) UG/L Q

62-53-3	Aniline	280 <del>291</del> 295	PD
	N,N-Dimethylaniline	200 <del>198</del> 204	PD

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

MW-18

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204281-02B

Sample wt/vol: 990 (g/mL) ML Lab File ID: 0401004.d

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: \_\_\_\_\_ Decanted: (Y/N) N Date Extracted: 04/22/02

Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/01/02

Injection Volume: 1 (µl) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) \_\_\_\_\_

## CONCENTRATION UNITS:

Number TICs found: 3 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 100-61-8	Benzenamine, N-methyl-	4.56	19	
2.	Unknown (15.193)	15.19	20	
3.	Unknown (16.802)	16.80	28	

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18DL

Lab Name: Buck Environmental Labs, In Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-02BSample wt/vol: 990 (g/mL) ML Lab File ID: a1701017.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02Concentrated Extract Volume: 1000 (µL) Date Analyzed: 05/02/02Injection Volume: 1 (µL) Dilution Factor: 5.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type)

CONCENTRATION UNITS:

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

62-53-3	Aniline	280 275	
	N,N-Dimethylaniline	200 204	

1G

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

MW-18DL

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_  
Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207  
Matrix: (soil/water) WATER Lab Sample ID: 0204281-02B  
Sample wt/vol: 990 (g/mL) ML Lab File ID: a1701017.d  
Level: (low/med) LOW Date Received: 04/19/02  
% Moisture: \_\_\_\_\_ Decanted: (Y/N) N Date Extracted: 04/22/02  
Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/02/02  
Injection Volume: 1 (µl) Dilution Factor: 5.00  
GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) \_\_\_\_\_

## CONCENTRATION UNITS:

Number TICs found: 1 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.	Unknown	14.83	27	

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW-19

Lab Name: Buck Environmental Labs, In Contract:Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207Matrix: (soil/water) WATERLab Sample ID: 0204281-03BSample wt/vol: 970 (g/mL) MLLab File ID: 0501005.dLevel: (low/med) LOWDate Received: 04/19/02% Moisture: Decanted: (Y/N) NDate Extracted: 04/22/02Concentrated Extract Volume: 1000 (μL)Date Analyzed: 05/01/02Injection Volume: 1 (μL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type)

## CONCENTRATION UNITS:

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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

MW-19

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_  
Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207  
Matrix: (soil/water) WATER Lab Sample ID: 0204281-03B  
Sample wt/vol: 970 (g/mL) ML Lab File ID: 0501005.d  
Level: (low/med) LOW Date Received: 04/19/02  
% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02  
Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/01/02  
Injection Volume: 1 (µl) Dilution Factor: 1.00  
GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type)

## CONCENTRATION UNITS:

Number TICs found: 3 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1. 84-69-5	1,2-Benzenedicarboxylic ac	13.45	5	
2.	Unknown (15.194)	15.19	24	
3.	Unknown (16.791)	16.79	26	

1C

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-23I

Lab Name: Buck Environmental Labs, In Contract:Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207Matrix: (soil/water) WATERLab Sample ID: 0204281-05BSample wt/vol: 950 (g/mL) MLLab File ID: 0701007.dLevel: (low/med) LOWDate Received: 04/19/02% Moisture: Decanted: (Y/N) NDate Extracted: 04/22/02Concentrated Extract Volume: 1000 (µL)Date Analyzed: 05/01/02Injection Volume: 1 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
62-53-3	Aniline	5		U
	N,N-Dimethylaniline	5		U

1G

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

MW-23I

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204281-05B

Sample wt/vol: 950 (g/mL) ML Lab File ID: 0701007.d

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: \_\_\_\_\_ Decanted: (Y/N) N Date Extracted: 04/22/02

Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/01/02

Injection Volume: 1 (µl) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) \_\_\_\_\_

## CONCENTRATION UNITS:

Number TICs found: 2 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.	Unknown (15.189)	15.19	17	
2.	Unknown (16.784)	16.78	14	



## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW-23I

Lab Name: Buck Environmental Labs, In Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-05BSample wt/vol: 950 (g/mL) ML Lab File ID: a0201002.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02Concentrated Extract Volume: 1000 (µL) Date Analyzed: 05/01/02Injection Volume: 1 (µL) Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
62-53-3	Aniline	5		U
	N,N-Dimethylaniline	5		U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

MW-23I RA

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_  
Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207  
Matrix: (soil/water) WATER Lab Sample ID: 0204281-05B  
Sample wt/vol: 950 (g/mL) ML Lab File ID: a0201002.d  
Level: (low/med) LOW Date Received: 04/19/02  
% Moisture: \_\_\_\_\_ Decanted: (Y/N) N Date Extracted: 04/22/02  
Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/01/02  
Injection Volume: 1 (µl) Dilution Factor: 1.00  
GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) \_\_\_\_\_

## CONCENTRATION UNITS:

Number TICs found: 2 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.301-02-0	9-Octadecenamide, (Z)-	15.19	18	
2.	Unknown	16.79	15	

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-23S

Lab Name: Buck Environmental Labs, In Contract:Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-04BSample wt/vol: 940 (g/mL) ML Lab File ID: 0601006.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02Concentrated Extract Volume: 1000 (μL) Date Analyzed: 05/01/02Injection Volume: 1 (μL) Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type)

## CONCENTRATION UNITS:

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

1G

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

MW-23S

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204281-04B

Sample wt/vol: 940 (g/mL) ML Lab File ID: 0601006.d

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02

Concentrated Extract Volume: 1000 (μl) Date Analyzed: 05/01/02

Injection Volume: 1 (μl) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type)

## CONCENTRATION UNITS:

Number TICs found: 4 (μg/L or μg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown (15.19)	15.19	27	
2.	Unknown (15.346)	15.35	18	
3.	Unknown (16.315)	16.32	10	
4.	Unknown (16.804)	16.80	22	

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-25D

Lab Name: Buck Environmental Labs, In Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-07BSample wt/vol: 985 (g/mL) ML Lab File ID: 0901009.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02Concentrated Extract Volume: 1000 (µL) Date Analyzed: 05/01/02Injection Volume: 1 (µL) Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q
62-53-3	Aniline	5		U
	N,N-Dimethylaniline	5		U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

MW-25D

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204281-07B

Sample wt/vol: 935 (g/mL) ML Lab File ID: 0901009.d

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: \_\_\_\_\_ Decanted: (Y/N) N Date Extracted: 04/22/02

Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/01/02

Injection Volume: 1 (µl) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) \_\_\_\_\_

## CONCENTRATION UNITS:

Number TICs found: 6 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown (14.471)	14.47	6	
2.	Unknown (15.173)	15.17	5	
3.	Unknown (15.209)	15.21	24	
4.	Unknown (15.352)	15.35	17	
5.	Unknown (16.317)	16.32	12	
6.	Unknown (16.818)	16.82	27	

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-25S

Lab Name: Buck Environmental Labs, In Contract: \_\_\_\_\_Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207Matrix: (soil/water) WATER Lab Sample ID: 0204281-06BSample wt/vol: 990 (g/mL) ML Lab File ID: 0801008.dLevel: (low/med) LOW Date Received: 04/19/02% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02Concentrated Extract Volume: 1000 (μL) Date Analyzed: 05/01/02Injection Volume: 1 (μL) Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type)

## CONCENTRATION UNITS:

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

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

MW-25S

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_  
Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207  
Matrix: (soil/water) WATER Lab Sample ID: 0204281-06B  
Sample wt/vol: 990 (g/mL) ML Lab File ID: 0801008.d  
Level: (low/med) LOW Date Received: 04/19/02  
% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02  
Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/01/02  
Injection Volume: 1 (µl) Dilution Factor: 1.00  
GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) \_\_\_\_\_

## CONCENTRATION UNITS:

Number TICs found: 4 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2489-86-3	Naphthalene, 1-(2-propenyl	12.17	6	
2.	Unknown (15.211)	15.21	18	
3.	Unknown (15.355)	15.36	8	
4.	Unknown (16.811)	16.81	19	



## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PZ-4D

Lab Name: Buck Environmental Labs, In Contract: \_\_\_\_\_Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207Matrix: (soil/water) WATERLab Sample ID: 0204286-02BSample wt/vol: 990 (g/mL) MLLab File ID: 1401014.dLevel: (low/med) LOWDate Received: 04/19/02% Moisture: Decanted: (Y/N) NDate Extracted: 04/22/02Concentrated Extract Volume: 1000 (µL)Date Analyzed: 05/01/02Injection Volume: 1 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type)

## CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg) UG/L	Q
62-53-3	Aniline	5	U
	N,N-Dimethylaniline	5	U

1G

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

PZ-4D

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_  
Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207  
Matrix: (soil/water) WATER Lab Sample ID: 0204286-02B  
Sample wt/vol: 990 (g/mL) ML Lab File ID: 1401014.d  
Level: (low/med) LOW Date Received: 04/19/02  
% Moisture: Decanted: (Y/N) N Date Extracted: 04/22/02  
Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/01/02  
Injection Volume: 1 (µl) Dilution Factor: 1.00  
GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type)

## CONCENTRATION UNITS:

Number TICs found: 3 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown (15.184)	15.18	32	
2.	Unknown (15.327)	15.33	10	
3.	Unknown (16.78)	16.78	28	

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PZ-4S

Lab Name: Buck Environmental Labs, In Contract:Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207Matrix: (soil/water) WATERLab Sample ID: 0204286-01BSample wt/vol: 940 (g/mL) MLLab File ID: 1301013.dLevel: (low/med) LOWDate Received: 04/19/02% Moisture: Decanted: (Y/N) NDate Extracted: 04/22/02Concentrated Extract Volume: 1000 (µL)Date Analyzed: 05/01/02Injection Volume: 1 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type)

## CONCENTRATION UNITS:

CAS NO.

COMPOUND

(µg/L or µg/Kg) UG/L Q

62-53-3	Aniline	<u>8</u> <del>8.32</del>	
	N,N-Dimethylaniline	<u>5</u>	<u>U</u>

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

## TENTATIVELY IDENTIFIED COMPOUNDS

PZ-4S

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204286-01B

Sample wt/vol: 940 (g/mL) ML Lab File ID: 1301013.d

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: \_\_\_\_\_ Decanted: (Y/N) N Date Extracted: 04/22/02

Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/01/02

Injection Volume: 1 (µl) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) \_\_\_\_\_

## CONCENTRATION UNITS:

Number TICs found: 5 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown (8.557)	8.56	25	
2.	Unknown (14.471)	14.47	4	
3.	Unknown (15.199)	15.20	24	
4.	Unknown (15.342)	15.34	10	
5.	Unknown (16.799)	16.80	13	

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TRENCH B

Lab Name: Buck Environmental Labs, In Contract:Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207Matrix: (soil/water) WATERLab Sample ID: 0204286-04BSample wt/vol: 965 (g/mL) MLLab File ID: a0401004.dLevel: (low/med) LOWDate Received: 04/19/02% Moisture: Decanted: (Y/N) NDate Extracted: 04/22/02Concentrated Extract Volume: 1000 (μL)Date Analyzed: 05/01/02Injection Volume: 1 (μL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type)

## CONCENTRATION UNITS:

CAS NO.

COMPOUND

(μg/L or μg/Kg) UG/L

Q

62-53-3	Aniline	1300 <del>1170</del> <del>1282</del>	ED
	N,N-Dimethylaniline	12 <del>11.6</del>	

1G  
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRENCH B

Lab Name: Buck Environmental Labs, Inc. Contract: \_\_\_\_\_

Lab Code: 10795 Case No.: C SAS No.: \_\_\_\_\_ SDG No.: BEL0207

Matrix: (soil/water) WATER Lab Sample ID: 0204296-04B

Sample wt/vol: 965 (g/mL) ML Lab File ID: a0401004.d

Level: (low/med) LOW Date Received: 04/19/02

% Moisture: \_\_\_\_\_ Decanted: (Y/N) N Date Extracted: 04/22/02

Concentrated Extract Volume: 1000 (µl) Date Analyzed: 05/01/02

Injection Volume: 1 (µl) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) \_\_\_\_\_

CONCENTRATION UNITS:

Number TICs found: 18 (µg/L or µg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.488-23-3	Benzene, 1,2,3,4-tetrameth	5.14	6	
2.527-53-7	Benzene, 1,2,3,5-tetrameth	5.20	5	
3.824-22-6	1H-Indene, 2,3-dihydro-4-m	5.70	7	
4.	Unknown (6.078)	6.08	4	
5.1685-82-1	1H-Indene, 2,3-dihydro-4,6	6.40	5	
6.	Methylnaphthalene Isomer	8.61	21	
7.101-83-7	Cyclohexanamine, N-cyclohe	10.32	18	
8.	Dimethylnaphthalene Isomer (10.	10.44	7	
9.939-27-5	Naphthalene, 2-ethyl-	10.70	5	
10.	Dimethylnaphthalene Isomer (10.	10.83	5	
11.	Trimethylnaphthalene Isome	11.72	5	
12.86-73-7	9H-Fluorene	12.06	4	
13.643-58-3	1,1'-Biphenyl, 2-methyl-	12.17	7	
14.7320-53-8	Dibenzofuran, 4-methyl-	12.40	8	
15.	Unknown (12.902)	12.90	16	
16.10544-50-0	Sulfur, mol (S8)	14.02	250	
17.	Unknown (15.198)	15.20	41	
18.	Unknown (16.807)	16.81	27	

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TRENCH BDL

Lab Name: Buck Environmental Labs, In Contract:Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207Matrix: (soil/water) WATERLab Sample ID: 0204286-04BSample wt/vol: 965 (g/mL) MLLab File ID: 0601006.dLevel: (low/med) LOWDate Received: 04/19/02% Moisture: \_\_\_\_\_ Decanted: (Y/N) NDate Extracted: 04/22/02Concentrated Extract Volume: 1000 (µL)Date Analyzed: 05/02/02Injection Volume: 1 (µL)Dilution Factor: 50.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(µg/L or µg/Kg)	UG/L	Q
62-53-3	Aniline	1300	1280	
	N,N-Dimethylaniline	260		U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

TRENCH BDL

Lab Name: Buck Environmental Labs, Inc.

Contract: \_\_\_\_\_

Lab Code: 10795Case No.: C

SAS No.: \_\_\_\_\_

SDG No.: BEL0207Matrix: (soil/water) WATERLab Sample ID: 0204296-04BSample wt/vol: 965 (g/mL) MLLab File ID: 0601006.dLevel: (low/med) LOWDate Received: 04/19/02% Moisture: \_\_\_\_\_ Decanted: (Y/N) NDate Extracted: 04/22/02Concentrated Extract Volume: 1000 (µl)Date Analyzed: 05/02/02Injection Volume: 1 (µl)Dilution Factor: 50.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_

Extraction: (Type)

## CONCENTRATION UNITS:

Number TICs found: 0

(µg/L or µg/Kg)

UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
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## Chain of Custody

CHAIN OF CUSTODY RECORD

PROJ. NO. 260.03		PROJECT NAME McKesson - Bear Street																					
SAMPLERS: (Signature) De. Sluis / Jerry Shi																							
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers		VOCs (8260)	SVOCS (8270)	Alcohols (805)	REMARKS												
	4/18/02	910		X	MW-17R	6	2	2	2										*For all MW-18 samples, the sampling time recorded on bottles was 9:50. However, the actual sampling time was 10:10.				
	4/18/02	1010			MW-18 *	6																	
	4/18/02	1615			MW-19	6																	
	4/18/02	1040			MW-23S	6																	
	4/18/02	1500			MW-23I	6																	
	4/18/02	1450			MW-25S	6																	
	4/18/02	1615			MW-25D	6																	
	4/18/02	1040			MW-23MS	6																	
	4/18/02	1040			MW-23MSD	6																	
	4/18/02				Dup-2	6																	
	4/18/02				Trip blank-4V	1		1															
	4/18/02				Trip blank-4A	1			1														
	4/18/02				Trip blank-40	1																	
Relinquished by: (Signature) De. Sluis					DATE	TIME	Received by: (Signature)					Relinquished by: (Signature)					DATE	TIME	Relinquished by: (Signature)				
Relinquished by: (Signature) M. Shi					DATE	TIME	Received by: (Signature)					Relinquished by: (Signature)					DATE	TIME	Relinquished by: (Signature)				
Relinquished by: (Signature)					DATE	TIME	Received for Laboratory by: (Signature) Emily E. Turner					DATE		TIME		Remarks: Cooler #1 7.5° Trip Blank 4-0 B Broken Cooler #2 7.5° MW-23S MS VOC B Broken							



0204286

## CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME		Number of Containers		REMARKS	
SAMPLERS: (Signature)		STATION LOCATION					
STA. NO.	DATE	TIME	COMP.	GRAB			
	4/11/02	920		X	PZ-4S		
	4/11/02			X	PZ-4D		
	4/14/02	1015		X	Collection Sump		
	4/14/02	1035		X	Trench B		
	4/11/02				Trip Blank-SV		
	4/19/02				Trip Blank SA		
	4/19/02				Trip blank - SO		
Relinquished by: (Signature)				DATE	TIME	Received by: (Signature)	
Relinquished by: (Signature)				DATE	TIME	Received by: (Signature)	
Relinquished by: (Signature)				DATE	TIME	Received for Laboratory by: (Signature)	

DATA REVIEW FOR  
MCKESSON - BEAR STREET SITE

SDG# BEL02013

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 # BEL0213 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:

[illegible]

- 1 compounds include: aniline and N,N'-dimethylaniline  
2 MS/MSD analyses performed on sample



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.

Recovery for one surrogate was above control limits in the method blank. Since recoveries for the remaining surrogates were within control limits, no data have been qualified based on the deviation. All other surrogate recoveries were within control limits.

## 6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every experimental run.

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

## 7. Compound Identification

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

All identified compounds met the specified criteria.

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

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

The matrix spike and matrix spike duplicate recoveries were slightly below control limits for aniline. Since all other matrix spike recoveries were within control limits and since all matrix spike blank recoveries were 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-17R / DUP-1	ND	--	--	NA

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
<b><u>Data Completeness and Deliverables</u></b>			
Have any missing deliverables been received and added to the data package?	<u>          </u>	<u>  X  </u>	<u>          </u>
Is there a narrative or cover letter present?	<u>  X  </u>	<u>          </u>	<u>          </u>
Are the sample numbers included in the narrative?	<u>  X  </u>	<u>          </u>	<u>          </u>
Are the sample chain-of-custodies present?	<u>  X  </u>	<u>          </u>	<u>          </u>
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	<u>          </u>	<u>  X  </u>	<u>          </u>
<b><u>Holding Times</u></b>			
Have any holding times been exceeded?	<u>          </u>	<u>  X  </u>	<u>          </u>
<b><u>Surrogate Recovery</u></b>			
Are the surrogate recovery forms present?	<u>  X  </u>	<u>          </u>	<u>          </u>
Are all samples listed on the surrogate recovery form?	<u>  X  </u>	<u>          </u>	<u>          </u>
Were two or more surrogate recoveries outside control limits for any sample or blank?	<u>          </u>	<u>  X  </u>	<u>          </u>
If yes, were the samples reanalyzed?	<u>          </u>	<u>          </u>	<u>  X  </u>
<b><u>Matrix Spikes</u></b>			
Is there a matrix spike recovery form present?	<u>  X  </u>	<u>          </u>	<u>          </u>
Were matrix spikes analyzed at the required frequency	<u>  X  </u>	<u>          </u>	<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>  0  </u> out of <u>  2  </u>			
<b><u>Blanks</u></b>			
Is the method blank summary form present?	<u>  X  </u>	<u>          </u>	<u>          </u>
Has a method blank been extracted for each set of samples or for each 20 samples, whichever is more frequent?	<u>  X  </u>	<u>          </u>	<u>          </u>
Has a blank been analyzed for each GC/MS system used?	<u>  X  </u>	<u>          </u>	<u>          </u>
Do any method/instrument blanks have positive results?	<u>          </u>	<u>  X  </u>	<u>          </u>
Are field/rinse blanks associated with every sample?	<u>          </u>	<u>  X  </u>	<u>          </u>
Do any field/rinse blanks have positive results?	<u>          </u>	<u>          </u>	<u>  X  </u>
<b><u>Tuning and Mass Calibration</u></b>			
Are the GC/MS tuning forms present for DFTPP?	<u>  X  </u>	<u>          </u>	<u>          </u>

## Semivolatile Organics Data Validation Checklist - Page 2

	YES	NO	NA
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	<u>X</u>	<u>      </u>	<u>      </u>
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	<u>X</u>	<u>      </u>	<u>      </u>
Have the ion abundance criteria been met for each instrument used?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Target Analytes</u></b>			
Is an organics analysis data sheet present for each of the following:			
Samples	<u>X</u>	<u>      </u>	<u>      </u>
Matrix spikes	<u>X</u>	<u>      </u>	<u>      </u>
Blanks	<u>X</u>	<u>      </u>	<u>      </u>
Has GPC cleanup been performed on all soil/sediment sample extracts?	<u>      </u>	<u>      </u>	<u>X</u>
Are the reconstructed ion chromatograms present for each of the following:			
Samples	<u>X</u>	<u>      </u>	<u>      </u>
Matrix spikes	<u>X</u>	<u>      </u>	<u>      </u>
Blanks	<u>X</u>	<u>      </u>	<u>      </u>
Is the chromatographic performance acceptable?	<u>X</u>	<u>      </u>	<u>      </u>
Are the mass spectra of the identified compounds present?	<u>X</u>	<u>      </u>	<u>      </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>	<u>      </u>	<u>      </u>
Do the samples and standard relative ion intensities agree within 20%?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Tentatively Identified Compounds</u></b>			
Are all the TIC summary forms present?	<u>      </u>	<u>      </u>	<u>X</u>
Are the mass spectra for the tentatively identified compounds and their "best match" spectra present?	<u>      </u>	<u>      </u>	<u>X</u>
Are any target compounds listed as TICs?	<u>      </u>	<u>      </u>	<u>X</u>
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>	<u>      </u>	<u>X</u>
Do the TIC and "best match" spectrum agree within 20%?	<u>      </u>	<u>      </u>	<u>X</u>

## Semivolatile Organics Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Quantitation and Detection Limits</u></b>			
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?	_____	_____	<u>  X  </u>
<b><u>Standard Data</u></b>			
Are the quantitation reports and reconstructed ion chromatograms present for the initial and continuing calibration standards?	<u>  X  </u>	_____	_____
<b><u>Initial Calibration</u></b>			
Are the initial calibration forms present for each instrument used?	<u>  X  </u>	_____	_____
Are the response factor RSDs within acceptable limits?	<u>  X  </u>	_____	_____
Are the average RRF equal to or greater than minimum requirements?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors in reporting the RRF or RSD?	_____	<u>  X  </u>	_____
<b><u>Continuing Calibration</u></b>			
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>  X  </u>	_____	_____
All %D within acceptable limits?	<u>  X  </u>	_____	_____
Are all RF equal to or greater than minimum requirements?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors in reporting of RF or %D?	_____	<u>  X  </u>	_____
<b><u>Internal Standards</u></b>			
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>	_____	_____
<b><u>Field Duplicates</u></b>			
Were field duplicates submitted with the samples?	<u>  X  </u>	_____	_____



### Semi-Volatile Qualifier Summary

#### Holding Time, Surrogates, Internal Standards

[illegible]

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

DCB	1,4-Dichlorobenzene-d4
NPT	Naphthalene-d8
ANT	Acenaphthene-d10
PHN	Phenanthrene-d10
CRY	Chrysene-d12
PRY	Perylene-d12

D	Diluted
1	Recovery low
1	Recovery high

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

**Semivolatile Calibration Outliers**

Instrument: MSD1  
Level: low

Date/Time	6/26/02		7/08/02 1410							
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
aniline										
n,n'-dimethylaniline										
Affected Samples:										

## Corrected Sample Analysis Data Sheets

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

PZ-4S

Lab Name: Buck Environmental Labs, In Contract: \_\_\_\_\_Lab Code: 10795Case No.: BLASLAND SAS No.: \_\_\_\_\_SDG No.: BEL0213Matrix: (soil/water) WATERLab Sample ID: 0206223-01ASample wt/vol: 940 (g/mL) MLLab File ID: a0801008.dLevel: (low/med) LOWDate Received: 06/19/02% Moisture: Decanted: (Y/N) NDate Extracted: 06/20/02Concentrated Extract Volume: 1000 (µL)Date Analyzed: 06/26/02Injection Volume: 1 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_Extraction: (Type) SEPF

## CONCENTRATION UNITS:

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

1C

EPA SAMPLE NO.

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

MW-24DR

Lab Name: Buck Environmental Labs, In Contract: \_\_\_\_\_Lab Code: 10795 Case No.: BLASLAND SAS No.: \_\_\_\_\_ SDG No.: BEL0213Matrix: (soil/water) WATER Lab Sample ID: 0206223-02ASample wt/vol: 970 (g/mL) ML Lab File ID: a0901009.dLevel: (low/med) LOW Date Received: 06/19/02% Moisture: Decanted: (Y/N) N Date Extracted: 06/20/02Concentrated Extract Volume: 1000 (µL) Date Analyzed: 06/26/23Injection Volume: 1 (µL) Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_ Extraction: (Type) SEPF

CONCENTRATION UNITS:

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

1C

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-24SR

Lab Name: Buck Environmental Labs, In Contract:Lab Code: 10795Case No.: BLASLAND SAS No.: \_\_\_\_\_SDG No.: BEL0213Matrix: (soil/water) WATERLab Sample ID: 0206223-03ASample wt/vol: 940 (g/mL) MLLab File ID: a1001010.dLevel: (low/med) LOWDate Received: 06/19/02% Moisture: Decanted: (Y/N) NDate Extracted: 06/20/02Concentrated Extract Volume: 1000 (µL)Date Analyzed: 06/26/02Injection Volume: 1 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_Extraction: (Type) SEPF

CONCENTRATION UNITS:

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

1C

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-18

Lab Name: Buck Environmental Labs, In Contract:Lab Code: 10795Case No.: BLASLAND SAS No.: \_\_\_\_\_SDG No.: BEL0213Matrix: (soil/water) WATERLab Sample ID: 0206223-04ASample wt/vol: 940 (g/mL) MLLab File ID: all01011.dLevel: (low/med) LOWDate Received: 06/19/02% Moisture: Decanted: (Y/N) NDate Extracted: 06/20/02Concentrated Extract Volume: 1000 (µL)Date Analyzed: 06/26/02Injection Volume: 1 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_Extraction: (Type) SEPF

## 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

1C

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-17R

Lab Name: Buck Environmental Labs, In Contract: \_\_\_\_\_Lab Code: 10795Case No.: BLASLAND

SAS No.: \_\_\_\_\_

SDG No.: BEL0213Matrix: (soil/water) WATERLab Sample ID: 0206223-05ASample wt/vol: 990 (g/mL) MLLab File ID: al201012.dLevel: (low/med) LOWDate Received: 06/19/02% Moisture: Decanted: (Y/N) NDate Extracted: 06/20/02Concentrated Extract Volume: 1000 (µL)Date Analyzed: 06/26/02Injection Volume: 1 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_Extraction: (Type) SEPF

## CONCENTRATION UNITS:

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



1C

## SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DUP-1

Lab Name: Buck Environmental Labs, In Contract: \_\_\_\_\_Lab Code: 10795Case No.: BLASLAND SAS No.: \_\_\_\_\_SDG No.: BEL0213Matrix: (soil/water) WATERLab Sample ID: 0206223-06ASample wt/vol: 960 (g/mL) MLLab File ID: a1301013.dLevel: (low/med) LOWDate Received: 06/19/02% Moisture: Decanted: (Y/N) NDate Extracted: 06/20/02Concentrated Extract Volume: 1000 (µL)Date Analyzed: 06/27/02Injection Volume: 1 (µL)Dilution Factor: 1.00GPC Cleanup: (Y/N) N pH: \_\_\_\_\_Extraction: (Type) SEPF

CONCENTRATION UNITS:

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



## Chain of Custody

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

CLP Category B 0206223  
per Margaret to BH 2:25 6/19  
custody seal intact

CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME																
260.03		McKesson - Bear Street																
SAMPLERS: (Signature)																		
Al. Skirido / Jerry Shi																		
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	Number of Containers					REMARKS							
						2	X											
	6/18/02	12:33		X	P2-4S	2	X								* SVOCs include airline and			
	6/18/02	14:30		X	MW-24DR	2	X								N,N-dimethylaniline			
	6/18/02	15:15		X	MW-24SR	2	X											
	6/18/02	16:55		X	MW-18	2	X								* Analyze samples ASAP			
	6/18/02	17:00		X	MW-17R	2	X											
	6/18/02	13:20		X	DUP-1	2	X								* Contact Margaret Skewarnicko			
	6/18/02	17:20		X	MW-17RMS	2	X								with questions @ 446-2570			
	6/18/02	17:20		X	MW-17R MSD	2	X								ext. 517			
															* Results to M. Skewarnicko			
Relinquished by: (Signature)					DATE	TIME	Received by: (Signature)					Relinquished by: (Signature)						
Al. Skirido					6/18/02	18:30												
Relinquished by: (Signature)					DATE	TIME	Received by: (Signature)					Relinquished by: (Signature)						
[Signature]					6/18/02	18:30												
Relinquished by: (Signature)					DATE	TIME	Received for Laboratory by: (Signature)					DATE	TIME	Remarks: Rec'd Fed Ex				
							Shirley E. Towner					6/19/02	10:40	Coolers PACKED IN ICE 2.5°C				