

*Interim Remedial Measure  
Summary Report*

*Volume II of II*

**Reliant Energy  
(Former Orion Power/Niagara Mohawk,  
a National Grid Company)  
School Street Hydroelectric Station  
Cohoes, New York**

**March 2003**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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# ***Verification Soil Sample Results***

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**SDG No. R2213434**

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**Samples Collected**  
**8/23/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2213434

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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



## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.

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. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

7. Matrix Spike/Matrix Spike Duplicate

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

All matrix spike and matrix spike duplicate recoveries and relative percent difference between recoveries were within control limits.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
VF-14 / DUP-1	Aroclor 1260	1600	1400	13.3%

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

## PCB 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?	_____	_____X_____	_____
Is there a narrative or cover letter present?	_____X_____	_____	_____
Are the sample numbers included in the narrative?	_____	_____X_____	_____
Are the sample chain-of-custodies present?	_____X_____	_____	_____
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	_____	_____X_____	_____
<b><u>Holding Times</u></b>			
Have any holding times been exceeded?	_____	_____X_____	_____
<b><u>Surrogate Recovery</u></b>			
Are the surrogate recovery forms present?	_____	_____X_____	_____
Are all the samples listed on the appropriate surrogate recovery form?	_____	_____	_____X_____
Were recoveries of any surrogate outside of specified limits for any sample or blank?	_____	_____X_____	_____
If yes, were the samples reanalyzed?	_____	_____	_____X_____
Are there any transcription/calculation errors between the raw data and the summary form?	_____	_____	_____X_____
<b><u>Matrix Spikes</u></b>			
Is there a matrix spike recovery form present?	_____X_____	_____	_____
Were matrix spikes analyzed at the required frequency?	_____X_____	_____	_____
How many spike recoveries were outside of QC limits? <u>  0  </u> out of <u>  2  </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? <u>  0  </u> out of <u>  1  </u>			
<b><u>Blanks</u></b>			
Is a method blank summary form present?	_____X_____	_____	_____
Has a method blank been extracted for each set of samples or for each 20 samples, whichever is more frequent?	_____X_____	_____	_____
Do any method/instrument blanks have positive results?	_____	_____X_____	_____
Are field/rinse blanks associated with every sample?	_____	_____X_____	_____
Do any field/rinse blanks have positive results?	_____	_____	_____X_____



**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	X	_____
Aroclor 1016/1260	X	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	X	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	X	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	X	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	X	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	X
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	X	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	X	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	X	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	X	_____	_____
Was the proper analytical sequence followed?	X	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	X	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	X	_____	_____
Were all positively identified compounds confirmed on a second column?	X	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	X
Were there any false negatives?	_____	X	_____

PCB Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Compound Quantitation and Reported 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 waters, sample moisture?	<u>  X  </u>	_____	_____
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>  X  </u>	_____	_____
Were any electronegative displacement (negative peaks) or unusual peaks detected?	_____	<u>  X  </u>	_____
<b><u>Field Duplicates</u></b>			
Were field duplicates submitted with the samples?	<u>  X  </u>	_____	_____

### PCB Qualifier Summary Holding Time and Surrogates

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
VF-14			
VF-14 DL			
VF-19			
VF-19 MS			
VF-19 MSD			
VF-36			
VF-37			
DUP-1			
DUP-1 DL			

Surrogates:  
 TCX Tetrachloro-m-xylene  
 DCB Decachlorobiphenyl  
 na Not applicable

Qualifiers:  
 D Surrogate diluted out  
 1 Recovery high  
 l Recovery low

\* Unless otherwise noted, all parameters are within specified limits

### PCB Calibration Summary

Instrument: HP5890-C  
 Column: DB-1701

Date:	8/28/02	8/29/02	8/29/02	8/30/02	8/30/02			
Time:		1509	2325	0739	1350			
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok			
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok			
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

**PCB Calibration Summary - Page 2**

Instrument: HP5890-C

Column: DB-17

Date:	8/28/02	8/29/02	8/29/02	8/30/02	8/30/02			
Time:		1509	2325	0739	1350			
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok			
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok			
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

## Corrected Sample Analysis Data Sheets

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/26/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : VF-14

Date Sampled : 08/23/02      Order #: 579177      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/24/02      Submission #: R2213434      Percent Solid: 93.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/27/02		
DATE ANALYZED	: 08/29/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	35 U	UG/KG
PCB 1221	33	35 U	UG/KG
PCB 1232	33	35 U	UG/KG
PCB 1242	33	35 U	UG/KG
PCB 1248	33	35 U	UG/KG
PCB 1254	33	35 U	UG/KG
PCB 1260	33	1600 <del>1400</del> E D	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	95	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	81	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/26/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : VF-14 DL

Date Sampled : 08/23/02      Order #: 579177      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/24/02      Submission #: R2213434      Percent Solid: 93.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 08/27/02	
DATE ANALYZED		: 08/30/02	
ANALYTICAL DILUTION:	5.00		Dry Weight
PCB 1016	33	180 U	UG/KG
PCB 1221	33	180 U	UG/KG
PCB 1232	33	180 U	UG/KG
PCB 1242	33	180 U	UG/KG
PCB 1248	33	180 U	UG/KG
PCB 1254	33	180 U	UG/KG
PCB 1260	33	1600	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	112	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	88	%



COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 09/26/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : VF-19

Date Sampled : 08/23/02 Order #: 579178 Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/24/02 Submission #: R2213434 Percent Solid: 88.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 08/27/02			
DATE ANALYZED : 08/29/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	37 U	UG/KG
PCB 1254	33	37 U	UG/KG
PCB 1260	33	37 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	89	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	91	%

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : VF-36

Date Sampled : 08/23/02

Order #: 579179

Sample Matrix: SOIL/SEDIMENT

Date Received: 08/24/02

Submission #: R2213434

Percent Solid: 87.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/27/02		
DATE ANALYZED	: 08/29/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	38 U	UG/KG
PCB 1221	33	38 U	UG/KG
PCB 1232	33	38 U	UG/KG
PCB 1242	33	38 U	UG/KG
PCB 1248	33	38 U	UG/KG
PCB 1254	33	38 U	UG/KG
PCB 1260	33	150	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	85	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	79	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/26/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : VF-37

Date Sampled : 08/23/02      Order #: 579180      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/24/02      Submission #: R2213434      Percent Solid: 87.9

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/27/02		
DATE ANALYZED	: 08/29/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	38 U	UG/KG
PCB 1221	33	38 U	UG/KG
PCB 1232	33	38 U	UG/KG
PCB 1242	33	38 U	UG/KG
PCB 1248	33	38 U	UG/KG
PCB 1254	33	38 U	UG/KG
PCB 1260	33	190	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	63	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	62	%

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : DUP-1

Date Sampled : 08/23/02      Order #: 579181      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 08/24/02      Submission #: R2213434      Percent Solid: 93.9

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/27/02		
DATE ANALYZED	: 08/29/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	35 U	UG/KG
PCB 1221	33	35 U	UG/KG
PCB 1232	33	35 U	UG/KG
PCB 1242	33	35 U	UG/KG
PCB 1248	33	35 U	UG/KG
PCB 1254	33	35 U	UG/KG
PCB 1260	33	1400 <del>1300</del> E	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	89	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	76	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/26/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : DUP-1

Date Sampled : 08/23/02      Order #: 579181      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/24/02      Submission #: R2213434      Percent Solid: 93.9

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 08/27/02			
DATE ANALYZED : 08/30/02			
ANALYTICAL DILUTION: 5.00			Dry Weight
PCB 1016	33	180 U	UG/KG
PCB 1221	33	180 U	UG/KG
PCB 1232	33	180 U	UG/KG
PCB 1242	33	180 U	UG/KG
PCB 1248	33	180 U	UG/KG
PCB 1254	33	180 U	UG/KG
PCB 1260	33	1400	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	103	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	80	%

## Laboratory Narrative

## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St IRM Project #36458.007  
SUBMISSION #: R2213434

BBL soil samples were collected on 8/23/02 and received at CAS on 8/24/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

Five soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was performed on VF-19. All MS/MSD recoveries were within limits. All Blank spike recoveries were within limits. All RPD's were within limits.

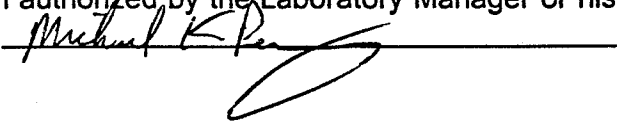
All surrogate standard recoveries were within limits.

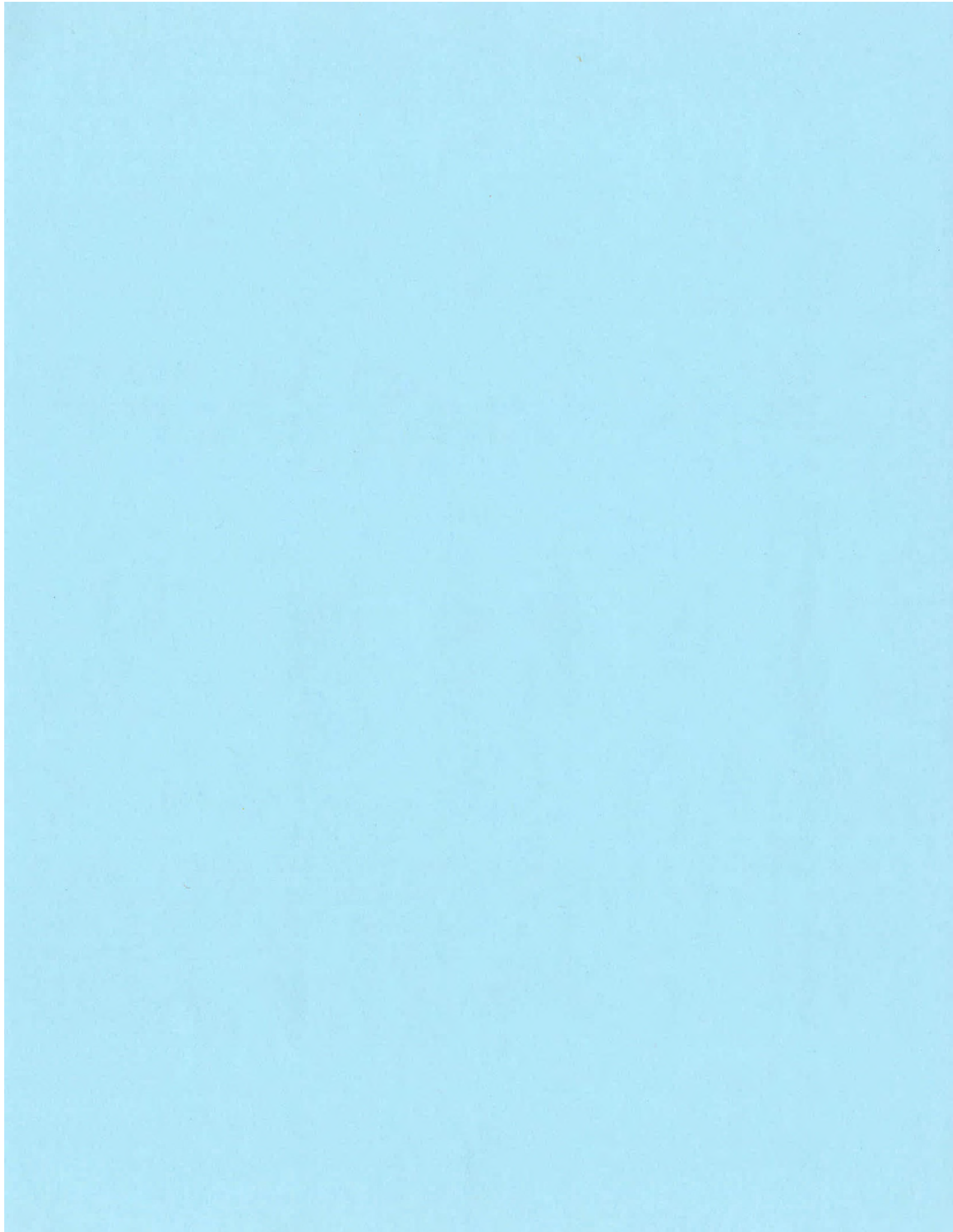
PCB 1260 for VF-14 and DUP-1 has been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature. 





**NYSDEC Sample Preparation and Analysis Summary Sheets**

<b>SDG #: VF-14</b> <b>SUBMISSION R2213434</b> <b>CLIENT: Blasland, Bouck &amp; Lee, Inc.</b> <b>CLIENT REP: Janice Jaeger</b> <b>PROJECT: NM SCHOOL ST IRM PROJECT</b>					<b>BATCH COMPLETE: <input type="checkbox"/> yes</b> <b>DISKETTE REQUESTED: Y <input type="checkbox"/> N <input type="checkbox"/></b> <b>DATE: 08/26/02</b> <b>CUSTODY SEAL: PRESENT/ABSENT:</b> <b>CHAIN OF CUSTODY: PRESENT/ABSENT:</b>					<b>DATE REVISED:</b> <b>DATE DUE: 9/23/02</b> <b>PROTOCOL: SW846</b> <b>SHIPPING No.:</b> <b>SUMMARY PKG: Y <input type="checkbox"/> N <input type="checkbox"/></b>			
CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	SAMPLED DATE	DATE RECEIVED	pH	% SOLIDS	REMARKS					
579177	VF-14	SOIL	PCB	8/23/02	8/24/02								
579178QC	VF-19	SOIL	PCB	8/23/02	8/24/02								
579179	VF-36	SOIL	PCB	8/23/02	8/24/02								
579180	VF-37	SOIL	PCB	8/23/02	8/24/02								
579181	DUP-1	SOIL	PCB	8/23/02	8/24/02								

## Sample Compliance Report



**SDG No. R2213467**

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**Samples Collected**  
**8/27/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2213467

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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



## PCB ANALYSES



## Introduction

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- 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.

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. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

7. Matrix Spike/Matrix Spike Duplicate

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

All matrix spike and matrix spike duplicate recoveries and relative percent difference between recoveries were within control limits.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
VF-12 / DUP-2	Aroclor 1260	1100	610	57.3%

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

## PCB 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>      </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>      </u>	<u>  X  </u>	<u>      </u>
Are all the samples listed on the appropriate surrogate recovery form?	<u>      </u>	<u>      </u>	<u>  X  </u>
Were recoveries of any surrogate 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>
Are there any transcription/calculation errors between the raw data and the summary form?	<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>  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 a 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>
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>

**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	X	_____
Aroclor 1016/1260	X	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	X	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	X	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	X	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	X	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	X
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	X	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	X	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	X	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	X	_____	_____
Was the proper analytical sequence followed?	X	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	X	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	X	_____	_____
Were all positively identified compounds confirmed on a second column?	X	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	X
Were there any false negatives?	_____	X	_____

PCB Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Compound Quantitation and Reported 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 waters, sample moisture?	<u>  X  </u>	_____	_____
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>  X  </u>	_____	_____
Were any electronegative displacement (negative peaks) or unusual peaks detected?	_____	<u>  X  </u>	_____
<b><u>Field Duplicates</u></b>			
Were field duplicates submitted with the samples?	<u>  X  </u>	_____	_____









**Corrected Sample Analysis Data Sheets**

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 09/27/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM-SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-25

Date Sampled : 08/23/02      Order #: 579823      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02      Submission #: R2213467      Percent Solid: 82.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED			
DATE ANALYZED			
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	40 U	UG/KG
PCB 1221	33	40 U	UG/KG
PCB 1232	33	40 U	UG/KG
PCB 1242	33	40 U	UG/KG
PCB 1248	33	40 U	UG/KG
PCB 1254	33	40 U	UG/KG
PCB 1260	33	790 860 ED	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	97	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	89	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/27/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM-SCHOOL STREET PROJECT #36458.007  
Client Sample ID : VF-25

Date Sampled : 08/23/02      Order #: 579823      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02      Submission #: R2213467      Percent Solid: 82.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 08/28/02			
DATE ANALYZED : 08/30/02			
ANALYTICAL DILUTION: 5.00			Dry Weight
PCB 1016	33	200 U	UG/KG
PCB 1221	33	200 U	UG/KG
PCB 1232	33	200 U	UG/KG
PCB 1242	33	200 U	UG/KG
PCB 1248	33	200 U	UG/KG
PCB 1254	33	200 U	UG/KG
PCB 1260	33	790	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	98	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	77	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 09/27/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM-SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-13

Date Sampled : 08/27/02      Order #: 579824      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02      Submission #: R2213467      Percent Solid: 93.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/28/02		
DATE ANALYZED	: 08/30/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	35 U	UG/KG
PCB 1221	33	35 U	UG/KG
PCB 1232	33	35 U	UG/KG
PCB 1242	33	35 U	UG/KG
PCB 1248	33	1100 820 <del>U</del>	UG/KG
PCB 1254	33	35 U	UG/KG
PCB 1260	33	170	UG/KG

SURROGATE RECOVERIES  
DECACHLOROBIPHENYL  
TETRACHLORO-META-XYLENE

QC LIMITS  
(35 - 131 %)  
(29 - 141 %)

90 %  
76 %

Blasland, Bouck & Lee, Inc.

Project Reference: NM-SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-13

Date Sampled : 08/27/02      Order #: 579824      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02      Submission #: R2213467      Percent Solid: 93.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/28/02		
DATE ANALYZED	: 08/30/02		
ANALYTICAL DILUTION:	5.00		Dry Weight
PCB 1016	33	180 U	UG/KG
PCB 1221	33	180 U	UG/KG
PCB 1232	33	180 U	UG/KG
PCB 1242	33	180 U	UG/KG
PCB 1248	33	1100	UG/KG
PCB 1254	33	180 U	UG/KG
PCB 1260	33	210	UG/KG

SURROGATE RECOVERIES  
DECACHLOROBIPHENYL  
TETRACHLORO-META-XYLENE

QC LIMITS  
(35 - 131 %)  
(29 - 141 %)

120 %  
87 %

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/27/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM-SCHOOL STREET PROJECT #36458.007  
Client Sample ID : VS-1

Date Sampled : 08/27/02      Order #: 579825      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02      Submission #: R2213467      Percent Solid: 94.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 08/28/02	
DATE ANALYZED		: 08/30/02	
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	35 U	UG/KG
PCB 1221	33	35 U	UG/KG
PCB 1232	33	35 U	UG/KG
PCB 1242	33	35 U	UG/KG
PCB 1248	33	35 U	UG/KG
PCB 1254	33	35 U	UG/KG
PCB 1260	33	110	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	79	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	87	%



COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/27/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM-SCHOOL STREET PROJECT #36458.007

Client Sample ID : VS-2

Date Sampled : 08/27/02 Order #: 579826 Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02 Submission #: R2213467 Percent Solid: 94.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 08/28/02			
DATE ANALYZED : 08/30/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	35 U	UG/KG
PCB 1221	33	35 U	UG/KG
PCB 1232	33	35 U	UG/KG
PCB 1242	33	35 U	UG/KG
PCB 1248	33	35 U	UG/KG
PCB 1254	33	35 U	UG/KG
PCB 1260	33	150	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	76	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	76	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/27/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM-SCHOOL STREET PROJECT #36458.007  
Client Sample ID : VF-12

Date Sampled : 08/27/02      Order #: 579827      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02      Submission #: R2213467      Percent Solid: 94.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 08/28/02			
DATE ANALYZED : 08/30/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	35 U	UG/KG
PCB 1221	33	35 U	UG/KG
PCB 1232	33	35 U	UG/KG
PCB 1242	33	35 U	UG/KG
PCB 1248	33	35 U	UG/KG
PCB 1254	33	35 U	UG/KG
PCB 1260	33	1100-830 E D	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	80	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	78	%

Blasland, Bouck & Lee, Inc.

Project Reference: NM-SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-12

Date Sampled : 08/27/02      Order #: 579827      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02      Submission #: R2213467      Percent Solid: 94.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/28/02		
DATE ANALYZED	: 08/30/02		
ANALYTICAL DILUTION:	5.00		Dry Weight
PCB 1016	33	170 U	UG/KG
PCB 1221	33	170 U	UG/KG
PCB 1232	33	170 U	UG/KG
PCB 1242	33	170 U	UG/KG
PCB 1248	33	170 U	UG/KG
PCB 1254	33	170 U	UG/KG
PCB 1260	33	1100	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	113	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	92	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/27/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM-SCHOOL STREET PROJECT #36458.007  
Client Sample ID: VF-6

Date Sampled : 08/27/02      Order #: 579828      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02      Submission #: R2213467      Percent Solid: 96.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/28/02		
DATE ANALYZED	: 08/30/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	34 U	UG/KG
PCB 1221	33	34 U	UG/KG
PCB 1232	33	34 U	UG/KG
PCB 1242	33	34 U	UG/KG
PCB 1248	33	34 U	UG/KG
PCB 1254	33	1100 E D	UG/KG
PCB 1260	33	610 520 E D	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	84	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	84	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/27/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM-SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-6

Date Sampled : 08/27/02      Order #: 579828      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02      Submission #: R2213467      Percent Solid: 96.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/28/02		
DATE ANALYZED	: 08/30/02		
ANALYTICAL DILUTION:	5.00		Dry Weight
PCB 1016	33	170 U	UG/KG
PCB 1221	33	170 U	UG/KG
PCB 1232	33	170 U	UG/KG
PCB 1242	33	170 U	UG/KG
PCB 1248	33	170 U	UG/KG
PCB 1254	33	1100	UG/KG
PCB 1260	33	610	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	105	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	89	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/27/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM-SCHOOL STREET PROJECT #36458.007  
Client Sample ID : DUP-2

Date Sampled : 08/27/02      Order #: 579829      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02      Submission #: R2213467      Percent Solid: 94.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/28/02		
DATE ANALYZED	: 08/30/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	35 U	UG/KG
PCB 1221	33	35 U	UG/KG
PCB 1232	33	35 U	UG/KG
PCB 1242	33	35 U	UG/KG
PCB 1248	33	35 U	UG/KG
PCB 1254	33	35 U	UG/KG
PCB 1260	33	60 540 ED	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	84	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	81	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 09/27/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM-SCHOOL STREET PROJECT #36458.007  
Client Sample ID : DUP-2

Date Sampled : 08/27/02      Order #: 579829      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/28/02      Submission #: R2213467      Percent Solid: 94.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/28/02		
DATE ANALYZED	: 08/30/02		
ANALYTICAL DILUTION:	2.00		Dry Weight
PCB 1016	33	70 U	UG/KG
PCB 1221	33	70 U	UG/KG
PCB 1232	33	70 U	UG/KG
PCB 1242	33	70 U	UG/KG
PCB 1248	33	70 U	UG/KG
PCB 1254	33	70 U	UG/KG
PCB 1260	33	610	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	92	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	95	%

## Laboratory Narrative



## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2213467

BBL soil samples were collected on 8/23-27/02 and received at CAS on 8/28/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

Seven soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was performed on VS-1. All MS/MSD recoveries were within limits. All Blank spike recoveries were within limits. All RPD's were within limits.

All surrogate standard recoveries were within limits.

Various Arochlors for VF-25, VF-13, VF-12, VF-6 and DUP-2 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature. Michael K. Perry

**NYSDEC Sample Preparation and Analysis Summary Sheets**



## Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>				Noncompliance
					VOC	SVOC	PCB	MET	
R2213467	8/23/02	2000	VF-25	soil	--	--	yes	--	
R2213467	8/27/02	2000	VF-13	soil	--	--	yes	--	
R2213467	8/27/02	2000	VS-1	soil	--	--	yes	--	
R2213467	8/27/02	2000	VS-2	soil	--	--	yes	--	
R2213467	8/27/02	2000	VF-12	soil	--	--	yes	--	
R2213467	8/27/02	2000	VF-6	soil	--	--	yes	--	
R2213467	8/27/02	2000	DUP-2	soil	--	--	yes	--	

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

**SDG No. R2213574**

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**Samples Collected**  
**9/4/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2213574

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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





## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.

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. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

7. Matrix Spike/Matrix Spike Duplicate

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

All matrix spike and matrix spike duplicate recoveries and relative percent difference between recoveries were within control limits.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
VF-9 / DUP-3	Aroclor 1254	540	340	45.4%
	Aroclor 1260	370	280	27.7%

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

## PCB 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>      </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>      </u>	<u>  X  </u>	<u>      </u>
Are all the samples listed on the appropriate surrogate recovery form?	<u>      </u>	<u>      </u>	<u>  X  </u>
Were recoveries of any surrogate 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>
Are there any transcription/calculation errors between the raw data and the summary form?	<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>  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 a 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>
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>

**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	<u>  X  </u>	_____
Aroclor 1016/1260	<u>  X  </u>	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	<u>  X  </u>	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	<u>  X  </u>	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	<u>  X  </u>	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	<u>  X  </u>
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	<u>  X  </u>	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	<u>  X  </u>	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	<u>  X  </u>	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	<u>  X  </u>	_____	_____
Was the proper analytical sequence followed?	<u>  X  </u>	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	<u>  X  </u>	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	<u>  X  </u>	_____	_____
Were all positively identified compounds confirmed on a second column?	<u>  X  </u>	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	<u>  X  </u>
Were there any false negatives?	_____	<u>  X  </u>	_____

**PCB Data Validation Checklist - Page 3**

	YES	NO	NA
<b><u>Compound Quantitation and Reported Detection Limits</u></b>			
Are there any transcription/calculation errors in the Form 1 results?	_____	_____X_____	_____
Are the reporting limits adjusted to reflect sample dilutions and, for waters, sample moisture?	_____X_____	_____	_____
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	_____X_____	_____	_____
Were any electronegative displacement (negative peaks) or unusual peaks detected?	_____	_____X_____	_____
<b><u>Field Duplicates</u></b>			
Were field duplicates submitted with the samples?	_____X_____	_____	_____



### PCB Qualifier Summary Holding Time and Surrogates

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
VF-2			
VF-13A			
VF-13A MS			
VF-13A MSD			
VF-8			
VF-8 DL			
VF-9			
VF-9 DL			
VF-7			
DUP-3			

Surrogates:  
 TCX Tetrachloro-m-xylene  
 DCB Decachlorobiphenyl  
 na Not applicable

Qualifiers:  
 D Surrogate diluted out  
 † Recovery high  
 ‡ Recovery low

\* Unless otherwise noted, all parameters are within specified limits

### PCB Calibration Summary

Instrument: HP5890-C  
 Column: DB-1701

Date:	9/7/02	9/7/02	9/8/02	9/8/02				
Time:		2307	0642	1253				
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok				
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok				
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

### PCB Calibration Summary - Page 2

Instrument: HP5890-C

Column: DB-17

Date:	9/7/02	9/7/02	9/8/02	9/8/02				
	Time:	2226	0642	1253				
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok				
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok				
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

**Corrected Sample Analysis Data Sheets**

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : VF-2

Date Sampled : 09/04/02      Order #: 581606      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/05/02      Submission #: R2213574      Percent Solid: 74.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/05/02		
DATE ANALYZED	: 09/08/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	44 U	UG/KG
PCB 1221	33	44 U	UG/KG
PCB 1232	33	44 U	UG/KG
PCB 1242	33	44 U	UG/KG
PCB 1248	33	44 U	UG/KG
PCB 1254	33	420	UG/KG
PCB 1260	33	200	UG/KG
<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	59	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	50	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-13A

Date Sampled : 09/04/02      Order #: 581607      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/05/02      Submission #: R2213574      Percent Solid: 85.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/05/02		
DATE ANALYZED	: 09/08/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	39 U	UG/KG
PCB 1260	33	39 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	85	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	94	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-8

Date Sampled : 09/04/02      Order #: 581608      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/05/02      Submission #: R2213574      Percent Solid: 88.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/05/02		
DATE ANALYZED	: 09/08/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	37 U	UG/KG
PCB 1254	33	690460 E D	UG/KG
PCB 1260	33	860780 E D	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	96	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	90	%

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL STREET PROJECT #36458.007  
 Client Sample ID : VF-8

Date Sampled : 09/04/02      Order #: 581608      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/05/02      Submission #: R2213574      Percent Solid: 88.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/05/02		
DATE ANALYZED	: 09/08/02		
ANALYTICAL DILUTION:	5.00		Dry Weight
PCB 1016	33	190 U	UG/KG
PCB 1221	33	190 U	UG/KG
PCB 1232	33	190 U	UG/KG
PCB 1242	33	190 U	UG/KG
PCB 1248	33	190 U	UG/KG
PCB 1254	33	690	UG/KG
PCB 1260	33	860	UG/KG
<u>SURROGATE RECOVERIES</u>		<u>QC LIMITS</u>	
DECACHLOROBIPHENYL	(35 - 131 %)	107	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	85	%



COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-9

Date Sampled : 09/04/02      Order #: 581609      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/05/02      Submission #: R2213574      Percent Solid: 80.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/05/02		
DATE ANALYZED	: 09/08/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	41 U	UG/KG
PCB 1221	33	41 U	UG/KG
PCB 1232	33	41 U	UG/KG
PCB 1242	33	41 U	UG/KG
PCB 1248	33	41 U	UG/KG
PCB 1254	33	540 550 E D	UG/KG
PCB 1260	33	310	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	66	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	68	%

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL STREET PROJECT #36458.007  
 Client Sample ID : VF-9

Date Sampled : 09/04/02      Order #: 581609      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/05/02      Submission #: R2213574      Percent Solid: 80.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/05/02			
DATE ANALYZED : 09/08/02			
ANALYTICAL DILUTION: 2.00			Dry Weight
PCB 1016	33	82 U	UG/KG
PCB 1221	33	82 U	UG/KG
PCB 1232	33	82 U	UG/KG
PCB 1242	33	82 U	UG/KG
PCB 1248	33	82 U	UG/KG
PCB 1254	33	540	UG/KG
PCB 1260	33	370	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	80	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	77	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-7

Date Sampled : 09/04/02      Order #: 581610      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/05/02      Submission #: R2213574      Percent Solid: 79.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/05/02		
DATE ANALYZED	: 09/08/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	42 U	UG/KG
PCB 1221	33	42 U	UG/KG
PCB 1232	33	42 U	UG/KG
PCB 1242	33	42 U	UG/KG
PCB 1248	33	42 U	UG/KG
PCB 1254	33	42 U	UG/KG
PCB 1260	33	170	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	80	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	86	%

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL STREET PROJECT #36458.007  
 Client Sample ID : DUP-3

Date Sampled : 09/04/02      Order #: 581611      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/05/02      Submission #: R2213574      Percent Solid: 85.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/05/02		
DATE ANALYZED	: 09/08/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	340	UG/KG
PCB 1260	33	280	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	74	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	68	%

## Laboratory Narrative

## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2213574

BBL soil samples were collected on 9/04/02 and received at CAS on 9/05/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

Six soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was performed on VF-13A. All MS/MSD recoveries were within limits. All Blank spike recoveries were within limits. All RPD's were within limits.

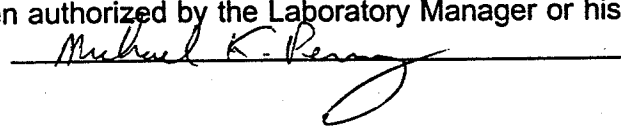
All surrogate standard recoveries were within limits.

Various Arochlors for VF-8 and VF-9 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature. 

**NYSDEC Sample Preparation and Analysis Summary Sheets**

SDG #: VF-2 BATCH COMPLETE: yes no DATE REVISED:  
 SUBMISSION R2213574 DISKETTE REQUESTED: Y\_\_\_ N\_\_\_ X\_\_\_ DATE DUE: 10/03/02  
 CLIENT: Blasland, Bouck & Lee, Inc. DATE: 09/05/02 PROTOCOL: SW846  
 CLIENT REP: Janice Jaeger CUSTODY SEAL: PRESENT/ABSENT:  
 PROJECT: NM SCHOOL STREET PROJEC CHAIN OF CUSTODY: PRESENT/ABSENT:  
 SHIPPING No.:  
 SUMMARY PKG: Y\_\_\_ X\_\_\_ N\_\_\_

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	SAMPLED DATE	DATE RECEIVED	pH	(SOLIDS)	% SOLIDS	REMARKS
581606	VF-2	SOIL	PCB	9/4/02	9/5/02				
581607QC	VF-13A	SOIL	PCB	9/4/02	9/5/02				
581608	VF-8	SOIL	PCB	9/4/02	9/5/02				
581609	VF-9	SOIL	PCB	9/4/02	9/5/02				
581610	VF-7	SOIL	PCB	9/4/02	9/5/02				
581611	DUP-3	SOIL	PCB	9/4/02	9/5/02				



## Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>				Noncompliance
					VOC	SVOC	PCB	MET	
R2213574	9/4/02	2000	VF-2	soil	--	--	yes	--	
R2213574	9/4/02	2000	VF-13A	soil	--	--	yes	--	
R2213574	9/4/02	2000	VF-8	soil	--	--	yes	--	
R2213574	9/4/02	2000	VF-9	soil	--	--	yes	--	
R2213574	9/4/02	2000	VF-7	soil	--	--	yes	--	
R2213574	9/4/02	2000	DUP-3	soil	--	--	yes	--	

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

**SDG No. R2213593**

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**Samples Collected**  
**9/4/02 - 9/5/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2213593

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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



## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.



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 samples VF-10DL, VF-27DL, VF-30DL and DUP-4DL. Since recoveries for the remaining surrogate were within control limits and since all recoveries were within control limits in the undiluted analyses of the samples, no data have been qualified based on the deviations. All other surrogate recoveries were within control limits.

6. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

Data for Aroclor 1254 in samples VF-10, VF-10DL and VF-4DL and data for Aroclor 1260 in sample VF-28 were calculated using peaks that showed significant contributions from other Aroclors in the samples. Data for these samples have been manually recalculated to minimize the potential high bias.

7. Matrix Spike/Matrix Spike Duplicate

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

All matrix spike and matrix spike duplicate recoveries and relative percent difference between recoveries were within control limits.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
VF-10 / DUP-4	Aroclor 1254	2000	1800	10.5%
	Aroclor 1260	1100	1300	16.7%

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

## PCB 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>      </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>      </u>	<u>  X  </u>	<u>      </u>
Are all the samples listed on the appropriate surrogate recovery form?	<u>      </u>	<u>      </u>	<u>  X  </u>
Were recoveries of any surrogate outside of specified limits for any sample or blank?	<u>  X  </u>	<u>      </u>	<u>      </u>
If yes, were the samples reanalyzed?	<u>      </u>	<u>  X  </u>	<u>      </u>
Are there any transcription/calculation errors between the raw data and the summary form?	<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>  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 a 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>
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>

**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	<u>  X  </u>	_____
Aroclor 1016/1260	<u>  X  </u>	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	<u>  X  </u>	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	<u>  X  </u>	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	<u>  X  </u>	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	<u>  X  </u>
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	<u>  X  </u>	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	<u>  X  </u>	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	<u>  X  </u>	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	<u>  X  </u>	_____	_____
Was the proper analytical sequence followed?	<u>  X  </u>	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	<u>  X  </u>	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	<u>  X  </u>	_____	_____
Were all positively identified compounds confirmed on a second column?	<u>  X  </u>	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	<u>  X  </u>
Were there any false negatives?	_____	<u>  X  </u>	_____

**PCB Data Validation Checklist - Page 3**

	YES	NO	NA
<b><u>Compound Quantitation and Reported Detection Limits</u></b>			
Are there any transcription/calculation errors in the Form 1 results?	<u>X</u>	<u>      </u>	<u>      </u>
Are the reporting limits adjusted to reflect sample dilutions and, for waters, sample moisture?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>X</u>	<u>      </u>	<u>      </u>
Were any electronegative displacement (negative peaks) or unusual peaks detected?	<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>

**PCB Qualifier Summary  
Holding Time and Surrogates**

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
VF-10			
VF-10 DL		1	
VF-18			
VF-3			
VF-3 MS			
VF-3 MSD			
VF-28			
VF-31			
VF-31 DL		1	
VF-27			
VF-27 DL		1	
DUP-4			
DUP-4 DL		1	
VF-20			
VF-20 DL			

Surrogates:  
TCX Tetrachloro-m-xylene  
DCB Decachlorobiphenyl  
na Not applicable

Qualifiers:  
D Surrogate diluted out  
1 Recovery high  
l Recovery low

\* Unless otherwise noted, all parameters are within specified limits

## PCB Calibration Summary

Instrument: HP5890-C  
 Column: DB-1701

Date:	9/7/02	9/9/02	9/10/02	9/10/02	9/10/02	9/10/02		
Time:		2001	0418	0907	1148	1802		
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok		
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok	ok		
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed





**Corrected Sample Analysis Data Sheets**

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458-007  
Client Sample ID : VF-10

Date Sampled : 09/04/02      Order #: 581870      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/06/02      Submission #: R2213593      Percent Solid: 96.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/09/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	34 U	UG/KG
PCB 1221	33	34 U	UG/KG
PCB 1232	33	34 U	UG/KG
PCB 1242	33	34 U	UG/KG
PCB 1248	33	34 U	UG/KG
PCB 1254	33	1650 1400 ED	UG/KG
PCB 1260	33	1108 820 ED	UG/KG
<u>SURROGATE RECOVERIES</u>		<u>QC LIMITS</u>	
DECACHLOROBIPHENYL	(35 - 131 %)	88	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	89	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : VF-10

Date Sampled : 09/04/02      Order #: 581870      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/06/02      Submission #: R2213593      Percent Solid: 96.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/10/02		
ANALYTICAL DILUTION:	10.00		Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	33	340 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	1400 2000	UG/KG
PCB 1260	33	1100	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(35 - 131 %)	133 *	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	116	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : VF-18

Date Sampled : 09/04/02      Order #: 581871      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/06/02      Submission #: R2213593      Percent Solid: 87.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/09/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	38 U	UG/KG
PCB 1221	33	38 U	UG/KG
PCB 1232	33	38 U	UG/KG
PCB 1242	33	38 U	UG/KG
PCB 1248	33	38 U	UG/KG
PCB 1254	33	38 U	UG/KG
PCB 1260	33	62	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	74	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	75	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : VF-3

Date Sampled : 09/05/02      Order #: 581872      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/06/02      Submission #: R2213593      Percent Solid: 91.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/09/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	36 U	UG/KG
PCB 1221	33	36 U	UG/KG
PCB 1232	33	36 U	UG/KG
PCB 1242	33	36 U	UG/KG
PCB 1248	33	36 U	UG/KG
PCB 1254	33	36 U	UG/KG
PCB 1260	33	150	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	89	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	87	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458-007  
Client Sample ID : VF-28

Date Sampled : 09/05/02      Order #: 581873      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/06/02      Submission #: R2213593      Percent Solid: 90.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/10/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	37 U	UG/KG
PCB 1254	33	71	UG/KG
PCB 1260	33	120 <del>130</del>	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	88	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	96	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : VF-31

Date Sampled : 09/05/02      Order #: 581874      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/06/02      Submission #: R2213593      Percent Solid: 84.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/10/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	39 U	UG/KG
PCB 1260	33	1300 <del>890</del> ED	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	98	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	111	%



Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : VF-31

Date Sampled : 09/05/02      Order #: 581874      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/06/02      Submission #: R2213593      Percent Solid: 84.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/06/02			
DATE ANALYZED : 09/10/02			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	390 U	UG/KG
PCB 1221	33	390 U	UG/KG
PCB 1232	33	390 U	UG/KG
PCB 1242	33	390 U	UG/KG
PCB 1248	33	390 U	UG/KG
PCB 1254	33	390 U	UG/KG
PCB 1260	33	1300	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	159 *	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	133	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : VF-27

Date Sampled : 09/05/02      Order #: 581875      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/06/02      Submission #: R2213593      Percent Solid: 83.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/10/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	39 U	UG/KG
PCB 1260	33	<del>38003100</del> ED	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	100	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	107	%

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : VF-27

Date Sampled : 09/05/02                      Order #: 581875                      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/06/02                      Submission #: R2213593                      Percent Solid: 83.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/10/02		
ANALYTICAL DILUTION:	10.00		Dry Weight
PCB 1016	33	390 U	UG/KG
PCB 1221	33	390 U	UG/KG
PCB 1232	33	390 U	UG/KG
PCB 1242	33	390 U	UG/KG
PCB 1248	33	390 U	UG/KG
PCB 1254	33	390 U	UG/KG
PCB 1260	33	3800	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	141 *	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	119	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8082 PCB'S  
 Reported: 10/04/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL STREET PROJECT #36458-007  
 Client Sample ID : DUP-4

Date Sampled : 09/04/02      Order #: 581876      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/06/02      Submission #: R2213593      Percent Solid: 96.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/10/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	34 U	UG/KG
PCB 1221	33	34 U	UG/KG
PCB 1232	33	34 U	UG/KG
PCB 1242	33	34 U	UG/KG
PCB 1248	33	34 U	UG/KG
PCB 1254	33	1800 <del>1400</del> ED	UG/KG
PCB 1260	33	1300 <del>1000</del> ED	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	101	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	108	%

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : DUP-4

Date Sampled : 09/04/02      Order #: 581876      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/06/02      Submission #: R2213593      Percent Solid: 96.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/06/02			
DATE ANALYZED : 09/10/02			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	340 U	UG/KG
PCB 1221	33	340 U	UG/KG
PCB 1232	33	340 U	UG/KG
PCB 1242	33	340 U	UG/KG
PCB 1248	33	340 U	UG/KG
PCB 1254	33	1200 2200	UG/KG
PCB 1260	33	1300	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	137 *	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	121	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : VF-20

Date Sampled : 09/05/02                      Order #: 581877                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/06/02                      Submission #: R2213593                      Percent Solid: 83.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/10/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	39 U	UG/KG
PCB 1260	33	<del>39</del> 650 <del>U</del> $\Delta$	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	82	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	79	%

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : VF-20

Date Sampled : 09/05/02      Order #: 581877      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/06/02      Submission #: R2213593      Percent Solid: 83.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/10/02		
ANALYTICAL DILUTION:	5.00		Dry Weight
PCB 1016	33	200 U	UG/KG
PCB 1221	33	200 U	UG/KG
PCB 1232	33	200 U	UG/KG
PCB 1242	33	200 U	UG/KG
PCB 1248	33	200 U	UG/KG
PCB 1254	33	200 U	UG/KG
PCB 1260	33	850	UG/KG
<u>SURROGATE RECOVERIES</u>		<u>QC LIMITS</u>	
DECACHLOROBIPHENYL	(35 - 131 %)	112	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	104	%

## Laboratory Narrative



## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2213593

BBL soil samples were collected on 9/04-05/02 and received at CAS on 9/06/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

Eight soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was performed on VF-3. All MS/MSD recoveries were within limits. All Blank spike recoveries were within limits. All RPD's were within limits.

All surrogate standard recoveries were within limits except Decachlorobiphenyl for VF-10DL, VF-31DL, VF-27DL and DUP-4DL and has been flagged with an "\*\*\*".

Various Arochlors for VF-10, VF-31, VF-27, VF-20 and DUP-4 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature. Michael E. Perry

**NYSDEC Sample Preparation and Analysis Summary Sheets**

SDG #: VF-3 SUBMISSION R2213593 CLIENT: Blasland, Bouck & Lee, Inc. CLIENT REP: Janice Jaeger PROJECT: NM SCHOOL STREET		BATCH COMPLETE: <input type="checkbox"/> yes DISKETTE REQUESTED: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> DATE: 09/06/02 CUSTODY SEAL: PRESENT/ABSENT: CHAIN OF CUSTODY: PRESENT/ABSENT:		DATE REVISED: DATE DUE: 10/04/02 PROTOCOL: SW846 SHIPPING No.: SUMMARY PKG: Y <input checked="" type="checkbox"/> X <input type="checkbox"/> N					
CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH	SOLIDS	%	REMARKS
581870	VF-10	SOIL	PCB	9/4/02	9/6/02				
581871	VF-18	SOIL	PCB	9/4/02	9/6/02				
581872QC	VF-3	SOIL	PCB	9/5/02	9/6/02				
581873	VF-28	SOIL	PCB	9/5/02	9/6/02				
581874	VF-31	SOIL	PCB	9/5/02	9/6/02				
581875	VF-27	SOIL	PCB	9/5/02	9/6/02				
581876	DUP-4	SOIL	PCB	9/4/02	9/6/02				
581877	VF-20	SOIL	PCB	9/5/02	9/6/02				

## Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>				Noncompliance
					VOC	SVOC	PCB	MET	
R2213593	9/4/02	2000	VF-10	soil	--	--	no	--	PCB - surr <sup>2</sup>
R2213593	9/4/02	2000	VF-18	soil	--	--	yes	--	
R2213593	9/5/02	2000	VF-3	soil	--	--	yes	--	
R2213593	9/5/02	2000	VF-28	soil	--	--	yes	--	
R2213593	9/5/02	2000	VF-31	soil	--	--	no	--	PCB - surr <sup>2</sup>
R2213593	9/5/02	2000	VF-27	soil	--	--	no	--	PCB - surr <sup>2</sup>
R2213593	9/5/02	2000	DUP-4	soil	--	--	no	--	PCB - surr <sup>2</sup>
R2213593	9/5/02	2000	VF-20	soil	--	--	yes	--	

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

2 The deviation resulted in no qualification of data.

**SDG No. R2213647**

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**Samples Collected**  
**9/10/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2213647

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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

Summary

The following is an assessment of the data package for SDG# R2213647 for sampling at the NMPC-School 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				
				VOC	SVOC	PCB	MET	TOC
VF-29	583002	soil	9/10/02			x		
VF-30 <sup>1</sup>	583003	soil	9/10/02			x		
VF-1	583004	soil	9/10/02			x		
DUP-5	583005	soil	9/10/02			x		

1 MS/MSD analysis performed on sample.



## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.

5. Surrogates / System Monitoring Compounds

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

Surrogates were diluted beyond the range of quantitation in samples VF-30DL and DUP-5DL. No data have been qualified based on diluted surrogates. All other surrogate recoveries were within control limits.

6. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

Data for sample DUP-5DL was calculated using a 200x dilution factor. An examination of the raw data, however, showed the correct dilution factor to be 100x. Data for the sample have been manually recalculated using the correct factor.

7. Matrix Spike/Matrix Spike Duplicate

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

Matrix spike recoveries could not be accurately calculated due to interference from PCBs present in the unspiked sample.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
VF-30 / DUP-5	Aroclor 1260	29000	2700	7.1%

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

## PCB 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?	_____	X _____	_____
Is there a narrative or cover letter present?	X _____	_____	_____
Are the sample numbers included in the narrative?	_____	X _____	_____
Are the sample chain-of-custodies present?	X _____	_____	_____
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	_____	X _____	_____
<b><u>Holding Times</u></b>			
Have any holding times been exceeded?	_____	X _____	_____
<b><u>Surrogate Recovery</u></b>			
Are the surrogate recovery forms present?	_____	X _____	_____
Are all the samples listed on the appropriate surrogate recovery form?	_____	_____	X _____
Were recoveries of any surrogate outside of specified limits for any sample or blank?	_____	X _____	_____
If yes, were the samples reanalyzed?	_____	_____	X _____
Are there any transcription/calculation errors between the raw data and the summary form?	_____	_____	X _____
<b><u>Matrix Spikes</u></b>			
Is there a matrix spike recovery form present?	X _____	_____	_____
Were matrix spikes analyzed at the required frequency?	X _____	_____	_____
How many spike recoveries were outside of QC limits? <u>  NA  </u> out of <u>  NA  </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? <u>  NA  </u> out of <u>  NA  </u>			
<b><u>Blanks</u></b>			
Is a method blank summary form present?	X _____	_____	_____
Has a method blank been extracted for each set of samples or for each 20 samples, whichever is more frequent?	X _____	_____	_____
Do any method/instrument blanks have positive results?	_____	X _____	_____
Are field/rinse blanks associated with every sample?	_____	X _____	_____
Do any field/rinse blanks have positive results?	_____	_____	X _____

**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	X _____	_____
Aroclor 1016/1260	X _____	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	X _____	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	X _____	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	X _____	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	X _____	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	X _____
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X _____	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	X _____	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	X _____	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	X _____	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	X _____	_____	_____
Was the proper analytical sequence followed?	X _____	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	X _____	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	X _____	_____	_____
Were all positively identified compounds confirmed on a second column?	X _____	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	X _____
Were there any false negatives?	_____	X _____	_____



PCB Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Compound Quantitation and Reported Detection Limits</u></b>			
Are there any transcription/calculation errors in the Form 1 results?	<u>  X  </u>	<u>      </u>	<u>      </u>
Are the reporting limits adjusted to reflect sample dilutions and, for waters, sample moisture?	<u>  X  </u>	<u>      </u>	<u>      </u>
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>  X  </u>	<u>      </u>	<u>      </u>
Were any electronegative displacement (negative peaks) or unusual peaks detected?	<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>

**PCB Qualifier Summary  
Holding Time and Surrogates**

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
VF-29			
VF-30			
VF-30 DL		D	D
VF-30 MS			
VF-30 MSD			
VF-1			
VF-1 DL			
DUP-5			
DUP-5 DL			
		D	D

Surrogates:  
TCX Tetrachloro-m-xylene  
DCB Decachlorobiphenyl  
na Not applicable

Qualifiers:  
D Surrogate diluted out  
! Recovery high  
! Recovery low

\* Unless otherwise noted, all parameters are within specified limits

### PCB Calibration Summary

Instrument: HP5890-C

Column: DB-1701

Date:	9/7/02	9/12/02	9/13/02	9/13/02	9/13/02	9/16/02	9/16/02	
Time:		1743	0037	0657	1352	1048	1307	
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok	ok	
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok	ok	ok	
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

PCB Calibration Summary - Page 2

Instrument: HP5890-C  
Column: DB-17

Date:	9/7/02	9/12/02	9/13/02	9/13/02	9/13/02	9/16/02	9/16/02	
Time:		1743	0037	0657	1352	1048	1307	
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok	ok	
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok	ok	ok	
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

## Corrected Sample Analysis Data Sheets

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/07/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : VF-29

Date Sampled : 09/10/02      Order #: 583002      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/11/02      Submission #: R2213647      Percent Solid: 97.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED			
DATE ANALYZED			
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	34 U	UG/KG
PCB 1221	33	34 U	UG/KG
PCB 1232	33	34 U	UG/KG
PCB 1242	33	34 U	UG/KG
PCB 1248	33	34 U	UG/KG
PCB 1254	33	34 U	UG/KG
PCB 1260	33	200	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	94	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	88	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8082 PCB'S  
 Reported: 10/07/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL STREET PROJECT #36458.007  
 Client Sample ID : VF-30

Date Sampled : 09/10/02                      Order #: 583003                      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/11/02                      Submission #: R2213647                      Percent Solid: 95.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/12/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	35 U	UG/KG
PCB 1221	33	35 U	UG/KG
PCB 1232	33	35 U	UG/KG
PCB 1242	33	35 U	UG/KG
PCB 1248	33	35 U	UG/KG
PCB 1254	33	35 U	UG/KG
PCB 1260	33	25000 20000 ED	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	119	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	101	%

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-30

Date Sampled : 09/10/02      Order #: 583003      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/11/02      Submission #: R2213647      Percent Solid: 95.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/13/02		
ANALYTICAL DILUTION:	100.00		Dry Weight
PCB 1016	33	3500 U	UG/KG
PCB 1221	33	3500 U	UG/KG
PCB 1232	33	3500 U	UG/KG
PCB 1242	33	3500 U	UG/KG
PCB 1248	33	3500 U	UG/KG
PCB 1254	33	3500 U	UG/KG
PCB 1260	33	29000	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%



COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 10/07/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-1

Date Sampled : 09/10/02                      Order #: 583004                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/11/02                      Submission #: R2213647                      Percent Solid: 87.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/12/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	38 U	UG/KG
PCB 1221	33	38 U	UG/KG
PCB 1232	33	38 U	UG/KG
PCB 1242	33	38 U	UG/KG
PCB 1248	33	38 U	UG/KG
PCB 1254	33	38 U	UG/KG
PCB 1260	33	470 490 ED	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	103	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	102	%

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL STREET PROJECT #36458.007  
 Client Sample ID : VF-1

Date Sampled : 09/10/02      Order #: 583004      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/11/02      Submission #: R2213647      Percent Solid: 87.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/13/02		
ANALYTICAL DILUTION:	2.00		Dry Weight
PCB 1016	33	75 U	UG/KG
PCB 1221	33	75 U	UG/KG
PCB 1232	33	75 U	UG/KG
PCB 1242	33	75 U	UG/KG
PCB 1248	33	75 U	UG/KG
PCB 1254	33	75 U	UG/KG
PCB 1260	33	470	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	99	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	90	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/07/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : DUP-5

Date Sampled : 09/10/02                      Order #: 583005                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/11/02                      Submission #: R2213647                      Percent Solid: 95.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/12/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	35 U	UG/KG
PCB 1221	33	35 U	UG/KG
PCB 1232	33	35 U	UG/KG
PCB 1242	33	35 U	UG/KG
PCB 1248	33	35 U	UG/KG
PCB 1254	33	35 U	UG/KG
PCB 1260	33	27000 <del>22000</del> ED	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	109	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	97	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8082 PCB'S  
 Reported: 10/07/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : DUP-5

Date Sampled : 09/10/02      Order #: 583005      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/11/02      Submission #: R2213647      Percent Solid: 95.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/16/02		
ANALYTICAL DILUTION:	200.00		Dry Weight
PCB 1016	33	6900 U	UG/KG
PCB 1221	33	6900 U	UG/KG
PCB 1232	33	6900 U	UG/KG
PCB 1242	33	6900 U	UG/KG
PCB 1248	33	6900 U	UG/KG
PCB 1254	33	6900 U	UG/KG
PCB 1260	33	27000 54000	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%

## Laboratory Narrative

## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2213647

BBL soil samples were collected on 9/04/02 and received at CAS on 9/05/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

Four soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was performed on VF-30. All MS/MSD recoveries were within diluted out and have been flagged with a "D". All Blank spike recoveries were within limits. All RPD's were within limits.

All surrogate standard recoveries were within limits except VF-30DL, VF-30DLMS, VF-30DLMSD and DUP-5DL. All surrogates were diluted out and have been flagged with a "D".

Various Arochlors for VF-30, VF-1 and DUP-5 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature. Michael K. Perry

**NYSDEC Sample Preparation and Analysis Summary Sheets**

SDG #: VF-1  
 SUBMISSION R2213647  
 CLIENT: Blasland, Bouck & Lee, Inc.  
 CLIENT REP: Janice Jaeger  
 PROJECT: NM SCHOOL STREET PROJEC

BATCH COMPLETE: yes  
 DISKETTE REQUESTED: Y N X  
 DATE: 09/11/02  
 CUSTODY SEAL: PRESENT/ABSENT:  
 CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:  
 DATE DUE: 10/09/02  
 PROTOCOL: SW846  
 SHIPPING No.:  
 SUMMARY PKG: Y X N

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH	% SOLIDS	REMARKS	AMPLE CONDITION
583002	VF-29	SOIL	PCB	9/10/02	9/11/02				
583003QC	VF-30	SOIL	PCB	9/10/02	9/11/02				
583004	VF-1	SOIL	PCB	9/10/02	9/11/02				
583005	DUP-5	SOIL	PCB	9/10/02	9/11/02				



## Sample Compliance Report

### SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>				Noncompliance
					VOC	SVOC	PCB	MET	
R2213647	9/10/02	2000	VF-29	soil	--	--	yes	--	
R2213647	9/10/02	2000	VF-30	soil	--	--	yes	--	
R2213646	9/10/02	2000	VF-1	soil	--	--	yes	--	
R2213647	9/10/02	2000	DUP-5	soil	--	--	no	--	PCB - quantitation

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

**SDG No. R2213764**

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**Samples Collected  
9/12/02 & 9/17/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2213764

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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

## Summary

The following is an assessment of the data package for SDG# R2213764 for sampling at the NMPC-School 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				
				VOC	SVOC	PCB	MET	TOC
VF-4A	584958	soil	9/12/02			x		
VF-11A <sup>1</sup>	584959	soil	9/17/02			x		
DUP-7	584960	soil	9/17/02			x		

1 MS/MSD analysis performed on sample.

## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.



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. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

7. Matrix Spike/Matrix Spike Duplicate

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

Matrix spike recoveries could not be accurately calculated due to interference from PCBs present in the unspiked sample.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
VF-11A / DUP-7	Aroclor 1254	2300	2900	23.1%
	Aroclor 1260	2800	2700	3.6%

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

## PCB 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?	_____	X _____	_____
Is there a narrative or cover letter present?	X _____	_____	_____
Are the sample numbers included in the narrative?	_____	X _____	_____
Are the sample chain-of-custodies present?	X _____	_____	_____
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	_____	X _____	_____
<b><u>Holding Times</u></b>			
Have any holding times been exceeded?	_____	X _____	_____
<b><u>Surrogate Recovery</u></b>			
Are the surrogate recovery forms present?	_____	X _____	_____
Are all the samples listed on the appropriate surrogate recovery form?	_____	_____	X _____
Were recoveries of any surrogate outside of specified limits for any sample or blank?	_____	X _____	_____
If yes, were the samples reanalyzed?	_____	_____	X _____
Are there any transcription/calculation errors between the raw data and the summary form?	_____	_____	X _____
<b><u>Matrix Spikes</u></b>			
Is there a matrix spike recovery form present?	X _____	_____	_____
Were matrix spikes analyzed at the required frequency?	X _____	_____	_____
How many spike recoveries were outside of QC limits? <u>NA</u> out of <u>NA</u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? <u>NA</u> out of <u>NA</u>			
<b><u>Blanks</u></b>			
Is a method blank summary form present?	X _____	_____	_____
Has a method blank been extracted for each set of samples or for each 20 samples, whichever is more frequent?	X _____	_____	_____
Do any method/instrument blanks have positive results?	_____	X _____	_____
Are field/rinse blanks associated with every sample?	_____	X _____	_____
Do any field/rinse blanks have positive results?	_____	_____	X _____

**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	X	_____
Aroclor 1016/1260	X	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	X	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	X	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	X	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	X	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	X
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	X	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	X	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	X	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	X	_____	_____
Was the proper analytical sequence followed?	X	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	X	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	X	_____	_____
Were all positively identified compounds confirmed on a second column?	X	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	X
Were there any false negatives?	_____	X	_____

PCB Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Compound Quantitation and Reported 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 waters, sample moisture?	<u>  X  </u>	_____	_____
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>  X  </u>	_____	_____
Were any electronegative displacement (negative peaks) or unusual peaks detected?	_____	<u>  X  </u>	_____
<b><u>Field Duplicates</u></b>			
Were field duplicates submitted with the samples?	<u>  X  </u>	_____	_____

### PCB Qualifier Summary Holding Time and Surrogates

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
VF-4A			
VF-11A			
VF-11A MS			
VF-11A MSD			
VF-11A DL			
DUP-7			
DUP-7 DL			

**Surrogates:**  
 TCX Tetrachloro-m-xylene  
 DCB Decachlorobiphenyl  
 na Not applicable

**Qualifiers:**  
 D Surrogate diluted out  
 † Recovery high  
 ‡ Recovery low

\* Unless otherwise noted, all parameters are within specified limits

**PCB Calibration Summary**

Instrument: HP5890-L  
 Column: DB-1701

Date:	9/18/02	9/19/02	9/20/02	9/20/02	9/20/02	9/20/02		
Time:		2247	0542	1054	1508	1836		
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok		
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok	ok		
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

### PCB Calibration Summary - Page 2

Instrument: HP5890-L

Column: DB-17

Date:	9/18/02	9/19/02	9/20/02	9/20/02	9/20/02	9/20/02		
Time:		2247	0542	1054	1508	1836		
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok		
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok	ok		
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed



## Corrected Sample Analysis Data Sheets

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 10/22/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-4A

Date Sampled : 09/12/02      Order #: 584958      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/18/02      Submission #: R2213764      Percent Solid: 95.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/19/02		
DATE ANALYZED	: 09/20/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	34 U	UG/KG
PCB 1221	33	34 U	UG/KG
PCB 1232	33	34 U	UG/KG
PCB 1242	33	34 U	UG/KG
PCB 1248	33	34 U	UG/KG
PCB 1254	33	220-210	UG/KG
PCB 1260	33	34 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	98	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	92	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 10/22/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-11A

Date Sampled : 09/17/02      Order #: 584959      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/18/02      Submission #: R2213764      Percent Solid: 83.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/19/02		
DATE ANALYZED	: 09/20/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	40 U	UG/KG
PCB 1221	33	40 U	UG/KG
PCB 1232	33	40 U	UG/KG
PCB 1242	33	40 U	UG/KG
PCB 1248	33	40 U	UG/KG
PCB 1254	33	2300 ±500 E D	UG/KG
PCB 1260	33	2800 1900 E D	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	67	ε
TETRACHLORO-META-XYLENE	(29 - 141 %)	68	ε

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 10/22/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : VF-11A

Date Sampled : 09/17/02      Order #: 584959      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/18/02      Submission #: R2213764      Percent Solid: 83.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/19/02			
DATE ANALYZED : 09/20/02			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	400 U	UG/KG
PCB 1221	33	400 U	UG/KG
PCB 1232	33	400 U	UG/KG
PCB 1242	33	400 U	UG/KG
PCB 1248	33	400 U	UG/KG
PCB 1254	33	2300	UG/KG
PCB 1260	33	2500	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	97	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	81	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 10/22/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : DUP-7

Date Sampled : / / Order #: 584960 Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/18/02 Submission #: R2213764 Percent Solid: 85.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/19/02		
DATE ANALYZED	: 09/20/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	2900 2100 E D	UG/KG
PCB 1260	33	2700 2100 E D	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	87	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	86	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 10/22/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : DUP-7

Date Sampled : / / Order #: 584960 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/18/02 Submission #: R2213764 Percent Solid: 85.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/19/02		
DATE ANALYZED	: 09/20/02		
ANALYTICAL DILUTION:	10.00		Dry Weight
PCB 1016	33	390 U	UG/KG
PCB 1221	33	390 U	UG/KG
PCB 1232	33	390 U	UG/KG
PCB 1242	33	390 U	UG/KG
PCB 1248	33	390 U	UG/KG
PCB 1254	33	2900	UG/KG
PCB 1260	33	2700	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(35 - 131 %)	111	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	89	%

## Laboratory Narrative

## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2213764

BBL soil samples were collected on 9/12-17/02 and received at CAS on 9/18/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

Three soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was performed on VF-11A. All MS/MSD recoveries were diluted out and have been flagged with a "D". All Blank spike recoveries were within limits. All RPD's were within limits.

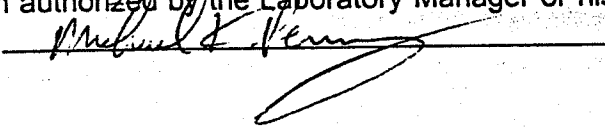
All surrogate standard recoveries were within limits.

Various Arochlors for VF-11A and DUP-7 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature. 



**NYSDEC Sample Preparation and Analysis Summary Sheets**

**SDG #: VF-4A**  
**SUBMISSION R2213764**  
**CLIENT: Blasland, Bouck & Lee, Inc.**  
**CLIENT REP: Janice Jaeger**  
**PROJECT: NM SCHOOL STREET PROJEC: CHAIN OF CUSTODY: PRESENT/ABSENT:**

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH	% SOLIDS	REMARKS
584958	VF-4A	SOIL	PCB	9/12/02	9/18/02			
584959QC	VF-11A	SOIL	PCB	9/17/02	9/18/02			
584960	DUP-7	SOIL	PCB		9/18/02			

DATE REVISED: 10/16/02  
 PROTOCOL: SW846  
 SHIPPING No.:  
 SUMMARY PKG: Y X N

## Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>				Noncompliance
					VOC	SVOC	PCB	MET	
R2213764	9/12/02	2000	VF-4A	soil	--	--	yes	--	
R2213764	9/17/02	2000	VF-11A	soil	--	--	yes	--	
R2213764	9/17/02	2000	DUP-7	soil	--	--	yes	--	

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



**SDG No. R2213809**

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**Samples Collected  
9/18/02 & 9/20/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2213809

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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

### Summary

The following is an assessment of the data package for SDG# R2213809 for sampling at the NMPC-School 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				
				VOC	SVOC	PCB	MET	TOC
VF-SB-1 <sup>1</sup>	586076	soil	9/18/02			x		
VF-30A	586077	soil	9/20/02			x		
DUP-8	586078	soil	9/20/02			x		

1 MS/MSD analysis performed on sample.



## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.

5. Surrogates / System Monitoring Compounds

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

Surrogates were diluted beyond the range of quantitation in samples VF-30ADL and DUP-8DL. No data have been qualified based on diluted surrogates. All other surrogate recoveries were within control limits.

6. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike 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.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
VF-30A / DUP-8	Aroclor 1260	2700	1800	40.0%

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

## PCB 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>      </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>      </u>	<u>  X  </u>	<u>      </u>
Are all the samples listed on the appropriate surrogate recovery form?	<u>      </u>	<u>      </u>	<u>  X  </u>
Were recoveries of any surrogate 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>
Are there any transcription/calculation errors between the raw data and the summary form?	<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>  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 a 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>
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>

**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	____X____	_____
Aroclor 1016/1260	____X____	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	____X____	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	____X____	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	____X____	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	____X____	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	____X____
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	____X____	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	____X____	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	____X____	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	____X____	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	____X____	_____	_____
Was the proper analytical sequence followed?	____X____	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	____X____	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	____X____	_____	_____
Were all positively identified compounds confirmed on a second column?	____X____	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	____X____
Were there any false negatives?	_____	____X____	_____

**PCB Data Validation Checklist - Page 3**

	YES	NO	NA
<b><u>Compound Quantitation and Reported Detection Limits</u></b>			
Are there any transcription/calculation errors in the Form 1 results?	_____	_____X_____	_____
Are the reporting limits adjusted to reflect sample dilutions and, for waters, sample moisture?	_____X_____	_____	_____
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	_____X_____	_____	_____
Were any electronegative displacement (negative peaks) or unusual peaks detected?	_____	_____X_____	_____
<b><u>Field Duplicates</u></b>			
Were field duplicates submitted with the samples?	_____X_____	_____	_____



### PCB Qualifier Summary Holding Time and Surrogates

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
VF-SB-1			
VF-SB-1 MS			
VF-SB-1 MSD			
VF-30A			
VF-30A DL		D	D
DUP-8			
DUP-8 DL		D	D

Surrogates:

TCX Tetrachloro-m-xylene

DCB Decachlorobiphenyl

na Not applicable

Qualifiers:

D Surrogate diluted out

↑ Recovery high

↓ Recovery low

\* Unless otherwise noted, all parameters are within specified limits

## PCB Calibration Summary

Instrument: HP5890-L  
 Column: DB-1701

Date:	9/29/02	9/30/02	9/30/02	10/1/02				
Time:		1352	2048	0343				
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok				
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok				
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

PCB Calibration Summary - Page 2

Instrument: HP5890-L  
Column: DB-17

Date:	9/29/02	9/30/02	9/30/02	10/1/02				
Time:		1352	2048	0343				
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok				
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok				
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

**PCB Calibration Summary - Page 3**

Instrument: HP5890-L  
 Column: DB-1701

Date:	10/22/02	10/22/02	10/22/02					
Time:		1649	2309					
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok					
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok					
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

**PCB Calibration Summary - Page 4**

Instrument: HP5890-L  
 Column: DB-17

Date:	10/22/02	10/22/02	10/22/02					
Time:		1649	2309					
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok					
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok					
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

## Corrected Sample Analysis Data Sheets

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/29/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST PROJECT #36458.007

Client Sample ID : VF-5B-1

---

Date Sampled : 09/18/02                      Order #: 586076                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/21/02                      Submission #: R2213809                      Percent Solid: 69.4

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/25/02		
DATE ANALYZED	: 09/30/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	48 U	UG/KG
PCB 1221	33	48 U	UG/KG
PCB 1232	33	48 U	UG/KG
PCB 1242	33	48 U	UG/KG
PCB 1248	33	48 U	UG/KG
PCB 1254	33	410	UG/KG
PCB 1260	33	160	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	73	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	71	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/29/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST PROJECT #36458.007  
Client Sample ID : VF-30A

Date Sampled : 09/20/02      Order #: 586077      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/21/02      Submission #: R2213809      Percent Solid: 81.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/25/02			
DATE ANALYZED : 09/30/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	40 U	UG/KG
PCB 1221	33	40 U	UG/KG
PCB 1232	33	40 U	UG/KG
PCB 1242	33	40 U	UG/KG
PCB 1248	33	40 U	UG/KG
PCB 1254	33	40 U	UG/KG
PCB 1260	33	270 1800 <del>U</del>	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	88	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	90	%



COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/29/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST PROJECT #36458.007  
Client Sample ID : VF-30A

Date Sampled : 09/20/02      Order #: 586077      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/21/02      Submission #: R2213809      Percent Solid: 81.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 09/25/02	
DATE ANALYZED		: 09/30/02	
ANALYTICAL DILUTION:	10.00		Dry Weight
PCB 1016	33	400 U	UG/KG
PCB 1221	33	400 U	UG/KG
PCB 1232	33	400 U	UG/KG
PCB 1242	33	400 U	UG/KG
PCB 1248	33	400 U	UG/KG
PCB 1254	33	400 U	UG/KG
PCB 1260	33	2700	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(35 - 131 %)	126	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	109	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/29/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST PROJECT #36458.007  
Client Sample ID : DUP-8

Date Sampled :     /     /                   Order #: 586078           Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/21/02   Submission #: R2213809   Percent Solid: 82.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 09/25/02	
DATE ANALYZED		: 09/30/02	
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	40 U	UG/KG
PCB 1221	33	40 U	UG/KG
PCB 1232	33	40 U	UG/KG
PCB 1242	33	40 U	UG/KG
PCB 1248	33	40 U	UG/KG
PCB 1254	33	40 U	UG/KG
PCB 1260	33	<del>1800</del> 1500 E D	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	91	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	93	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/29/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST PROJECT #36458.007  
Client Sample ID : DUP-8

Date Sampled : / / Order #: 586078 Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/21/02 Submission #: R2213809 Percent Solid: 82.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/25/02			
DATE ANALYZED : 09/30/02			
ANALYTICAL DILUTION: 5.00			Dry Weight
PCB 1016	33	200 U	UG/KG
PCB 1221	33	200 U	UG/KG
PCB 1232	33	200 U	UG/KG
PCB 1242	33	200 U	UG/KG
PCB 1248	33	200 U	UG/KG
PCB 1254	33	200 U	UG/KG
PCB 1260	33	1800	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(35 - 131 %)	109	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	96	%

## Laboratory Narrative

## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2213809

BBL soil samples were collected on 9/18-20/02 and received at CAS on 9/21/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

Three soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was performed on VF-5B-1. All MS/MSD recoveries were within limits. All Blank spike recoveries were within limits. All RPD's were within limits.

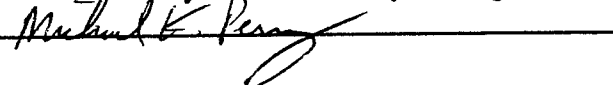
All surrogate standard recoveries were within limits.

Arochlor 1260 for VF-30A and DUP-8 has been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature. 

**NYSDEC Sample Preparation and Analysis Summary Sheets**

SDG #: VF-5B-1  
 SUBMISSION R2213809  
 CLIENT: Blasland, Bouck & Lee, Inc.  
 CLIENT REP: Janice Jaeger  
 PROJECT: NM SCHOOL ST PROJECT #386

BATCH COMPLETE:  yes  
 DISKETTE REQUESTED: Y  N  x  
 DATE: 09/23/02  
 CUSTODY SEAL: PRESENT/ABSENT:  
 CHAIN OF CUSTODY: PRESENT/ABSENT:

DATE REVISED:  
 DATE DUE: 10/21/02  
 PROTOCOL: SW846  
 SHIPPING No.:  
 SUMMARY PKG: Y X N

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS			SAMPLED RECEIVED (SOLIDS)			REMARKS
			DATE	DATE	DATE	DATE	pH	% SOLIDS	
586076QC	VF-5B-1	SOIL		PCB		9/18/02	9/21/02		
586077	VF-30A	SOIL		PCB		9/20/02	9/21/02		
586078	DUP-8	SOIL		PCB			9/21/02		

## Sample Compliance Report



# SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>				Noncompliance
					VOC	SVOC	PCB	TOC	
R2213809	9/18/02	2000	VF-SB-1		--	--	yes	--	
R2213809	9/20/02	2000	VF-30A		--	--	yes	--	
R2213809	9/20/02	2000	DUP-8		--	--	yes	--	

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

2 No data have been qualified based on the deviation.

**SDG No. R2213939**

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**Samples Collected**  
**9/24/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2213939

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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

### Summary

The following is an assessment of the data package for SDG# R2213939 for sampling at the NMPC-School 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				
				VOC	SVOC	PCB	MET	TOC
VF-5C-2 <sup>1</sup>	587708	soil	9/24/02			x		
VS-15	587709	soil	9/24/02			x		
DUP-9	587710	soil	9/24/02			x		

1 MS/MSD analysis performed on sample.

## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.

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. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

Interference peaks were included among those quantitated in sample VS-15. Results for the sample were manually recalculated to minimize any potential high bias in the data.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike 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.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
VF-5C-2 / DUP-9	Aroclor 1248	130	250	48.0%
	Aroclor 1260	62	100	46.9%

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

## PCB 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>      </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>      </u>	<u>  X  </u>	<u>      </u>
Are all the samples listed on the appropriate surrogate recovery form?	<u>      </u>	<u>      </u>	<u>  X  </u>
Were recoveries of any surrogate 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>
Are there any transcription/calculation errors between the raw data and the summary form?	<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>  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 a 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>
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>

**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	<u>  X  </u>	_____
Aroclor 1016/1260	<u>  X  </u>	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	<u>  X  </u>	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	<u>  X  </u>	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	<u>  X  </u>	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	<u>  X  </u>
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	<u>  X  </u>	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	<u>  X  </u>	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	<u>  X  </u>	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	<u>  X  </u>	_____	_____
Was the proper analytical sequence followed?	<u>  X  </u>	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	<u>  X  </u>	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	<u>  X  </u>	_____	_____
Were all positively identified compounds confirmed on a second column?	<u>  X  </u>	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	<u>  X  </u>
Were there any false negatives?	_____	<u>  X  </u>	_____

PCB Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Compound Quantitation and Reported Detection Limits</u></b>			
Are there any transcription/calculation errors in the Form 1 results?	<u>X</u>	<u>      </u>	<u>      </u>
Are the reporting limits adjusted to reflect sample dilutions and, for waters, sample moisture?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>X</u>	<u>      </u>	<u>      </u>
Were any electronegative displacement (negative peaks) or unusual peaks detected?	<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>

**PCB Qualifier Summary  
Holding Time and Surrogates**

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
VF-5C-2			
VF-5S-2 MS			
VF-5C-2 MSD			
VS-15			
VS-15 DL			
DUP-9			

Surrogates:  
 TCX Tetrachloro-m-xylene  
 DCB Decachlorobiphenyl  
 na Not applicable

Qualifiers:  
 D Surrogate diluted out  
 † Recovery high  
 ‡ Recovery low

\* Unless otherwise noted, all parameters are within specified limits

### PCB Calibration Summary

Instrument: HP5890-L

Column: DB-1701

Date:	9/29/02	9/30/02	10/1/02	10/1/02	10/1/02	10/1/02		
Time:		2048	0343	1038	1436	2100		
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok		
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok	ok		
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

**PCB Calibration Summary - Page 2**

Instrument: HP5890-L  
 Column: DB-17

Date:	9/29/02	9/30/02	10/1/02	10/1/02	10/1/02	10/1/02		
Time:		2048	0343	1038	1436	2100		
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok		
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok	ok		
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed



**Corrected Sample Analysis Data Sheets**

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/31/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST PROJECT #36458.007  
Client Sample ID : VF-5C-2

Date Sampled : 09/24/02                      Order #: 587708                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/26/02                      Submission #: R2213939                      Percent Solid: 88.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/27/02			
DATE ANALYZED : 10/01/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	130 140	UG/KG
PCB 1254	33	37 U	UG/KG
PCB 1260	33	62	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	96	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	93	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/31/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST PROJECT #36458.007

Client Sample ID : VS-15

Date Sampled : 09/24/02      Order #: 587709      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/26/02      Submission #: R2213939      Percent Solid: 82.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 09/27/02	
DATE ANALYZED		: 10/01/02	
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	40 U	UG/KG
PCB 1221	33	40 U	UG/KG
PCB 1232	33	40 U	UG/KG
PCB 1242	33	40 U	UG/KG
PCB 1248	33	40 U	UG/KG
PCB 1254	33	860 <del>730</del> E D	UG/KG
PCB 1260	33	220 <del>230</del> D	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL  
TETRACHLORO-META-XYLENE

(35 - 131 %)  
(29 - 141 %)

76 %  
77 %

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/31/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST PROJECT #36458.007  
Client Sample ID : VS-15

Date Sampled : 09/24/02      Order #: 587709      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/26/02      Submission #: R2213939      Percent Solid: 82.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/27/02			
DATE ANALYZED : 10/01/02			
ANALYTICAL DILUTION: 5.00			Dry Weight
PCB 1016	33	200 U	UG/KG
PCB 1221	33	200 U	UG/KG
PCB 1232	33	200 U	UG/KG
PCB 1242	33	200 U	UG/KG
PCB 1248	33	200 U	UG/KG
PCB 1254	33	<del>260</del> 990	UG/KG
PCB 1260	33	<del>220</del> 290	UG/KG
<u>SURROGATE RECOVERIES</u>		<u>QC LIMITS</u>	
DECACHLOROBIPHENYL	(35 - 131 %)	110	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	90	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/31/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST PROJECT #36458.007  
Client Sample ID : DUP-9

Date Sampled : 09/24/02      Order #: 587710      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/26/02      Submission #: R2213939      Percent Solid: 86.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED			
DATE ANALYZED			
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	38 U	UG/KG
PCB 1221	33	38 U	UG/KG
PCB 1232	33	38 U	UG/KG
PCB 1242	33	38 U	UG/KG
PCB 1248	33	250	UG/KG
PCB 1254	33	38 U	UG/KG
PCB 1260	33	100	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(35 - 131 %)	91	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	90	%

## Laboratory Narrative

## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2213939

BBL soil samples were collected on 09/24/02 and received at CAS on 09/26/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

Three soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was performed on VF-5C-2. All MS and Blank spike recoveries were within limits. The MSD recovery was outside limits and has been flagged with an "\*\*".

All surrogate standard recoveries were within limits.

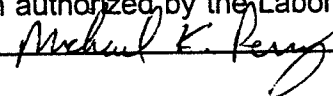
Arochlor 1254 for VS-15 has been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

  
\_\_\_\_\_

**NYSDEC Sample Preparation and Analysis Summary Sheets**



SDG #: VS-15 SUBMISSION R2213939 CLIENT: Blasland, Bouck & Lee, Inc. CLIENT REP: Janice Jaeger PROJECT: NM SCHOOL ST PROJECT #364					BATCH COMPLETE: <u>   </u> yes DISKETTE REQUESTED: Y <u>   </u> N <u>   </u> X <u>   </u> DATE: 09/26/02 CUSTODY SEAL: PRESENT/ABSENT: CHAIN OF CUSTODY: PRESENT/ABSENT:					DATE REVISED: DATE DUE: 10/24/02 PROTOCOL: SW846 SHIPPING No.: SUMMARY PKG: Y <u>   </u> X <u>   </u> N <u>   </u>				
CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH	% SOLIDS	REMARKS						
587708QC	VF-5C-2	SOIL	PCB	9/24/02	9/26/02									
587709	VS-15	SOIL	PCB	9/24/02	9/26/02									
587710	DUP-9	SOIL	PCB	9/24/02	9/26/02									

## Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>				Noncompliance
					VOC	SVOC	PCB	TOC	
R2213939	9/24/02	2000	VF-5C-2	soil	--	--	yes	--	
R2213939	9/24/02	2000	VS-15	soil	--	--	yes	--	
R2213939	9/24/02	2000	DUP-9	soil	--	--	yes	--	

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

**SDG No. R2214084**

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**Samples Collected**  
**10/2/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2214084

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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

Summary

The following is an assessment of the data package for SDG# R2214084 for sampling at the NMPC-School 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				
				VOC	SVOC	PCB	MET	TOC
VF-24	589880	soil	10/2/02			x		
VS-11 <sup>1</sup>	589881	soil	10/2/02			x		
VS-10	589882	soil	10/2/02			x		
DUP-10	589889	soil	10/2/02			x		

1 MS/MSD analysis performed on sample.

## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.

5. Surrogates / System Monitoring Compounds

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

Surrogates were diluted beyond the range of quantitation in sample DUP-10DL. No data have been qualified based on diluted surrogates. All other surrogate recoveries were within control limits.

6. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike 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.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
VF-24 / DUP-10	Aroclor 1260	3700	4500	19.5%

The duplicate results are acceptable.

10. System Performance and Overall Assessment

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

## Data Validation Checklist

## PCB 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?	_____	_____X_____	_____
Is there a narrative or cover letter present?	_____X_____	_____	_____
Are the sample numbers included in the narrative?	_____	_____X_____	_____
Are the sample chain-of-custodies present?	_____X_____	_____	_____
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	_____	_____X_____	_____
<b><u>Holding Times</u></b>			
Have any holding times been exceeded?	_____	_____X_____	_____
<b><u>Surrogate Recovery</u></b>			
Are the surrogate recovery forms present?	_____	_____X_____	_____
Are all the samples listed on the appropriate surrogate recovery form?	_____	_____	_____X_____
Were recoveries of any surrogate outside of specified limits for any sample or blank?	_____	_____X_____	_____
If yes, were the samples reanalyzed?	_____	_____	_____X_____
Are there any transcription/calculation errors between the raw data and the summary form?	_____	_____	_____X_____
<b><u>Matrix Spikes</u></b>			
Is there a matrix spike recovery form present?	_____X_____	_____	_____
Were matrix spikes analyzed at the required frequency?	_____X_____	_____	_____
How many spike recoveries were outside of QC limits? <u>  0  </u> out of <u>  2  </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? <u>  0  </u> out of <u>  1  </u>			
<b><u>Blanks</u></b>			
Is a method blank summary form present?	_____X_____	_____	_____
Has a method blank been extracted for each set of samples or for each 20 samples, whichever is more frequent?	_____X_____	_____	_____
Do any method/instrument blanks have positive results?	_____	_____X_____	_____
Are field/rinse blanks associated with every sample?	_____	_____X_____	_____
Do any field/rinse blanks have positive results?	_____	_____	_____X_____

**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	____X____	_____
Aroclor 1016/1260	____X____	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	____X____	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	____X____	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	____X____	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	____X____	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	____X____
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	____X____	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	____X____	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	____X____	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	____X____	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	____X____	_____	_____
Was the proper analytical sequence followed?	____X____	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	____X____	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	____X____	_____	_____
Were all positively identified compounds confirmed on a second column?	____X____	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	____X____
Were there any false negatives?	_____	____X____	_____

PCB Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Compound Quantitation and Reported 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 waters, sample moisture?	<u>  X  </u>	_____	_____
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>  X  </u>	_____	_____
Were any electronegative displacement (negative peaks) or unusual peaks detected?	_____	<u>  X  </u>	_____
<b><u>Field Duplicates</u></b>			
Were field duplicates submitted with the samples?	<u>  X  </u>	_____	_____

**PCB Qualifier Summary  
Holding Time and Surrogates**

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
VF-24			
VF-24 DL			
VS-11			
VS-11 MS			
VS-11 MSD			
VS-10			
VS-10 DL			
DUP-10			
DUP-10 DL		D	D

Surrogates:  
TCX Tetrachloro-m-xylene  
DCB Decachlorobiphenyl  
na Not applicable

Qualifiers:  
D Surrogate diluted out  
! Recovery high  
! Recovery low

\* Unless otherwise noted, all parameters are within specified limits

### PCB Calibration Summary

Instrument: HP5890-L  
 Column: DB-1701

Date:	9/29/02	10/7/02	10/7/02	10/8/02	10/8/02			
Time:		0903	1611	0831	1229			
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok			
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok			
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed



**PCB Calibration Summary - Page 2**

Instrument: HP5890-L  
 Column: DB-17

Date:	9/29/02	10/7/02	10/7/02	10/8/02	10/8/02			
Time:		0903	1611	0831	1229			
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok				
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok				
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

## Corrected Sample Analysis Data Sheets

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 10/31/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM #36458.007

Client Sample ID : VF-24

Date Sampled : 10/02/02 09:00 Order #: 589880 Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/03/02 Submission #: R2214084 Percent Solid: 88.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/04/02			
DATE ANALYZED : 10/07/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	37 U	UG/KG
PCB 1254	33	37 U	UG/KG
PCB 1260	33	3700 2500 <del>E</del> D	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	88	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	80	%

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 10/31/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM #36458.007

Client Sample ID : VF-24

Date Sampled : 10/02/02 09:00 Order #: 589880 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/03/02 Submission #: R2214084 Percent Solid: 88.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/04/02		
DATE ANALYZED	: 10/08/02		
ANALYTICAL DILUTION:	10.00		Dry Weight
PCB 1016	33	370 U	UG/KG
PCB 1221	33	370 U	UG/KG
PCB 1232	33	370 U	UG/KG
PCB 1242	33	370 U	UG/KG
PCB 1248	33	370 U	UG/KG
PCB 1254	33	370 U	UG/KG
PCB 1260	33	3700	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	125	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	95	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/31/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM #36458.007  
Client Sample ID : VS-11

Date Sampled : 10/02/02 09:30 Order #: 589881 Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/03/02 Submission #: R2214084 Percent Solid: 84.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/04/02			
DATE ANALYZED : 10/07/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	39 U	UG/KG
PCB 1260	33	39 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	93	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	87	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 10/31/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM #36458.007

Client Sample ID : VS-10

Date Sampled : 10/02/02 09:40 Order #: 589882 Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/03/02 Submission #: R2214084 Percent Solid: 88.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/04/02		
DATE ANALYZED	: 10/07/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	38 U	UG/KG
PCB 1221	33	38 U	UG/KG
PCB 1232	33	38 U	UG/KG
PCB 1242	33	38 U	UG/KG
PCB 1248	33	38 U	UG/KG
PCB 1254	33	230	UG/KG
PCB 1260	33	1100 850 $\Delta$	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	93	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	88	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/31/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM #36458.007  
Client Sample ID : VS-10

Date Sampled : 10/02/02 09:40 Order #: 589882 Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/03/02 Submission #: R2214084 Percent Solid: 88.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/04/02			
DATE ANALYZED : 10/08/02			
ANALYTICAL DILUTION: 5.00			Dry Weight
PCB 1016	33	190 U	UG/KG
PCB 1221	33	190 U	UG/KG
PCB 1232	33	190 U	UG/KG
PCB 1242	33	190 U	UG/KG
PCB 1248	33	190 U	UG/KG
PCB 1254	33	290	UG/KG
PCB 1260	33	1100	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	112	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	91	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 10/31/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM #36458.007

Client Sample ID : DUP-10

Date Sampled : 10/02/02                      Order #: 589889                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/03/02                      Submission #: R2214084                      Percent Solid: 88.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/04/02		
DATE ANALYZED	: 10/07/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	37 U	UG/KG
PCB 1254	33	37 U	UG/KG
PCB 1260	33	4500 3100 E D	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	91	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	84	%



COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 10/31/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM #36458.007

Client Sample ID : DUP-10

Date Sampled : 10/02/02                      Order #: 589889                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/03/02                      Submission #: R2214084                      Percent Solid: 88.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/04/02		
DATE ANALYZED	: 10/08/02		
ANALYTICAL DILUTION:	20.00		Dry Weight
PCB 1016	33	740 U	UG/KG
PCB 1221	33	740 U	UG/KG
PCB 1232	33	740 U	UG/KG
PCB 1242	33	740 U	UG/KG
PCB 1248	33	740 U	UG/KG
PCB 1254	33	740 U	UG/KG
PCB 1260	33	4500	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%

## Laboratory Narrative

## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2214084

BBL soil samples were collected on 10/02/02 and received at CAS on 10/03/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

Four soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was performed on VS-11. All MS/MSD recoveries were within limits. All Blank spike recoveries were within limits. All RPD's were within limits.

All surrogate standard recoveries were within limits except DUP10DL which was diluted out and has been flagged with a "D".

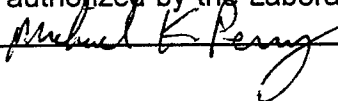
Arochlor 1260 for VF-24, VS-10 and DUP-10 has been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

 \_\_\_\_\_

**NYSDEC Sample Preparation and Analysis Summary Sheets**



## Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>				Noncompliance
					VOC	SVOC	PCB	TOC	
R2214084	10/2/02	2000	VF-24	soil	--	--	yes	--	
R2214084	10/2/02	2000	VS-11	soil	--	--	yes	--	
R2214084	10/2/02	2000	VS-10	soil	--	--	yes	--	
R2214084	10/2/02	2000	DUP-10	soil	--	--	yes	--	

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

2 No data have been qualified based on the deviation.

**SDG No. R2214110**

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**Samples Collected  
10/3/02 – 10/4/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2214110

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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

Summary

The following is an assessment of the data package for SDG# R2214110 for sampling at the NMPC-School 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				
				VOC	SVOC	PCB	MET	TOC
RB-N <sup>1</sup>	590470	soil	10/3/02			x		
RB-S	590671	soil	10/4/02			x		
VF-32A	590472	soil	10/4/02			x		
S-101	590473	soil	10/4/02			x		
DUP-11	590474	soil	10/4/02			x		

1 MS/MSD analysis performed on sample.

## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.

5. Surrogates / System Monitoring Compounds

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

Surrogates were diluted beyond the range of quantitation in sample S-101DL. No data have been qualified based on diluted surrogates. All other surrogate recoveries were within control limits.

6. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike 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.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
RB-S / DUP-11	Aroclor 1260	580	810	33.1%

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

## PCB 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>      </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>      </u>	<u>  X  </u>	<u>      </u>
Are all the samples listed on the appropriate surrogate recovery form?	<u>      </u>	<u>      </u>	<u>  X  </u>
Were recoveries of any surrogate 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>
Are there any transcription/calculation errors between the raw data and the summary form?	<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>  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 a 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>
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>



**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	X	_____
Aroclor 1016/1260	X	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	X	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	X	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	X	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	X	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	X
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	X	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	X	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	X	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	X	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	X	_____	_____
Was the proper analytical sequence followed?	X	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	X	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	X	_____	_____
Were all positively identified compounds confirmed on a second column?	X	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	X
Were there any false negatives?	_____	X	_____

PCB Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Compound Quantitation and Reported 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 waters, sample moisture?	<u>  X  </u>	<u>      </u>	<u>      </u>
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>  X  </u>	<u>      </u>	<u>      </u>
Were any electronegative displacement (negative peaks) or unusual peaks detected?	<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>

**PCB Qualifier Summary  
Holding Time and Surrogates**

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
RB-N			
RB-N MS			
RB-N MSD			
RB-S			
RB-S DL			
VF-32A			
VF-32A DL			
S-101			
S-101 DL		D	D
DUP-11			
DUP-11 DL			

**Surrogates:**  
 TCX Tetrachloro-m-xylene  
 DCB Decachlorobiphenyl  
 na Not applicable

**Qualifiers:**  
 D Surrogate diluted out  
 † Recovery high  
 ‡ Recovery low

\* Unless otherwise noted, all parameters are within specified limits

### PCB Calibration Summary

Instrument: HP5890-C  
 Column: DB-1701

Date:	10/11/02	10/14/02	10/15/02	10/15/02	10/15/02	10/15/02	10/15/02	
Time:		1925	0339	0719	0951	1426	2100	
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok	ok	
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok	ok	ok	
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

### PCB Calibration Summary - Page 2

Instrument: HP5890-C

Column: DB-17

Date:	10/11/02	10/14/02	10/15/02	10/15/02	10/15/02	10/15/02	10/15/02	
Time:		1925	0339	0719	0951	1426	2100	
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok	ok	
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok	ok	ok	
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

**Corrected Sample Analysis Data Sheets**

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 11/11/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM-SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : RB-N

---

Date Sampled : 10/03/02      Order #: 590470      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/05/02      Submission #: R2214110      Percent Solid: 76.1

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/07/02		
DATE ANALYZED	: 10/14/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	43 U	UG/KG
PCB 1221	33	43 U	UG/KG
PCB 1232	33	43 U	UG/KG
PCB 1242	33	43 U	UG/KG
PCB 1248	33	43 U	UG/KG
PCB 1254	33	43 U	UG/KG
PCB 1260	33	69	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(37 - 156 %)	83	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	61	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 11/11/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM-SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : RB-S

Date Sampled : 10/04/02      Order #: 590471      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/05/02      Submission #: R2214110      Percent Solid: 86.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/07/02		
DATE ANALYZED	: 10/15/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	38 U	UG/KG
PCB 1221	33	38 U	UG/KG
PCB 1232	33	38 U	UG/KG
PCB 1242	33	38 U	UG/KG
PCB 1248	33	38 U	UG/KG
PCB 1254	33	38 U	UG/KG
PCB 1260	33	580 600 E D	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(37 - 156 %)	97	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	80	%



COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 11/11/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM-SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : RB-S

Date Sampled : 10/04/02      Order #: 590471      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/05/02      Submission #: R2214110      Percent Solid: 86.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/07/02			
DATE ANALYZED : 10/15/02			
ANALYTICAL DILUTION: 2.00			Dry Weight
PCB 1016	33	76 U	UG/KG
PCB 1221	33	76 U	UG/KG
PCB 1232	33	76 U	UG/KG
PCB 1242	33	76 U	UG/KG
PCB 1248	33	76 U	UG/KG
PCB 1254	33	76 U	UG/KG
PCB 1260	33	76 U	UG/KG

580

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(37 - 156 %)	97	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	78	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 11/11/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM-SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : VF-32A

Date Sampled : 10/04/02                      Order #: 590472                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/05/02                      Submission #: R2214110                      Percent Solid: 84.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/07/02		
DATE ANALYZED	: 10/15/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	39 U	UG/KG
PCB 1260	33	630 620 E D	UG/KG
<u>SURROGATE RECOVERIES</u>		<u>QC LIMITS</u>	
DECACHLOROBIPHENYL	(37 - 156 %)	92	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	78	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 11/11/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM-SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : VF-32A

Date Sampled : 10/04/02      Order #: 590472      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/05/02      Submission #: R2214110      Percent Solid: 84.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/07/02			
DATE ANALYZED : 10/15/02			
ANALYTICAL DILUTION: 2.00			Dry Weight
PCB 1016	33	78 U	UG/KG
PCB 1221	33	78 U	UG/KG
PCB 1232	33	78 U	UG/KG
PCB 1242	33	78 U	UG/KG
PCB 1248	33	78 U	UG/KG
PCB 1254	33	78 U	UG/KG
PCB 1260	33	630	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(37 - 156 %)	100	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	74	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 11/11/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM-SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : S-101

Date Sampled : 10/04/02                      Order #: 590473                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/05/02                      Submission #: R2214110                      Percent Solid: 83.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/07/02		
DATE ANALYZED	: 10/15/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	40 U	UG/KG
PCB 1221	33	40 U	UG/KG
PCB 1232	33	40 U	UG/KG
PCB 1242	33	40 U	UG/KG
PCB 1248	33	40 U	UG/KG
PCB 1254	33	40 U	UG/KG
PCB 1260	33	36000 20000 E D	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(37 - 156 %)	86	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	52	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8082 PCB'S**  
 Reported: 11/11/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM-SCHOOL ST IRM PROJECT #36458.007  
 Client Sample ID : S-101

Date Sampled : 10/04/02      Order #: 590473      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/05/02      Submission #: R2214110      Percent Solid: 83.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/07/02			
DATE ANALYZED : 10/15/02			
ANALYTICAL DILUTION: 200.00			Dry Weight
PCB 1016	33	7900 U	UG/KG
PCB 1221	33	7900 U	UG/KG
PCB 1232	33	7900 U	UG/KG
PCB 1242	33	7900 U	UG/KG
PCB 1248	33	7900 U	UG/KG
PCB 1254	33	7900 U	UG/KG
PCB 1260	33	36000	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(37 - 156 %)	D	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	D	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 11/11/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM-SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : DUP-11

Date Sampled : 10/04/02                      Order #: 590474                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/05/02                      Submission #: R2214110                      Percent Solid: 85.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/07/02		
DATE ANALYZED	: 10/15/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	39 U	UG/KG
PCB 1260	33	810 690 <del>E</del> <sup>D</sup>	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(37 - 156 %)	84	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	68	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 11/11/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM-SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : DUP-11

Date Sampled : 10/04/02      Order #: 590474      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/05/02      Submission #: R2214110      Percent Solid: 85.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/07/02			
DATE ANALYZED : 10/15/02			
ANALYTICAL DILUTION: 5.00			Dry Weight
PCB 1016	33	190 U	UG/KG
PCB 1221	33	190 U	UG/KG
PCB 1232	33	190 U	UG/KG
PCB 1242	33	190 U	UG/KG
PCB 1248	33	190 U	UG/KG
PCB 1254	33	190 U	UG/KG
PCB 1260	33	810 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(37 - 156 %)	106	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	76	%

## Laboratory Narrative



## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2214110

BBL soil samples were collected on 10/03-04/02 and received at CAS on 10/05/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

Five soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was performed on RB-N. All MS/MSD recoveries were within limits. All Blank spike recoveries were within limits. All RPD's were within limits.

All surrogate standard recoveries were within limits except S-101DL. The surrogates were were diluted out and flagged with a "D".

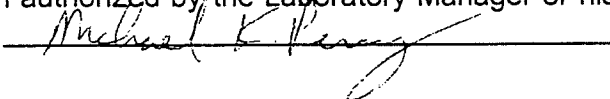
Arochlor 1260 for RB-S, VF-32A, S-101 and DUP-11 has been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.



**NYSDEC Sample Preparation and Analysis Summary Sheets**

SDG #: RB-N SUBMISSION R2214110 CLIENT: Blasland, Bouck & Lee, Inc. CLIENT REP: Janice Jaeger PROJECT: NM-SCHOOL ST IRM PROJECT CHAIN OF CUSTODY: PRESENT/ABSENT:		BATCH COMPLETE: <input type="checkbox"/> yes <input type="checkbox"/> no DISKETTE REQUESTED: Y <input type="checkbox"/> N <input checked="" type="checkbox"/> DATE: 10/07/02 CUSTODY SEAL: PRESENT/ABSENT: PROJECT CHAIN OF CUSTODY: PRESENT/ABSENT:			DATE REVISED: DATE DUE: 11/04/02 PROTOCOL: SW846 SHIPPING No.: SUMMARY PKG: Y <input checked="" type="checkbox"/> X <input type="checkbox"/> N			
CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH	% SOLIDS	REMARKS
590470QC	RB-N	SOIL	PCB	10/3/02	10/5/02			
590471	RB-S	SOIL	PCB	10/4/02	10/5/02			
590472	VF-32A	SOIL	PCB	10/4/02	10/5/02			
590473	S-101	SOIL	PCB	10/4/02	10/5/02			
590474	DUP-11	SOIL	PCB	10/4/02	10/5/02			

## Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>				Noncompliance
					VOC	SVOC	PCB	TOC	
R2214110	10/3/02	2000	RB-N	soil	--	--	yes	--	
R2214110	10/4/02	2000	RB-S	soil	--	--	yes	--	
R2214110	10/4/02	2000	VF-32A	soil	--	--	yes	--	
R2214110	10/4/02	2000	S-101	soil	--	--	yes	--	
R2214110	10/4/02	2000	DUP-11	soil	--	--	yes	--	

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

**SDG No. R2214151**

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**Samples Collected**  
**10/8/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2214151

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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

Summary

The following is an assessment of the data package for SDG# R2214151 for sampling at the NMPC-School 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				
				VOC	SVOC	PCB	MET	TOC
WC-13	591433	soil	10/8/02			x		
RB-S-2 <sup>1</sup>	591434	soil	10/8/02			x		
DUP-12	591435	soil	10/8/02			x		

1 MS/MSD analysis performed on sample.



## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.

5. Surrogates / System Monitoring Compounds

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

Surrogates were diluted beyond the range of quantitation in sample WC-13DL. No data have been qualified based on diluted surrogates. All other surrogate recoveries were within control limits.

6. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike 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 could not be accurately calculated due to interference from PCBs present in the unspiked sample.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
RB-S-2 / DUP-12	Aroclor 1260	940	1600	52.0%

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

## PCB 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>      </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>      </u>	<u>  X  </u>	<u>      </u>
Are all the samples listed on the appropriate surrogate recovery form?	<u>      </u>	<u>      </u>	<u>  X  </u>
Were recoveries of any surrogate 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>
Are there any transcription/calculation errors between the raw data and the summary form?	<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>  NA  </u> out of <u>  NA  </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? <u>  NA  </u> out of <u>  NA  </u>			
<b><u>Blanks</u></b>			
Is a 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>
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>

**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	<u>  X  </u>	_____
Aroclor 1016/1260	<u>  X  </u>	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	<u>  X  </u>	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	<u>  X  </u>	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	<u>  X  </u>	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	<u>  X  </u>
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	<u>  X  </u>	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	<u>  X  </u>	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	<u>  X  </u>	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	<u>  X  </u>	_____	_____
Was the proper analytical sequence followed?	<u>  X  </u>	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	<u>  X  </u>	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	<u>  X  </u>	_____	_____
Were all positively identified compounds confirmed on a second column?	<u>  X  </u>	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	<u>  X  </u>
Were there any false negatives?	_____	<u>  X  </u>	_____

PCB Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Compound Quantitation and Reported 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 waters, sample moisture?	<u>  X  </u>	_____	_____
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>  X  </u>	_____	_____
Were any electronegative displacement (negative peaks) or unusual peaks detected?	_____	<u>  X  </u>	_____
<b><u>Field Duplicates</u></b>			
Were field duplicates submitted with the samples?	<u>  X  </u>	_____	_____



**PCB Qualifier Summary  
Holding Time and Surrogates**

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
WC-13			
WC-13 DL		D	D
RB-S-2			
RB-S-2 DL			
RB-S-2 MS			
RB-S-2 MSD			
DUP-12			
DUP-12 DL			

Surrogates:  
 TCX Tetrachloro-m-xylene  
 DCB Decachlorobiphenyl  
 na Not applicable

Qualifiers:  
 D Surrogate diluted out  
 † Recovery high  
 ‡ Recovery low

\* Unless otherwise noted, all parameters are within specified limits

### PCB Calibration Summary

Instrument: HP5890-C  
 Column: DB-1701

Date:	10/11/02	10/14/02	10/14/02	10/15/02				
Time:		1152	1925	0339				
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok				
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok				
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

**PCB Calibration Summary - Page 2**

Instrument: HP5890-C

Column: DB-17

Date:	10/11/02	10/14/02	10/14/02	10/15/02				
Time:		1152	1925	0339				
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok				
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok				
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

## Corrected Sample Analysis Data Sheets

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 11/11/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST PROJECT #36458.007

Client Sample ID : WC-13

Date Sampled : 10/08/02      Order #: 591433      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/09/02      Submission #: R2214151      Percent Solid: 88.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/09/02			
DATE ANALYZED : 10/14/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	37 U	UG/KG
PCB 1254	33	37 U	UG/KG
PCB 1260	33	18000 <del>11000</del> E	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(37 - 156 %)	100	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	76	%

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL ST PROJECT #36458.007  
 Client Sample ID : WC-13

Date Sampled : 10/08/02      Order #: 591433      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/09/02      Submission #: R2214151      Percent Solid: 88.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/09/02			
DATE ANALYZED : 10/14/02			
ANALYTICAL DILUTION: 200.00			Dry Weight
PCB 1016	33	7500 U	UG/KG
PCB 1221	33	7500 U	UG/KG
PCB 1232	33	7500 U	UG/KG
PCB 1242	33	7500 U	UG/KG
PCB 1248	33	7500 U	UG/KG
PCB 1254	33	7500 U	UG/KG
PCB 1260	33	18000	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(37 - 156 %)	D	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	D	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 11/11/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST PROJECT #36458.007

Client Sample ID : RB-S-2

Date Sampled : 10/08/02                      Order #: 591434                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/09/02                      Submission #: R2214151                      Percent Solid: 83.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/09/02			
DATE ANALYZED : 10/14/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	39 U	UG/KG
PCB 1260	33	940 <del>1100</del> E D	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(37 - 156 %)	95	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	81	%

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL ST PROJECT #36458.007  
 Client Sample ID : RB-S-2

Date Sampled : 10/08/02      Order #: 591434      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 10/09/02      Submission #: R2214151      Percent Solid: 83.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/09/02			
DATE ANALYZED : 10/14/02			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	390 U	UG/KG
PCB 1221	33	390 U	UG/KG
PCB 1232	33	390 U	UG/KG
PCB 1242	33	390 U	UG/KG
PCB 1248	33	390 U	UG/KG
PCB 1254	33	390 U	UG/KG
PCB 1260	33	940	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(37 - 156 %)	84	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	65	%



COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 11/11/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST PROJECT #36458.007

Client Sample ID : DUP-12

Date Sampled : 10/08/02                      Order #: 591435                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/09/02                      Submission #: R2214151                      Percent Solid: 83.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/09/02			
DATE ANALYZED : 10/14/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	39 U	UG/KG
PCB 1260	33	1600 <del>1100</del> E D	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(37 - 156 %)	80	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	71	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 11/11/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST PROJECT #36458.007

Client Sample ID : DUP-12

Date Sampled : 10/08/02      Order #: 591435      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/09/02      Submission #: R2214151      Percent Solid: 83.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/09/02			
DATE ANALYZED : 10/14/02			
ANALYTICAL DILUTION: 5.00			Dry Weight
PCB 1016	33	200 U	UG/KG
PCB 1221	33	200 U	UG/KG
PCB 1232	33	200 U	UG/KG
PCB 1242	33	200 U	UG/KG
PCB 1248	33	200 U	UG/KG
PCB 1254	33	200 U	UG/KG
PCB 1260	33	1600	UG/KG
<u>SURROGATE RECOVERIES</u>		<u>QC LIMITS</u>	
DECACHLOROBIPHENYL	(37 - 156 %)	123	%
TETRACHLORO-META-XYLENE	(45 - 133 %)	94	%

## Laboratory Narrative

## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2214151

BBL soil samples were collected on 10/08/02 and received at CAS on 10/09/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

Three soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was performed on RB-S-2. All MS/MSD recoveries were outside limits probably due to the high level of Arochlor 1260 present in the sample and has been flagged with an "\*\*". All Blank spike recoveries were within limits. All RPD's were within limits.

All surrogate standard recoveries were within limits except WC-13DL. The surrogates were diluted out and flagged with a "D".

Arochlor 1260 for WC-13, RB-S-2 and DUP-12 has been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature. Michael E. Perry

**NYSDEC Sample Preparation and Analysis Summary Sheets**

CAS ASI/CLP BATCHING FORM / LOGIN SHEET

SDG #: WC-13 SUBMISSION R2214151 CLIENT: Blasland, Bouck & Lee, Inc. CLIENT REP: Janice Jaeger PROJECT: NM SCHOOL ST PROJECT #36- CHAIN OF CUSTODY: PRESENT/ABSENT:			BATCH COMPLETE: <input type="checkbox"/> yes DISKETTE REQUESTED: Y <input type="checkbox"/> N <input type="checkbox"/> x <input type="checkbox"/> DATE: 10/09/02 CUSTODY SEAL: PRESENT/ABSENT: CHAIN OF CUSTODY: PRESENT/ABSENT:			DATE REVISED: DATE DUE: 11/06/02 PROTOCOL: SW846 SHIPPING No.: SUMMARY PKG: Y <input checked="" type="checkbox"/> X <input type="checkbox"/> N <input type="checkbox"/>		
CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS	DATE SAMPLED	DATE RECEIVED	pH	% SOLIDS	REMARKS
591433	WC-13	SOIL	PCB	10/8/02	10/9/02			
591434QC	RB-S-2	SOIL	PCB	10/8/02	10/9/02			
591435	DUP-12	SOIL	PCB	10/8/02	10/9/02			

10/9/02

591433.XLS

## Sample Compliance Report

# SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>				Noncompliance
					VOC	SVOC	PCB	TOC	
R2214151	10/8/02	2000	WC-13	soil	--	--	yes	--	
R2214151	10/8/02	2000	RB-S-2	soil	--	--	yes	--	
R2214151	10/8/02	2000	DUP-12	soil	--	--	yes	--	

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



# ***Sediment Sample Results***

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DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2213672

PCB ANALYSIS

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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

Summary

The following is an assessment of the data package for SDG# R2213672 for sampling at the NMPC-School 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				
				VOC	SVOC	PCB	MET	TOC
SD-101 (1.5-2)	583288	sediment	9/11/02			x		x
SD-102 (0.5-1) <sup>1</sup>	583289	sediment	9/11/02			x		x
SD-103 (0-0.5)	583290	sediment	9/11/02			x		x
SD-104 (0.5-1)	583291	sediment	9/11/02			x		x
SD-105 (2.2-2.7)	583292	sediment	9/11/02			x		x
SD-106 (1.2-1.7)	583293	sediment	9/11/02			x		x
SD-107 (0-0.5)	583294	sediment	9/11/02			x		x
SD-108 (0.5-1)	583295	sediment	9/11/02			x		x
DUP-SD-1	583296	sediment	9/11/02			x		x

<sup>1</sup> MS/MSD analysis performed on sample.

## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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 Aroclors were detected in the method blank. No rinse blanks were submitted with the samples.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Multi-point calibration was performed for Aroclors 1016 and 1260 only. The initial calibrations were within the specified limit for these Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibration verification standards were within the specified limit.

5. Surrogates / System Monitoring Compounds

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

Surrogates were diluted beyond the range of quantitation in samples SD-103(0-0.5)DL and SD-107(0-0.5)DL. No data have been qualified based on diluted surrogates. All other surrogate recoveries were within control limits.

6. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified Aroclors met the specified criteria.

7. Matrix Spike/Matrix Spike Duplicate

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

The matrix spike duplicate recovery was above control limits. Since the matrix spike recovery was within control limits and since the high recovery can be attributed, at least in part, to interference from PCBs present in the unspiked sample, no data have been qualified based on matrix spike performance.

8. Matrix Spike Blank

The matrix spike blank recovery was within control limits.

9. Field Duplicates

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
VF-30 / DUP-5	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

## PCB 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>      </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>      </u>	<u>  X  </u>	<u>      </u>
Are all the samples listed on the appropriate surrogate recovery form?	<u>      </u>	<u>      </u>	<u>  X  </u>
Were recoveries of any surrogate 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>
Are there any transcription/calculation errors between the raw data and the summary form?	<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>  2  </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? <u>  1  </u> out of <u>  1  </u>			
<b><u>Blanks</u></b>			
Is a 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>
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>

**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			
peak resolution check	_____	<u>  X  </u>	_____
Aroclor 1016/1260	<u>  X  </u>	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	<u>  X  </u>	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	<u>  X  </u>	_____
Are the %RSD for the initial calibrations within specified limits for all analytes?	<u>  X  </u>	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	<u>  X  </u>
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	<u>  X  </u>	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	<u>  X  </u>	_____
Are all the percent difference (%D) values for all continuing calibration standards within specified limits?	<u>  X  </u>	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	<u>  X  </u>	_____	_____
Was the proper analytical sequence followed?	<u>  X  </u>	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	<u>  X  </u>	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	<u>  X  </u>	_____	_____
Were all positively identified compounds confirmed on a second column?	<u>  X  </u>	_____	_____
Was GC/MS confirmation provided when required?	_____	_____	<u>  X  </u>
Were there any false negatives?	_____	<u>  X  </u>	_____

PCB Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Compound Quantitation and Reported 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 waters, sample moisture?	<u>  X  </u>	_____	_____
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>  X  </u>	_____	_____
Were any electronegative displacement (negative peaks) or unusual peaks detected?	_____	<u>  X  </u>	_____
<b><u>Field Duplicates</u></b>			
Were field duplicates submitted with the samples?	<u>  X  </u>	_____	_____

**PCB Qualifier Summary**  
**Holding Time and Surrogates**

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
SD-101 (1.5-2)			
SD-102 (0.5-1)			
SD-102 (0.5-1) MS			
SD-102 (0.5-1) MSD			
SD-103 (0.0-5)			
SD-103 (0-0.5) DL		D	D
SD-104 (0.5-1)			
SD-104 (0.5-1) DL			
SD-105 (2.2-2.7)			
SD-106 (1.2-1.7)			
SD-107 (0.5-1)			
SD-107 (0.5-1) DL		D	D
DUP-SD-1			

Surrogates:  
 TCX Tetrachloro-m-xylene  
 DCB Decachlorobiphenyl  
 na Not applicable

Qualifiers:  
 D Surrogate diluted out  
 † Recovery high  
 ‡ Recovery low

\* Unless otherwise noted, all parameters are within specified limits

### PCB Calibration Summary

Instrument: HP5890-C  
 Column: DB-1701

Date:	9/7/02	9/13/02	9/13/02	9/13/02	9/13/02	9/16/02	9/16/02	
Time:		0037	0657	1352	2012	1048	1307	
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok	ok	
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok	ok	ok	
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

**PCB Calibration Summary - Page 2**

Instrument: HP5890-C  
 Column: DB-17

Date:	9/7/02	9/13/02	9/13/02	9/13/02	9/13/02	9/16/02	9/16/02	
Time:		0037	0657	1352	2012	1048	1302	
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok	ok	
Aroclor 1221	--*							
Aroclor 1232	--*							
Aroclor 1242	--*							
Aroclor 1248	--*							
Aroclor 1254	--*							
Aroclor 1260	ok	ok	ok	ok	ok	ok	ok	
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\* Single-point standards analyzed

## Corrected Sample Analysis Data Sheets



Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL STREET PROJECT #36458.007  
 Client Sample ID : SD-101 (1.5-2.0')

Date Sampled : 09/11/02                      Order #: 583288                      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/12/02                      Submission #: R2213672                      Percent Solid: 79.3

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/12/02			
DATE ANALYZED : 09/13/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	42 U	UG/KG
PCB 1221	33	42 U	UG/KG
PCB 1232	33	42 U	UG/KG
PCB 1242	33	42 U	UG/KG
PCB 1248	33	42 U	UG/KG
PCB 1254	33	42 U	UG/KG
PCB 1260	33	42 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	86	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	82	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/11/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-102 (0.5-1.0')

Date Sampled : 09/11/02                      Order #: 583289                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02                      Submission #: R2213672                      Percent Solid: 83.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/13/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	39 U	UG/KG
PCB 1221	33	39 U	UG/KG
PCB 1232	33	39 U	UG/KG
PCB 1242	33	39 U	UG/KG
PCB 1248	33	39 U	UG/KG
PCB 1254	33	39 U	UG/KG
PCB 1260	33	180	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	92	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	80	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 10/11/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : SD-103 (0-0.5')

Date Sampled : 09/11/02      Order #: 583290      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02      Submission #: R2213672      Percent Solid: 82.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/13/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	40 U	UG/KG
PCB 1221	33	40 U	UG/KG
PCB 1232	33	40 U	UG/KG
PCB 1242	33	40 U	UG/KG
PCB 1248	33	40 U	UG/KG
PCB 1254	33	40 U	UG/KG
PCB 1260	33	14000 6400 <del>U</del> D	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	96	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	86	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/11/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-103 (0-0.5') *OL*

Date Sampled : 09/11/02      Order #: 583290      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02      Submission #: R2213672      Percent Solid: 82.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 09/12/02	
DATE ANALYZED		: 09/13/02	
ANALYTICAL DILUTION:	50.00		Dry Weight
PCB 1016	33	2000 U	UG/KG
PCB 1221	33	2000 U	UG/KG
PCB 1232	33	2000 U	UG/KG
PCB 1242	33	2000 U	UG/KG
PCB 1248	33	2000 U	UG/KG
PCB 1254	33	2000 U	UG/KG
PCB 1260	33	14000	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8082 PCB'S

Reported: 10/11/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : SD-104 (0.5-1.0')

Date Sampled : 09/11/02

Order #: 583291

Sample Matrix: SOIL/SEDIMENT

Date Received: 09/12/02

Submission #: R2213672

Percent Solid: 75.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/13/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	44 U	UG/KG
PCB 1221	33	44 U	UG/KG
PCB 1232	33	44 U	UG/KG
PCB 1242	33	44 U	UG/KG
PCB 1248	33	44 U	UG/KG
PCB 1254	33	44 U	UG/KG
PCB 1260	33	16001200 E D	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL

(35 - 131 %)

90

%

TETRACHLORO-META-XYLENE

(29 - 141 %)

78

%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/11/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-104 (0.5-1.0')

Date Sampled : 09/11/02                      Order #: 583291                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02                      Submission #: R2213672                      Percent Solid: 75.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/13/02		
ANALYTICAL DILUTION:	5.00		Dry Weight
PCB 1016	33	220 U	UG/KG
PCB 1221	33	220 U	UG/KG
PCB 1232	33	220 U	UG/KG
PCB 1242	33	220 U	UG/KG
PCB 1248	33	220 U	UG/KG
PCB 1254	33	220 U	UG/KG
PCB 1260	33	1600	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(35 - 131 %)	113	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	94	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/11/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-105 (2.2-2.7')

Date Sampled : 09/11/02      Order #: 583292      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02      Submission #: R2213672      Percent Solid: 78.0

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/13/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	42 U	UG/KG
PCB 1221	33	42 U	UG/KG
PCB 1232	33	42 U	UG/KG
PCB 1242	33	42 U	UG/KG
PCB 1248	33	42 U	UG/KG
PCB 1254	33	42 U	UG/KG
PCB 1260	33	42 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	90	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	83	%

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL STREET PROJECT #36458.007  
 Client Sample ID : SD-106 (1.2-1.7')

Date Sampled : 09/11/02                      Order #: 583293                      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/12/02                      Submission #: R2213672                      Percent Solid: 81.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/13/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	40 U	UG/KG
PCB 1221	33	40 U	UG/KG
PCB 1232	33	40 U	UG/KG
PCB 1242	33	40 U	UG/KG
PCB 1248	33	40 U	UG/KG
PCB 1254	33	40 U	UG/KG
PCB 1260	33	40 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(35 - 131 %)	99	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	94	%



COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/11/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-107 (0-0.5')

Date Sampled : 09/11/02      Order #: 583294      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02      Submission #: R2213672      Percent Solid: 78.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/13/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	42 U	UG/KG
PCB 1221	33	42 U	UG/KG
PCB 1232	33	42 U	UG/KG
PCB 1242	33	42 U	UG/KG
PCB 1248	33	42 U	UG/KG
PCB 1254	33	42 U	UG/KG
PCB 1260	33	600 <del>3000</del> ED	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	106	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	87	%

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL STREET PROJECT #36458.007  
 Client Sample ID : SD-107 (0-0.5')

Date Sampled : 09/11/02      Order #: 583294      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/12/02      Submission #: R2213672      Percent Solid: 78.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/16/02		
ANALYTICAL DILUTION:	20.00		Dry Weight
PCB 1016	33	840 U	UG/KG
PCB 1221	33	840 U	UG/KG
PCB 1232	33	840 U	UG/KG
PCB 1242	33	840 U	UG/KG
PCB 1248	33	840 U	UG/KG
PCB 1254	33	840 U	UG/KG
PCB 1260	33	6100	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL STREET PROJECT #36458.007  
 Client Sample ID : SD-108 (0.5-1.0')

Date Sampled : 09/11/02                      Order #: 583295                      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/12/02                      Submission #: R2213672                      Percent Solid: 80.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/13/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	41 U	UG/KG
PCB 1221	33	41 U	UG/KG
PCB 1232	33	41 U	UG/KG
PCB 1242	33	41 U	UG/KG
PCB 1248	33	41 U	UG/KG
PCB 1254	33	41 U	UG/KG
PCB 1260	33	<del>2000</del> 1500 ED	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(35 - 131 %)	84	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	82	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8082 PCB'S  
 Reported: 10/11/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM SCHOOL STREET PROJECT #36458.007  
 Client Sample ID : SD-108 (0.5-1.0')

Date Sampled : 09/11/02      Order #: 583295      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 09/12/02      Submission #: R2213672      Percent Solid: 80.7

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/12/02			
DATE ANALYZED : 09/13/02			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	410 U	UG/KG
PCB 1221	33	410 U	UG/KG
PCB 1232	33	410 U	UG/KG
PCB 1242	33	410 U	UG/KG
PCB 1248	33	410 U	UG/KG
PCB 1254	33	410 U	UG/KG
PCB 1260	33	2000	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL	(35 - 131 %)	108	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	88	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 10/11/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : DUP-SD-1

Date Sampled : 09/11/02                      Order #: 583296                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02                      Submission #: R2213672                      Percent Solid: 82.2

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/12/02		
DATE ANALYZED	: 09/13/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	40 U	UG/KG
PCB 1221	33	40 U	UG/KG
PCB 1232	33	40 U	UG/KG
PCB 1242	33	40 U	UG/KG
PCB 1248	33	40 U	UG/KG
PCB 1254	33	40 U	UG/KG
PCB 1260	33	40 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	95	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	86	%

TOTAL ORGANIC CARBON

## Introduction

Analyses were performed according to the following method:

Total Organic Carbon      EPA Region II Lloyd Kahn

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:

- ND    The analyte was analyzed for but not detected. The associated value is the analyte reporting limit.
- J    The associated numerical value is an estimated concentration only.
- E    The reported value is estimated due to the presence of interference.
- M    Duplicate injection precision not met.
- N    Spiked sample recovery not within control limits.
- \*    Duplicate analysis not within control limits.
- 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 tests, 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 method-specified holding time for TOC analysis is 14 days from sample collection to analysis.

All samples were analyzed within specified holding time.

### 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 (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

NO TOC was detected in the calibration or preparation blanks. No rinse blanks were submitted with the samples.

### 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 continuing performance is satisfactory.

#### 3.1 Initial Calibration

The initial calibration was acceptable.

#### 3.2 Continuing Calibration

The continuing calibration verification was acceptable.

### 4. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

#### 4.1 Matrix Spike/Duplicate

The matrix spike recovery and laboratory duplicate results were within control limits.



5. Field Duplicate

The duplicate results are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
SD-106(1.2-1.7) / DUP-SD-1	TOC	5440	12500	78.7%

The duplicate results are acceptable.

6. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

7. System Performance and Overall Assessment

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

## Data Validation Checklist

## Data Validation Checklist

	YES	NO	NA
<b><u>Data Completeness and Deliverables</u></b>			
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>      </u>	<u>X</u>	<u>      </u>
<b><u>Raw Data</u></b>			
Are the preparation logs present?	<u>X</u>	<u>      </u>	<u>      </u>
Are preparation dates present on sample preparation logs/bench sheets?	<u>X</u>	<u>      </u>	<u>      </u>
Are the measurement read out records present?	<u>X</u>	<u>      </u>	<u>      </u>
Is the data legible?	<u>X</u>	<u>      </u>	<u>      </u>
Is the data properly labeled?	<u>X</u>	<u>      </u>	<u>      </u>
Are pH values listed?	<u>      </u>	<u>      </u>	<u>X</u>
Percent solids calculation present for soils/sediments?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Holding Times</u></b>			
Were all analyses performed within the specified holding times?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Sample Data</u></b>			
Are all forms complete?	<u>X</u>	<u>      </u>	<u>      </u>
Are correct units indicated the results sheets?	<u>X</u>	<u>      </u>	<u>      </u>
Are soil sample results for each parameter corrected for percent solids?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Initial Calibration</u></b>			
Is a record of an initial calibration present?:	<u>X</u>	<u>      </u>	<u>      </u>
Is correlation coefficient less than .995?:	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Initial and Continuing Calibration Verification</u></b>			
Present and complete for all analytes?	<u>X</u>	<u>      </u>	<u>      </u>
Are all calibration standards (initial and continuing) within control limits?:	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Initial and Continuing Calibration Blanks</u></b>			
Present and complete?	<u>X</u>	<u>      </u>	<u>      </u>
Was an initial calibration blank analyzed?	<u>X</u>	<u>      </u>	<u>      </u>
Are all calibration blanks less than or equal to the RL?	<u>X</u>	<u>      </u>	<u>      </u>

**Data Validation Checklist - Page 2**

	YES	NO	NA
<b><u>Preparation Blank</u></b>			
Was one prep. blank analyzed for:			
each batch of digested samples?	<u>X</u>	<u>      </u>	<u>      </u>
each matrix type?	<u>X</u>	<u>      </u>	<u>      </u>
Are all preparation blanks less than the RL?	<u>X</u>	<u>      </u>	<u>      </u>
If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?	<u>      </u>	<u>      </u>	<u>X</u>
<b><u>Matrix Spike</u></b>			
Present and complete for:			
each batch?	<u>X</u>	<u>      </u>	<u>      </u>
each matrix type?	<u>X</u>	<u>      </u>	<u>      </u>
Was field blank used for spiked sample?	<u>      </u>	<u>X</u>	<u>      </u>
Are all recoveries for analytes with sample concentrations less than four times the spike concentration within control limits?	<u>X</u>	<u>      </u>	<u>      </u>
Are results outside the control limits (75-125%) flagged with "N"?	<u>      </u>	<u>      </u>	<u>X</u>
<b><u>Laboratory Duplicates</u></b>			
Present and complete for:			
each batch?	<u>X</u>	<u>      </u>	<u>      </u>
each matrix type?	<u>X</u>	<u>      </u>	<u>      </u>
Was field blank used for duplicate analysis?	<u>      </u>	<u>X</u>	<u>      </u>
Are all values within control limits?	<u>X</u>	<u>      </u>	<u>      </u>
If no, are all results outside the control limits flagged with an * ?	<u>      </u>	<u>      </u>	<u>X</u>
<b><u>Field Duplicates</u></b>			
Were field duplicates analyzed?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Aqueous</u></b>			
is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times RL?	<u>      </u>	<u>      </u>	<u>X</u>
Is any difference between sample and duplicate greater than RL where sample and/or duplicate is less than 5 times RL?	<u>      </u>	<u>      </u>	<u>X</u>
<b><u>Soil/Sediment</u></b>			
Is any RPD (where sample and duplicate are both greater than 5 times RL) > 100%?	<u>      </u>	<u>X</u>	<u>      </u>

### Data Validation Checklist - Page 3

	YES	NO	NA
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x RL) >2xRL?	_____	_____	<u>  X  </u>
<b><u>Laboratory Control Sample</u></b>			
Was one LCS prepared and analyzed for:			
each matrix?	<u>  X  </u>	_____	_____
each batch?	<u>  X  </u>	_____	_____
Are all recoveries within control limits?	<u>  X  </u>	_____	_____
<b><u>Field Blank</u></b>			
Is the field blank concentration less than RL for all analytes?	_____	_____	<u>  X  </u>
If no, was field blank value already rejected due to other QC criteria?	_____	_____	<u>  X  </u>
<b><u>Percent Solids</u></b>			
Are the percent solids in soil/sediment(s):			
< 50%?	_____	<u>  X  </u>	_____
< 10%?	_____	<u>  X  </u>	_____

**Corrected Sample Analysis Data Sheets**

COLUMBIA ANALYTICAL SERVICES

Reported: 10/09/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-101 (1.5-2.0')

Date Sampled : 09/11/02                      Order #: 583288                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02                      Submission #: R2213672

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT	DATE	TIME	DILUTION
				UNITS	ANALYZED	ANALYZED	
PERCENT SOLIDS	160.0	1.0	79.3	%	09/13/02	11:00	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	11800	MG/KG	09/12/02	09:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/09/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-102 (0.5-1.0')

Date Sampled : 09/11/02  
Date Received: 09/12/02

Order #: 583289  
Submission #: R2213672

Sample Matrix: SOIL/SEDIMENT

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	83.7	%	09/13/02	11:00	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	7730	MG/KG	09/12/02	09:30	1.0



COLUMBIA ANALYTICAL SERVICES

Reported: 10/09/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-103 (0-0.5')

---

Date Sampled : 09/11/02                      Order #: 583290                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02                      Submission #: R2213672

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	82.0	%	09/13/02	11:00	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	5550	MG/KG	09/12/02	09:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/09/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-104 (0.5-1.0')

---

Date Sampled : 09/11/02                      Order #: 583291                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02                      Submission #: R2213672

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	75.8	%	09/13/02	11:00	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	10200	MG/KG	09/12/02	09:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/09/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-105 (2.2-2.7')

---

Date Sampled : 09/11/02                      Order #: 583292                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02                    Submission #: R2213672

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	78.0	%	09/13/02	11:00	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	4820	MG/KG	09/12/02	09:30	1.0

---

COLUMBIA ANALYTICAL SERVICES

Reported: 10/09/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-106 (1.2-1.7')

---

Date Sampled : 09/11/02                      Order #: 583293                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02                      Submission #: R2213672

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	81.8	%	09/13/02	11:00	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	5440	MG/KG	09/12/02	09:30	1.0

---

COLUMBIA ANALYTICAL SERVICES

Reported: 10/09/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-107 (0-0.5')

Date Sampled : 09/11/02  
Date Received: 09/12/02

Order #: 583294  
Submission #: R2213672

Sample Matrix: SOIL/SEDIMENT

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	78.7	%	09/13/02	11:00	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	8640	MG/KG	09/12/02	09:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/09/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : SD-108 (0.5-1.0')

---

Date Sampled : 09/11/02                      Order #: 583295                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02                      Submission #: R2213672

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	80.7	%	09/13/02	11:00	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	7860	MG/KG	09/12/02	09:30	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 10/09/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Client Sample ID : DUP-SD-1

---

Date Sampled : 09/11/02                      Order #: 583296                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/12/02                      Submission #: R2213672

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	82.2	%	09/13/02	11:00	1.0
TOTAL ORGANIC CARBON	TOC.LK	300	12500	MG/KG	09/12/02	09:30	1.0

## Laboratory Narrative



## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2213672

BBL soil samples were collected on 9/11/02 and received at CAS on 9/12/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### INORGANICS

Nine soil samples were analyzed for TOC by Lloyd Kahn.

Site specific QC was performed on SD-102 (0.5-1.0'). All Blank spike recoveries were within limits. All RPD's were within limits.

No other analytical or QC problems were encountered.

### PCB's

Nine soil samples were analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met except the continuing calibration AR1660M16 was outside limits high. The affected samples were repeated at dilutions under a compliant continuing calibration and both sets of results have been reported out.

Site specific QC was performed on SD-102 (0.5-1.0'). All MS recoveries were within limits. The MSD recovery and RPD were outside limits and have been flagged with an "\*\*\*". All Blank spike recoveries were within limits.

All surrogate standard recoveries were within limits except SD-103(0-0.5')DL and SD-107 (0-0.5')DL. All surrogates were diluted out and have been flagged with a "D".

Various Arochlors for SD-103 (0-0.5'), SD-104 (0.5-1.0'), SD-107 (0-0.5') and SD-108 (0.5-1.0') have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature. Michael K. Perry

**NYSDEC Sample Preparation and Analysis Summary Sheets**

CAS JOB #	CLIENT/EPA ID	MATRIX	REQUESTED PARAMETERS		DATE SAMPLED	DATE RECEIVED	pH	% SOLIDS	REMARKS
			PRESENT/ABSENT	PRESENT/ABSENT					
583288	SD-101 (1.5-2.0')	SOIL	PCB,TOC		9/11/02	9/12/02			
583289QC	SD-102 (0.5-1.0')	SOIL	PCB,TOC		9/11/02	9/12/02			
583290	SD-103 (0-0.5')	SOIL	PCB,TOC		9/11/02	9/12/02			
583291	SD-104 (0.5-1.0')	SOIL	PCB,TOC		9/11/02	9/12/02			
583292	SD-105 (2.2-2.7')	SOIL	PCB,TOC		9/11/02	9/12/02			
583293	SD-106 (1.2-1.7')	SOIL	PCB,TOC		9/11/02	9/12/02			
583294	SD-107 (0-0.5')	SOIL	PCB,TOC		9/11/02	9/12/02			
583295	SD-108 (0.5-1.0')	SOIL	PCB,TOC		9/11/02	9/12/02			
583296	DUP-SD-1	SOIL	PCB,TOC		9/11/02	9/12/02			

BATCH COMPLETE:      yes  
 DISKETTE REQUESTED: Y      N      X       
 DATE: 09/12/02  
 CUSTODY SEAL: PRESENT/ABSENT:  
 PROJECT: NM SCHOOL STREET PROJEC CHAIN OF CUSTODY: PRESENT/ABSENT:  
 SUMMARY PKG: Y X N

DATE REVISED:  
 DATE DUE: 9/12/02  
 PROTOCOL: SW846  
 SHIPPING No.:

## Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>				Noncompliance
					VOC	SVOC	PCB	TOC	
R2213672	9/11/02	2000	SD-101	sediment	--	--	no	yes	PCB - ms/msd <sup>2</sup>
R2213672	9/11/02	2000	SD-102	sediment	--	--	no	yes	PCB - ms/msd <sup>2</sup>
R2213672	9/11/02	2000	SD-103	sediment	--	--	no	yes	PCB - ms/msd <sup>2</sup>
R2213672	9/11/02	2000	SD-104	sediment	--	--	no	yes	PCB - ms/msd <sup>2</sup>
R2213672	9/11/02	2000	SD-105	sediment	--	--	no	yes	PCB - ms/msd <sup>2</sup>
R2213672	9/11/02	2000	SD-106	sediment	--	--	no	yes	PCB - ms/msd <sup>2</sup>
R2213672	9/11/02	2000	SD-107	sediment	--	--	no	yes	PCB - ms/msd <sup>2</sup>
R2213672	9/11/02	2000	SD-108	sediment	--	--	no	yes	PCB - ms/msd <sup>2</sup>
R2213672	9/11/02	2000	DUP-SD-1	sediment	--	--	no	yes	PCB - ms/msd <sup>2</sup>

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

2 No data have been qualified based on the deviation.

***In-Site Waste Characterization  
Sample Results***

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A FULL SERVICE ENVIRONMENTAL LABORATORY

June 24, 2002

Mr. John Brussel  
Blasland, Bouck & Lee, Inc.  
6723 Towpath Road  
Box 66  
Syracuse, NY 13214

PROJECT:NM SCHOOL STREET PROJECT #364.58.007  
Submission #:R2212267

Dear Mr. Brussel:

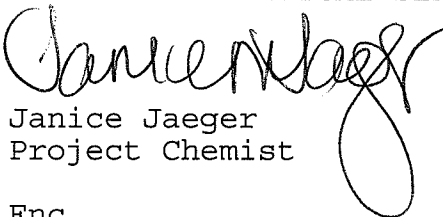
Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 06/12/02 per a Facsimile transmittal. All data has been reviewed prior to report submission.

Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

  
Janice Jaeger  
Project Chemist

Enc.



1 Mustard ST.  
Suite 250  
Rochester, NY 14609  
(585) 288-5380

**THIS IS AN ANALYTICAL TEST REPORT FOR:**

Client : Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #364.58.007  
Lab Submission # : R2212267  
Project Manager : Janice Jaeger  
Reported : 06/24/02

Report Contains a total of 31 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. *Michael K. Perry*





**CASE NARRATIVE**

This report contains analytical results for the following samples:

Submission #: R2212267

<u>Lab ID</u>	<u>Client ID</u>
558108	IW-1
558111	IW-2
558112	IW-3
558113	IW-4
558114	IW-5

All samples were received in good condition.

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.



Effective 6/18/2002

## ORGANIC QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- X - As specified in Case Narrative.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292



Effective 6/18/2002

## INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- E - The reported value is estimated because of the presence of interference.
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- \* - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

### CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292

**COLUMBIA ANALYTICAL SERVICES**

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-1

Date Sampled : 06/04/02 14:45

Order #: 558108

Sample Matrix: SOIL/SEDIMENT

Date Received: 06/05/02

Submission #: R2212267

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
CYANIDE REACTIVITY	9010/9	5.00	5.00 U	MG/KG	06/12/02	15:30	1.0
FLASH POINT	1010.M		>100	°C	06/11/02	11:30	1.0
PH	9040/9	1.00	7.88		06/06/02	13:30	NA
SULFIDE REACTIVITY	9030	20.0	20.0 U	MG/KG	06/12/02	11:30	1.0

**COLUMBIA ANALYTICAL SERVICES**

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-1

Date Sampled : 06/04/02 14:45

Order #: 558108

Sample Matrix: SOIL/SEDIMENT

Date Received: 06/05/02

Submission #: R2212267

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ARSENIC	6010B	0.500	0.500 U	MG/L	06/10/02	1.0
BARIUM	6010B	1.00	1.00 U	MG/L	06/10/02	1.0
CADMIUM	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
CHROMIUM	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
LEAD	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
MERCURY	7470A	0.000300	0.00300 U	MG/L	06/11/02	10.0
SELENIUM	6010B	0.500	0.500 U	MG/L	06/10/02	1.0
SILVER	6010B	0.100	0.100 U	MG/L	06/10/02	1.0

**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS**  
METHOD 8260B TCLP  
Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

**Project Reference:** NM SCHOOL STREET PROJECT #364.58.007

**Client Sample ID :** IW-1

**Date Sampled :** 06/04/02 14:45 **Order #:** 558108 **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** 06/05/02 **Submission #:** R2212267 **Analytical Run** 78963

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/11/02			
ANALYTICAL DILUTION: 10.00			
BENZENE	5.0	50 U	UG/L
2-BUTANONE (MEK)	10	100 U	UG/L
CARBON TETRACHLORIDE	5.0	50 U	UG/L
CHLOROBENZENE	5.0	50 U	UG/L
CHLOROFORM	5.0	50 U	UG/L
1,2-DICHLOROETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHENE	5.0	50 U	UG/L
TETRACHLOROETHENE	5.0	50 U	UG/L
TRICHLOROETHENE	5.0	50 U	UG/L
VINYL CHLORIDE	5.0	50 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

BROMOFLUOROBENZENE	(42 - 149 %)	93	%
TOLUENE-D8	(71 - 128 %)	98	%
DIBROMOFLUOROMETHANE	(70 - 127 %)	103	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8270C TCLP

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

**Project Reference:** NM SCHOOL STREET PROJECT #364.58.007

**Client Sample ID :** IW-1

**Date Sampled :** 06/04/02 14:45 **Order #:** 558108 **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** 06/05/02 **Submission #:** R2212267 **Analytical Run** 78905

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/10/02			
DATE ANALYZED : 06/11/02			
ANALYTICAL DILUTION: 10.00			
1,4-DICHLOROBENZENE	10	100 U	UG/L
2,4-DINITROTOLUENE	10	100 U	UG/L
HEXACHLOROBENZENE	10	100 U	UG/L
HEXACHLOROBUTADIENE	10	100 U	UG/L
HEXACHLOROETHANE	10	100 U	UG/L
2-METHYLPHENOL	10	100 U	UG/L
3+4-METHYLPHENOL	10	100 U	UG/L
NITROBENZENE	10	100 U	UG/L
PENTACHLOROPHENOL	50	500 U	UG/L
PYRIDINE	50	500 U	UG/L
2,4,6-TRICHLOROPHENOL	10	100 U	UG/L
2,4,5-TRICHLOROPHENOL	10	100 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-D14	(10 - 152 %)	71	%
NITROBENZENE-D5	(10 - 138 %)	48	%
PHENOL-D6	(11 - 130 %)	21	%
2-FLUOROBIPHENYL	(11 - 112 %)	44	%
2-FLUOROPHENOL	(10 - 130 %)	34	%
2,4,6-TRIBROMOPHENOL	(10 - 130 %)	60	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

**COLUMBIA ANALYTICAL SERVICES**

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-2

Date Sampled : 06/04/02 15:15

Order #: 558111

Sample Matrix: SOIL/SEDIMENT

Date Received: 06/05/02

Submission #: R2212267

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE	TIME	DILUTION
					ANALYZED	ANALYZED	
CYANIDE REACTIVITY	9010/9	5.00	5.00 U	MG/KG	06/12/02	15:30	1.0
FLASH POINT	1010.M		>100	°C	06/11/02	11:30	1.0
PH	9040/9	1.00	8.32		06/06/02	13:30	NA
SULFIDE REACTIVITY	9030	20.0	20.0 U	MG/KG	06/12/02	11:30	1.0



**COLUMBIA ANALYTICAL SERVICES**

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-2

Date Sampled : 06/04/02 15:15

Order #: 558111

Sample Matrix: SOIL/SEDIMENT

Date Received: 06/05/02

Submission #: R2212267

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ARSENIC	6010B	0.500	0.500 U	MG/L	06/10/02	1.0
BARIUM	6010B	1.00	1.52	MG/L	06/10/02	1.0
CADMIUM	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
CHROMIUM	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
LEAD	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
MERCURY	7470A	0.000300	0.00300 U	MG/L	06/11/02	10.0
SELENIUM	6010B	0.500	0.500 U	MG/L	06/10/02	1.0
SILVER	6010B	0.100	0.100 U	MG/L	06/10/02	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
METHOD 8260B TCLP  
Reported: 06/24/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #364.58.007  
Client Sample ID : IW-2

Date Sampled : 06/04/02 15:15 Order #: 558111 Sample Matrix: SOIL/SEDIMENT  
Date Received: 06/05/02 Submission #: R2212267 Analytical Run 78963

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/11/02			
ANALYTICAL DILUTION: 10.00			
BENZENE	5.0	50 U	UG/L
2-BUTANONE (MEK)	10	100 U	UG/L
CARBON TETRACHLORIDE	5.0	50 U	UG/L
CHLOROBENZENE	5.0	50 U	UG/L
CHLOROFORM	5.0	50 U	UG/L
1,2-DICHLOROETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHENE	5.0	50 U	UG/L
TETRACHLOROETHENE	5.0	50 U	UG/L
TRICHLOROETHENE	5.0	50 U	UG/L
VINYL CHLORIDE	5.0	50 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

BROMOFLUOROBENZENE	(42 - 149 %)	94	%
TOLUENE-D8	(71 - 128 %)	99	%
DIBROMOFLUOROMETHANE	(70 - 127 %)	100	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8270C TCLP

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-2

Date Sampled : 06/04/02 15:15 Order #: 558111 Sample Matrix: SOIL/SEDIMENT  
Date Received: 06/05/02 Submission #: R2212267 Analytical Run 78905

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 06/10/02		
DATE ANALYZED	: 06/11/02		
ANALYTICAL DILUTION:	10.00		
1,4-DICHLOROBENZENE	10	100 U	UG/L
2,4-DINITROTOLUENE	10	100 U	UG/L
HEXACHLOROBENZENE	10	100 U	UG/L
HEXACHLOROBUTADIENE	10	100 U	UG/L
HEXACHLOROETHANE	10	100 U	UG/L
2-METHYLPHENOL	10	100 U	UG/L
3+4-METHYLPHENOL	10	100 U	UG/L
NITROBENZENE	10	100 U	UG/L
PENTACHLOROPHENOL	50	500 U	UG/L
PYRIDINE	50	500 U	UG/L
2,4,6-TRICHLOROPHENOL	10	100 U	UG/L
2,4,5-TRICHLOROPHENOL	10	100 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-D14	(10 - 152 %)	60	%
NITROBENZENE-D5	(10 - 138 %)	44	%
PHENOL-D6	(11 - 130 %)	24	%
2-FLUOROBIPHENYL	(11 - 112 %)	38	%
2-FLUOROPHENOL	(10 - 130 %)	32	%
2,4,6-TRIBROMOPHENOL	(10 - 130 %)	56	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

**COLUMBIA ANALYTICAL SERVICES**

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-3

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Date Sampled : 06/04/02 15:30                      Order #: 558112                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 06/05/02                      Submission #: R2212267

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ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
CYANIDE REACTIVITY	9010/9	5.00	5.00 U	MG/KG	06/12/02	15:30	1.0
FLASH POINT	1010.M		>100	°C	06/11/02	11:30	1.0
PH	9040/9	1.00	7.93		06/06/02	13:30	NA
SULFIDE REACTIVITY	9030	20.0	20.0 U	MG/KG	06/12/02	11:30	1.0

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**COLUMBIA ANALYTICAL SERVICES**

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-3

Date Sampled : 06/04/02 15:30

Order #: 558112

Sample Matrix: SOIL/SEDIMENT

Date Received: 06/05/02

Submission #: R2212267

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ARSENIC	6010B	0.500	0.500 U	MG/L	06/10/02	1.0
BARIUM	6010B	1.00	1.00 U	MG/L	06/10/02	1.0
CADMIUM	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
CHROMIUM	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
LEAD	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
MERCURY	7470A	0.000300	0.00300 U	MG/L	06/11/02	10.0
SELENIUM	6010B	0.500	0.500 U	MG/L	06/10/02	1.0
SILVER	6010B	0.100	0.100 U	MG/L	06/10/02	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
METHOD 8260B TCLP  
Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-3

Date Sampled : 06/04/02 15:30 Order #: 558112 Sample Matrix: SOIL/SEDIMENT  
Date Received: 06/05/02 Submission #: R2212267 Analytical Run 78963

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 06/11/02		
ANALYTICAL DILUTION:	10.00		
BENZENE	5.0	50 U	UG/L
2-BUTANONE (MEK)	10	100 U	UG/L
CARBON TETRACHLORIDE	5.0	50 U	UG/L
CHLOROBENZENE	5.0	50 U	UG/L
CHLOROFORM	5.0	50 U	UG/L
1,2-DICHLOROETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHENE	5.0	50 U	UG/L
TETRACHLOROETHENE	5.0	50 U	UG/L
TRICHLOROETHENE	5.0	50 U	UG/L
VINYL CHLORIDE	5.0	50 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

BROMOFLUOROBENZENE	(42 - 149 %)	92	%
TOLUENE-D8	(71 - 128 %)	98	%
DIBROMOFLUOROMETHANE	(70 - 127 %)	101	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8270C TCLP

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-3

Date Sampled : 06/04/02 15:30 Order #: 558112 Sample Matrix: SOIL/SEDIMENT  
Date Received: 06/05/02 Submission #: R2212267 Analytical Run 78905

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/10/02			
DATE ANALYZED : 06/11/02			
ANALYTICAL DILUTION: 10.00			
1,4-DICHLOROBENZENE	10	100 U	UG/L
2,4-DINITROTOLUENE	10	100 U	UG/L
HEXACHLOROBENZENE	10	100 U	UG/L
HEXACHLOROBUTADIENE	10	100 U	UG/L
HEXACHLOROETHANE	10	100 U	UG/L
2-METHYLPHENOL	10	100 U	UG/L
3+4-METHYLPHENOL	10	100 U	UG/L
NITROBENZENE	10	100 U	UG/L
PENTACHLOROPHENOL	50	500 U	UG/L
PYRIDINE	50	500 U	UG/L
2,4,6-TRICHLOROPHENOL	10	100 U	UG/L
2,4,5-TRICHLOROPHENOL	10	100 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-D14	(10 - 152 %)	84	%
NITROBENZENE-D5	(10 - 138 %)	58	%
PHENOL-D6	(11 - 130 %)	27	%
2-FLUOROBIPHENYL	(11 - 112 %)	55	%
2-FLUOROPHENOL	(10 - 130 %)	42	%
2,4,6-TRIBROMOPHENOL	(10 - 130 %)	75	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

**COLUMBIA ANALYTICAL SERVICES**

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-4

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Date Sampled : 06/04/02 15:50                      Order #: 558113                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 06/05/02                      Submission #: R2212267

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ANALYTE	METHOD	PQL	RESULT	UNITS	DATE	TIME	DILUTION
					ANALYZED	ANALYZED	
CYANIDE REACTIVITY	9010/9	5.00	5.00 U	MG/KG	06/12/02	15:30	1.0
FLASH POINT	1010.M		>100	°C	06/11/02	11:30	1.0
PH	9040/9	1.00	8.11		06/06/02	13:30	NA
SULFIDE REACTIVITY	9030	20.0	20.0 U	MG/KG	06/12/02	11:30	1.0



**COLUMBIA ANALYTICAL SERVICES**

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-4

Date Sampled : 06/04/02 15:50

Order #: 558113

Sample Matrix: SOIL/SEDIMENT

Date Received: 06/05/02

Submission #: R2212267

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ARSENIC	6010B	0.500	0.500 U	MG/L	06/10/02	1.0
BARIUM	6010B	1.00	1.00 U	MG/L	06/10/02	1.0
CADMIUM	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
CHROMIUM	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
LEAD	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
MERCURY	7470A	0.000300	0.00300 U	MG/L	06/11/02	10.0
SELENIUM	6010B	0.500	0.500 U	MG/L	06/10/02	1.0
SILVER	6010B	0.100	0.100 U	MG/L	06/10/02	1.0

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
METHOD 8260B TCLP  
Reported: 06/24/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #364.58.007  
Client Sample ID : IW-4

Date Sampled : 06/04/02 15:50 Order #: 558113 Sample Matrix: SOIL/SEDIMENT  
Date Received: 06/05/02 Submission #: R2212267 Analytical Run 78963

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/11/02			
ANALYTICAL DILUTION: 10.00			
BENZENE	5.0	50 U	UG/L
2-BUTANONE (MEK)	10	100 U	UG/L
CARBON TETRACHLORIDE	5.0	50 U	UG/L
CHLOROBENZENE	5.0	50 U	UG/L
CHLOROFORM	5.0	50 U	UG/L
1,2-DICHLOROETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHENE	5.0	50 U	UG/L
TETRACHLOROETHENE	5.0	50 U	UG/L
TRICHLOROETHENE	5.0	50 U	UG/L
VINYL CHLORIDE	5.0	50 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

BROMOFLUOROBENZENE	(42 - 149 %)	91	%
TOLUENE-D8	(71 - 128 %)	99	%
DIBROMOFLUOROMETHANE	(70 - 127 %)	100	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8270C TCLP

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-4

Date Sampled : 06/04/02 15:50 Order #: 558113 Sample Matrix: SOIL/SEDIMENT  
Date Received: 06/05/02 Submission #: R2212267 Analytical Run 78905

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/10/02			
DATE ANALYZED : 06/11/02			
ANALYTICAL DILUTION: 10.00			
1,4-DICHLOROBENZENE	10	100 U	UG/L
2,4-DINITROTOLUENE	10	100 U	UG/L
HEXACHLOROBENZENE	10	100 U	UG/L
HEXACHLOROBUTADIENE	10	100 U	UG/L
HEXACHLOROETHANE	10	100 U	UG/L
2-METHYLPHENOL	10	100 U	UG/L
3+4-METHYLPHENOL	10	100 U	UG/L
NITROBENZENE	10	100 U	UG/L
PENTACHLOROPHENOL	50	500 U	UG/L
PYRIDINE	50	500 U	UG/L
2,4,6-TRICHLOROPHENOL	10	100 U	UG/L
2,4,5-TRICHLOROPHENOL	10	100 U	UG/L
<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
TERPHENYL-D14	(10 - 152 %)	71	⊗
NITROBENZENE-D5	(10 - 138 %)	47	⊗
PHENOL-D6	(11 - 130 %)	23	⊗
2-FLUOROBIPHENYL	(11 - 112 %)	45	⊗
2-FLUOROPHENOL	(10 - 130 %)	36	⊗
2,4,6-TRIBROMOPHENOL	(10 - 130 %)	62	⊗

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

**COLUMBIA ANALYTICAL SERVICES**

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-5

Date Sampled : 06/04/02 16:20

Order #: 558114

Sample Matrix: SOIL/SEDIMENT

Date Received: 06/05/02

Submission #: R2212267

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE	TIME	DILUTION
					ANALYZED	ANALYZED	
CYANIDE REACTIVITY	9010/9	5.00	5.00 U	MG/KG	06/12/02	15:30	1.0
FLASH POINT	1010.M		>100	°C	06/11/02	11:30	1.0
PH	9040/9	1.00	7.82		06/06/02	13:39	NA
SULFIDE REACTIVITY	9030	20.0	20.0 U	MG/KG	06/12/02	11:30	1.0

**COLUMBIA ANALYTICAL SERVICES**

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-5

Date Sampled : 06/04/02 16:20

Order #: 558114

Sample Matrix: SOIL/SEDIMENT

Date Received: 06/05/02

Submission #: R2212267

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ARSENIC	6010B	0.500	0.500 U	MG/L	06/10/02	1.0
BARIUM	6010B	1.00	1.00 U	MG/L	06/10/02	1.0
CADMIUM	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
CHROMIUM	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
LEAD	6010B	0.100	0.100 U	MG/L	06/10/02	1.0
MERCURY	7470A	0.000300	0.00300 U	MG/L	06/11/02	10.0
SELENIUM	6010B	0.500	0.500 U	MG/L	06/10/02	1.0
SILVER	6010B	0.100	0.100 U	MG/L	06/10/02	1.0

**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS**  
METHOD 8260B TCLP  
Reported: 06/24/02

Blasland, Bouck & Lee, Inc.  
**Project Reference:** NM SCHOOL STREET PROJECT #364.58.007  
**Client Sample ID :** IW-5

**Date Sampled :** 06/04/02 16:20 **Order #:** 558114 **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** 06/05/02 **Submission #:** R2212267 **Analytical Run** 78963

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 06/11/02		
ANALYTICAL DILUTION:	10.00		
BENZENE	5.0	50 U	UG/L
2-BUTANONE (MEK)	10	100 U	UG/L
CARBON TETRACHLORIDE	5.0	50 U	UG/L
CHLOROBENZENE	5.0	50 U	UG/L
CHLOROFORM	5.0	50 U	UG/L
1,2-DICHLOROETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHENE	5.0	50 U	UG/L
TETRACHLOROETHENE	5.0	50 U	UG/L
TRICHLOROETHENE	5.0	50 U	UG/L
VINYL CHLORIDE	5.0	50 U	UG/L

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
BROMOFLUOROBENZENE	(42 - 149 %)	92	%
TOLUENE-D8	(71 - 128 %)	98	%
DIBROMOFLUOROMETHANE	(70 - 127 %)	105	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8270C TCLP

Reported: 06/24/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #364.58.007

Client Sample ID : IW-5

Date Sampled : 06/04/02 16:20 Order #: 558114 Sample Matrix: SOIL/SEDIMENT  
Date Received: 06/05/02 Submission #: R2212267 Analytical Run 78905

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 06/10/02			
DATE ANALYZED : 06/11/02			
ANALYTICAL DILUTION: 10.00			
1,4-DICHLOROBENZENE	10	100 U	UG/L
2,4-DINITROTOLUENE	10	100 U	UG/L
HEXACHLOROBENZENE	10	100 U	UG/L
HEXACHLOROBUTADIENE	10	100 U	UG/L
HEXACHLOROETHANE	10	100 U	UG/L
2-METHYLPHENOL	10	100 U	UG/L
3+4-METHYLPHENOL	10	100 U	UG/L
NITROBENZENE	10	100 U	UG/L
PENTACHLOROPHENOL	50	500 U	UG/L
PYRIDINE	50	500 U	UG/L
2,4,6-TRICHLOROPHENOL	10	100 U	UG/L
2,4,5-TRICHLOROPHENOL	10	100 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-D14	(10 - 152 %)	75	%
NITROBENZENE-D5	(10 - 138 %)	46	%
PHENOL-D6	(11 - 130 %)	23	%
2-FLUOROBIPHENYL	(11 - 112 %)	45	%
2-FLUOROPHENOL	(10 - 130 %)	36	%
2,4,6-TRIBROMOPHENOL	(10 - 130 %)	65	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

COLUMBIA ANALYTICAL SERVICES

INORGANIC BLANK SPIKE SUMMARY

CAS Submission #: R2212267  
Client: Blasland, Bouck & Lee, Inc.  
NM SCHOOL STREET PROJECT #364.58.007

BLANK SPIKES

	BLANK	FOUND	ADDED	% REC	LIMITS	RUN	UNITS
ARSENIC	0.500 U	5.62	5.00	112	80 - 120	78845	MG/L
BARIUM	1.00 U	5.06	5.00	101	80 - 120	78845	MG/L
CADMIUM	0.100 U	1.05	1.00	105	80 - 120	78845	MG/L
CHROMIUM	0.100 U	5.11	5.00	102	80 - 120	78845	MG/L
LEAD	0.100 U	5.38	5.00	108	80 - 120	78845	MG/L
SELENIUM	0.500 U	0.988	1.00	99	80 - 120	78845	MG/L
SILVER	0.100 U	5.46	5.00	109	80 - 120	78845	MG/L
MERCURY	0.000300	0.0106	0.0100	107	80 - 120	78879	MG/L
CYANIDE REACTIVITY	5.00 U	2.46	33.3	7	0 - 23	78917	MG/KG
SULFIDE REACTIVITY	20.0 U	134	67.9	197	42 - 213	78918	MG/KG



**COLUMBIA ANALYTICAL SERVICES**

**VOLATILE ORGANICS**  
METHOD 8260B TCLP  
Reported: 06/24/02

**Project Reference:**  
**Client Sample ID :** METHOD BLANK

**Date Sampled :** **Order #:** 559951 **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** **Submission #:** **Analytical Run** 78963

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ANALYTE	PQL	RESULT	UNITS
<hr/>			
DATE ANALYZED	: 06/11/02		
ANALYTICAL DILUTION:	1.00		
<hr/>			
BENZENE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

BROMOFLUOROBENZENE	(42 - 149 %)	94	%
TOLUENE-D8	(71 - 128 %)	100	%
DIBROMOFLUOROMETHANE	(70 - 127 %)	104	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8270C TCLP

Reported: 06/24/02

**Project Reference:**

Client Sample ID : METHOD BLANK

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**Date Sampled :**                                      **Order #:** 559657                                      **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:**                                      **Submission #:**                                      **Analytical Run** 78905

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 06/10/02		
DATE ANALYZED	: 06/11/02		
ANALYTICAL DILUTION:	10.00		
1,4-DICHLOROBENZENE	10	100 U	UG/L
2,4-DINITROTOLUENE	10	100 U	UG/L
HEXACHLOROBENZENE	10	100 U	UG/L
HEXACHLOROBUTADIENE	10	100 U	UG/L
HEXACHLOROETHANE	10	100 U	UG/L
2-METHYLPHENOL	10	100 U	UG/L
3+4-METHYLPHENOL	10	100 U	UG/L
NITROBENZENE	10	100 U	UG/L
PENTACHLOROPHENOL	50	500 U	UG/L
PYRIDINE	50	500 U	UG/L
2,4,6-TRICHLOROPHENOL	10	100 U	UG/L
2,4,5-TRICHLOROPHENOL	10	100 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-D14	(10 - 152 %)	64	%
NITROBENZENE-D5	(10 - 138 %)	45	%
PHENOL-D6	(11 - 130 %)	22	%
2-FLUOROBIPHENYL	(11 - 112 %)	42	%
2-FLUOROPHENOL	(10 - 130 %)	34	%
2,4,6-TRIBROMOPHENOL	(10 - 130 %)	52	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
METHOD: 8260B TCLP

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 559952 ANALYTICAL RUN #: 78963

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED	: 6/11/2002		
ANALYTICAL DILUTION:	1.0		
BENZENE	20.0	101	70 - 130
2-BUTANONE (MEK)	20.0	93	50 - 150
CARBON TETRACHLORIDE	20.0	103	70 - 130
CHLOROBENZENE	20.0	98	70 - 130
CHLOROFORM	20.0	99	70 - 130
1,2-DICHLOROETHANE	20.0	101	70 - 130
1,1-DICHLOROETHENE	20.0	85	70 - 130
TETRACHLOROETHENE	20.0	103	70 - 130
TRICHLOROETHENE	20.0	95	70 - 130
VINYL CHLORIDE	20.0	84	70 - 130

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY    LABORATORY CONTROL SAMPLE  
SOIL/SEDIMENT

Spiked Order No. : 559658

Client ID:

Test: 8270C TCLP

Analytical Units: UG/L

Run Number : 78905

ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	BLANK SPIKE		QC LIMITS
			FOUND	% REC.	REC.
1,4-DICHLOROBENZENE	1000	0	460	46	25 - 105
2,4-DINITROTOLUENE	1000	0	580	58	41 - 130
HEXACHLOROBENZENE	1000	0	800	80	45 - 110
HEXACHLOROBUTADIENE	1000	0	470	47	31 - 107
HEXACHLOROETHANE	1000	0	390	39	25 - 92
2-METHYLPHENOL	1000	0	580	58	39 - 98
3+4-METHYLPHENOL	2000	0	1100	55	37 - 99
NITROBENZENE	1000	0	560	56	32 - 103
PENTACHLOROPHENOL	1000	0	560	56	17 - 110
2,4,6-TRICHLOROPHENOL	1000	0	635	64	39 - 106
2,4,5-TRICHLOROPHENOL	1000	0	700	70	40 - 108



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #

CAS Contact

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (716) 288-5380 • 800-695-7222 x11 • FAX (716) 288-8475

PAGE 1 OF 1

Project Name: **NM School Street** Project Number: **364.58.007**

Project Manager: **John Brussel** Report CC

Company/Address: **BBL, Inc.**

**6723 Towpath Rd.**

**Syracuse, NY 13214**

Phone #: **(315) 446-2570** FAX#: **(315) 449-4111**

Sampler's Signature: **[Signature]** Sampler's Printed Name: **Christine Vooris**

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	ANALYSIS REQUESTED (Include Method Number and Container Preservative)												PRESERVATIVE	REMARKS/ ALTERNATE DESCRIPTION										
						GC/MS VOAS	GC/MS SVOAS	GC VOAS	PESTICIDES/PCBs	STARS LIST 8021 VOAS	STARS LIST 8021 TCLP	STARS LIST 8270 VOAS	STARS LIST 8270 TCLP	TCLP METALS	WASTE CHARACTERIZATION	METALS, TOTAL	METALS, DISSOLVED			METALS, TOTAL (List in comments below)									
IW-1	558108	6/4/02	14:45	SOIL	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Please use USEPA Methods: 8260 VOCs 8270 SVOCs 6010 Metals Chapter 7 Methods ICR	
IW-2			15:15		3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
IW-3			15:30		3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
IW-4			15:50		3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
IW-5			16:20		3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		

SPECIAL INSTRUCTIONS/COMMENTS  
**Metals**  
Please fax preliminary results to John Brussel.

TURNAROUND REQUIREMENTS  
RUSH (SURCHARGES APPLY)  24 hr  48 hr  5 day

REPORT REQUIREMENTS  
 I. Results Only  
 II. Results + QC Summaries (LCS, DUP, MS/MSD as required)  
 III. Results + QC and Calibration Summaries  
 IV. Data Validation Report with Raw Data  
 V. Specialized Forms / Custom Report  
Edata  Yes  No

INVOICE INFORMATION  
BILL TO: **John Brussel**  
**6723 Towpath Rd**  
**Syracuse, NY 13214**  
SUBMISSION #:

RECEIVED BY: **[Signature]**  
SIGNATURE: **[Signature]**  
PRINTED NAME: **[Printed Name]**  
FIRM: **[Firm]**  
DATE/TIME: **[Date/Time]**

**Cooler Receipt And Preservation Check Form**

Project/Client BBL Submission Number \_\_\_\_\_

Cooler received on 6-5-02 by: NE COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC CLIENT
7. Temperature of cooler(s) upon receipt: 4°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes  
 If No, Explain Below No No No No No

Date/Time Temperatures Taken: 6-5-02 @ 11:00

Thermometer ID: 161 Temp Blank Sample Bottle Cooler Temp. IR. Gun

If out of Temperature, Client Approval to Run Samples \_\_\_\_\_

Cooler Breakdown: Date: 6/6/02 by: and

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO <sub>3</sub>					
2	H <sub>2</sub> SO <sub>4</sub>					
Residual Chlorine (+/-)	for TCN & Phenol					
5-11 pH slurry*	CLP SVOA					
5-9 pH slurry*	CLP* P/PCBs					
5-9**	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH  
 \*Do not adjust pH! Report in C/N \*\*If pH adjustment is required, use NaOH and/or H<sub>2</sub>SO<sub>4</sub>

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

Other Comments:

***Post-Excavation Waste  
Characterization Sample Results***

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A FULL SERVICE ENVIRONMENTAL LABORATORY

August 23, 2002

Mr. John Brussel  
Blasland, Bouck & Lee, Inc.  
6723 Towpath Road  
Box 66  
Syracuse, NY 13214

PROJECT:NM - SCHOOL ST IRM PROJECT #36458.007  
Submission #:R2213359

Dear Mr. Brussel:

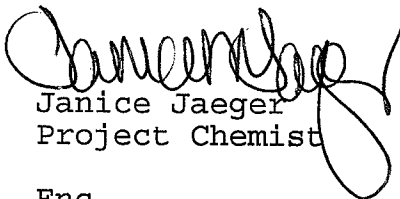
Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 08/22/02 per a Facsimile transmittal. All data has been reviewed prior to report submission.

Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

  
Janice Jaeger  
Project Chemist

Enc.





1 Mustard ST.  
Suite 250  
Rochester, NY 14609  
(585) 288-5380

**THIS IS AN ANALYTICAL TEST REPORT FOR:**

Client : Blasland, Bouck & Lee, Inc.  
Project Reference: NM - SCHOOL ST IRM PROJECT #36458.007  
Lab Submission # : R2213359  
Project Manager : Janice Jaeger  
Reported : 08/23/02

Report Contains a total of 13 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. Michael F. Perry



## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM-School St IRM Project #36458.007  
SUBMISSION #: R2213359

BBL samples were collected on 08/19/02 and received at CAS on 08/20/02 in good condition.

### PCB'S

Two soil samples were analyzed for PCB's by method 8082 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits.

Site specific QC was not requested for these samples. All Blank spike/Blank spike duplicate recoveries were within limits. All RPD's were outside limits and have been flagged with an "\*\*".

The Laboratory Blank associated with these analyses was free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.



This report contains analytical results for the following samples:

Submission #: R2213359

Lab ID

577526

577527

Client ID

WC-1

WC-2



Effective 6/28/2002

## INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- E - The reported value is estimated because of the presence of interference.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- \* - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292



Effective 6/18/2002

## ORGANIC QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- X - As specified in Case Narrative.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292

**COLUMBIA ANALYTICAL SERVICES**

Reported: 08/23/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : WC-1

---

Date Sampled : 08/19/02

Order #: 577526

Sample Matrix: SOIL/SEDIMENT

Date Received: 08/20/02

Submission #: R2213359

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	91.9	%	08/21/02	11:10	1.0

---

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 08/23/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : WC-1

---

Date Sampled : 08/19/02                      Order #: 577526                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/20/02                      Submission #: R2213359                      Percent Solid: 91.9

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 08/20/02	
DATE ANALYZED		: 08/21/02	
ANALYTICAL DILUTION:	10.00		Dry Weight
PCB 1016	33	360 U	UG/KG
PCB 1221	33	360 U	UG/KG
PCB 1232	33	360 U	UG/KG
PCB 1242	33	360 U	UG/KG
PCB 1248	33	360 U	UG/KG
PCB 1254	33	360 U	UG/KG
PCB 1260	33	3100	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	123	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	106	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 08/23/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM - SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : WC-2

---

Date Sampled : 08/19/02                      Order #: 577527                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/20/02                      Submission #: R2213359

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	92.3	%	08/21/02	11:10	1.0

---



**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 08/23/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : WC-2

---

Date Sampled : 08/19/02                      Order #: 577527                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/20/02                      Submission #: R2213359                      Percent Solid: 92.3

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 08/20/02	
DATE ANALYZED		: 08/21/02	
ANALYTICAL DILUTION:	10.00		Dry Weight
PCB 1016	33	360 U	UG/KG
PCB 1221	33	360 U	UG/KG
PCB 1232	33	360 U	UG/KG
PCB 1242	33	360 U	UG/KG
PCB 1248	33	360 U	UG/KG
PCB 1254	33	360 U	UG/KG
PCB 1260	33	1900	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	109	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	105	%

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 08/23/02

Project Reference:

Client Sample ID : METHOD BLANK

---

Date Sampled :	Order #:	577740	Sample Matrix:	SOIL/SEDIMENT
Date Received:	Submission #:		Percent Solid:	100

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/20/02		
DATE ANALYZED	: 08/20/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	33 U	UG/KG
PCB 1221	33	33 U	UG/KG
PCB 1232	33	33 U	UG/KG
PCB 1242	33	33 U	UG/KG
PCB 1248	33	33 U	UG/KG
PCB 1254	33	33 U	UG/KG
PCB 1260	33	33 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	68	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	73	%







# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (716) 288-5380 • 800-695-7222 x11 • FAX (716) 288-8475 PAGE 1 OF 1

SR #

CAS Contact

Project Name <b>NM - School St IRM</b> Project Manager <b>John C. Brussel, P.E.</b> Company/Address <b>6723 TOWPATH RD</b> <b>SYRACUSE, NEW YORK 13214</b>		Project Number <b>316458.007</b> Report CC		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Phone # <b>315-446-2570 ext 441</b> Sampler's Signature <i>Tavia M. Cramer</i> Sampler's Printed Name <b>TAVIA M. CRAMER</b>		FAX# <b>315-449-4111</b>		PRESERVATIVE <b>8</b>	
CLIENT SAMPLE ID <b>WC-1</b> <b>WC-2</b>		FOR OFFICE USE ONLY LAB ID <b>577924</b> <b>27</b>		NUMBER OF CONTAINERS <b>1</b> <b>1</b>	
SAMPLING DATE <b>8/19/02</b> <b>8/19/02</b>		TIME <b>1345</b> <b>1415</b>		MATRIX <b>SOIL</b> <b>SOIL</b>	
REMARKS/ ALTERNATE DESCRIPTION <b>*TEMP BLANK INCLUDED</b> <b>Please fax preliminary results ASAP</b> <b>TO John Brussel @ 315-449-4111 and</b> <b>TAVIA Cramer @ 315-452-7080</b> <b>578</b>					
SPECIAL INSTRUCTIONS/COMMENTS <b>Metals</b>					
TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 24 hr <input checked="" type="checkbox"/> 48 hr <input type="checkbox"/> 5 day <input type="checkbox"/> STANDARD REQUESTED FAX DATE <b>ASAP</b> REQUESTED REPORT DATE <b>STANDARD</b>		REPORT REQUIREMENTS <input checked="" type="checkbox"/> I. Results Only <input type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report Edata <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		INVOICE INFORMATION PO# BILL TO:	
SUBMISSION #: RECEIVED BY <i>ReTeX</i>		RELINQUISHED BY Signature Printed Name Firm Date/Time		RECEIVED BY Signature Printed Name Firm Date/Time	
SAMPLE RECEIPT: CONDITION/COOLER TEMP: <b>30</b> RELINQUISHED BY Signature Printed Name Firm Date/Time <b>18:00</b> <b>8/20/02</b> <b>9:20</b>		CUSTODY SEALS: <b>Y</b> RELINQUISHED BY Signature Printed Name Firm Date/Time		RECEIVED BY Signature Printed Name Firm Date/Time	

**Cooler Receipt And Preservation Check Form**

Project/Client BLA Submission Number R2-13359

Cooler received on 8/20/02 by: [Signature] COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES/NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES/NO
3. Did all bottles arrive in good condition (unbroken)? YES/NO
4. Did any VOA vials have significant air bubbles? YES/NO/N/A
5. Were Ice or Ice packs present? YES/NO
6. Where did the bottles originate? CAS/ROC, CLIENT
7. Temperature of cooler(s) upon receipt: 3°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 8/20/02 9:20

Thermometer ID: \_\_\_\_\_ Temp Blank Sample Bottle Cooler Temp. IR. Gun

If out of Temperature, Client Approval to Run Samples \_\_\_\_\_

Cooler Breakdown: Date: 8/20/02 by: [Signature]

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES/NO
2. Did all bottle labels and tags agree with custody papers? YES/NO
3. Were correct containers used for the tests indicated? YES/NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO <sub>3</sub>					
2	H <sub>2</sub> SO <sub>4</sub>					
Residual Chlorine (+/-)	for TCN & Phenol					
5-11 pH slurry*	CLP SVOA					
5-9 pH slurry*	CLP* P/PCBs					
5-9**	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH  
\*Do not adjust pH! Report in C/N \*\*If pH adjustment is required, use NaOH and/or H<sub>2</sub>SO<sub>4</sub>

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2			

Other Comments:



A FULL SERVICE ENVIRONMENTAL LABORATORY

September 10, 2002

Mr. John Brussel  
Blasland, Bouck & Lee, Inc.  
6723 Towpath Road  
Box 66  
Syracuse, NY 13214

PROJECT:NM SCHOOL ST IRM PROJECT #36458.007  
Submission #:R2213433

Dear Mr. Brussel:

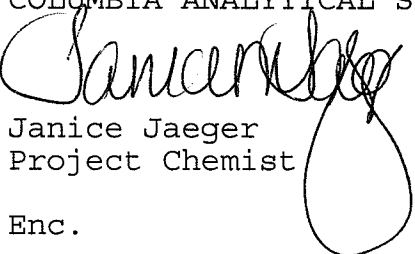
Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 08/28/02 per a Facsimile transmittal. All data has been reviewed prior to report submission.

Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

  
Janice Jaeger  
Project Chemist

Enc.



1 Mustard ST.  
Suite 250  
Rochester, NY 14609  
(585) 288-5380

**THIS IS AN ANALYTICAL TEST REPORT FOR:**

Client : Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM PROJECT #36458.007  
Lab Submission # : R2213433  
Project Manager : Janice Jaeger  
Reported : 09/10/02

Report Contains a total of 15 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. *Michael E. Perry*





## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM-School St IRM Project #36458.007  
SUBMISSION #: R2213433

BBL samples were collected on 08/22/02 and received at CAS on 08/24/02 in good condition.

### PCB'S

Two soil samples were analyzed for PCB's by method 8082 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits except WC-3DL and WC-4DL. The surrogates were diluted out and have been flagged with a "D".

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits.

PCB 1260 for WC-3 and WC-4 has been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

The Laboratory Blank associated with these analyses was free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.



This report contains analytical results for the following samples:

Submission #: R2213433

Lab ID

579175

579176

Client ID

WC-3

WC-4



Effective 6/18/2002

## ORGANIC QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- X - As specified in Case Narrative.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292



Effective 6/28/2002

## INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- E - The reported value is estimated because of the presence of interference.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- \* - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292

**COLUMBIA ANALYTICAL SERVICES**

Reported: 09/10/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : WC-3

Date Sampled : 08/22/02

Order #: 579175

Sample Matrix: SOIL/SEDIMENT

Date Received: 08/24/02

Submission #: R2213433

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	93.5	%	08/27/02	16:02	1.0

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/10/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : WC-3

Date Sampled : 08/22/02      Order #: 579175      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/24/02      Submission #: R2213433      Percent Solid: 93.5

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 08/27/02			
DATE ANALYZED : 08/28/02			
ANALYTICAL DILUTION: 100.00			Dry Weight
PCB 1016	33	3500 U	UG/KG
PCB 1221	33	3500 U	UG/KG
PCB 1232	33	3500 U	UG/KG
PCB 1242	33	3500 U	UG/KG
PCB 1248	33	3500 U	UG/KG
PCB 1254	33	3500 U	UG/KG
PCB 1260	33	17000	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/10/02

Blasland, Bouck & Lee, Inc.

**Project Reference:** NM SCHOOL ST IRM PROJECT #36458.007

**Client Sample ID :** WC-3

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**Date Sampled :** 08/22/02      **Order #:** 579175      **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** 08/24/02    **Submission #:** R2213433    **Percent Solid:** 93.5

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 08/27/02		
DATE ANALYZED	: 08/27/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	35 U	UG/KG
PCB 1221	33	35 U	UG/KG
PCB 1232	33	35 U	UG/KG
PCB 1242	33	35 U	UG/KG
PCB 1248	33	35 U	UG/KG
PCB 1254	33	35 U	UG/KG
PCB 1260	33	9400 E	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	97	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	94	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 09/10/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : WC-4

Date Sampled : 08/23/02

Order #: 579176

Sample Matrix: SOIL/SEDIMENT

Date Received: 08/24/02

Submission #: R2213433

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	91.4	%	08/27/02	16:02	1.0



COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/10/02

Blasland, Bouck & Lee, Inc.

**Project Reference:** NM SCHOOL ST IRM PROJECT #36458.007

**Client Sample ID :** WC-4

---

**Date Sampled :** 08/23/02      **Order #:** 579176      **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** 08/24/02    **Submission #:** R2213433    **Percent Solid:** 91.4

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 08/27/02	
DATE ANALYZED		: 08/28/02	
ANALYTICAL DILUTION:	10.00		Dry Weight
PCB 1016	33	360 U	UG/KG
PCB 1221	33	360 U	UG/KG
PCB 1232	33	360 U	UG/KG
PCB 1242	33	360 U	UG/KG
PCB 1248	33	360 U	UG/KG
PCB 1254	33	360 U	UG/KG
PCB 1260	33	1800	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	101	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	76	%

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/10/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : WC-4

---

Date Sampled : 08/23/02                      Order #: 579176                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/24/02                      Submission #: R2213433                      Percent Solid: 91.4

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 08/27/02			
DATE ANALYZED : 08/28/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	36 U	UG/KG
PCB 1221	33	36 U	UG/KG
PCB 1232	33	36 U	UG/KG
PCB 1242	33	36 U	UG/KG
PCB 1248	33	36 U	UG/KG
PCB 1254	33	36 U	UG/KG
PCB 1260	33	1500 E	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	85	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	79	%

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/10/02

**Project Reference:**

**Client Sample ID :** METHOD BLANK

---

<b>Date Sampled :</b>	<b>Order #:</b> 579647	<b>Sample Matrix:</b> SOIL/SEDIMENT
<b>Date Received:</b>	<b>Submission #:</b>	<b>Percent Solid:</b> 100

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ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 08/27/02			
DATE ANALYZED : 08/27/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	33 U	UG/KG
PCB 1221	33	33 U	UG/KG
PCB 1232	33	33 U	UG/KG
PCB 1242	33	33 U	UG/KG
PCB 1248	33	33 U	UG/KG
PCB 1254	33	33 U	UG/KG
PCB 1260	33	33 U	UG/KG

---

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	80	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	51	%

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY    LABORATORY CONTROL SAMPLE  
SOIL/SEDIMENT

Spiked Order No. : 579648

Client ID:

Test: 8082 PCB'S

Analytical Units: UG/KG

Run Number : 81921

ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	BLANK SPIKE		QC LIMITS
			FOUND	% REC.	REC.
PCB 1260	167	0	170	102	34 - 130



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (716) 288-5380 • 800-695-7222 x11 • FAX (716) 288-8475 PAGE 1 OF 1

SR # \_\_\_\_\_  
CAS Contact \_\_\_\_\_

Project Name <b>NM - School St. 1 RM</b>		Project Number <b>30458-007</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>John Brussel</b>		Report CC		PRESERVATIVE	
Company/Address <b>ESBL, Inc. 6723 Towpath Rd Syracuse NY 13214</b>		FAX# <b>315-449-4111</b>		NUMBER OF CONTAINERS	
Phone # <b>315-446-2570</b>		Sampler's Printed Name <b>TARA M. CRAMER</b>		PRESERVATIVE	
Sampler's Signature <i>Tara M. Cramer</i>		FOR OFFICE USE ONLY		PRESERVATIVE	
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	TIME	MATRIX	ANALYSIS REQUESTED (Include Method Number and Container Preservative)
WC-3		8/22/02	9:00	SOIL	GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP PESTICIDES/PCBS <input checked="" type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 601/602 STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8270 SVOAS <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> H/P METALS <input type="checkbox"/> SVOAS <input type="checkbox"/> H/P METALS <input type="checkbox"/> TOTAL METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below)
WC-4		8/23/02	11:00	SOIL	GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP PESTICIDES/PCBS <input checked="" type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 601/602 STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8270 SVOAS <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> H/P METALS <input type="checkbox"/> SVOAS <input type="checkbox"/> H/P METALS <input type="checkbox"/> TOTAL METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below)
VF-14			13:00		GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP PESTICIDES/PCBS <input checked="" type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 601/602 STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8270 SVOAS <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> H/P METALS <input type="checkbox"/> SVOAS <input type="checkbox"/> H/P METALS <input type="checkbox"/> TOTAL METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below)
VF-19			8:30		GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP PESTICIDES/PCBS <input checked="" type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 601/602 STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8270 SVOAS <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> H/P METALS <input type="checkbox"/> SVOAS <input type="checkbox"/> H/P METALS <input type="checkbox"/> TOTAL METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below)
VF-36			11:30		GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP PESTICIDES/PCBS <input checked="" type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 601/602 STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8270 SVOAS <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> H/P METALS <input type="checkbox"/> SVOAS <input type="checkbox"/> H/P METALS <input type="checkbox"/> TOTAL METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below)
VF-37			11:45		GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP PESTICIDES/PCBS <input checked="" type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 601/602 STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8270 SVOAS <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> H/P METALS <input type="checkbox"/> SVOAS <input type="checkbox"/> H/P METALS <input type="checkbox"/> TOTAL METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below)
DUP-1					GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP PESTICIDES/PCBS <input checked="" type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 601/602 STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8270 SVOAS <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> H/P METALS <input type="checkbox"/> SVOAS <input type="checkbox"/> H/P METALS <input type="checkbox"/> TOTAL METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below)
MS (VF-19)			8:30		GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP PESTICIDES/PCBS <input checked="" type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 601/602 STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8270 SVOAS <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> H/P METALS <input type="checkbox"/> SVOAS <input type="checkbox"/> H/P METALS <input type="checkbox"/> TOTAL METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below)
MSP (VF-19)			8:30		GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP PESTICIDES/PCBS <input checked="" type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 601/602 STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8270 SVOAS <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> H/P METALS <input type="checkbox"/> SVOAS <input type="checkbox"/> H/P METALS <input type="checkbox"/> TOTAL METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below)
Temp Blank					GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP GCMS VOAS <input type="checkbox"/> CLP GCMS SVOAS <input type="checkbox"/> CLP PESTICIDES/PCBS <input checked="" type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 601/602 STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8021 VOAS <input type="checkbox"/> TCLP STARS LIST 8270 SVOAS <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> H/P METALS <input type="checkbox"/> SVOAS <input type="checkbox"/> H/P METALS <input type="checkbox"/> TOTAL METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below)

Note the 2 different Tom-around times. \* (VF) samples reported by NYS ASPCAT B Deliverables

SPECIAL INSTRUCTIONS/COMMENTS  
Metals

TURNAROUND REQUIREMENTS  
RUSH (SURCHARGES APPLY)  
24 hr  48 hr  5 day   
STANDARD   
REQUESTED FAX DATE  
ASAP  
REQUESTED REPORT DATE  
STANDARD

REPORT REQUIREMENTS  
 I. Results Only (WC samples)  
 II. Results + CC Summaries (Sample)  
III. Results + CC and Calibration Summaries  
IV. Data Validation Report with Raw Data  
V. Specialized Forms / Custom Report

INVOICE INFORMATION  
BILL TO:  
SUBMISSION #:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: \_\_\_\_\_ CUSTODY SEALS: Y N

REINQUISHED BY	RECEIVED BY	REINQUISHED BY	RECEIVED BY
Signature <i>Tara M. Cramer</i>	Signature <i>James Tom</i>	Signature <i>Tara M. Cramer</i>	Signature <i>James Tom</i>
Printed Name <i>Tara M. Cramer</i>	Printed Name <i>James Tom</i>	Printed Name <i>Tara M. Cramer</i>	Printed Name <i>James Tom</i>
Firm <i>ESBL, Inc.</i>	Firm <i>CAS</i>	Firm <i>ESBL, Inc.</i>	Firm <i>CAS</i>
Date/Time <i>8/23/02 11:00 AM</i>	Date/Time <i>8/24/02 9:25</i>	Date/Time <i>8/23/02 11:00 AM</i>	Date/Time <i>8/24/02 9:25</i>

**Columbia Analytical Services Inc.  
Cooler Receipt And Preservation Check Form**

Project/Client BBL Submission Number 13433

Cooler received on 2/24/02 by: AND COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES/NO
  2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
  3. Did all bottles arrive in good condition (unbroken)? YES NO
  4. Did any VOA vials have significant air bubbles? YES NO N/A
  5. Were Ice or Ice packs present? YES NO
  6. Where did the bottles originate? CAS/ROC, CLIENT
  7. Temperature of cooler(s) upon receipt: 5°
- Is the temperature within 0° - 6° C?: Yes  Yes  Yes  Yes  Yes
- If No, Explain Below No  No  No  No  No
- Date/Time Temperatures Taken: 2/24/02 937
- Thermometer ID: IR-Gun Temp Blank Sample Bottle Cooler Temp. IR Gun

If out of Temperature, Client Approval to Run Samples \_\_\_\_\_

Cooler Breakdown: Date: 8/26/02 by: BCL

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

		YES	NO	Sample ID.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO <sub>3</sub>					
2	H <sub>2</sub> SO <sub>4</sub>					
Residual Chlorine (+/-)	for TCN & Phenol					
5-9*	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH  
\*If pH adjustment is required, use NaOH and/or H<sub>2</sub>SO<sub>4</sub>

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2		

Other Comments:



A FULL SERVICE ENVIRONMENTAL LABORATORY

September 23, 2002

Mr. John Brussel  
Blasland, Bouck & Lee, Inc.  
6723 Towpath Road  
Box 66  
Syracuse, NY 13214

PROJECT:NM SCHOOL ST IRM PROJECT#36458.007  
Submission #:R2213534

Dear Mr. Brussel:

Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 09/05/02 per a Facsimile transmittal. All data has been reviewed prior to report submission.

Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

A handwritten signature in black ink, appearing to read "Janice Jaeger", is written over the typed name and title. The signature is fluid and cursive, with a long, sweeping tail that extends downwards and to the right.

Janice Jaeger  
Project Chemist

Enc.



1 Mustard ST.  
Suite 250  
Rochester, NY 14609  
(585) 288-5380

**THIS IS AN ANALYTICAL TEST REPORT FOR:**

Client : Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM PROJECT#36458.007  
Lab Submission # : R2213534  
Project Manager : Janice Jaeger  
Reported : 09/23/02

Report Contains a total of 12 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. *Michael K. Perry*



## **CASE NARRATIVE**

COMPANY: Blasland Bouck & Lee  
NM-School St IRM Project #36458.007  
SUBMISSION #: R2213534

BBL sample was collected on 08/30/02 and received at CAS on 08/31/02 in good condition.

### **PCB'S**

One soil sample was analyzed for PCB's by method 8082 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits except WC-5DL. All surrogates were diluted out and have been flagged with a "D".

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits. The Blank spike duplicate recovery was outside limits and has been flagged with an "\*\*". All RPD's were within limits.

PCB 1260 for WC-5 has been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

The Laboratory Blank associated with these analyses was free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.



This report contains analytical results for the following samples:

Submission #: R2213534

Lab ID

580907

Client ID

WC-5



Effective 6/18/2002

## ORGANIC QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- X - As specified in Case Narrative.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292



Effective 6/28/2002

## INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- E - The reported value is estimated because of the presence of interference.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- \* - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

### CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292

**COLUMBIA ANALYTICAL SERVICES**

Reported: 09/23/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM PROJECT#36458.007  
Client Sample ID : WC-5

---

Date Sampled : 08/30/02 10:00                      Order #: 580907                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/31/02                      Submission #: R2213534

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	88.9	%	09/04/02	12:00	1.0

---

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/23/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT#36458.007

Client Sample ID : WC-5

Date Sampled : 08/30/02 10:00 Order #: 580907 Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/31/02 Submission #: R2213534 Percent Solid: 88.9

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/03/02			
DATE ANALYZED : 09/05/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	37 U	UG/KG
PCB 1254	33	37 U	UG/KG
PCB 1260	33	5500 E	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	88	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	78	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/23/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT#36458.007

Client Sample ID : WC-5

---

Date Sampled : 08/30/02 10:00 Order #: 580907      Sample Matrix: SOIL/SEDIMENT  
Date Received: 08/31/02 Submission #: R2213534      Percent Solid: 88.9

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/03/02			
DATE ANALYZED : 09/05/02			
ANALYTICAL DILUTION: 100.00			Dry Weight
PCB 1016	33	3700 U	UG/KG
PCB 1221	33	3700 U	UG/KG
PCB 1232	33	3700 U	UG/KG
PCB 1242	33	3700 U	UG/KG
PCB 1248	33	3700 U	UG/KG
PCB 1254	33	3700 U	UG/KG
PCB 1260	33	10000	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/23/02

Project Reference:

Client Sample ID : METHOD BLANK

---

Date Sampled :	Order #: 581243	Sample Matrix: SOIL/SEDIMENT
Date Received:	Submission #:	Percent Solid: 100

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/03/02			
DATE ANALYZED : 09/06/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	33 U	UG/KG
PCB 1221	33	33 U	UG/KG
PCB 1232	33	33 U	UG/KG
PCB 1242	33	33 U	UG/KG
PCB 1248	33	33 U	UG/KG
PCB 1254	33	33 U	UG/KG
PCB 1260	33	33 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	96	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	87	%







# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

SR #

CAS Contact

PAGE 1 OF 1

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (716) 288-5380 • 800-695-7222 x11 • FAX (716) 288-8475

www.caslab.com

Project Name <b>NW School St ARM</b>		Project Number <b>30458.007</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>John Brussel</b>		Report CC		PRESERVATIVE	
Company/Address <b>BBL Inc. 6723 Towpath Rd Syracuse NY 13214</b>		FAX# <b>315-446-2570</b>		NUMBER OF CONTAINERS	
Phone # <b>315-446-2570</b>		FAX# <b>315-449-4111</b>		GC/MS VOAS <input type="checkbox"/> CLP GC/MS SVOS <input type="checkbox"/> CLP GC/MS SVOS <input type="checkbox"/> CLP GC/MS SVOS <input type="checkbox"/> CLP	
Sample's Signature <b>Jean M. Cramer</b>		Sample's Printed Name <b>JAN M CRAMER</b>		PESTICIDES (PCBs) <input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> CLP <input type="checkbox"/> 8082 <input type="checkbox"/> 607/602	
FOR OFFICE USE ONLY		SAMPLING DATE		MATRIX	
LAB ID		<b>9/30/02</b>		<b>Soil</b>	
CLIENT SAMPLE ID <b>WC-5</b>					
SPECIAL INSTRUCTIONS/COMMENTS <b>Temp blank</b>					
Metals					
TURNAROUND REQUIREMENTS		RUSH (SURCHARGES APPLY)		REPORT REQUIREMENTS	
24 hr <input checked="" type="checkbox"/> 48 hr <input type="checkbox"/> 5 day <input type="checkbox"/>		STANDARD		<input checked="" type="checkbox"/> I. Results Only <input type="checkbox"/> II. Results + OC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + OC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report	
REQUESTED FAX DATE <b>ASAP</b>		REQUESTED REPORT DATE <b>STANDARD</b>		Edata <input type="checkbox"/> Yes <input type="checkbox"/> No	
RECEIVED BY <b>Jean M Cramer</b>		RECEIVED BY		INVOICE INFORMATION	
Signature <b>Jean M Cramer</b>		Signature		PO#	
Printed Name <b>Jean M Cramer</b>		Printed Name		BILL TO:	
Firm <b>BBL Inc.</b>		Firm		<b>1222/3534</b>	
Date/Time <b>9/30/02 12:00</b>		Date/Time		SUBMISSION #:	
CUSTODY SEALS: <b>Y N</b>		RECEIVED BY		RECEIVED BY	
Signature <b>Jean M Cramer</b>		Signature		Signature	
Printed Name <b>Jean M Cramer</b>		Printed Name		Printed Name	
Firm <b>BBL Inc.</b>		Firm		Firm	
Date/Time <b>9/30/02 12:00</b>		Date/Time		Date/Time	

**Columbia Analytical Services Inc.  
Cooler Receipt And Preservation Check Form**

Project/Client BBL Submission Number R2-13534

Cooler received on 8-31-02 by: [Signature] COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES/NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES/NO
3. Did all bottles arrive in good condition (unbroken)? YES/NO
4. Did any VOA vials have significant air bubbles? YES/NO/N/A
5. Were Ice or Ice packs present? YES/NO
6. Where did the bottles originate? CAS/ROC CLIENT
7. Temperature of cooler(s) upon receipt: 50

Is the temperature within 0° - 6° C?: Yes  No  Yes  Yes  Yes   
 If No, Explain Below No  No  No  No  No

Date/Time Temperatures Taken: 8-31-02 @ 10:15

Thermometer ID: IR-600 Temp Blank Sample Bottle Cooler Temp. IR. Gun

If out of Temperature, Client Approval to Run Samples \_\_\_\_\_

Cooler Breakdown: Date ~~9-3-02~~ 9-3-02 by: [Signature]

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES/NO
2. Did all bottle labels and tags agree with custody papers? YES/NO
3. Were correct containers used for the tests indicated? YES/NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO <sub>3</sub>					
2	H <sub>2</sub> SO <sub>4</sub>					
Residual Chlorine (+/-)	for TCN & Phenol					
5-9*	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH  
 \*If pH adjustment is required, use NaOH and/or H<sub>2</sub>SO<sub>4</sub>

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2		

Other Comments:



A FULL SERVICE ENVIRONMENTAL LABORATORY

September 11, 2002

Mr. John Brussel  
Blasland, Bouck & Lee, Inc.  
6723 Towpath Road  
Box 66  
Syracuse, NY 13214

PROJECT:NM SCHOOL STREET PROJECT #36458.007  
Submission #:R2213575

Dear Mr. Brussel:

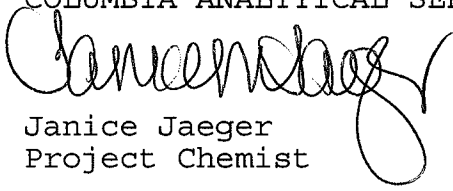
Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 09/09/02 per a Facsimile transmittal. All data has been reviewed prior to report submission.

Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

  
Janice Jaeger  
Project Chemist

Enc.



1 Mustard ST.  
Suite 250  
Rochester, NY 14609  
(585) 288-5380

**THIS IS AN ANALYTICAL TEST REPORT FOR:**

Client : Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Lab Submission # : R2213575  
Project Manager : Janice Jaeger  
Reported : 09/11/02

Report Contains a total of 12 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. Reys



## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM-School St IRM Project #36458.007  
SUBMISSION #: R2213575

BBL sample was collected on 09/04/02 and received at CAS on 09/05/02 in good condition.

### PCB'S

One soil sample was analyzed for PCB's by method 8082 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits except WC-6DL. Decachlorobiphenyl has been flagged with an "\*\*".

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits.

PCB 1248 and PCB 1260 for WC-6 have been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

The Laboratory Blank associated with these analyses was free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.



This report contains analytical results for the following samples:

Submission #: R2213575

Lab ID

581612

Client ID

WC-6



Effective 6/18/2002

## ORGANIC QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- X - As specified in Case Narrative.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292





Effective 6/28/2002

## INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- E - The reported value is estimated because of the presence of interference.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- \* - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

### **CAS/Rochester Lab ID # for State Certifications**

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Connecticut ID # PH0556  
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Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292

**COLUMBIA ANALYTICAL SERVICES**

Reported: 09/11/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : WC-6

Date Sampled : 09/04/02

Order #: 581612

Sample Matrix: SOIL/SEDIMENT

Date Received: 09/05/02

Submission #: R2213575

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	89.1	%	09/06/02	14:08	1.0

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/11/02

Blasland, Bouck & Lee, Inc.

**Project Reference:** NM SCHOOL STREET PROJECT #36458.007

**Client Sample ID :** WC-6

---

**Date Sampled :** 09/04/02      **Order #:** 581612      **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** 09/05/02    **Submission #:** R2213575    **Percent Solid:** 89.1

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 09/05/02	
DATE ANALYZED		: 09/08/02	
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	2000 E	UG/KG
PCB 1254	33	37 U	UG/KG
PCB 1260	33	450 E	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	80	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	78	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/11/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : WC-6

Date Sampled : 09/04/02                      Order #: 581612                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/05/02                      Submission #: R2213575                      Percent Solid: 89.1

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/05/02			
DATE ANALYZED : 09/09/02			
ANALYTICAL DILUTION: 10.00			Dry Weight
PCB 1016	33	370 U	UG/KG
PCB 1221	33	370 U	UG/KG
PCB 1232	33	370 U	UG/KG
PCB 1242	33	370 U	UG/KG
PCB 1248	33	3200	UG/KG
PCB 1254	33	370 U	UG/KG
PCB 1260	33	660	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	133 *	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	125	%

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/11/02

**Project Reference:**

**Client Sample ID :** METHOD BLANK

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<b>Date Sampled :</b>	<b>Order #:</b> 582075	<b>Sample Matrix:</b> SOIL/SEDIMENT
<b>Date Received:</b>	<b>Submission #:</b>	<b>Percent Solid:</b> 100

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ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/05/02			
DATE ANALYZED : 09/07/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	33 U	UG/KG
PCB 1221	33	33 U	UG/KG
PCB 1232	33	33 U	UG/KG
PCB 1242	33	33 U	UG/KG
PCB 1248	33	33 U	UG/KG
PCB 1254	33	33 U	UG/KG
PCB 1260	33	33 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	100	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	84	%

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY    LABORATORY CONTROL SAMPLE  
SOIL/SEDIMENT

Spiked Order No. : 582076

Client ID:

Test: 8082 PCB'S

Analytical Units: UG/KG

Run Number : 82268

ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	BLANK SPIKE		QC LIMITS
			FOUND	% REC.	REC.
PCB 1260	167	0	182	109	34 - 130

Project Name <b>NM School St.</b>		Project Number <b>36458007</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)		PRESERVATIVE	NUMBER OF CONTAINERS	GC/MS VOAS <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP <input type="checkbox"/> 8270 <input type="checkbox"/> 625 <input type="checkbox"/> CLP <input type="checkbox"/> GC VOAS	PESTICIDES PCBs <input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> CLP <input type="checkbox"/> 8082 <input type="checkbox"/> 607 <input type="checkbox"/> 608	STAR'S LIST 8021 VOAS <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP	STAR'S LIST 8270 VOAS <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP	WASTE CHARACTERIZATION <input type="checkbox"/> VOAS <input type="checkbox"/> SVOAS <input type="checkbox"/> H/P	METALS, TOTAL <input type="checkbox"/> React <input type="checkbox"/> Corros. <input type="checkbox"/> Ignit.	METALS, DISSOLVED (List in comments below)	METALS, TOTAL (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION	Preservative Key 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn Acetate 6. MeOH 7. NaHSO4 8. Other <u>ke</u>		
Client Sample ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	TIME	MATRIX															
VF-2		9/4/02	9:00	Soil				<input checked="" type="checkbox"/>											
VF-13A			9:15					<input checked="" type="checkbox"/>											
MS (VF-13A)			9:15					<input checked="" type="checkbox"/>											
MSD (VF-13A)			8:15					<input checked="" type="checkbox"/>											
VF-8			8:45					<input checked="" type="checkbox"/>											
VF-9			8:00					<input checked="" type="checkbox"/>											
VF-7								<input checked="" type="checkbox"/>											
DUP-3								<input checked="" type="checkbox"/>											
WC-6								<input checked="" type="checkbox"/>											
SPECIAL INSTRUCTIONS/COMMENTS <b>Metals</b> * Temp Blank Included in soil jar WC-6 on a 2-day turnaround all others on a 3-day turnaround																			
TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 24 hr <input checked="" type="checkbox"/> 48 hr <input checked="" type="checkbox"/> 5 day <input type="checkbox"/> STANDARD <input type="checkbox"/> <u>WC-6</u> REQUESTED FAX DATE <u>ASAP</u> all other REQUESTED REPORT DATE <u>TAT</u> <u>Standard</u>																			
REPORT REQUIREMENTS <input checked="" type="checkbox"/> I. Results Only <u>WC-6</u> <input checked="" type="checkbox"/> II. Results + QC Summaries <u>All others</u> (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <u>VF-8, VF-9</u> <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report Edata <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																			
INVOICE INFORMATION PO# _____ BILL TO: _____ SUBMISSION #: _____																			
SAMPLE RECEIPT: CONDITION/COOLER TEMP: RECEIVED BY _____ RELINQUISHED BY _____ Signature _____ Printed Name _____ Firm _____ Date/Time _____						RECEIVED BY _____ RELINQUISHED BY _____ Signature _____ Printed Name _____ Firm _____ Date/Time _____						RECEIVED BY _____ RELINQUISHED BY _____ Signature _____ Printed Name _____ Firm _____ Date/Time _____							

**Cooler Receipt And Preservation Check Form**

Project/Client BBL Submission Number 13575

Cooler received on 9/5/02 by: NSD COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES/NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant air bubbles? YES NO N/A
5. Were **Ice** or **Ice packs** present? YES NO
6. Where did the bottles originate? CAS/ROC, CLIENT
7. Temperature of cooler(s) upon receipt: 4°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 9/5/02 915

Thermometer ID: IR. Gun Temp Blank Sample Bottle Cooler Temp. IR. Gun

**If out of Temperature, Client Approval to Run Samples**

Cooler Breakdown: Date: 9/5/02 by: BC

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO <sub>3</sub>					
2	H <sub>2</sub> SO <sub>4</sub>					
Residual Chlorine (+/-)	for TCN & Phenol					
5-11 pH slurry*	CLP SVOA					
5-9 pH slurry*	CLP* P/PCBs					
5-9**	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH

\*Do not adjust pH! Report in C/N \*\*If pH adjustment is required, use NaOH and/or H<sub>2</sub>SO<sub>4</sub>

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

Other Comments:





A FULL SERVICE ENVIRONMENTAL LABORATORY

September 16, 2002

Mr. John Brussel  
Blasland, Bouck & Lee, Inc.  
6723 Towpath Road  
Box 66  
Syracuse, NY 13214

PROJECT:NM SCHOOL STREET PROJECT #36458-007  
Submission #:R2213594

Dear Mr. Brussel:

Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 09/10/02 per a Facsimile transmittal. All data has been reviewed prior to report submission.

Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

A handwritten signature in black ink, appearing to read "Janice Jaeger", is written over the typed name. The signature is fluid and cursive, with a large loop at the end.

Janice Jaeger  
Project Chemist

Enc.



1 Mustard ST.  
Suite 250  
Rochester, NY 14609  
(585) 288-5380

**THIS IS AN ANALYTICAL TEST REPORT FOR:**

Client : Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458-007  
Lab Submission # : R2213594  
Project Manager : Janice Jaeger  
Reported : 09/16/02

Report Contains a total of 15 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. *Michael K. Perry*



## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM-School St IRM Project #36458.007  
SUBMISSION #: R2213594

BBL samples were collected on 09/05/02 and received at CAS on 09/06/02 in good condition.

### PCB'S

Two soil samples were analyzed for PCB's by method 8082 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits except WC-7, WC-7DL and WC-8DL. Decachlorobiphenyl for WC-7 has been flagged with an "\*". All other surrogates were diluted out and have been flagged with a "D".

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits.

PCB 1260 for WC-7 and WC-8 has been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

The Laboratory Blank associated with these analyses was free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.



This report contains analytical results for the following samples:

Submission #: R2213594

Lab ID

581878

581879

Client ID

WC-7

WC-8



Effective 6/18/2002

## ORGANIC QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- X - As specified in Case Narrative.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292



Effective 6/28/2002

## INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- E - The reported value is estimated because of the presence of interference.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- \* - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292

**COLUMBIA ANALYTICAL SERVICES**

Reported: 09/16/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : WC-7

Date Sampled : 09/05/02

Order #: 581878

Sample Matrix: SOIL/SEDIMENT

Date Received: 09/06/02

Submission #: R2213594

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	89.5	%	09/09/02	15:04	1.0

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/16/02

Blasland, Bouck & Lee, Inc.

**Project Reference:** NM SCHOOL STREET PROJECT #36458-007

**Client Sample ID :** WC-7

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**Date Sampled :** 09/05/02      **Order #:** 581878      **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** 09/06/02      **Submission #:** R2213594      **Percent Solid:** 89.5

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/10/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	37 U	UG/KG
PCB 1254	33	37 U	UG/KG
PCB 1260	33	57000 E	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	137 *	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	83	%



**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
METHOD 8082 PCB'S  
Reported: 09/16/02

Blasland, Bouck & Lee, Inc.

**Project Reference:** NM SCHOOL STREET PROJECT #36458-007

**Client Sample ID :** WC-7

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**Date Sampled :** 09/05/02      **Order #:** 581878      **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** 09/06/02      **Submission #:** R2213594      **Percent Solid:** 89.5

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ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 09/06/02	
DATE ANALYZED		: 09/11/02	
ANALYTICAL DILUTION:	1000.00		Dry Weight
PCB 1016	33	37000 U	UG/KG
PCB 1221	33	37000 U	UG/KG
PCB 1232	33	37000 U	UG/KG
PCB 1242	33	37000 U	UG/KG
PCB 1248	33	37000 U	UG/KG
PCB 1254	33	37000 U	UG/KG
PCB 1260	33	150000	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%

**COLUMBIA ANALYTICAL SERVICES**

Reported: 09/16/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : WC-8

Date Sampled : 09/05/02

Date Received: 09/06/02

Order #: 581879

Submission #: R2213594

Sample Matrix: SOIL/SEDIMENT

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	89.2	%	09/09/02	15:04	1.0

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/16/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458-007

Client Sample ID : WC-8

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Date Sampled : 09/05/02                      Order #: 581879                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/06/02                      Submission #: R2213594                      Percent Solid: 89.2

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ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/10/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	37 U	UG/KG
PCB 1254	33	37 U	UG/KG
PCB 1260	33	3400 E	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	85	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	92	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/16/02

Blasland, Bouck & Lee, Inc.

**Project Reference:** NM SCHOOL STREET PROJECT #36458-007

**Client Sample ID :** WC-8

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**Date Sampled :** 09/05/02      **Order #:** 581879      **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** 09/06/02    **Submission #:** R2213594    **Percent Solid:** 89.2

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ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/06/02		
DATE ANALYZED	: 09/11/02		
ANALYTICAL DILUTION:	20.00		Dry Weight
PCB 1016	33	740 U	UG/KG
PCB 1221	33	740 U	UG/KG
PCB 1232	33	740 U	UG/KG
PCB 1242	33	740 U	UG/KG
PCB 1248	33	740 U	UG/KG
PCB 1254	33	740 U	UG/KG
PCB 1260	33	5300	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/16/02

**Project Reference:**

**Client Sample ID :** METHOD BLANK

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<b>Date Sampled :</b>	<b>Order #:</b> 582325	<b>Sample Matrix:</b> SOIL/SEDIMENT
<b>Date Received:</b>	<b>Submission #:</b>	<b>Percent Solid:</b> 100

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ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/06/02			
DATE ANALYZED : 09/10/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	33 U	UG/KG
PCB 1221	33	33 U	UG/KG
PCB 1232	33	33 U	UG/KG
PCB 1242	33	33 U	UG/KG
PCB 1248	33	33 U	UG/KG
PCB 1254	33	33 U	UG/KG
PCB 1260	33	33 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	91	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	94	%





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (716) 288-5380 • 800-695-7222 X11 • FAX (716) 288-8475 PAGE 1 OF 2

SR #

CAS Contact

Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)		PRESERVATIVE		NUMBER OF CONTAINERS		PRESERVATIVE		REMARKS/ALTERNATE DESCRIPTION	
Client Sample ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	TIME	MATRIX	GCMS VOAS	GCMS SVOAS	GC VOAS	PESTICIDES/PCBs	STAR'S LIST	TCLP	WASTE CHARACTERIZATION	METALS TOTAL	METALS DISSOLVED
VF-10		9/4/02	1400	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VF-10		9/4/02	1440	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VF-3		9/5/02	045		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MS (VF-3)		9/5/02	045		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MSN (VF-3)		9/5/02	045		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VF-20		9/5/02	1555		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VF-31		9/5/02	1515		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VF-27		9/5/02	1530		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DUP-4		9/5/02			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
WC-7		9/5/02	800	↓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

SPECIAL INSTRUCTIONS/COMMENTS (w/c.c) <b>Metals</b> * Please Fax results to John Brunzel + TAVIA Creamer (716) 288-5380 (716) 288-8475 (716) 288-7086 * WC-7 and WC-8 on 48hr Turnaround * VF's and QA/QC on 72hr turnaround * NYSDEC CATB Deliverables for VF samples See QAPP <input checked="" type="checkbox"/>	TURNAROUND REQUIREMENTS <input checked="" type="checkbox"/> RUSH (SURCHARGES APPLY) <input checked="" type="checkbox"/> 24 hr <input checked="" type="checkbox"/> 48 hr <input checked="" type="checkbox"/> 72 hr STANDARD <input checked="" type="checkbox"/> WC <input checked="" type="checkbox"/> VF+ <input checked="" type="checkbox"/> QA/QC REQUESTED FAX DATE ASAP REQUESTED REPORT DATE STANDARD	REPORT REQUIREMENTS <input checked="" type="checkbox"/> I. Results Only WC-B, WC-7 <input checked="" type="checkbox"/> II. Results + QC Summaries VF's (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report Edata <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	INVOICE INFORMATION PO# BILL TO: SUBMISSION #: RECEIVED BY:
---	---	---	---

SAMPLE RECEIPT: CONDITION/COOLER TEMP: <u>60C</u> RELINQUISHED BY: <u>Juan M. Lauer</u> Signature: <u>Juan M. Lauer</u> Printed Name: <u>JUAN M LAUER</u> Firm: <u>CAS</u> Date/Time: <u>9/5/02 8:00 pm</u>	RECEIVED BY: <u>Gregory D. Smelton</u> Signature: <u>Gregory D. Smelton</u> Printed Name: <u>Gregory D. Smelton</u> Firm: <u>CAS</u> Date/Time: <u>9-6-02 9:30</u>	CUSTODY SEALS: <u>0</u> RELINQUISHED BY:
--	--	---



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (716) 288-5380 • 800-695-7222 x11 • FAX (716) 288-8475 PAGE 2 OF 2

SR #

CAS Contact

Project Name <b>NW School St</b> Project Manager <b>John Brussel</b> Company/Address <b>BBL, Inc</b> <b>6723 Tonawanda Rd</b> <b>Syracuse NY 13214</b> Phone # <b>315-4110-2570</b> Sampler's Signature <b>John M. Crane</b> Sampler's Printed Name <b>TAVIA CRANE</b>		Project Number <b>30458 007</b> Report CC  PRESERVATIVE NUMBER OF CONTAINERS  ANALYSIS REQUESTED (Include Method Number and Container Preservative) GMS VOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP GMS SVOAs <input type="checkbox"/> 8270 <input type="checkbox"/> 625 <input type="checkbox"/> CLP GC VOAs <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602 PESTICIDES/PCBs <input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> CLP <input type="checkbox"/> 8082 STARS LIST 8021 VOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP STARS LIST 8270 SVOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> SVAS <input type="checkbox"/> H/P METALS TOTAL <input type="checkbox"/> React <input type="checkbox"/> Corros <input type="checkbox"/> Ignit. METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below) METALS, DISOLVED (List in comments below)		PRESERVATIVE NUMBER OF CONTAINERS  ANALYSIS REQUESTED (Include Method Number and Container Preservative) GMS VOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP GMS SVOAs <input type="checkbox"/> 8270 <input type="checkbox"/> 625 <input type="checkbox"/> CLP GC VOAs <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602 PESTICIDES/PCBs <input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> CLP <input type="checkbox"/> 8082 STARS LIST 8021 VOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP STARS LIST 8270 SVOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> SVAS <input type="checkbox"/> H/P METALS TOTAL <input type="checkbox"/> React <input type="checkbox"/> Corros <input type="checkbox"/> Ignit. METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below) METALS, DISOLVED (List in comments below)		PRESERVATIVE NUMBER OF CONTAINERS  ANALYSIS REQUESTED (Include Method Number and Container Preservative) GMS VOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP GMS SVOAs <input type="checkbox"/> 8270 <input type="checkbox"/> 625 <input type="checkbox"/> CLP GC VOAs <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602 PESTICIDES/PCBs <input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> CLP <input type="checkbox"/> 8082 STARS LIST 8021 VOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP STARS LIST 8270 SVOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> SVAS <input type="checkbox"/> H/P METALS TOTAL <input type="checkbox"/> React <input type="checkbox"/> Corros <input type="checkbox"/> Ignit. METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below) METALS, DISOLVED (List in comments below)	
CLIENT SAMPLE ID <b>VF-20</b> <b>WC-8</b> <b>Temp Blank</b>		FOR OFFICE USE ONLY LAB ID  SAMPLING DATE <b>9/5/02</b> <b>9/5/02</b>  TIME <b>1500</b> <b>1330</b>  MATRIX <b>Soil</b> <b>Soil</b> <b>Water</b>		PRESERVATIVE NUMBER OF CONTAINERS  ANALYSIS REQUESTED (Include Method Number and Container Preservative) GMS VOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP GMS SVOAs <input type="checkbox"/> 8270 <input type="checkbox"/> 625 <input type="checkbox"/> CLP GC VOAs <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602 PESTICIDES/PCBs <input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> CLP <input type="checkbox"/> 8082 STARS LIST 8021 VOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP STARS LIST 8270 SVOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> SVAS <input type="checkbox"/> H/P METALS TOTAL <input type="checkbox"/> React <input type="checkbox"/> Corros <input type="checkbox"/> Ignit. METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below) METALS, DISOLVED (List in comments below)		PRESERVATIVE NUMBER OF CONTAINERS  ANALYSIS REQUESTED (Include Method Number and Container Preservative) GMS VOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP GMS SVOAs <input type="checkbox"/> 8270 <input type="checkbox"/> 625 <input type="checkbox"/> CLP GC VOAs <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602 PESTICIDES/PCBs <input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> CLP <input type="checkbox"/> 8082 STARS LIST 8021 VOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP STARS LIST 8270 SVOAs <input type="checkbox"/> TOTAL <input type="checkbox"/> TCLP WASTE CHARACTERIZATION <input type="checkbox"/> SVAS <input type="checkbox"/> H/P METALS TOTAL <input type="checkbox"/> React <input type="checkbox"/> Corros <input type="checkbox"/> Ignit. METALS, DISSOLVED (List in comments below) METALS, TOTAL (List in comments below) METALS, DISOLVED (List in comments below)	
SPECIAL INSTRUCTIONS/COMMENTS <b>Metals</b> *Please fax result w/ copy of COC to John Brussel (at number above) and to TAVIA CRANE @ 519-452-7086. * NYSDEC CAT B Deliverables for all VF samples * WC-7 and WC-8 on 48hr turnaround time * <del>VF</del> samples and QA/QC on 72 hr turnaround See QAPP <input type="checkbox"/> * <del>VF</del> samples and QA/QC on 72 hr turnaround SAMPLE RECEIPT: CONDITION/COOLER TEMP: <b>6°C</b> CUSTODY SEALS: <b>Y N</b>		TURNAROUND REQUIREMENTS <input checked="" type="checkbox"/> RUSH (SURCHARGES APPLY) 24 hr <input checked="" type="checkbox"/> 48 hr <input checked="" type="checkbox"/> 72 hr <input checked="" type="checkbox"/> day STANDARD <input type="checkbox"/> VF+ <input type="checkbox"/> QA/QC REQUESTED FAX DATE <b>ASAP</b> REQUESTED REPORT DATE <b>STANDARD</b>		REPORT REQUIREMENTS <input checked="" type="checkbox"/> I. Results Only <b>WC-7 + WC-8</b> <input checked="" type="checkbox"/> II. Results + OC Summaries (LCS, DUP, MS/MSD as required) <b>VF</b> <input type="checkbox"/> III. Results + OC and Calibration <b>QA/QC</b> Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report Edata <input type="checkbox"/> Yes <input type="checkbox"/> No SUBMISSION #:  RECEIVED BY SIGNATURE PRINTED NAME FIRM DATE/TIME		INVOICE INFORMATION PO# BILL TO:  RECEIVED BY SIGNATURE PRINTED NAME FIRM DATE/TIME	
RELINQUISHED BY Signature <b>John M. Crane</b> Printed Name <b>JOHN M. CRANE</b> Firm <b>BBL Inc</b> Date/Time <b>9/5/02 8:00 pm</b>		RECEIVED BY Signature <b>Gregory A. Esmerian</b> Printed Name <b>Gregory A. Esmerian</b> Firm <b>CAS</b> Date/Time <b>9/5/02 9:00</b>		RELINQUISHED BY Signature  Printed Name  Firm  Date/Time  		RECEIVED BY Signature  Printed Name  Firm  Date/Time  	



**Cooler Receipt And Preservation Check Form**

Project/Client BBZ Submission Number R2-13594

Cooler received on 9-6-02 by: HE COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC, CLIENT
7. Temperature of cooler(s) upon receipt: 6°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes  
 If No, Explain Below No No No No No

Date/Time Temperatures Taken: 9-6-02 @ 9:40

Thermometer ID: IR-6000 Temp Blank Sample Bottle Cooler Temp. IR. Gun

If out of Temperature, Client Approval to Run Samples \_\_\_\_\_

Cooler Breakdown: Date: 9-6-02 by: HE

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

	YES	NO	Sample I.D.	Reagent	Vol. Added
pH					
12				NaOH	
2				HNO <sub>3</sub>	
2				H <sub>2</sub> SO <sub>4</sub>	
Residual Chlorine (+/-)				for TCN & Phenol	
5-11 pH slurry*				CLP SVOA	
5-9 pH slurry*				CLP* P/PCBs	
5-9**				P/PCBs (608 only)	

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH  
 \*Do not adjust pH! Report in C/N \*\*If pH adjustment is required, use NaOH and/or H<sub>2</sub>SO<sub>4</sub>

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

Other Comments: \_\_\_\_\_



A FULL SERVICE ENVIRONMENTAL LABORATORY

September 16, 2002

Mr. John Brussel  
Blasland, Bouck & Lee, Inc.  
6723 Towpath Road  
Box 66  
Syracuse, NY 13214

PROJECT:NM SCHOOL STREET IRM PROJECT #36458.007  
Submission #:R2213606

Dear Mr. Brussel:

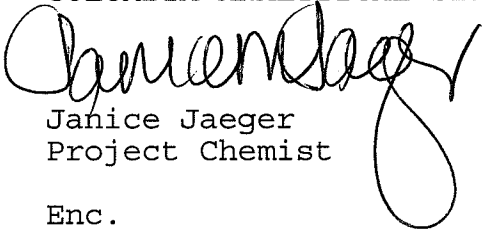
Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 09/11/02 per a Facsimile transmittal. All data has been reviewed prior to report submission.

Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

  
Janice Jaeger  
Project Chemist

Enc.



1 Mustard ST.  
Suite 250  
Rochester, NY 14609  
(585) 288-5380

**THIS IS AN ANALYTICAL TEST REPORT FOR:**

Client : Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET IRM PROJECT #36458.007  
Lab Submission # : R2213606  
Project Manager : Janice Jaeger  
Reported : 09/16/02

Report Contains a total of 14 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. *Michael E. Perry*



## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM-School St IRM Project #36458.007  
SUBMISSION #: R2213606

BBL sample was collected on 09/06/02 and received at CAS on 09/07/02 in good condition.

### PCB'S

Two soil samples were analyzed for PCB's by method 8082 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits except WC-9DL and S-100. All surrogates were diluted out and have been flagged with a "D".

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits.

PCB 1260 for WC-9 has been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

The Laboratory Blank associated with these analyses was free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.



This report contains analytical results for the following samples:

Submission #: R2213606

Lab ID

582212

582213

Client ID

WC-9

S-100



Effective 6/18/2002

## ORGANIC QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- X - As specified in Case Narrative.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292



Effective 6/28/2002

## INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- E - The reported value is estimated because of the presence of interference.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- \* - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

### CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292

**COLUMBIA ANALYTICAL SERVICES**

Reported: 09/16/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET IRM PROJECT #36458.007

Client Sample ID : WC-9

Date Sampled : 09/06/02

Order #: 582212

Sample Matrix: SOIL/SEDIMENT

Date Received: 09/07/02

Submission #: R2213606

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	91.8	%	09/09/02	15:04	1.0



**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/16/02

Blasland, Bouck & Lee, Inc.

**Project Reference:** NM SCHOOL STREET IRM PROJECT #36458.007

**Client Sample ID :** WC-9

---

**Date Sampled :** 09/06/02      **Order #:** 582212      **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** 09/07/02      **Submission #:** R2213606      **Percent Solid:** 91.8

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/10/02		
DATE ANALYZED	: 09/10/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	36 U	UG/KG
PCB 1221	33	36 U	UG/KG
PCB 1232	33	36 U	UG/KG
PCB 1242	33	36 U	UG/KG
PCB 1248	33	36 U	UG/KG
PCB 1254	33	36 U	UG/KG
PCB 1260	33	16000 E	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	97	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	82	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/16/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET IRM PROJECT #36458.007

Client Sample ID : WC-9

---

Date Sampled : 09/06/02                      Order #: 582212                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/07/02                      Submission #: R2213606                      Percent Solid: 91.8

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/10/02			
DATE ANALYZED : 09/11/02			
ANALYTICAL DILUTION: 100.00			Dry Weight
PCB 1016	33	3600 U	UG/KG
PCB 1221	33	3600 U	UG/KG
PCB 1232	33	3600 U	UG/KG
PCB 1242	33	3600 U	UG/KG
PCB 1248	33	3600 U	UG/KG
PCB 1254	33	3600 U	UG/KG
PCB 1260	33	29000	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%

COLUMBIA ANALYTICAL SERVICES

Reported: 09/16/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET IRM PROJECT #36458.007

Client Sample ID : S-100

---

Date Sampled : 09/06/02	Order #: 582213	Sample Matrix: SOIL/SEDIMENT
Date Received: 09/07/02	Submission #: R2213606	

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	81.6	%	09/09/02	15:04	1.0

---

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
METHOD 8082 PCB'S  
Reported: 09/16/02

Blasland, Bouck & Lee, Inc.

**Project Reference:** NM SCHOOL STREET IRM PROJECT #36458.007

**Client Sample ID :** S-100

---

**Date Sampled :** 09/06/02      **Order #:** 582213      **Sample Matrix:** SOIL/SEDIMENT  
**Date Received:** 09/07/02    **Submission #:** R2213606    **Percent Solid:** 81.6

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED		: 09/10/02	
DATE ANALYZED		: 09/12/02	
ANALYTICAL DILUTION:	5000.00		Dry Weight
PCB 1016	33	200000 U	UG/KG
PCB 1221	33	200000 U	UG/KG
PCB 1232	33	200000 U	UG/KG
PCB 1242	33	200000 U	UG/KG
PCB 1248	33	200000 U	UG/KG
PCB 1254	33	200000 U	UG/KG
PCB 1260	33	1200000	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 09/16/02

**Project Reference:**

**Client Sample ID :** METHOD BLANK

---

<b>Date Sampled :</b>	<b>Order #:</b> 582878	<b>Sample Matrix:</b> SOIL/SEDIMENT
<b>Date Received:</b>	<b>Submission #:</b>	<b>Percent Solid:</b> 100

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED :			
DATE ANALYZED :	09/11/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	33 U	UG/KG
PCB 1221	33	33 U	UG/KG
PCB 1232	33	33 U	UG/KG
PCB 1242	33	33 U	UG/KG
PCB 1248	33	33 U	UG/KG
PCB 1254	33	33 U	UG/KG
PCB 1260	33	33 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	92	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	96	%

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY:     LABORATORY CONTROL SAMPLE  
    SOIL/SEDIMENT

Spiked Order No. :    582879

Dup Spiked Order No. :    582880

Client ID:

Test: 8082 PCB'S

Analytical Units:    UG/KG

Run Number         :    82408

ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	BLANK SPIKE		BLANK SPIKE DUP.				QC LIMITS
			FOUND	% REC.	FOUND	% REC.	RPD	RPD	REC.
PCB 1260	170	0	194	116	170	102	13	30	34 - 130



### Cooler Receipt And Preservation Check Form

Project/Client BBL Submission Number R2-13606

Cooler received on 9-7-02 by: HE COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC, CLIENT
7. Temperature of cooler(s) upon receipt: 6°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 9-7-02 @ 11:00

Thermometer ID: IR-6um Temp Blank Sample Bottle Cooler Temp. IR. Gun

**If out of Temperature, Client Approval to Run Samples**

Cooler Breakdown: Date: 9/9/02 by: KMC

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO <sub>3</sub>					
2	H <sub>2</sub> SO <sub>4</sub>					
Residual Chlorine (+/-) for TCN & Phenol						
5-11 pH slurry*	CLP SVOA					
5-9 pH slurry*	CLP* P/PCBs					
5-9**	P/PCBs (608 only)					

YES = All samples OK      NO = Samples were preserved at lab as listed      PC OK to adjust pH

\*Do not adjust pH! Report in C/N      \*\*If pH adjustment is required, use NaOH and/or H<sub>2</sub>SO<sub>4</sub>

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2	

Other Comments:





A FULL SERVICE ENVIRONMENTAL LABORATORY

October 4, 2002

Mr. John Brussel  
Blasland, Bouck & Lee, Inc.  
6723 Towpath Road  
Box 66  
Syracuse, NY 13214

PROJECT:NM SCHOOL STREET PROJECT #36458.007  
Submission #:R2213795

Dear Mr. Brussel:

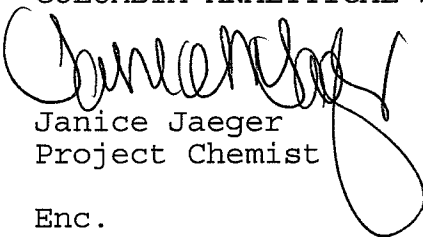
Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 09/24/02 per a Facsimile transmittal. All data has been reviewed prior to report submission.

Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

  
Janice Jaeger  
Project Chemist

Enc.



1 Mustard ST.  
Suite 250  
Rochester, NY 14609  
(585) 288-5380

**THIS IS AN ANALYTICAL TEST REPORT FOR:**

Client : Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL STREET PROJECT #36458.007  
Lab Submission # : R2213795  
Project Manager : Janice Jaeger  
Reported : 10/04/02

Report Contains a total of 11 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. *Michael C. Perry*

## **CASE NARRATIVE**

COMPANY: Blasland Bouck & Lee  
NM-School St IRM Project #36458.007  
SUBMISSION #: R2213795

BBL sample was collected on 09/19/02 and received at CAS on 09/20/02 in good condition.

### **PCB'S**

One soil sample was analyzed for PCB's by method 8082 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All surrogate standard recoveries were within limits except WC-11DL. All surrogates were diluted out and have been flagged with a "D".

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits.

PCB 1254 and 1260 for WC-11 has been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

The Laboratory Blank associated with these analyses was free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.



This report contains analytical results for the following samples:

Submission #: R2213795

Lab ID

585799

Client ID

WC-11



Effective 6/18/2002

## ORGANIC QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- X - As specified in Case Narrative.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : WC-11

Date Sampled : 09/19/02 16:00

Order #: 585799

Sample Matrix: SOIL/SEDIMENT

Date Received: 09/20/02

Submission #: R2213795

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	89.6	%	09/20/02	12:00	1.0

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**  
**METHOD 8082 PCB'S**  
Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : WC-11

---

Date Sampled : 09/19/02 16:00 Order #: 585799      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/20/02 Submission #: R2213795      Percent Solid: 89.6

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 09/20/02		
DATE ANALYZED	: 09/24/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	37 U	UG/KG
PCB 1221	33	37 U	UG/KG
PCB 1232	33	37 U	UG/KG
PCB 1242	33	37 U	UG/KG
PCB 1248	33	37 U	UG/KG
PCB 1254	33	6000 E	UG/KG
PCB 1260	33	2000 E	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	112	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	120	%

**COLUMBIA ANALYTICAL SERVICES**

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 10/04/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL STREET PROJECT #36458.007

Client Sample ID : WC-11

---

Date Sampled : 09/19/02 16:00 Order #: 585799      Sample Matrix: SOIL/SEDIMENT  
Date Received: 09/20/02 Submission #: R2213795      Percent Solid: 89.6

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/20/02			
DATE ANALYZED : 09/24/02			
ANALYTICAL DILUTION: 50.00			Dry Weight
PCB 1016	33	1800 U	UG/KG
PCB 1221	33	1800 U	UG/KG
PCB 1232	33	1800 U	UG/KG
PCB 1242	33	1800 U	UG/KG
PCB 1248	33	1800 U	UG/KG
PCB 1254	33	9700	UG/KG
PCB 1260	33	4600	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%



COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**  
METHOD 8082 PCB'S  
Reported: 10/04/02

**Project Reference:**  
**Client Sample ID :** METHOD BLANK

---

<b>Date Sampled :</b>	<b>Order #:</b> 585994	<b>Sample Matrix:</b> SOIL/SEDIMENT
<b>Date Received:</b>	<b>Submission #:</b>	<b>Percent Solid:</b> 100

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 09/20/02			
DATE ANALYZED : 09/25/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	33 U	UG/KG
PCB 1221	33	33 U	UG/KG
PCB 1232	33	33 U	UG/KG
PCB 1242	33	33 U	UG/KG
PCB 1248	33	33 U	UG/KG
PCB 1254	33	33 U	UG/KG
PCB 1260	33	33 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	119	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	111	%

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY    LABORATORY CONTROL SAMPLE  
SOIL/SEDIMENT

Spiked Order No. : 585995

Client ID:

Test: 8082 PCB'S

Analytical Units: UG/KG

Run Number : 82816

ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	BLANK SPIKE		QC LIMITS
			FOUND	% REC.	REC.
PCB 1254	167	0	189	113	70 - 130

Project Name <b>N M School St</b>		Project Number <b>36458-007</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>John Brussel</b>		Report CC _____		PRESERVATIVE	
Company/Address <b>BBL, Inc.</b>		Company/Address <b>16223 Tompauk Rd</b>		PRESERVATIVE KEY	
Phone # <b>315-446-2570</b>		FAX # <b>315-447-9111</b>		0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO4 8. Other <b>KE</b>	
Sampler's Signature <b>JAVIA CRAMER</b>		Sampler's Printed Name <b>JAVIA CRAMER</b>		REMARKS/ ALTERNATE DESCRIPTION	
CLIENT SAMPLE ID <b>WC-11</b>		FOR OFFICE USE ONLY LAB/ID <b>585799</b>		SAMPLING DATE <b>9/10/02 16:00</b>	
		MATRIX <b>Silic</b>			
SPECIAL INSTRUCTIONS/COMMENTS <b>Metals</b>		TURNAROUND REQUIREMENTS		REPORT REQUIREMENTS	
<p><i>Temp Blank</i></p> <p><i>Please fax data to John Brussel @ 518-452-7000</i></p> <p><i>also send to Tawia Cramer @ 518-452-7000</i></p>		<input checked="" type="checkbox"/> I. Results Only <input type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report		<input checked="" type="checkbox"/> I. Results Only <input type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/> V. Specialized Forms / Custom Report	
		RUSH (SURCHARGES APPLY) hr <input checked="" type="checkbox"/> 48 hr <input type="checkbox"/> 5 day STANDARD REQUESTED FAX DATE <b>ASAP</b> REQUESTED REPORT DATE <b>STANDARD</b>		Edate <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
		RECEIVED BY Signature: <i>[Signature]</i> Printed Name: <i>[Name]</i> Firm: <i>[Firm]</i> Date/Time: <i>[Date/Time]</i>		RECEIVED BY Signature: <i>[Signature]</i> Printed Name: <i>[Name]</i> Firm: <i>[Firm]</i> Date/Time: <i>[Date/Time]</i>	
SAMPLE RECEIPT: CONDITION/COOLER TEMP: <b>59</b> RECEIVED BY Signature: <i>[Signature]</i> Printed Name: <i>[Name]</i> Firm: <i>[Firm]</i> Date/Time: <b>9/10/02 9:45</b>		CUSTODY SEALS: <b>YN</b> RECEIVED BY Signature: <i>[Signature]</i> Printed Name: <i>[Name]</i> Firm: <i>[Firm]</i> Date/Time: <i>[Date/Time]</i>		INVOICE INFORMATION PO# _____ BILL TO: <b>John Brussel, BBL, Inc</b> <b>16223 Tompauk Rd</b> <b>Syracuse, NY 13214</b> SUBMISSION #: <b>R22-13795</b> RECEIVED BY	

**Cooler Receipt And Preservation Check Form**

Project/Client BBL Submission Number R2-13795

Cooler received on 9/20/02 by: BL COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC CLIENT
7. Temperature of cooler(s) upon receipt: 50

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 9/20/02 1000

Thermometer ID: 161 or IR GLN Reading From: Temp Blank or Sample Bottle

If out of Temperature, Client Approval to Run Samples \_\_\_\_\_

Cooler Breakdown: Date: 9-20-02 by: BL

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO <sub>3</sub>					
2	H <sub>2</sub> SO <sub>4</sub>					
Residual Chlorine (+/-)	for TCN & Phenol					
5-9**	P/PCBs (608 only)					

YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH  
 \*\*If pH adjustment is required, use NaOH and/or H<sub>2</sub>SO<sub>4</sub>

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2				

Other Comments:



A FULL SERVICE ENVIRONMENTAL LABORATORY

October 15, 2002

Mr. John Brussel  
Blasland, Bouck & Lee, Inc.  
6723 Towpath Road  
Box 66  
Syracuse, NY 13214

PROJECT:NM SCHOOL ST IRM #36458.007 (WC-12)  
Submission #:R2214083

Dear Mr. Brussel:

Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 10/07/02 per a Facsimile transmittal. All data has been reviewed prior to report submission.

Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

Sincerely,

COLUMBIA ANALYTICAL SERVICES

A handwritten signature in black ink, appearing to read 'Janice Jaeger', is written over the typed name and title. The signature is fluid and cursive, with a large loop at the end.

Janice Jaeger  
Project Chemist

Enc.



1 Mustard ST.  
Suite 250  
Rochester, NY 14609  
(585) 288-5380

**THIS IS AN ANALYTICAL TEST REPORT FOR:**

Client : Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM #36458.007 (WC-12)  
Lab Submission # : R2214083  
Project Manager : Janice Jaeger  
Reported : 10/15/02

Report Contains a total of 12 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. *Michael K. Perry*

## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
NM School St Project #36458.007  
SUBMISSION #: R2214083

BBL soil sample was collected on 10/02/02 and received at CAS on 10/03/02 in good condition. See attached batching log for a cross-reference list of client ID and CAS order numbers.

### PCB's

One soil sample was analyzed for PCB's by EPA Method 8082 from SW-846.

All initial and continuing calibration criteria were met.

Site specific QC was not requested for these samples. All Blank spike recoveries were within limits.

All surrogate standard recoveries were within limits except WC-12DL which were diluted out and have been flagged with a "D".

Various Arochlors for WC-12 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All samples were analyzed within the required holding times.

All Laboratory blanks were free of contamination.

No other analytical or QC problems were encountered with these analyses.



This report contains analytical results for the following samples:

Submission #: R2214083

Lab ID

589875

Client ID

WC-12





Effective 6/18/2002

## ORGANIC QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- X - As specified in Case Narrative.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292



Effective 6/28/2002

## INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- E - The reported value is estimated because of the presence of interference.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- \* - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

### CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

Reported: 10/15/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM #36458.007 (WC-12)  
Client Sample ID : WC-12

---

Date Sampled : 10/02/02 09:50                      Order #: 589875                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/03/02                      Submission #: R2214083

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	87.9	%	10/04/02	16:00	1.0

---

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 10/15/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM #36458.007 (WC-12)

Client Sample ID : WC-12

---

Date Sampled : 10/02/02 09:50 Order #: 589875 Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/03/02 Submission #: R2214083 Percent Solid: 87.9

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/04/02			
DATE ANALYZED : 10/07/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	38 U	UG/KG
PCB 1221	33	38 U	UG/KG
PCB 1232	33	38 U	UG/KG
PCB 1242	33	38 U	UG/KG
PCB 1248	33	38 U	UG/KG
PCB 1254	33	2100 E	UG/KG
PCB 1260	33	6500 E	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	92	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	84	%

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 10/15/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM #36458.007 (WC-12)

Client Sample ID : WC-12

---

Date Sampled : 10/02/02 09:50 Order #: 589875 Sample Matrix: SOIL/SEDIMENT  
Date Received: 10/03/02 Submission #: R2214083 Percent Solid: 87.9

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/04/02			
DATE ANALYZED : 10/07/02			
ANALYTICAL DILUTION: 50.00			Dry Weight
PCB 1016	33	1900 U	UG/KG
PCB 1221	33	1900 U	UG/KG
PCB 1232	33	1900 U	UG/KG
PCB 1242	33	1900 U	UG/KG
PCB 1248	33	1900 U	UG/KG
PCB 1254	33	3700	UG/KG
PCB 1260	33	10000	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(35 - 131 %)	D	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	D	%

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 10/15/02

**Project Reference:**

**Client Sample ID :** METHOD BLANK

---

<b>Date Sampled :</b>	<b>Order #:</b> 590621	<b>Sample Matrix:</b> SOIL/SEDIMENT
<b>Date Received:</b>	<b>Submission #:</b>	<b>Percent Solid:</b> 100

---

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/04/02		
DATE ANALYZED	: 10/07/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	33 U	UG/KG
PCB 1221	33	33 U	UG/KG
PCB 1232	33	33 U	UG/KG
PCB 1242	33	33 U	UG/KG
PCB 1248	33	33 U	UG/KG
PCB 1254	33	33 U	UG/KG
PCB 1260	33	33 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	82	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	76	%

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY    LABORATORY CONTROL SAMPLE  
SOIL/SEDIMENT

Spiked Order No. : 590622

Client ID:

Test: 8082 PCB'S

Analytical Units: UG/KG

Run Number : 83423

ANALYTE	SPIKE ADDED	SAMPLE CONCENT.	BLANK SPIKE		QC LIMITS
			FOUND	% REC.	REC.
PCB 1254	167	0	170	102	70 - 130



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (716) 288-5380 • 800-695-7222 X11 • FAX (716) 288-8475 PAGE 1 OF 1

SR #

CAS Contact

Project Name: NM School St IRM  
 Project Manager: John Brussel, PE  
 Company/Address: BBL, Inc  
6723 Tempath Rd  
Syracuse NY 13214  
 Phone #: 315-466-2570  
 Sample's Signature: Tavia M Cramen  
 Sample's Printed Name: TAVIA M CRAMEN  
 Project Number: 30458-007  
 Report CC: BLS-449-4111

## ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE	NUMBER OF CONTAINERS	GCMS VOAS	GCMS SVOAS	GC VOAS	PESTICIDES/PCBS	STAR'S LIST 8021 VOAS	STAR'S LIST 8021 TCLP	STAR'S LIST 8270 SVOAS	TCLP	WASTE CHARACTERIZATION	METALS CHARACTERIZATION	METALS TOTAL	METALS TOTAL (List in comments below)	METALS DISSOLVED (List in comments below)	REMARKS/ALTERNATE DESCRIPTION
<input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP		<input type="checkbox"/> 8270 <input type="checkbox"/> 625 <input type="checkbox"/> CLP	<input type="checkbox"/> 8021 <input type="checkbox"/> 601/602	<input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 8082	<input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 8082	<input type="checkbox"/> 8021 <input type="checkbox"/> 601/602	<input type="checkbox"/> 8021 <input type="checkbox"/> 601/602	<input type="checkbox"/> 8021 <input type="checkbox"/> 601/602	<input type="checkbox"/> 8021 <input type="checkbox"/> 601/602	<input type="checkbox"/> React <input type="checkbox"/> Corros <input type="checkbox"/> Ignit.	<input type="checkbox"/> React <input type="checkbox"/> Corros <input type="checkbox"/> Ignit.	<input type="checkbox"/> React <input type="checkbox"/> Corros <input type="checkbox"/> Ignit.	<input type="checkbox"/> React <input type="checkbox"/> Corros <input type="checkbox"/> Ignit.	<input type="checkbox"/> React <input type="checkbox"/> Corros <input type="checkbox"/> Ignit.	

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	TIME	MATRIX
VF-24		10/2/02	9:00	Soil
VS-11		10/2/02	9:30	Soil
VS-10		10/2/02	9:40	Soil
WJC-12	589875	10/2/02	9:50	Soil
MS/msp(VS-11)		10/2/02	9:30	Soil
msb(VS-11)		10/2/02	9:30	Soil
DUP-10		10/2/02	-	Soil

Temp blank

## SPECIAL INSTRUCTIONS/COMMENTS

**Metals**  
 NYSDEC ASP CAT B Deliverables for Verification samples (VF and VS -)  
 Please fax results asap to John Brussel and to Tavia Cramen @ 315-452-7000  
 See QAPP

## TURNAROUND REQUIREMENTS

RUSH (SURCHARGES APPLY)  
 24 hr  48 hr  72 hr  3 DAY  
 STANDARD  
 REQUESTED FAX DATE: ASAP  
 REQUESTED REPORT DATE: 9/1/02  
 STANDARD

## REPORT REQUIREMENTS

I. Results Only (WJC-12)  
 II. Results + OC Summaries all others (LCS, DUP, MS/MSD as required)  
 III. Results + OC and Calibration Summaries  
 IV. Data Validation Report with Raw Data  
 V. Specialized Forms / Custom Report  
 Edata  Yes  No

RELINQUISHED BY	RECEIVED BY	CUSTODY SEALS	RELINQUISHED BY	RECEIVED BY
Signature: <u>Tavia M Cramen</u> Printed Name: <u>TAVIA M CRAMEN</u> Firm: <u>BBL, Inc</u> Date/Time: <u>10/2/02 5 PM</u>	Signature: <u>[Signature]</u> Printed Name: <u>[Name]</u> Firm: <u>[Firm]</u> Date/Time: <u>[Date/Time]</u>	<u>3</u>	Signature: <u>[Signature]</u> Printed Name: <u>[Name]</u> Firm: <u>[Firm]</u> Date/Time: <u>[Date/Time]</u>	Signature: <u>[Signature]</u> Printed Name: <u>[Name]</u> Firm: <u>[Firm]</u> Date/Time: <u>[Date/Time]</u>

INVOICE INFORMATION  
 PO#  
 BILL TO:  
 SUPPLEMENT # KDA14083  
 RECEIVED BY



### Cooler Receipt And Preservation Check Form

Project/Client BBZ Submission Number RAA14083

Cooler received on 10/3/02 by BBZ COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO N/A
4. Did any VOA vials have significant air bubbles? YES NO
5. Were Ice or Ice packs present? CAS/ROC CLIENT
6. Where did the bottles originate? 3
7. Temperature of cooler(s) upon receipt: 3

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes  
 If No, Explain Below No No No No No

Date/Time Temperatures Taken: 10/3/02 10:25  
 Thermometer ID: 161 or IR GUN Reading From: Temp Blank or Sample Bottle

If out of Temperature, Client Approval to Run Samples \_\_\_\_\_

Cooler Breakdown: Date: 10/3/02 by: BBZ

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO <sub>3</sub>					
2	H <sub>2</sub> SO <sub>4</sub>					
Residual Chlorine (+/-)	for TCN & Phenol					
5-9**	P/PCBs (608 only)					

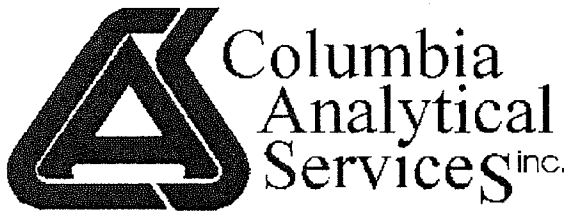
YES = All samples OK NO = Samples were preserved at lab as listed PC OK to adjust pH  
 \*\*If pH adjustment is required, use NaOH and/or H<sub>2</sub>SO<sub>4</sub>

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2		

Other Comments: \_\_\_\_\_

# ***Wastewater Sample Results***

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A FULL SERVICE ENVIRONMENTAL LABORATORY

October 25, 2002

Mr. John Brussel  
Blasland, Bouck & Lee, Inc.  
6723 Towpath Road  
Box 66  
Syracuse, NY 13214

PROJECT:NM SCHOOL ST IRM PROJECT #36458.007  
Submission #:R2214152

Dear Mr. Brussel:

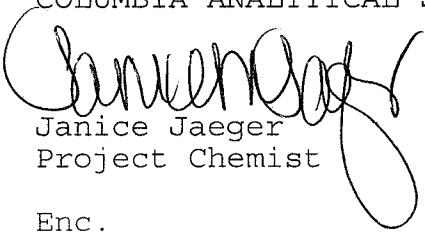
Enclosed are the analytical results of the analyses requested. The analytical data was provided to you on 10/21/02 per a Facsimile transmittal. All data has been reviewed prior to report submission.

Should you have any questions please contact me at (585) 288-5380.

Thank you for letting us provide this service.

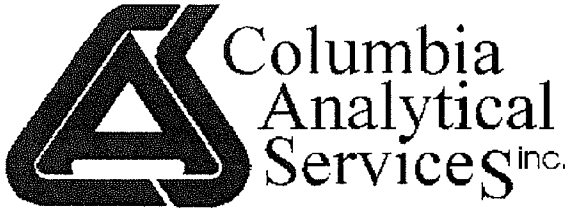
Sincerely,

COLUMBIA ANALYTICAL SERVICES



Janice Jaeger  
Project Chemist

Enc.



1 Mustard ST.  
Suite 250  
Rochester, NY 14609  
(585) 288-5380

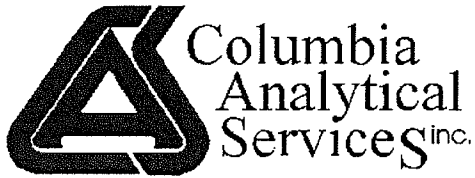
**THIS IS AN ANALYTICAL TEST REPORT FOR:**

Client : Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM PROJECT #36458.007  
Lab Submission # : R2214152  
Project Manager : Janice Jaeger  
Reported : 10/25/02

Report Contains a total of 19 pages

The results reported herein relate only to the samples received by the laboratory. This report may not be reproduced except in full, without the approval of Columbia Analytical Services.

This package has been reviewed by Columbia Analytical Services' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal. *Michael K. Perry*



**CASE NARRATIVE**

This report contains analytical results for the following samples:

Submission #: R2214152

<u>Lab ID</u>	<u>Client ID</u>
591443	WW-1
591445	WW-1
591448	TRIP BLANK

All samples were received in good condition.

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

All sampling activities performed by CAS personnel have been in accordance with "CAS Field Procedures and Measurements Manual" or by client specifications.



Effective 6/18/2002

## ORGANIC QUALIFIERS

- U - Indicates compound was analyzed for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture.
- J - Indicates an estimated value. The flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
- N - Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search.
- P - This flag is used for a pesticide/Aroclor target analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a "P".
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample.
- E - This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
- D - This flag identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor, as in the "E" flag above, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and ALL concentration values reported on that Form I are flagged with the "D" flag.
- A - This flag indicates that a TIC is a suspected aldol-condensation product.
- X - As specified in Case Narrative.

### **CAS/Rochester Lab ID # for State Certifications**

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292



Effective 6/28/2002

## INORGANIC QUALIFIERS

C (Concentration) qualifier –

- B - if the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but was greater than or equal to the Instrument Detection Limit (IDL).
- U - if the analyte was analyzed for, but not detected

Q qualifier - Specified entries and their meanings are as follows:

- E - The reported value is estimated because of the presence of interference.
- J - Estimated Value
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- W - Post-digestion spike for Furnace AA Analysis is out of control limits (85-115), while sample absorbance is less than 50% of spike absorbance.
- \* - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

M (Method) qualifier:

- "P" for ICP
- "A" for Flame AA
- "F" for Furnace AA
- "PM" for ICP when Microwave Digestion is used
- "AM" for Flame AA when Microwave Digestion is used
- "FM" for Furnace M when Microwave Digestion is used
- "CV" for Manual Cold Vapor AA
- "AV" for Automated Cold Vapor AA
- "CA" for Midi-Distillation Spectrophotometric
- "AS" for Semi-Automated Spectrophotometric
- "C" for Manual Spectrophotometric
- "T" for Titrimetric
- " " where no data has been entered
- "NR" if the analyte is not required to be analyzed.

### CAS/Rochester Lab ID # for State Certifications

Army Corp of Engineers Validated  
Delaware Accredited  
Connecticut ID # PH0556  
Florida ID # E87674  
Massachusetts ID # M-NY032  
Navy Facilities Engineering Service Center Approved  
Nebraska Accredited

NELAP Accredited  
New York ID # 10145  
New Jersey ID # NY004  
New Hampshire ID # 294100 A/B  
Rhode Island ID # 158  
South Carolina ID #91012  
West Virginia ID # 292

COLUMBIA ANALYTICAL SERVICES

Reported: 10/25/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : WW-1

Date Sampled : 10/08/02  
Date Received: 10/09/02

Order #: 591445  
Submission #: R2214152

Sample Matrix: WATER

ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
CYANIDE REACTIVITY	9010/9	0.0500	0.0500 U	MG/L	10/16/02	14:00	1.0
FLASH POINT	1010		>100	°C	10/10/02	11:10	1.0
PH	9040/9	1.00	7.37		10/09/02	15:05	NA
SULFIDE REACTIVITY	9030	1.00	1.80	MG/L	10/16/02	09:45	1.0



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. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified compounds met the specified criteria.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method independent of matrix interferences.

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

8. Laboratory Control Sample

All laboratory control sample recoveries were within control limits.

9. Field Duplicate

Results for duplicate samples are summarized below:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
Backfill-03-071602 / DUP-1-Backfill	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

## PCB 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?	_____	X	_____
Is there a narrative or cover letter present?	X	_____	_____
Are the sample numbers included in the narrative?	_____	X	_____
Are the sample chain-of-custodies present?	X	_____	_____
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	_____	X	_____
<b><u>Holding Times</u></b>			
Have any holding times been exceeded?	_____	X	_____
<b><u>Surrogate Recovery</u></b>			
Are the surrogate recovery forms present?	_____	X	_____
Are all samples listed on the surrogate recovery form?	_____	_____	X
Were recoveries of any surrogate outside control limits for any sample or blank?	_____	X	_____
If yes, were the samples reanalyzed?	_____	_____	X
Are there any transcription/calculation errors between the raw data and the summary form?	_____	X	_____
<b><u>Matrix Spikes</u></b>			
Is there a matrix spike recovery form present?	X	_____	_____
Were matrix spikes analyzed at the required frequency?	X	_____	_____
How many spike recoveries were outside of QC limits? <u>  0  </u> out of <u>  2  </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? <u>  0  </u> out of <u>  1  </u>			
<b><u>Blanks</u></b>			
Is a method blank summary form present?	X	_____	_____
Has a method blank been extracted for each set of samples or for each 20 samples, whichever is more frequent?	X	_____	_____
Do any method//instrument blanks have positive results?	_____	X	_____
Are field/rinse blanks associated with every sample?	_____	X	_____
Do any field/rinse blanks have positive results?	_____	_____	X
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			

**PCB Data Validation Checklist - Page 2**

	YES	NO	NA
peak resolution check	_____	<u>  X  </u>	_____
Aroclor 1016/1260	<u>  X  </u>	_____	_____
Aroclors 1221, 1232, 1242, 1248, and 1254	<u>  X  </u>	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	<u>  X  </u>	_____
Are the %RSD or r2 for the initial calibration within acceptable limits for all analytes?	<u>  X  </u>	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	<u>  X  </u>
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	<u>  X  </u>	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	<u>  X  </u>	_____
Are all the percent difference (%D) for all continuing calibration standards within acceptable limits?	<u>  X  </u>	_____	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	<u>  X  </u>	_____	_____
Was the proper analytical sequence followed?	<u>  X  </u>	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	<u>  X  </u>	_____	_____
<b><u>PCB Identification</u></b>			
Are RT of sample compounds within the established RT windows?	<u>  X  </u>	_____	_____
Were all positively identified compounds confirmed on a second column?	_____	_____	<u>  X  </u>
Was GC/MS confirmation provided when required?	_____	_____	<u>  X  </u>
Were there any false negatives?	_____	<u>  X  </u>	_____
<b><u>Compound Quantitation and Reported 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 waters, sample moisture?	<u>  X  </u>	_____	_____

PCB Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>  X  </u>	<u>      </u>	<u>      </u>
Were any electronegative displacement (negative peaks) or unusual peaks detected?	<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>

### PCB Qualifier Summary Holding Time and Surrogates

Sample ID	Holding Time*	Surrogates*	
		TCX	DCB
Backfill-01-071602			
Backfill-02-071602			
DUP-1-Backfill			
Backfill-03-071602			
Backfill-03-071602 MS			
Backfill-03-071602 MSD			

Surrogates:  
TCX Tetrachloro-m-xylene  
DCB Decachlorobiphenyl  
na Not applicable

Qualifiers:  
D Surrogate diluted out  
! Recovery high  
↓ Recovery low

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

## PCB Calibration Summary

Instrument: HP5890-C  
 Column: DB-1701

Date:	7/22/02	7/25/02	7/26/02	7/26/02	7/26/02	7/26/02		
Time:		2004	0412	0626	1717	2121		
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok		
Aroclor 1221	-*							
Aroclor 1232	-*							
Aroclor 1242	-*							
Aroclor 1248	-*							
Aroclor 1254	-*							
Aroclor 1260	ok	ok	ok	ok	ok	ok		
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\*Single-point calibration

### PCB Calibration Summary - Page 2

Instrument: HP5890-C

Column: DB-17

Date:	7/22/02	7/25/02	7/26/02	7/26/02	7/26/02	7/26/02		
Time:		2004	0412	0626	1717	2121		
	Initial Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.	Cont Cal.
	%RSD	%D	%D	%D	%D	%D	%D	%D
Aroclor 1016	ok	ok	ok	ok	ok	ok		
Aroclor 1221	-*							
Aroclor 1232	-*							
Aroclor 1242	-*							
Aroclor 1248	-*							
Aroclor 1254	-*							
Aroclor 1260	ok	ok	ok	ok	ok	ok		
Tetrachloro-m-xylene	ok							
Decachlorobiphenyl	ok							
Affected Samples:								

\*Single-point calibration



**Corrected Sample Analysis Data Sheets**

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 08/15/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL STREET PROJECT #36458.011

Client Sample ID : BACKFILL-01-071602

Date Sampled : 07/16/02 15:00 Order #: 568818 Sample Matrix: SOIL/SEDIMENT  
Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 86.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/18/02			
DATE ANALYZED : 07/26/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	38 U	UG/KG
PCB 1221	33	38 U	UG/KG
PCB 1232	33	38 U	UG/KG
PCB 1242	33	38 U	UG/KG
PCB 1248	33	38 U	UG/KG
PCB 1254	33	38 U	UG/KG
PCB 1260	33	38 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	99	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	92	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 08/15/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
Client Sample ID : BACKFILL-02-071602

Date Sampled : 07/16/02 14:40 Order #: 568819 Sample Matrix: SOIL/SEDIMENT  
Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 96.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/18/02			
DATE ANALYZED : 07/26/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	34 U	UG/KG
PCB 1221	33	34 U	UG/KG
PCB 1232	33	34 U	UG/KG
PCB 1242	33	34 U	UG/KG
PCB 1248	33	34 U	UG/KG
PCB 1254	33	34 U	UG/KG
PCB 1260	33	34 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	95	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	94	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8082 PCB'S  
Reported: 08/15/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL STREET PROJECT #36458.011

Client Sample ID : BACKFILL-03-071602

Date Sampled : 07/16/02 15:00 Order #: 568821 Sample Matrix: SOIL/SEDIMENT  
Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 86.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/18/02			
DATE ANALYZED : 07/26/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
PCB 1016	33	38 U	UG/KG
PCB 1221	33	38 U	UG/KG
PCB 1232	33	38 U	UG/KG
PCB 1242	33	38 U	UG/KG
PCB 1248	33	38 U	UG/KG
PCB 1254	33	38 U	UG/KG
PCB 1260	33	38 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	88	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	93	%

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 08/15/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL STREET PROJECT #36458.011

Client Sample ID : DUP-1-BACKFILL

---

Date Sampled : 07/16/02                      Order #: 568820                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 07/17/02                      Submission #: R2212858                      Percent Solid: 86.8

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ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 07/18/02		
DATE ANALYZED	: 07/26/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
PCB 1016	33	38 U	UG/KG
PCB 1221	33	38 U	UG/KG
PCB 1232	33	38 U	UG/KG
PCB 1242	33	38 U	UG/KG
PCB 1248	33	38 U	UG/KG
PCB 1254	33	38 U	UG/KG
PCB 1260	33	38 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL	(35 - 131 %)	89	%
TETRACHLORO-META-XYLENE	(29 - 141 %)	87	%

## METALS ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 methods 6010 and 7471.

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:

### Concentration (C ) qualifiers:

- U The analyte was analyzed for but not detected. The associated value is the analyte instrument detection limit.
- B The reported value was obtained from a reading less than the contract required detection limit (CRDL) but greater than or equal to the instrument detection limit (IDL).

### Quantitation (Q) qualifiers:

- E The reported value is estimated due to the presence of interference.
- N Spiked sample recovery not within control limits.
- \* Duplicate analysis not within control limits.

### Validation qualifiers:

- J The analyte was positively identified; however, the associated numerical value is an estimated concentration only.
- UJ The analyte was not detected above the reported sample detection limit. However, the reported limit is approximate and may or may not represent the actual limit of detection.
- 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 tests, 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 metals (except mercury) analyses under NYSASP are as follows:

Metal (except mercury)	180 days
Mercury	26 days

The NYSASP holding time are measure from validated time of sample receipt (VTSR). The technical holding times (measured from date of collection), as as follows:

Metals (except mercury)	180 days
Mercury	28 days

All samples were 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 (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No analytes were detected in the preparation or calibration 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 continuing performance is satisfactory.

#### 3.1 Initial Calibration

The correct number and type of standards were analyzed and all initial calibration verification standard recoveries were within control limits. .

#### 3.2 Continuing Calibration

All continuing calibration verification standard recoveries were within control limits.

#### 3.3 CRDL Standard

All CRDL standard recoveries were within the acceptable limits.



### 3.4 ICP Interference Control Sample

All ICS recoveries were acceptable.

## 4. Matrix Spike/Laboratory Duplicate

Matrix spike and laboratory duplicate data are used to assess the precision and accuracy of the analytical method.

### 4.1 Matrix spike

The matrix spike recovery for antimony was below control limits. All data for antimony have been qualified as estimated based on the deviation.

### 4.2 Laboratory Duplicate

All laboratory duplicate results were within control limits.

## 5. Field Duplicate

Results for duplicate samples are summarized below:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
Backfill-03-071602 / DUP-1-Backfill	aluminum	11300	9580	16.5%
	arsenic	7.7	7.8	1.3%
	barium	79.0	77.3	5.0%
	calcium	6250	7180	13.8%
	chromium	14.4	12.2	16.5%
	cobalt	11.9	12.6	5.7%
	copper	38.6	40.8	5.5%
	iron	23900	21700	9.6%
	lead	16.0	17.0	6.1%
	magnesium	5870	5350	9.3%
	manganese	768	889	14.6%
	mercury	0.05	0.06	18.8%
	nickel	22.9	22.0	1.0%
	potassium	989	710	32.8%
	vanadium	18.2	15.2	17.9%
	zinc	78.4	80.6	2.8%

The duplicate results are acceptable.

6. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

7. Serial Dilution

All serial dilution results were within the acceptable limits.

8. Furnace QC

No furnace analyses were performed on the samples.

9. Method of Standard Additions (MSA)

No samples were analyzed following the method of standard additions.

10. System Performance and Overall Assessment

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

## Data Validation Checklist

## Metals Data Validation Checklist

	YES	NO	NA
<b><u>Data Completeness and Deliverables</u></b>			
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>      </u>	<u>X</u>	<u>      </u>
Are all forms labeled with:			
Laboratory name?	<u>X</u>	<u>      </u>	<u>      </u>
Sample No.?	<u>X</u>	<u>      </u>	<u>      </u>
SDG No.?	<u>X</u>	<u>      </u>	<u>      </u>
Correct units?	<u>X</u>	<u>      </u>	<u>      </u>
Matrix?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Raw Data</u></b>			
Is the digestion log for flame AA/ICP present?	<u>X</u>	<u>      </u>	<u>      </u>
Is the digestion log for furnace AA present?	<u>      </u>	<u>      </u>	<u>X</u>
Is the distillation log for mercury present?	<u>X</u>	<u>      </u>	<u>      </u>
Are pH values listed?	<u>      </u>	<u>      </u>	<u>X</u>
pH for metals analyses <2 (waters)?	<u>      </u>	<u>      </u>	<u>X</u>
Percent solids calculation present for soils/sediments?	<u>X</u>	<u>      </u>	<u>      </u>
Are preparation dates present on sample preparation logs/bench sheets?	<u>X</u>	<u>      </u>	<u>      </u>
Are the measurement read out records present for:			
ICP	<u>X</u>	<u>      </u>	<u>      </u>
Flame AA	<u>      </u>	<u>      </u>	<u>X</u>
Furnace AA	<u>      </u>	<u>      </u>	<u>X</u>
Mercury	<u>X</u>	<u>      </u>	<u>      </u>
Is the data legible?	<u>X</u>	<u>      </u>	<u>      </u>
Is the data properly labeled?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Holding Times</u></b>			
Were mercury analyses performed within 28 days?	<u>      </u>	<u>X</u>	<u>      </u>
Were other metal analysis performed within 6 months?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Data Results</u></b>			
Are all forms complete?	<u>X</u>	<u>      </u>	<u>      </u>
Are correct units indicated on Form I's?	<u>X</u>	<u>      </u>	<u>      </u>
Are soil sample results corrected for percent solids?	<u>X</u>	<u>      </u>	<u>      </u>

**Metals Data Validation Checklist - Page 2**

	YES	NO	NA
Are all "less than IDL" values coded with "U"?	<u>X</u>	<u>      </u>	<u>      </u>
Is a physical description of samples given on Form I's?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Calibration</u></b>			
Is a record of at least 2 point calibration present for ICP analysis?	<u>X</u>	<u>      </u>	<u>      </u>
Is a record of 5 point calibration present for Hg analysis?	<u>X</u>	<u>      </u>	<u>      </u>
Is a record of 4 point calibration present for:			
Flame AA?	<u>      </u>	<u>      </u>	<u>X</u>
Furnace AA?	<u>      </u>	<u>      </u>	<u>X</u>
Is one calibration standard at the CRDL level for all AA (except Hg) analyses?	<u>      </u>	<u>      </u>	<u>X</u>
Is correlation coefficient less than .995 for:			
Mercury Analysis?	<u>      </u>	<u>X</u>	<u>      </u>
Atomic Absorption Analysis?	<u>      </u>	<u>      </u>	<u>X</u>
<b><u>Initial and Continuing Calibration Verification</u></b>			
Present and complete for all analytes?	<u>X</u>	<u>      </u>	<u>      </u>
Are all calibration standards (initial and continuing) within control limits for:			
Metals (90-110%)?	<u>X</u>	<u>      </u>	<u>      </u>
Hg (80-120%)?	<u>X</u>	<u>      </u>	<u>      </u>
Was continuing calibration performed every 10 samples or every 2 hours?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>CRDL Standards for AA and ICP</u></b>			
Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?	<u>      </u>	<u>      </u>	<u>X</u>
Was a 2xCRDL standard (CRI) analyzed for each ICP run?	<u>X</u>	<u>      </u>	<u>      </u>
Was CRI analyzed after the ICV/ICB and before the final CCV/CCB?	<u>X</u>	<u>      </u>	<u>      </u>
Are CRA and CRI standards within control limits for metals (80-120%)?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Initial and Continuing Calibration Blanks</u></b>			
Present and complete?	<u>X</u>	<u>      </u>	<u>      </u>
Was an initial calibration blank analyzed?	<u>X</u>	<u>      </u>	<u>      </u>
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	<u>X</u>	<u>      </u>	<u>      </u>
Are all calibration blanks less than or equal to the Contract Required Detection Limits (CRDLs)?	<u>X</u>	<u>      </u>	<u>      </u>

**Metals Data Validation Checklist - Page 3**

	YES	NO	NA
Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?	_____	_____	X
<b><u>Preparation Blank</u></b>			
Was one prep. blank analyzed for:			
each matrix?	X	_____	_____
each batch of digested samples?	X	_____	_____
Is concentration of prep. blank less than the CRDL?	X	_____	_____
If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?	_____	X	_____
Is concentration of prep. blank value less than two times IDL (when IDL>CRDL)?	_____	_____	X
Is concentration of prep. blank below the negative CRDL?	_____	X	_____
<b><u>ICP Interference Check Sample</u></b>			
Present and complete?	X	_____	_____
Was ICS analyzed at beginning and end of run (or at least twice every 8 hours)?	X	_____	_____
Are all ICS results inside the control limits ( $\pm 20\%$ )?	X	_____	_____
If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?	_____	_____	X
<b><u>Matrix Spike</u></b>			
Present and complete for:			
each batch?	X	_____	_____
each matrix type?	X	_____	_____
Was field blank used for spiked sample?	_____	X	_____
Are all recoveries for analytes with sample concentrations less than four times the spike concentration within control limits (75-125)?	X	_____	_____
Are results outside the control limits (75-125%) flagged with "N" on Form I's and Form VA?	_____	_____	X
<b><u>Aqueous</u></b>			
Are any spike recoveries:			
less than 30%?	_____	_____	X
between 30-74%?	_____	_____	X
between 126-150%?	_____	_____	X
greater than 150%?	_____	_____	X
<b><u>Soil/Sediment</u></b>			
Are any spike recoveries:			

**Metals Data Validation Checklist - Page 4**

	YES	NO	NA
less than 10%?	_____	X	_____
between 10-74%?	_____	X	_____
between 126-200%?	_____	X	_____
greater than 200%?	_____	X	_____
<b><u>Laboratory Duplicates</u></b>			
Present and complete for:			
each batch?	X	_____	_____
each matrix type?	X	_____	_____
Was field blank used for duplicate analysis?	_____	X	_____
Are all values within control limits (RPD 20% or difference $\leq \pm$ CRDL)?	X	_____	_____
If no, are all results outside the control limits flagged with an * on Form I's and VI?	_____	_____	X
<b><u>Aqueous</u></b>			
Is any RPD greater than 20% where sample and duplicate are both greater than or equal to 5 times CRDL?	_____	_____	X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?	_____	_____	X
<b><u>Soil/Sediment</u></b>			
Is any RPD (where sample and duplicate are both greater than or equal to 5 times CRDL) > 100%?	_____	X	_____
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5xCRDL) > 2xCRDL?	_____	X	_____
<b><u>Field Duplicates</u></b>			
Were field duplicates analyzed?	X	_____	_____
<b><u>Aqueous</u></b>			
is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5xCRDL?	_____	_____	X
Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5xCRDL?	_____	_____	X
<b><u>Soil/Sediment</u></b>			
Is any RPD (where sample and duplicate are both greater than 5 times CRDL) > 100%?	_____	X	_____
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL) >2xCRDL?	_____	X	_____

**Metals Data Validation Checklist - Page 5**

	YES	NO	NA
<b><u>Laboratory Control Sample</u></b>			
Was one LCS prepared and analyzed for:			
each matrix?	<u>X</u>	<u>      </u>	<u>      </u>
each batch samples digested/distilled?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Aqueous LCS</u></b>			
Is any LCS recovery:			
less than 50%?	<u>      </u>	<u>      </u>	<u>X</u>
between 50% and 79%?	<u>      </u>	<u>      </u>	<u>X</u>
between 121% and 150%?	<u>      </u>	<u>      </u>	<u>X</u>
greater than 150%?	<u>      </u>	<u>      </u>	<u>X</u>
<b><u>Solid LCS</u></b>			
Is LCS "Found" value higher than the control limits?	<u>      </u>	<u>X</u>	<u>      </u>
Is LCS "Found" lower than the control limits?	<u>      </u>	<u>X</u>	<u>      </u>
<b><u>ICP Serial Dilution</u></b>			
Was Serial Dilution analysis performed for:			
each SDG?	<u>X</u>	<u>      </u>	<u>      </u>
each matrix type?	<u>X</u>	<u>      </u>	<u>      </u>
Was field blank(s) used for Serial Dilution Analysis?	<u>      </u>	<u>X</u>	<u>      </u>
Are any required % difference values:			
> 10%?	<u>      </u>	<u>X</u>	<u>      </u>
≥100%?	<u>      </u>	<u>X</u>	<u>      </u>
Are results outside control limit flagged with an "E" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater.	<u>      </u>	<u>      </u>	<u>X</u>
<b><u>Furnace Atomic Absorption (AA) QC Analysis</u></b>			
Are duplicate injections present in furnace raw data (except during full Method of Standard Addition) for each sample analyzed by GFAA?	<u>      </u>	<u>      </u>	<u>X</u>
Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or coefficient of Variation (CV) for concentrations greater than CRDL?	<u>      </u>	<u>      </u>	<u>X</u>
Is analytical spike recovery outside the control limits (85-115%) for any sample?	<u>      </u>	<u>      </u>	<u>X</u>
Were dilutions analyzed for samples with analytical spike recoveries less than 40%?	<u>      </u>	<u>      </u>	<u>X</u>
<b><u>Method of Standard Addition</u></b>			
Performed?	<u>      </u>	<u>X</u>	<u>      </u>



**Metals Data Validation Checklist - Page 6**

	YES	NO	NA
If no, is any Form I result coded with "S" or "+"?	_____	<u>X</u>	_____
Was MSA required for any sample but not performed?	_____	<u>X</u>	_____
Is the coefficient of correlation for MSA less than 0.995 for any sample?	_____	_____	<u>X</u>
Is the coefficient of correlation for MSA less than 0.990 for any sample?	_____	_____	<u>X</u>
Was proper quantitation procedure followed?	_____	_____	<u>X</u>
<b><u>Dissolved/Total for Inorganic/Total Analytes</u></b>			
Were any analyses performed for dissolved as well as total analytes on the same sample.	_____	_____	<u>X</u>
Is the concentration of any dissolved analyte greater than its total concentration by more than 10%? (if >CRDL)	_____	_____	<u>X</u>
Is the concentration of any dissolved analyte greater than its total concentration by more than 50%?	_____	_____	<u>X</u>
<b><u>Field Blank</u></b>			
Is the field blank concentration less than CRDL (or 2xIDL when IDL>CRDL) for all analytes?	_____	_____	<u>X</u>
If no, was field blank value already rejected due to other QC criteria?	_____	_____	<u>X</u>
<b><u>Verification of Instrumental Parameters</u></b>			
Is verification report present for :			
Instrument Detection Limits (quarterly)?	<u>X</u>	_____	_____
ICP Interelement Correlation Factors (annually)?	<u>X</u>	_____	_____
ICP Linear Ranges (quarterly)?	<u>X</u>	_____	_____
Is IDL greater than CRDL for any analyte?	_____	<u>X</u>	_____
If yes, are the concentrations of the samples analyzed on the instrument whose IDL exceeds CRDL, greater than 5xIDL.	_____	_____	<u>X</u>
Was any sample result higher than the linear range of ICP?	_____	<u>X</u>	_____
Was any sample result higher than the highest calibration standard for non-ICP parameters?	_____	_____	<u>X</u>
If yes for any of the above, was the sample diluted to obtain the result on Form I?	_____	_____	<u>X</u>
<b><u>Percent Solids</u></b>			
Are the percent solids in soil/sediment(s):			
< 50%?	_____	<u>X</u>	_____
< 10%?	_____	<u>X</u>	_____

**Corrected Sample Analysis Data Sheets**

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

BACKFILL-01-071602

Contract: R2212858

Lab Code: Case No.: SAS No.: SDG NO.: BACKFILL-001

Matrix (soil/water): SOIL/SEDIMENT Lab Sample ID: 568818

Level (low/med): LOW Date Received: 07/17/02

% Solids: 86.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10400			P
7440-36-0	Antimony	6.7	U	AJ	P
7440-38-2	Arsenic	7.0			P
7440-39-3	Barium	76.5			P
7440-41-7	Beryllium	0.56	U		P
7440-43-9	Cadmium	0.56	U		P
7440-70-2	Calcium	6690			P
7440-47-3	Chromium	13.4			P
7440-48-4	Cobalt	13.2			P
7440-50-8	Copper	40.9			P
7439-89-6	Iron	23300			P
7439-92-1	Lead	15.7			P
7439-95-4	Magnesium	5610			P
7439-96-5	Manganese	748			P
7439-97-6	Mercury	0.06			CV
7440-02-0	Nickel	22.5			P
7440-09-7	Potassium	778			P
7782-49-2	Selenium	1.1	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	111	U		P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	16.0			P
7440-66-6	Zinc	77.2			P

Color Before: BLACK

Clarity Before:

Texture: MEDIUM

Color After: YELLOW

Clarity After: CLEAR

Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

BACKFILL-02-071602

Contract: R2212858

Lab Code:

Case No.:

SAS No.:

SDG NO.: BACKFILL-001

Matrix (soil/water): SOIL/SEDIMENT

Lab Sample ID: 568819

Level (low/med): LOW

Date Received: 07/17/02

% Solids: 96.4

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8710			P
7440-36-0	Antimony	6.2	Y	MT	P
7440-38-2	Arsenic	6.0			P
7440-39-3	Barium	104			P
7440-41-7	Beryllium	0.51	U		P
7440-43-9	Cadmium	0.51	U		P
7440-70-2	Calcium	21700			P
7440-47-3	Chromium	11.5			P
7440-48-4	Cobalt	8.8			P
7440-50-8	Copper	23.9			P
7439-89-6	Iron	21000			P
7439-92-1	Lead	14.8			P
7439-95-4	Magnesium	6360			P
7439-96-5	Manganese	986			P
7439-97-6	Mercury	0.03	U		CV
7440-02-0	Nickel	19.2			P
7440-09-7	Potassium	853			P
7782-49-2	Selenium	1.0	U		P
7440-22-4	Silver	1.0	U		P
7440-23-5	Sodium	103	U		P
7440-28-0	Thallium	0.99	U		F
7440-62-2	Vanadium	12.2			P
7440-66-6	Zinc	64.3			P

Color Before: BLACK

Clarity Before:

Texture: MEDIUM

Color After: YELLOW

Clarity After: CLEAR

Artifacts:

Comments:

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

BACKFILL-03-071602

Contract: R2212858

Lab Code:

Case No.:

SAS No.:

SDG NO.: BACKFILL-001

Matrix (soil/water): SOIL/SEDIMENT

Lab Sample ID: 568821

Level (low/med): LOW

Date Received: 07/17/02

% Solids: 86.6

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11300			P
7440-36-0	Antimony	6.9	U	MS	P
7440-38-2	Arsenic	7.7			P
7440-39-3	Barium	79.0			P
7440-41-7	Beryllium	0.58	U		P
7440-43-9	Cadmium	0.58	U		P
7440-70-2	Calcium	6250			P
7440-47-3	Chromium	14.4			P
7440-48-4	Cobalt	11.9			P
7440-50-8	Copper	38.6			P
7439-89-6	Iron	23900			P
7439-92-1	Lead	16.0			P
7439-95-4	Magnesium	5870			P
7439-96-5	Manganese	768			P
7439-97-6	Mercury	0.05			CV
7440-02-0	Nickel	22.8			P
7440-09-7	Potassium	989			P
7782-49-2	Selenium	1.2	U		P
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	115	U		P
7440-28-0	Thallium	1.1	U		F
7440-62-2	Vanadium	18.2			P
7440-66-6	Zinc	78.4			P

Color Before: BLACK

Clarity Before:

Texture: MEDIUM

Color After: YELLOW

Clarity After: CLEAR

Artifacts:

Comments:

## METALS

-1-

## INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.

DUP-1-BACKFILL

Contract: R2212858

Lab Code:

Case No.:

SAS No.:

SDG NO.: BACKFILL-001Matrix (soil/water): SOIL/SEDIMENTLab Sample ID: 568820Level (low/med): LOWDate Received: 07/17/02

% Solids: 86.8

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9580			P
7440-36-0	Antimony	6.6	X	AUS	P
7440-38-2	Arsenic	7.8			P
7440-39-3	Barium	77.3			P
7440-41-7	Beryllium	0.55	U		P
7440-43-9	Cadmium	0.55	U		P
7440-70-2	Calcium	7180			P
7440-47-3	Chromium	12.2			P
7440-48-4	Cobalt	12.6			P
7440-50-8	Copper	40.8			P
7439-89-6	Iron	21700			P
7439-92-1	Lead	17.0			P
7439-95-4	Magnesium	5350			P
7439-96-5	Manganese	889			P
7439-97-6	Mercury	0.06			CV
7440-02-0	Nickel	22.0			P
7440-09-7	Potassium	710			P
7782-49-2	Selenium	1.1	U		P
7440-22-4	Silver	1.1	U		P
7440-23-5	Sodium	111	U		P
7440-28-0	Thallium	1.2	U		F
7440-62-2	Vanadium	15.2			P
7440-66-6	Zinc	80.6			P

Color Before: BLACK

Clarity Before:

Texture: MEDIUM

Color After: YELLOW

Clarity After: CLEAR

Artifacts:

Comments:

## SUPPLEMENTAL PARAMETERS

## Introduction

Analyses were performed according to the following method:

Cyanide

SW-846 method 9012

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 analyte was analyzed for but not detected. The associated value is the analyte reporting limit.
- B The reported value was obtained from a reading less than the reporting limit (RL) but greater than or equal to the instrument detection limit (IDL).
- J The associated numerical value is an estimated concentration only.
- M Duplicate injection precision not met.
- N Spiked sample recovery not within control limits.
- \* Duplicate analysis not within control limits.
- 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 tests, 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 method-specified holding time for cyanide is 14 days from sample collection.

All samples were analyzed within specified holding time.

### 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 (including initial and continuing calibration blanks and preparation blanks) measure laboratory contamination. Field and rinse blanks measure contamination of samples during field operations.

No cyanide was detected in the method 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 continuing performance is satisfactory.

#### 3.1 Initial Calibration

No initial calibration data was provided.

#### 3.2 Continuing Calibration

No continuing calibration data was provided.

### 4. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

#### 4.1 Matrix Spike/Duplicate

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

### 5. Field Duplicate

Results for duplicate samples are summarized as follows:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
Backfill-03-071602 / DUP-1-Backfill	cyanide	ND	ND	NA

The duplicate results are acceptable.

6. Laboratory Control Sample (LCS)

All LCS recoveries were within control limits.

7. General Comments

No raw data were included in the data package.

8. System Performance and Overall Assessment

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

## Data Validation Checklist

## Data Validation Checklist

	YES	NO	NA
<b><u>Data Completeness and Deliverables</u></b>			
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>Raw Data</u></b>			
Are the preparation logs present?	<u>      </u>	<u>X</u>	<u>      </u>
Are preparation dates present on sample preparation logs/bench sheets?	<u>      </u>	<u>      </u>	<u>X</u>
Are the measurement read out records present?	<u>      </u>	<u>X</u>	<u>      </u>
Is the data legible?	<u>      </u>	<u>      </u>	<u>X</u>
Is the data properly labeled?	<u>      </u>	<u>      </u>	<u>X</u>
Are pH values listed?	<u>      </u>	<u>      </u>	<u>X</u>
Percent solids calculation present for soils/sediments?	<u>      </u>	<u>X</u>	<u>      </u>
<b><u>Holding Times</u></b>			
Were all analyses performed within the specified holding times?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Sample Data</u></b>			
Are all forms complete?	<u>X</u>	<u>      </u>	<u>      </u>
Are correct units indicated the results sheets?	<u>X</u>	<u>      </u>	<u>      </u>
Are soil sample results for each parameter corrected for percent solids?	<u>X</u>	<u>      </u>	<u>      </u>
<b><u>Initial Calibration</u></b>			
Is a record of an initial calibration present?:	<u>      </u>	<u>X</u>	<u>      </u>
Is correlation coefficient less than .995?:	<u>      </u>	<u>      </u>	<u>X</u>
<b><u>Initial and Continuing Calibration Verification</u></b>			
Present and complete for all analytes?	<u>      </u>	<u>X</u>	<u>      </u>
Are all calibration standards (initial and continuing) within control limits?:	<u>      </u>	<u>      </u>	<u>X</u>
Was continuing calibration performed every 10 samples or every 2 hours?	<u>      </u>	<u>      </u>	<u>X</u>
Was the ICV for cyanides distilled?	<u>      </u>	<u>      </u>	<u>X</u>
<b><u>Initial and Continuing Calibration Blanks</u></b>			
Present and complete?	<u>      </u>	<u>X</u>	<u>      </u>

**Data Validation Checklist - Page 2**

	YES	NO	NA
Was an initial calibration blank analyzed?	_____	_____	<u>  X  </u>
Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	_____	_____	<u>  X  </u>
Are all calibration blanks less than or equal to the RL?	_____	_____	<u>  X  </u>
<b><u>Preparation Blank</u></b>			
Was one prep. blank analyzed for:			
each batch of digested samples?	<u>  X  </u>	_____	_____
each matrix type?	<u>  X  </u>	_____	_____
Are all preparation blanks less than the RL?	<u>  X  </u>	_____	_____
If no, is the concentration of the sample with the least concentrated analyte less than 10 times the prep. blank?	_____	_____	<u>  X  </u>
<b><u>Matrix Spike</u></b>			
Present and complete for:			
each batch?	<u>  X  </u>	_____	_____
each matrix type?	<u>  X  </u>	_____	_____
Was field blank used for spiked sample?	_____	<u>  X  </u>	_____
Are all recoveries for analytes with sample concentrations less than four times the spike concentration within control limits?	_____	<u>  X  </u>	_____
Are results outside the control limits flagged with "N"?	_____	<u>  X  </u>	_____
<b><u>Laboratory Duplicates</u></b>			
Present and complete for:			
each batch?	<u>  X  </u>	_____	_____
each matrix type?	<u>  X  </u>	_____	_____
Was field blank used for duplicate analysis?	_____	<u>  X  </u>	_____
Are all values within control limits?	<u>  X  </u>	_____	_____
If no, are all results outside the control limits flagged with an * ?	_____	_____	<u>  X  </u>
<b><u>Field Duplicates</u></b>			
Were field duplicates analyzed?	<u>  X  </u>	_____	_____
<b><u>Aqueous</u></b>			
is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times RL?	_____	_____	<u>  X  </u>

### Data Validation Checklist - Page 3

	YES	NO	NA
Is any difference between sample and duplicate greater than RL where sample and/or duplicate is less than 5 times RL?	_____	_____	_____X_____
<b><u>Soil/Sediment</u></b>			
Is any RPD (where sample and duplicate are both greater than 5 times RL) > 100%?	_____	_____	_____X_____
Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x RL) >2xRL?	_____	_____	_____X_____
<b><u>Laboratory Control Sample</u></b>			
Was one LCS prepared and analyzed for:			
each matrix?	_____X_____	_____	_____
each batch?	_____X_____	_____	_____
Are all recoveries within control limits?	_____X_____	_____	_____
<b><u>Field Blank</u></b>			
Is the field blank concentration less than RL for all analytes?	_____	_____X_____	_____
If no, was field blank value already rejected due to other QC criteria?	_____	_____	_____X_____
<b><u>Percent Solids</u></b>			
Are the percent solids in soil/sediment(s):			
< 50%?	_____	_____X_____	_____
< 10%?	_____	_____X_____	_____

**Corrected Sample Analysis Data Sheets**

COLUMBIA ANALYTICAL SERVICES

Reported: 08/13/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
Client Sample ID : BACKFILL-01-071602

---

Date Sampled : 07/16/02 15:00      Order #: 568818      Sample Matrix: SOIL/SEDIMENT  
Date Received: 07/17/02      Submission #: R2212858

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	86.6	%	07/24/02	09:53	1.0
TOTAL CYANIDE	9012.T	1.00	1.15 U	MG/KG	07/19/02	09:55	1.0

---



COLUMBIA ANALYTICAL SERVICES

Reported: 08/13/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
Client Sample ID : BACKFILL-02-071602

---

Date Sampled : 07/16/02 14:40                      Order #: 568819                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 07/17/02                      Submission #: R2212858

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	96.4	%	07/24/02	09:53	1.0
TOTAL CYANIDE	9012.T	1.00	1.04 U	MG/KG	07/19/02	09:55	1.0

---

COLUMBIA ANALYTICAL SERVICES

Reported: 08/13/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
Client Sample ID : BACKFILL-03-071602

---

Date Sampled : 07/16/02 15:00                      Order #: 568821                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 07/17/02                      Submission #: R2212858

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT	DATE	TIME	DILUTION
				UNITS	ANALYZED	ANALYZED	
PERCENT SOLIDS	160.0	1.0	86.6	%	07/24/02	09:53	1.0
TOTAL CYANIDE	9012.T	1.00	1.15 U	MG/KG	07/19/02	09:55	1.0

COLUMBIA ANALYTICAL SERVICES

Reported: 08/13/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
Client Sample ID : DUP-1-BACKFILL

---

Date Sampled : 07/16/02                      Order #: 568820                      Sample Matrix: SOIL/SEDIMENT  
Date Received: 07/17/02                      Submission #: R2212858

---

ANALYTE	METHOD	PQL	RESULT	DRY WEIGHT UNITS	DATE ANALYZED	TIME ANALYZED	DILUTION
PERCENT SOLIDS	160.0	1.0	86.8	%	07/24/02	09:53	1.0
TOTAL CYANIDE	9012.T	1.00	1.15 U	MG/KG	07/19/02	09:55	1.0

---

## Laboratory Narrative

## CASE NARRATIVE

COMPANY: Blasland Bouck & Lee  
N - School Street Project #36458.011  
SUBMISSION #: R2212858

BBL samples were collected on 07/16/02 and received at CAS on 07/17/02 in good condition.

### INORGANICS

Four soil samples were analyzed for TAL Metals by Methods 6010/7000 and Cyanide by method 9012 from SW-846.

Site specific QC was performed on Backfill-03-071602. All MS recoveries were within limits except Antimony and has been flagged with an "N". All Blank spike recoveries were within limits. All RPD's were within limits.

No other analytical or QC problems were encountered.

### VOLATILE ORGANICS

Four soil samples were analyzed for the TCL list of Volatiles by Method 8260B from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within QC limits.

Site specific QC was performed on Backfill-03-071602. All MS/MSD recoveries were within limits. All RPD's were within limits. All Reference spike recoveries were within limits except MIBK and has been flagged with an "\*\*". No data was affected.

The Laboratory blanks associated with these samples were free of contamination except the blank from 7/18/02 contained a low level hit for Acetone. No data was affected.

All samples were analyzed within required holding times.

No other analytical or QC problems were encountered.

### SEMIVOLATILE ORGANICS

Four soil samples were analyzed for TCL list of Semivolatiles by method 8270C from SW846.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within limits.

Site specific QC was performed on Backfill-03-071602. All MS/MSD and Blank Spike recoveries were within limits. All RPD's were within limits.

The Laboratory Blank associated with these analyses was free of contamination.

All samples were extracted and analyzed within required holding times.

No other analytical or QC problems were encountered.

**PESTICIDES/PCB's**

Four soil samples were analyzed for the TCL list of Pesticides and PCB's by methods 8081 and 8082 from SW-846.

All the initial and continuing calibration criteria were met for all analytes.

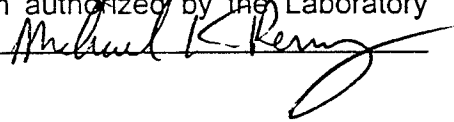
All surrogate standard recoveries were within limits.

Site specific QC was performed on Backfill-03-071602. All MS/MSD recoveries were within limits except Dieldrin and has been flagged with an "\*\*". All Blank spike recoveries were within limits except 4,4'-DDT and has been flagged with an "\*\*". No data was affected. All RPD's were within limits.

The Laboratory Blanks associated with these analyses were free of contamination.

All samples were extracted and analyzed within required holding.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature. 

**NYSDEC Sample Preparation and Analysis Summary Sheets**





## Sample Compliance Report

## SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliance <sup>1</sup>					Noncompliance
					VOC	SVOC	PEST	PCB	MET	
R2212858	7/16/02	2000	Backfill-01-071602	water	yes	yes	no	yes	no	PEST - cal, ms <sup>2</sup> , msb <sup>2</sup> MET - ms
R2212858	7/16/02	2000	Backfill-02-071602	soil	yes	yes	no	yes	no	PEST - cal, ms <sup>2</sup> , msb <sup>2</sup> MET - ms
R2212858	7/16/02	2000	DUP-1-Backfill	soil	yes	yes	no	yes	no	PEST - cal, ms <sup>2</sup> , msb <sup>2</sup> MET - ms
R2212858	7/16/02	2000	Backfill-03-071602	soil	yes	yes	no	yes	no	PEST - cal, ms <sup>2</sup> , msb <sup>2</sup> MET - ms

- 1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.
- 2 The deviation resulted in no qualification of data.
- 3 Although the deviation resulted in the qualification of data, the laboratory was method compliant.

DATA REVIEW FOR

NMPC  
SCHOOL STREET

SDG# R2212858

VOLATILE, SEMIVOLATILE,  
PCB, AND INORGANIC ANALYSES

Analyses performed by:

Columbia Analytical Services, Inc.  
Rochester, New York

Review performed by:



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

Summary

The following is an assessment of the data package for SDG# R2212858 for sampling at the NMPC-School 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				
				VOC	SVOC	PCB	PEST	TAL
Backfill-01-071602	568818	soil	7/16/02	x	x	x	x	x
Backfill-02-071602	568819	soil	7/16/02	x	x	x	x	x
DUP-1-Backfill	568820	soil	7/16/02	x	x	x	x	x
Backfill-03-071602 <sup>1</sup>	568821	soil	7/16/02	x	x	x	x	x

1 MS/MSD analysis performed on sample

## VOLATILE ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8260 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 tests, 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 NYSASP is 10 days from sample receipt. The technical holding time for soils is 14 days from sample collection.

All samples were analyzed within the specified holding times.

### 2. Blank Contamination

Quality assurance blanks (i.e., method, trip, field, and 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 method blank. No acetone was detected in the samples; therefore, the blank content has no impact on the reported data.

### 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 percent relative standard deviation (%RSD) limits for select compounds only and allows two outliers. A technical review of the data applies limits 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

The method species percent drift (%D) criteria for select compounds only. A technical review applies limits to all compounds with no exceptions.

The continuing calibration %D was outside acceptable limits for carbon disulfide. Since no carbon disulfide was detected in the samples and since the compound response was increasing, no data have been qualified based on the deviation.

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 responses and retention times were within established limits.

7. Compound Identification

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

All compounds met the specified criteria.

8. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

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

9. Laboratory Control Sample

The laboratory control sample recovery for 4-methyl-2-pentanone was above control limits. Since no 4-methyl-2-pentanone was detected in the samples, the high recoveries have no impact on the reported data.

10. Field Duplicates

Results for duplicate samples are summarized below:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
Backfill-03-071602 / DUP-1-Backfill	ND	--	--	NA

ND Not detected.

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

The duplicate results are acceptable.



## 11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines 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?	_____	X	_____
Is there a narrative or cover letter present?	X	_____	_____
Are the sample numbers included in the narrative?	_____	X	_____
Are the sample chain-of-custodies present?	X	_____	_____
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	_____	X	_____
<b><u>Holding Times</u></b>			
Have any holding times been exceeded?	_____	X	_____
<b><u>Surrogate Recovery</u></b>			
Are surrogate recovery forms present?	_____	X	_____
Are all samples listed on the surrogate recovery form?	_____	_____	X
Was one or more surrogate recovery outside control limits for any sample or blank?	_____	X	_____
If yes, were the samples reanalyzed?	_____	_____	X
Are there any transcription/calculation errors between the raw data and the summary form?	_____	X	_____
<b><u>Matrix Spikes</u></b>			
Is there a matrix spike recovery form present?	X	_____	_____
Were matrix spikes analyzed at the required frequency?	X	_____	_____
How many spike recoveries were outside of QC limits? <u>  0  </u> out of <u>  10  </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? <u>  0  </u> out of <u>  5  </u>			
<b><u>Blanks</u></b>			
Is a method blank summary form present?	X	_____	_____
Has a method blank been analyzed each day or for each 20 samples, whichever is more frequent?	X	_____	_____
Has a blank been analyzed at least once every twelve hours for each system used?	X	_____	_____
Do any method/instrument blanks have positive results?	X	_____	_____
Are there trip/field blanks associated with every sample?	_____	X	_____
Do any trip/field blanks have positive results?	_____	_____	X
<b><u>Tuning and Mass Calibration</u></b>			
Are the GC/MS tuning forms present for BFB?	X	_____	_____

## Volatile Organics Data Validation Checklist - Page 2

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

### Volatile Organics Data Validation Checklist - Page 3

	YES	NO	NA
<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 initial calibration forms present for each instrument?	<u>X</u>	_____	_____
Are the response factor RSDs within acceptable limits?	<u>X</u>	_____	_____
Are the average RRFs $\geq$ minimum requirements?	<u>X</u>	_____	_____
Are there any transcription/calculation errors in reporting the RRFs or RSDs?	_____	<u>X</u>	_____
<b><u>Continuing Calibration</u></b>			
Are continuing calibration forms present for each day and 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 $\geq$ 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 every sample and blank within the upper and lower limits for each continuing calibration?	<u>X</u>	_____	_____
Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	<u>X</u>	_____	_____
<b><u>Field Duplicates</u></b>			
Were field duplicates submitted with the samples?	<u>X</u>	_____	_____

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

Sample ID	Holding Time*	Surrogates*			Internal Standards*			
		TOL	BFB	DBF	PFB	DFB	CBZ	DCB
Backfill-01-071602								
Backfill-02-071602								
DUP-1-Backfill								
Backfill-03-071602								
Backfill-03-071602 MS								
Backfill-03-071602 MSD								

Surrogates:  
TOL Toluene-d8  
BFB Bromofluorobenzene  
DBF Dibromofluoromethane

Internal Standards:  
PFB Pentafluorobenzene  
DFB 1,4-Difluorobenzene  
CBZ Chlorobenzene-d5  
DCB 1,4-Dichlorobenzene-d4

Qualifiers:  
D Diluted  
‡ Recovery high  
‡ Recovery low  
‡‡ Recovery <25%

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

### Volatile Calibration Outliers

Instrument: 5971  
 Matrix: soil  
 Level: low

Date/Time	7/14/02		7/18/02 1209							
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
carbon disulfide				+25.2						
methylene chloride										
acetone										
1,1-dichloroethene										
1,1-dichloroethane										
1,2-dichloroethene (total)										
vinyl acetate										
methyltertbutylether										
cis-1,3-dichloropropene										
trans-1,3-dichloropropene										
chloroform										
1,2-dichloroethane										
2-butanone										
1,1,1-trichloroethane										
carbon tetrachloride										
bromodichloromethane										
1,2-dichloropropane										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
bromoform										
4-methyl-2-pentanone										
2-hexanone										
tetrachloroethene										
1,1,2,2-tetrachloroethane										

**Volatile Calibration Outliers - Page 2**

Date/Time	7/14/02		7/18/02 1209							
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
toluene										
chlorobenzene										
ethylbenzene										
styrene										
o-xylene										
m&p-xylene										
Affected Samples:			all samples							



## Corrected Sample Analysis Data Sheets

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
 METHOD 8260B TCL  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
 Client Sample ID : BACKFILL-01-071602

Date Sampled : 07/16/02 15:00 Order #: 568818 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 86.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/18/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
ACETONE	20	23 U	UG/KG
BENZENE	5.0	5.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.8 U	UG/KG
BROMOFORM	5.0	5.8 U	UG/KG
BROMOMETHANE	5.0	5.8 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.8 U	UG/KG
CHLOROBENZENE	5.0	5.8 U	UG/KG
CHLOROETHANE	5.0	5.8 U	UG/KG
CHLOROFORM	5.0	5.8 U	UG/KG
CHLOROMETHANE	5.0	5.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
ETHYLBENZENE	5.0	5.8 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
METHYLENE CHLORIDE	5.0	5.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.8 U	UG/KG
TETRACHLOROETHENE	5.0	5.8 U	UG/KG
TOLUENE	5.0	5.8 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.8 U	UG/KG
TRICHLOROETHENE	5.0	5.8 U	UG/KG
VINYL CHLORIDE	5.0	5.8 U	UG/KG
O-XYLENE	5.0	5.8 U	UG/KG
M+P-XYLENE	5.0	1.7 J	UG/KG

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(42 - 149 %)	97	%
TOLUENE-D8	(71 - 128 %)	103	%
DIBROMOFLUOROMETHANE	(70 - 127 %)	93	%

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

01-071602

Lab Name: CAS\ROCH Contract: BLA  
Lab Code: 10145 Case No.: R2-12858 SAS No.: \_\_\_\_\_ SDG No.: BACKFILL  
Matrix: (soil/water) SOIL Lab Sample ID: 568818 1.0  
Sample wt/vol: 5.0 (g/ml) G Lab File ID: A2447.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. 0 Date Analyzed: 07/18/02  
GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0  
Soil Extract Volume 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q
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COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
 METHOD 8260B TCL  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
 Client Sample ID : BACKFILL-02-071602

Date Sampled : 07/16/02 14:40 Order #: 568819 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 96.4

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/18/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
ACETONE	20	21 U	UG/KG
BENZENE	5.0	5.2 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.2 U	UG/KG
BROMOFORM	5.0	5.2 U	UG/KG
BROMOMETHANE	5.0	5.2 U	UG/KG
2-BUTANONE (MEK)	10	10 U	UG/KG
CARBON DISULFIDE	10	10 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.2 U	UG/KG
CHLOROBENZENE	5.0	5.2 U	UG/KG
CHLOROETHANE	5.0	5.2 U	UG/KG
CHLOROFORM	5.0	5.2 U	UG/KG
CHLOROMETHANE	5.0	5.2 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.2 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.2 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.2 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.2 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.2 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.2 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.2 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.2 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.2 U	UG/KG
ETHYLBENZENE	5.0	5.2 U	UG/KG
2-HEXANONE	10	10 U	UG/KG
METHYLENE CHLORIDE	5.0	5.2 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/KG
STYRENE	5.0	5.2 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.2 U	UG/KG
TETRACHLOROETHENE	5.0	5.2 U	UG/KG
TOLUENE	5.0	5.2 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.2 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.2 U	UG/KG
TRICHLOROETHENE	5.0	5.2 U	UG/KG
VINYL CHLORIDE	5.0	5.2 U	UG/KG
O-XYLENE	5.0	5.2 U	UG/KG
M+P-XYLENE	5.0	5.2 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(42 - 149 %)	110	%
TOLUENE-D8	(71 - 128 %)	105	%
DIBROMOFLUOROMETHANE	(70 - 127 %)	93	%

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

02-071602

Lab Name: CASIROCH Contract: BLA  
Lab Code: 10145 Case No.: R2-12858 SAS No.: \_\_\_\_\_ SDG No.: BACKFILL  
Matrix: (soil/water) SOIL Lab Sample ID: 568819 1.0  
Sample wt/vol: 5.0 (g/ml) G Lab File ID: A2448.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. 0 Date Analyzed: 07/18/02  
GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0  
Soil Extract Volume 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

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

CAS NO.	COMPOUND	RT	EST. CONC.	Q
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COLUMBIA ANALYTICAL SERVICES

Reported: 10/25/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : WW-1

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Date Sampled : 10/08/02                      Order #: 591443                      Sample Matrix: WATER  
Date Received: 10/09/02                      Submission #: R2214152

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ANALYTE	METHOD	PQL	RESULT	UNITS	DATE ANALYZED	DILUTION
ARSENIC	6010B	0.500	0.500 U	MG/L	10/16/02	1.0
BARIUM	6010B	1.00	1.00 U	MG/L	10/16/02	1.0
CADMIUM	6010B	0.100	0.100 U	MG/L	10/16/02	1.0
CHROMIUM	6010B	0.100	0.100 U	MG/L	10/16/02	1.0
LEAD	6010B	0.100	0.100 U	MG/L	10/16/02	1.0
MERCURY	7470A	0.000300	0.00300 U	MG/L	10/16/02	10.0
SELENIUM	6010B	0.500	0.500 U	MG/L	10/16/02	1.0
SILVER	6010B	0.100	0.100 U	MG/L	10/16/02	1.0

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COLUMBIA ANALYTICAL SERVICES

**VOLATILE ORGANICS**  
METHOD 8260B TCLP  
Reported: 10/25/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : WW-1

Date Sampled : 10/08/02                      Order #: 591443                      Sample Matrix: WATER  
Date Received: 10/09/02                      Submission #: R2214152                      Analytical Run 83848

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/11/02			
ANALYTICAL DILUTION: 10.00			
BENZENE	5.0	50 U	UG/L
2-BUTANONE (MEK)	10	100 U	UG/L
CARBON TETRACHLORIDE	5.0	50 U	UG/L
CHLOROBENZENE	5.0	50 U	UG/L
CHLOROFORM	5.0	50 U	UG/L
1,2-DICHLOROETHANE	5.0	50 U	UG/L
1,1-DICHLOROETHENE	5.0	50 U	UG/L
TETRACHLOROETHENE	5.0	50 U	UG/L
TRICHLOROETHENE	5.0	50 U	UG/L
VINYL CHLORIDE	5.0	50 U	UG/L

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
BROMOFLUOROBENZENE	(83 - 118 %)	101	%
TOLUENE-D8	(91 - 113 %)	96	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	103	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8270C TCLP

Reported: 10/25/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : WW-1

Date Sampled : 10/08/02                      Order #: 591443                      Sample Matrix: WATER  
Date Received: 10/09/02                    Submission #: R2214152                    Analytical Run 83831

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/14/02		
DATE ANALYZED	: 10/16/02		
ANALYTICAL DILUTION:	10.00		
1,4-DICHLOROBENZENE	10	100 U	UG/L
2,4-DINITROTOLUENE	10	100 U	UG/L
HEXACHLOROBENZENE	10	100 U	UG/L
HEXACHLOROBUTADIENE	10	100 U	UG/L
HEXACHLOROETHANE	10	100 U	UG/L
2-METHYLPHENOL	10	100 U	UG/L
3+4-METHYLPHENOL	10	100 U	UG/L
NITROBENZENE	10	100 U	UG/L
PENTACHLOROPHENOL	50	500 U	UG/L
PYRIDINE	50	500 U	UG/L
2,4,6-TRICHLOROPHENOL	10	100 U	UG/L
2,4,5-TRICHLOROPHENOL	10	100 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-D14	(10 - 152 %)	90	%
NITROBENZENE-D5	(30 - 116 %)	74	%
PHENOL-D6	(10 - 130 %)	30	%
2-FLUOROBIPHENYL	(38 - 107 %)	73	%
2-FLUOROPHENOL	(10 - 75 %)	43	%
2,4,6-TRIBROMOPHENOL	(10 - 135 %)	97	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.



COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 10/25/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM SCHOOL ST IRM PROJECT #36458.007

Client Sample ID : WW-1

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Date Sampled : 10/08/02                      Order #: 591445                      Sample Matrix: WATER  
Date Received: 10/09/02                      Submission #: R2214152                      Analytical Run 83722

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ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/10/02		
DATE ANALYZED	: 10/14/02		
ANALYTICAL DILUTION:	1.00		
PCB 1016	0.93	0.93 U	UG/L
PCB 1221	0.93	0.93 U	UG/L
PCB 1232	0.93	0.93 U	UG/L
PCB 1242	0.93	0.93 U	UG/L
PCB 1248	0.93	0.93 U	UG/L
PCB 1254	0.93	0.93 U	UG/L
PCB 1260	0.93	14 E	UG/L

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(10 - 138 %)	62	%
TETRACHLORO-META-XYLENE	(16 - 141 %)	68	%

SA

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**  
METHOD 8082 PCB'S  
Reported: 10/25/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : WW-1

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Date Sampled : 10/08/02                      Order #: 591445                      Sample Matrix: WATER  
Date Received: 10/09/02                      Submission #: R2214152                      Analytical Run 0

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ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 10/10/02		
DATE ANALYZED	: 10/21/02		
ANALYTICAL DILUTION:	2.00		
PCB 1016	0.93	1.9 U	UG/L
PCB 1221	0.93	1.9 U	UG/L
PCB 1232	0.93	1.9 U	UG/L
PCB 1242	0.93	1.9 U	UG/L
PCB 1248	0.93	1.9 U	UG/L
PCB 1254	0.93	1.9 U	UG/L
PCB 1260	0.93	14	UG/L

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(10 - 138 %)	67	%
TETRACHLORO-META-XYLENE	(16 - 141 %)	71	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
METHOD 8260B TCLP  
Reported: 10/25/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM SCHOOL ST IRM PROJECT #36458.007  
Client Sample ID : TRIP BLANK

Date Sampled : 10/08/02                      Order #: 591448                      Sample Matrix: WATER  
Date Received: 10/09/02                      Submission #: R2214152                      Analytical Run 83848

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED	: 10/11/02		
ANALYTICAL DILUTION:	1.00		
BENZENE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

BROMOFLUOROBENZENE	(83 - 118 %)	101	%
TOLUENE-D8	(91 - 113 %)	95	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	102	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

COLUMBIA ANALYTICAL SERVICES

INORGANIC BLANK SPIKE SUMMARY

CAS Submission #: R2214152  
 Client: Blasland, Bouck & Lee, Inc.  
 NM SCHOOL ST IRM PROJECT #36458.007

BLANK SPIKES

	BLANK	FOUND	ADDED	% REC	LIMITS	RUN	UNITS
MERCURY	0.000300 U	0.0102	0.0100	102	80 - 120	83852	MG/L
ARSENIC	0.500 U	5.30	5.00	106	80 - 120	83873	MG/L
BARIUM	1.00 U	5.23	5.00	105	80 - 120	83873	MG/L
CADMIUM	0.100 U	1.07	1.00	107	80 - 120	83873	MG/L
CHROMIUM	0.100 U	5.32	5.00	106	80 - 120	83873	MG/L
LEAD	0.100 U	5.26	5.00	105	80 - 120	83873	MG/L
SELENIUM	0.500 U	1.08	1.00	108	80 - 120	83873	MG/L
SILVER	0.100 U	5.43	5.00	109	80 - 120	83873	MG/L
SULFIDE REACTIVITY	1.00 U	85.7	59.6	144	42 - 213	83821	MG/L
CYANIDE REACTIVITY	0.0500 U	0.265	4.92	5	0 - 23	83875	MG/L

COLUMBIA ANALYTICAL SERVICES

**VOLATILE ORGANICS**  
METHOD 8260B TCLP  
Reported: 10/25/02

Project Reference:  
Client Sample ID : METHOD BLANK

Date Sampled :                      Order #: 593731                      Sample Matrix: WATER  
Date Received:                      Submission #:                      Analytical Run 83848

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 10/11/02			
ANALYTICAL DILUTION: 1.00			
BENZENE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

BROMOFLUOROBENZENE	(83 - 118 %)	100	%
TOLUENE-D8	(91 - 113 %)	97	%
DIBROMOFLUOROMETHANE	(87 - 115 %)	103	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**  
METHOD 8270C TCLP  
Reported: 10/25/02

**Project Reference:**  
Client Sample ID : METHOD BLANK

Date Sampled : Order #: 593619 Sample Matrix: WATER  
Date Received: Submission #: Analytical Run 83831

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/14/02			
DATE ANALYZED : 10/15/02			
ANALYTICAL DILUTION: 10.00			
1,4-DICHLOROBENZENE	10	100 U	UG/L
2,4-DINITROTOLUENE	10	100 U	UG/L
HEXACHLOROBENZENE	10	100 U	UG/L
HEXACHLOROBUTADIENE	10	100 U	UG/L
HEXACHLOROETHANE	10	100 U	UG/L
2-METHYLPHENOL	10	100 U	UG/L
3+4-METHYLPHENOL	10	100 U	UG/L
NITROBENZENE	10	100 U	UG/L
PENTACHLOROPHENOL	50	500 U	UG/L
PYRIDINE	50	500 U	UG/L
2,4,6-TRICHLOROPHENOL	10	100 U	UG/L
2,4,5-TRICHLOROPHENOL	10	100 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-D14	(10 - 152 %)	86	%
NITROBENZENE-D5	(30 - 116 %)	78	%
PHENOL-D6	(10 - 130 %)	32	%
2-FLUOROBIPHENYL	(38 - 107 %)	73	%
2-FLUOROPHENOL	(10 - 75 %)	45	%
2,4,6-TRIBROMOPHENOL	(10 - 135 %)	94	%

Data Reported following TCLP Toxicity Characteristics Leaching Procedure.  
Federal Register, Part 261, Vol. 55, NO 126, June 29, 1990.

COLUMBIA ANALYTICAL SERVICES

**EXTRACTABLE ORGANICS**

METHOD 8082 PCB'S

Reported: 10/25/02

Project Reference:

Client Sample ID : METHOD BLANK

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Date Sampled :	Order #: 592775	Sample Matrix: WATER
Date Received:	Submission #:	Analytical Run 83722

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ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 10/10/02			
DATE ANALYZED : 10/13/02			
ANALYTICAL DILUTION: 1.00			
PCB 1016	1.0	1.0 U	UG/L
PCB 1221	1.0	1.0 U	UG/L
PCB 1232	1.0	1.0 U	UG/L
PCB 1242	1.0	1.0 U	UG/L
PCB 1248	1.0	1.0 U	UG/L
PCB 1254	1.0	1.0 U	UG/L
PCB 1260	1.0	1.0 U	UG/L

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL	(10 - 138 %)	89	%
TETRACHLORO-META-XYLENE	(16 - 141 %)	65	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
METHOD: 8260B TCLP

LABORATORY CONTROL SAMPLE SUMMARY

REFERENCE ORDER #: 593732 ANALYTICAL RUN #: 83848

ANALYTE	TRUE VALUE	% RECOVERY	QC LIMITS
DATE ANALYZED	: 10/11/02		
ANALYTICAL DILUTION:	1.0		
BENZENE	20.0	95	70 - 130
2-BUTANONE (MEK)	20.0	82	50 - 150
CARBON TETRACHLORIDE	20.0	87	70 - 130
CHLOROBENZENE	20.0	94	70 - 130
CHLOROFORM	20.0	95	70 - 130
1,2-DICHLOROETHANE	20.0	88	70 - 130
1,1-DICHLOROETHENE	20.0	89	70 - 130
TETRACHLOROETHENE	20.0	87	70 - 130
TRICHLOROETHENE	20.0	88	70 - 130
VINYL CHLORIDE	20.0	88	70 - 130



COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY: LABORATORY CONTROL SAMPLE  
WATER

Spiked Order No. : 593620

Dup Spiked Order No. : 593621

Client ID:

Test: 8270C TCLP

Analytical Units: UG/L

Run Number : 83831

ANALYTE	SPIKE	SAMPLE	BLANK SPIKE		BLANK SPIKE DUP.				QC LIMITS
	ADDED	CONCENT.	FOUND	% REC.	FOUND	% REC.	RPD	RPD	REC.
1,4-DICHLOROBENZENE	1000	0	450	45	450	45	0	30	30 - 130
2,4-DINITROTOLUENE	1000	0	850	85	850	85	0	30	52 - 110
HEXACHLOROBENZENE	1000	0	840	84	870	87	4	30	58 - 112
HEXACHLOROBUTADIENE	1000	0	400	40	400	40	0	30	30 - 107
HEXACHLOROETHANE	1000	0	390	39	390	39	0	30	21 - 103
2-METHYLPHENOL	1000	0	640	64	670	67	5	30	37 - 104
3+4-METHYLPHENOL	2000	0	1200	60	1300	65	8	30	42 - 94
NITROBENZENE	1000	0	700	70	730	73	4	30	49 - 100
PENTACHLOROPHENOL	1000	0	770	77	810	81	5	30	21 - 121
2,4,6-TRICHLOROPHENOL	1000	0	803	80	833	83	4	30	57 - 104
2,4,5-TRICHLOROPHENOL	1000	0	820	82	830	83	1	30	61 - 101

COLUMBIA ANALYTICAL SERVICES

QUALITY CONTROL SUMMARY: LABORATORY CONTROL SAMPLE  
 WATER

Spiked Order No. : 592776

Dup Spiked Order No. : 592777

Client ID:

Test: 8082 PCB'S

Analytical Units: UG/L

Run Number : 83722

ANALYTE	SPIKE	SAMPLE CONCENT.	BLANK SPIKE		BLANK SPIKE DUP.			QC LIMITS	
	ADDED		FOUND	% REC.	FOUND	% REC.	RPD	RPD	REC.
PCB 1254	5.0	0	4.50	90	3.70	74	20	30	70 - 130



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

One Mustard St., Suite 250 • Rochester, NY 14609-0859 • (716) 288-5380 • 800-695-7222 x11 • FAX (716) 288-8475 PAGE 1 OF 1

SR #

CAS Contact

Project Name		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)		PRESERVATIVE	NUMBER OF CONTAINERS	GCMs VOAs GCMS SVOA's GC VOAs	PESTICIDES 8081 □ 808 □ 608 □ CLP 8082 □ 8021 □ 601/602 □ CLP	STARS LIST 8021 VOAs TOTAL □ TCLP	STARS LIST 8270 SVOA's TOTAL □ TCLP	WASTE CHARACTERIZATION GCMS SVOA's □ H/P WASTE CHARACTERIZATION React. Acct. □ H/P	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
Company/Address	Project Manager	Report CC	Company/Address	Project Manager	Report CC										
NW School St 10210	John Brussel	36458007	BBC Inc.	John Brussel											
6723 Tompkins Rd			Syracuse NY 13214												
315-4462570		3154494111													
James M. Craven	James M. Craven	JAVIA M. CRAMER													
Client Sample ID	For Office Use Only	Sampling Date	Time	Matrix											
WW-1	5944345	10/02/16	45	Water	10										
Temp Blank	48				3										
Temp Blank					1										

SPECIAL INSTRUCTIONS/COMMENTS <b>Metals</b> Please fax results to John Brussel + to JAVIA CRAMER 578 452 7086 PCBS, TCLP, TCLP, TCLP + Ign, Corros + reactivity (8002), VOAs, SVOA's, Metals + Ign, Corros + reactivity See CAPP X FOR WASTE WATER ANALYSIS METHODS + PROCED	TURNAROUND REQUIREMENTS X RUSH (SURCHARGES APPLY) 24 hr 48 hr 5 day STANDARD REQUESTED FAX DATE ASAP REQUESTED REPORT DATE STANDARD	REPORT REQUIREMENTS X I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + OC and Calibration Summaries IV. Data Validation Report with Raw Data V. Specialized Forms / Custom Report Edata Yes No	INVOICE INFORMATION PO# BILL TO: SUBMISSION #:
	RECEIVED BY JAVIA M. CRAMER Signature Printed Name Firm Date/Time	RECEIVED BY JAVIA M. CRAMER Signature Printed Name Firm Date/Time	RECEIVED BY JAVIA M. CRAMER Signature Printed Name Firm Date/Time

### Cooler Receipt And Preservation Check Form

Project/Client BBL Submission Number R2-14152

Cooler received on 10-9-02 by: JE COURIER: CAS UPS FEDEX CD&L CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did any VOA vials have significant air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROC, CLIENT
7. Temperature of cooler(s) upon receipt: 2°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 10/9/02 955

Thermometer ID: 161 or IR GUN Reading From: Temp Blank or Sample Bottle

If out of Temperature, Client Approval to Run Samples \_\_\_\_\_

Cooler Breakdown: Date: 10/9/02 by: ICMC

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
  2. Did all bottle labels and tags agree with custody papers? YES NO
  3. Were correct containers used for the tests indicated? YES NO
  4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A
- Explain any discrepancies: \_\_\_\_\_

		YES	NO	Sample I.D.	Reagent	Vol. Added
pH	Reagent					
12	NaOH					
2	HNO <sub>3</sub>					
2	H <sub>2</sub> SO <sub>4</sub>					
Residual Chlorine (+/-) for TCN & Phenol						
5-9**	P/PCBs (608 only)					

YES = All samples OK      NO = Samples were preserved at lab as listed      PC OK to adjust pH \_\_\_\_\_  
 \*\*If pH adjustment is required, use NaOH and/or H<sub>2</sub>SO<sub>4</sub>

VOC Vial pH Verification (Tested after Analysis) Following Samples Exhibited pH > 2			

Other Comments:

# ***Backfill Material Sample Results***

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**SDG No. R2212858**

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**Samples Collected**  
**7/16/02**

**BBL**<sup>®</sup>  
BLASLAND, BOUCK & LEE, INC.  
*engineers & scientists*

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

Sample ID	Holding Time*	Surrogates*						Internal Standards*				
		N B Z	F B P	T P H	P H L	2 F P	T B P	D C B	N P T	A N T	P H N	C R Y
Backfill-01-071602												
Backfill-02-071602												
DUP-1-Backfill												
Backfill-03-071602												
Backfill-03-071602 MS												
Backfill-03-071602 MSD												

Surrogates:  
 NBZ Nitrobenzene-d5  
 FBP 2-Fluorobiphenyl  
 TPH Terphenyl-d14  
 PHL Phenol-d6  
 2FP 2-Fluorophenol  
 TBP 2,4,6-Tribromophenol

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

Qualifiers:  
 D Diluted  
 ↓ Recovery low  
 † Recovery high  
 na not applicable

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

### Semivolatile Calibration Outliers

Instrument: 5973-A

Date/Time	7/01/02		7/01/02 1439		7/19/02 1230					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
Phenol										
bis(2-Chloroethyl)ether										
2-Chlorophenol										
1,3-Dichlorobenzene										
1,4-Dichlorobenzene										
1,2-Dichlorobenzene										
Benzyl Alcohol										
2-Methylphenol										
bis(2-Chloroisopropyl)ether										
4-Methylphenol										
N-Nitroso-di-n-propylamine										
Hexachloroethane										
Nitrobenzene										
Isophorone										
2-Nitrophenol										
2,4-Dimethylphenol										
bis(2-Chloroethoxy)methane										
Benzoic Acid										
2,4-Dichlorophenol										
1,2,4-Trichlorobenzene										
Naphthalene										
4-Chloroaniline										
Hexachlorobutadiene										
4-Chloro-3-methylphenol										
2-Methylnaphthalene										
Hexachlorocyclopentadiene										
2,4,6-Trichlorophenol										
2,4,5-Trichlorophenol										
2-Chloronaphthalene										
2-Nitroaniline										
Dimethyl phthalate										
Acenaphthylene										
2,6-Dinitrotoluene										
3-Nitroaniline										
Acenaphthene										



**Semivolatile Calibration Outliers - Page 2**

Date/Time	7/01/02		7/01/02 1439		7/19/02 1230					
	Initial Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.		Cont. Cal.	
	RF	%RSD	RF	%D	RF	%D	RF	%D	RF	%D
2,4-Dinitrophenol										
4-Nitrophenol										
Dibenzofuran										
4-Nitroaniline										
2,4-Dinitrotoluene										
Diethylphthalate										
Fluorene										
4-Chlorophenyl-phenylether										
4,6-Dinitro-2-methylphenol										
N-Nitrosodiphenylamine										
4-Bromophenyl-phenylether										
Hexachlorobenzene										
Pentachlorophenol										
Phenanthrene										
Anthracene										
Di-n-butylphthalate										
Fluoranthene										
Pyrene										
Butylbenzylphthalate										
Benzo(a)anthracene										
3,3'-Dichlorobenzidine										
Chrysene										
bis(2-ethylhexyl)phthalate										
Di-n-octylphthalate										
Benzo(b)fluoranthene										
Benzo(k)fluoranthene										
Benzo(a)pyrene										
Indeno(1,2,3-cd)pyrene										
Dibenz(a,h)anthracene										
Benzo(g,h,i)perylene										
Affected Samples:										

## Corrected Sample Analysis Data Sheets

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8270C SEMIVOLATILES  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
 Client Sample ID : BACKFILL-01-071602

Date Sampled : 07/16/02 15:00 Order #: 568818 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 86.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/18/02			
DATE ANALYZED : 07/19/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
ACENAPHTHENE	330	380 U	UG/KG
ACENAPHTHYLENE	330	380 U	UG/KG
ANTHRACENE	330	380 U	UG/KG
BENZO (A) ANTHRACENE	330	380 U	UG/KG
BENZO (A) PYRENE	330	380 U	UG/KG
BENZO (B) FLUORANTHENE	330	380 U	UG/KG
BENZO (G, H, I) PERYLENE	330	380 U	UG/KG
BENZO (K) FLUORANTHENE	330	380 U	UG/KG
BENZYL ALCOHOL	330	380 U	UG/KG
BUTYL BENZYL PHTHALATE	330	380 U	UG/KG
DI-N-BUTYLPHTHALATE	330	85 J	UG/KG
CARBAZOLE	330	380 U	UG/KG
INDENO (1, 2, 3 - CD) PYRENE	330	380 U	UG/KG
4 - CHLOROANILINE	330	380 U	UG/KG
BIS (- 2 - CHLOROETHOXY) METHANE	330	380 U	UG/KG
BIS (2 - CHLOROETHYL) ETHER	330	380 U	UG/KG
2 - CHLORONAPHTHALENE	330	380 U	UG/KG
2 - CHLOROPHENOL	330	380 U	UG/KG
2, 2' - OXYBIS (1 - CHLOROPROPANE)	330	380 U	UG/KG
CHRYSENE	330	380 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	380 U	UG/KG
DIBENZOFURAN	330	380 U	UG/KG
1, 3 - DICHLOROBENZENE	330	380 U	UG/KG
1, 2 - DICHLOROBENZENE	330	380 U	UG/KG
1, 4 - DICHLOROBENZENE	330	380 U	UG/KG
3, 3' - DICHLOROBENZIDINE	330	380 U	UG/KG
2, 4 - DICHLOROPHENOL	330	380 U	UG/KG
DIETHYLPHTHALATE	330	380 U	UG/KG
DIMETHYL PHTHALATE	330	380 U	UG/KG
2, 4 - DIMETHYLPHENOL	330	380 U	UG/KG
2, 4 - DINITROPHENOL	1700	2000 U	UG/KG
2, 4 - DINITROTOLUENE	330	380 U	UG/KG
2, 6 - DINITROTOLUENE	330	380 U	UG/KG
BIS (2 - ETHYLHEXYL) PHTHALATE	330	270 J	UG/KG
FLUORANTHENE	330	380 U	UG/KG
FLUORENE	330	380 U	UG/KG
HEXACHLOROBENZENE	330	380 U	UG/KG
HEXACHLOROBUTADIENE	330	380 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	380 U	UG/KG
HEXACHLOROETHANE	330	380 U	UG/KG
ISOPHORONE	330	380 U	UG/KG
2 - METHYLNAPHTHALENE	330	380 U	UG/KG
4, 6 - DINITRO - 2 - METHYLPHENOL	1700	2000 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8270C SEMIVOLATILES  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
 Client Sample ID : BACKFILL-01-071602

Date Sampled : 07/16/02 15:00 Order #: 568818 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 86.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/18/02			
DATE ANALYZED : 07/19/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
4-CHLORO-3-METHYLPHENOL	330	380 U	UG/KG
2-METHYLPHENOL	330	380 U	UG/KG
3+4-METHYLPHENOL	330	380 U	UG/KG
NAPHTHALENE	330	380 U	UG/KG
2-NITROANILINE	1700	2000 U	UG/KG
3-NITROANILINE	1700	2000 U	UG/KG
4-NITROANILINE	1700	2000 U	UG/KG
NITROBENZENE	330	380 U	UG/KG
2-NITROPHENOL	330	380 U	UG/KG
4-NITROPHENOL	1700	2000 U	UG/KG
N-NITROSODIMETHYLAMINE	330	380 U	UG/KG
N-NITROSODIPHENYLAMINE	330	380 U	UG/KG
DI-N-OCTYL PHTHALATE	330	380 U	UG/KG
PENTACHLOROPHENOL	1700	2000 U	UG/KG
PHENANTHRENE	330	380 U	UG/KG
PHENOL	330	380 U	UG/KG
4-BROMOPHENYL-PHENYLEETHER	330	380 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	380 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	380 U	UG/KG
PYRENE	330	380 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	380 U	UG/KG
2,4,6-TRICHLOROPHENOL	330	380 U	UG/KG
2,4,5-TRICHLOROPHENOL	330	380 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(10 - 152 %)	73	%
NITROBENZENE-d5	(10 - 138 %)	54	%
PHENOL-d6	(11 - 130 %)	57	%
2-FLUOROBIPHENYL	(11 - 112 %)	61	%
2-FLUOROPHENOL	(10 - 130 %)	54	%
2,4,6-TRIBROMOPHENOL	(10 - 130 %)	83	%

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

01-071602

Lab Name: CAS-ROCH Contract: BBL

Lab Code: 10145 Case No.: R2212858 SAS No.: \_\_\_\_\_ SDG No.: BACKFILL-001

Matrix: (soil/water) SOIL Lab Sample ID: 568818 1.0

Sample wt/vol: 30 (g/ml) G Lab File ID: AQ059.D

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: 13.4 decanted: (Y/N) N Date Extracted: 7/18/02

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/19/02

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

Number TICs found: 8 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown hydrocarbon	12.70	150	J
2.	unknown hydrocarbon	13.70	200	J
3.	unknown acid	15.10	1000	J
4.	unknown acid	16.81	300	J
5.	unknown phenol	17.42	150	J
6.	unknown	21.36	270	J
7.	unknown	21.86	1400	J
8.	unknown	25.98	1700	J

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
METHOD 8270C SEMIVOLATILES  
Reported: 08/15/02

Blasland, Bouck & Lee, Inc.  
Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
Client Sample ID : BACKFILL-02-071602

Date Sampled : 07/16/02 14:40 Order #: 568819 Sample Matrix: SOIL/SEDIMENT  
Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 96.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/18/02			
DATE ANALYZED : 07/19/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
ACENAPHTHENE	330	340 U	UG/KG
ACENAPHTHYLENE	330	340 U	UG/KG
ANTHRACENE	330	340 U	UG/KG
BENZO (A) ANTHRACENE	330	340 U	UG/KG
BENZO (A) PYRENE	330	340 U	UG/KG
BENZO (B) FLUORANTHENE	330	340 U	UG/KG
BENZO (G, H, I) PERYLENE	330	340 U	UG/KG
BENZO (K) FLUORANTHENE	330	340 U	UG/KG
BENZYL ALCOHOL	330	340 U	UG/KG
BUTYL BENZYL PHTHALATE	330	340 U	UG/KG
DI-N-BUTYLPHthalate	330	340 U	UG/KG
CARBAZOLE	330	340 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	340 U	UG/KG
4-CHLOROANILINE	330	340 U	UG/KG
BIS (-2-CHLOROETHOXY) METHANE	330	340 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	340 U	UG/KG
2-CHLORONAPHTHALENE	330	340 U	UG/KG
2-CHLOROPHENOL	330	340 U	UG/KG
2, 2' -OXYBIS (1-CHLOROPROPANE)	330	340 U	UG/KG
CHRYSENE	330	340 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	340 U	UG/KG
DIBENZOFURAN	330	340 U	UG/KG
1, 3-DICHLOROBENZENE	330	340 U	UG/KG
1, 2-DICHLOROBENZENE	330	340 U	UG/KG
1, 4-DICHLOROBENZENE	330	340 U	UG/KG
3, 3' -DICHLOROBENZIDINE	330	340 U	UG/KG
2, 4-DICHLOROPHENOL	330	340 U	UG/KG
DIETHYLPHthalate	330	340 U	UG/KG
DIMETHYL PHTHALATE	330	340 U	UG/KG
2, 4-DIMETHYLPHENOL	330	340 U	UG/KG
2, 4-DINITROPHENOL	1700	1800 U	UG/KG
2, 4-DINITROTOLUENE	330	340 U	UG/KG
2, 6-DINITROTOLUENE	330	340 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	340 U	UG/KG
FLUORANTHENE	330	340 U	UG/KG
FLUORENE	330	340 U	UG/KG
HEXACHLOROBENZENE	330	340 U	UG/KG
HEXACHLOROBUTADIENE	330	340 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	340 U	UG/KG
HEXACHLOROETHANE	330	340 U	UG/KG
ISOPHORONE	330	340 U	UG/KG
2-METHYLNAPHTHALENE	330	340 U	UG/KG
4, 6-DINITRO-2-METHYLPHENOL	1700	1800 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8270C SEMIVOLATILES  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
 Client Sample ID : BACKFILL-02-071602

Date Sampled : 07/16/02 14:40 Order #: 568819 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 96.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/18/02			
DATE ANALYZED : 07/19/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
4-CHLORO-3-METHYLPHENOL	330	340 U	UG/KG
2-METHYLPHENOL	330	340 U	UG/KG
3+4-METHYLPHENOL	330	340 U	UG/KG
NAPHTHALENE	330	340 U	UG/KG
2-NITROANILINE	1700	1800 U	UG/KG
3-NITROANILINE	1700	1800 U	UG/KG
4-NITROANILINE	1700	1800 U	UG/KG
NITROBENZENE	330	340 U	UG/KG
2-NITROPHENOL	330	340 U	UG/KG
4-NITROPHENOL	1700	1800 U	UG/KG
N-NITROSODIMETHYLAMINE	330	340 U	UG/KG
N-NITROSODIPHENYLAMINE	330	340 U	UG/KG
DI-N-OCTYL PHTHALATE	330	340 U	UG/KG
PENTACHLOROPHENOL	1700	1800 U	UG/KG
PHENANTHRENE	330	340 U	UG/KG
PHENOL	330	340 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	340 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	340 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	340 U	UG/KG
PYRENE	330	340 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	340 U	UG/KG
2,4,6-TRICHLOROPHENOL	330	340 U	UG/KG
2,4,5-TRICHLOROPHENOL	330	340 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

TERPHENYL-d14	(10 - 152 %)	81	%
NITROBENZENE-d5	(10 - 138 %)	56	%
PHENOL-d6	(11 - 130 %)	61	%
2-FLUOROBIPHENYL	(11 - 112 %)	63	%
2-FLUOROPHENOL	(10 - 130 %)	58	%
2,4,6-TRIBROMOPHENOL	(10 - 130 %)	90	%

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

02-071602

Lab Name: CAS-ROCH Contract: BBL

Lab Code: 10145 Case No.: R2212858 SAS No.: \_\_\_\_\_ SDG No.: BACKFILL-oc/

Matrix: (soil/water) SOIL Lab Sample ID: 568819 1.0

Sample wt/vol: 30 (g/ml) G Lab File ID: AQ060.D

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: 3.6 decanted: (Y/N) N Date Extracted: 7/18/02

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/19/02

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

CONCENTRATION UNITS:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8270C SEMIVOLATILES  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL STREET PROJECT #36458.011

Client Sample ID : BACKFILL-03-071602

Date Sampled : 07/16/02 15:00 Order #: 568821 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 86.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/18/02			
DATE ANALYZED : 07/19/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
ACENAPHTHENE	330	380 U	UG/KG
ACENAPHTHYLENE	330	380 U	UG/KG
ANTHRACENE	330	380 U	UG/KG
BENZO (A) ANTHRACENE	330	380 U	UG/KG
BENZO (A) PYRENE	330	380 U	UG/KG
BENZO (B) FLUORANTHENE	330	380 U	UG/KG
BENZO (G, H, I) PERYLENE	330	380 U	UG/KG
BENZO (K) FLUORANTHENE	330	380 U	UG/KG
BENZYL ALCOHOL	330	380 U	UG/KG
BUTYL BENZYL PHTHALATE	330	380 U	UG/KG
DI-N-BUTYLPHthalate	330	280 J	UG/KG
CARBAZOLE	330	380 U	UG/KG
INDENO (1, 2, 3-CD) PYRENE	330	380 U	UG/KG
4-CHLOROANILINE	330	380 U	UG/KG
BIS (-2-CHLOROETHOXY)METHANE	330	380 U	UG/KG
BIS (2-CHLOROETHYL) ETHER	330	380 U	UG/KG
2-CHLORONAPHTHALENE	330	380 U	UG/KG
2-CHLOROPHENOL	330	380 U	UG/KG
2,2'-OXYBIS (1-CHLOROPROPANE)	330	380 U	UG/KG
CHRYSENE	330	380 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	380 U	UG/KG
DIBENZOFURAN	330	380 U	UG/KG
1,3-DICHLOROBENZENE	330	380 U	UG/KG
1,2-DICHLOROBENZENE	330	380 U	UG/KG
1,4-DICHLOROBENZENE	330	380 U	UG/KG
3,3'-DICHLOROBENZIDINE	330	380 U	UG/KG
2,4-DICHLOROPHENOL	330	380 U	UG/KG
DIETHYLPHthalate	330	380 U	UG/KG
DIMETHYL PHTHALATE	330	380 U	UG/KG
2,4-DIMETHYLPHENOL	330	380 U	UG/KG
2,4-DINITROPHENOL	1700	2000 U	UG/KG
2,4-DINITROTOLUENE	330	380 U	UG/KG
2,6-DINITROTOLUENE	330	380 U	UG/KG
BIS (2-ETHYLHEXYL) PHTHALATE	330	350 J	UG/KG
FLUORANTHENE	330	380 U	UG/KG
FLUORENE	330	380 U	UG/KG
HEXACHLOROBENZENE	330	380 U	UG/KG
HEXACHLOROBUTADIENE	330	380 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	380 U	UG/KG
HEXACHLOROETHANE	330	380 U	UG/KG
ISOPHORONE	330	380 U	UG/KG
2-METHYLNAPHTHALENE	330	380 U	UG/KG
4,6-DINITRO-2-METHYLPHENOL	1700	2000 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8270C SEMIVOLATILES  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
 Client Sample ID : BACKFILL-03-071602

Date Sampled : 07/16/02 15:00 Order #: 568821 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 86.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/18/02			
DATE ANALYZED : 07/19/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
4-CHLORO-3-METHYLPHENOL	330	380 U	UG/KG
2-METHYLPHENOL	330	380 U	UG/KG
3+4-METHYLPHENOL	330	380 U	UG/KG
NAPHTHALENE	330	380 U	UG/KG
2-NITROANILINE	1700	2000 U	UG/KG
3-NITROANILINE	1700	2000 U	UG/KG
4-NITROANILINE	1700	2000 U	UG/KG
NITROBENZENE	330	380 U	UG/KG
2-NITROPHENOL	330	380 U	UG/KG
4-NITROPHENOL	1700	2000 U	UG/KG
N-NITROSODIMETHYLAMINE	330	380 U	UG/KG
N-NITROSODIPHENYLAMINE	330	380 U	UG/KG
DI-N-OCTYL PHTHALATE	330	380 U	UG/KG
PENTACHLOROPHENOL	1700	2000 U	UG/KG
PHENANTHRENE	330	380 U	UG/KG
PHENOL	330	380 U	UG/KG
4-BROMOPHENYL-PHENYLETHER	330	380 U	UG/KG
4-CHLOROPHENYL-PHENYLETHER	330	380 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	380 U	UG/KG
PYRENE	330	380 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	380 U	UG/KG
2,4,6-TRICHLOROPHENOL	330	380 U	UG/KG
2,4,5-TRICHLOROPHENOL	330	380 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
TERPHENYL-d14	(10 - 152 %)	81	%
NITROBENZENE-d5	(10 - 138 %)	50	%
PHENOL-d6	(11 - 130 %)	54	%
2-FLUOROBIPHENYL	(11 - 112 %)	57	%
2-FLUOROPHENOL	(10 - 130 %)	50	%
2,4,6-TRIBROMOPHENOL	(10 - 130 %)	86	%

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

03-071602

Lab Name: CAS-ROCH Contract: BBL

Lab Code: 10145 Case No.: R2212858 SAS No.: \_\_\_\_\_ SDG No.: BACKFILL-001

Matrix: (soil/water) SOIL Lab Sample ID: 568821 1.0

Sample wt/vol: 30 (g/ml) G Lab File ID: AQ062.D

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: 13.4 decanted: (Y/N) N Date Extracted: 7/18/02

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/19/02

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

## CONCENTRATION UNITS:

Number TICs found: 14 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	8.84	170	J
2.	unknown	10.63	200	J
3.	unknown hydrocarbon	11.65	180	J
4.	unknown phenol	12.98	160	J
5.	unknown	13.39	210	J
6.	unknown hydrocarbon	13.70	260	J
7.	unknown amine	14.61	230	J
8.	unknown acid	15.10	2000	J
9.	unknown amine	16.34	390	J
10.	unknown acid	16.81	410	J
11.	unknown phenol	17.40	410	J
12.	unknown	21.36	300	J
13.	unknown	21.87	1700	J
14.	unknown	25.98	2900	J

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8270C SEMIVOLATILES  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL STREET PROJECT #36458.011

Client Sample ID : DUP-1-BACKFILL

Date Sampled : 07/16/02                      Order #: 568820                      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02                      Submission #: R2212858                      Percent Solid: 86.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED	: 07/18/02		
DATE ANALYZED	: 07/19/02		
ANALYTICAL DILUTION:	1.00		Dry Weight
ACENAPHTHENE	330	380 U	UG/KG
ACENAPHTHYLENE	330	380 U	UG/KG
ANTHRACENE	330	380 U	UG/KG
BENZO (A) ANTHRACENE	330	380 U	UG/KG
BENZO (A) PYRENE	330	380 U	UG/KG
BENZO (B) FLUORANTHENE	330	380 U	UG/KG
BENZO (G, H, I) PERYLENE	330	380 U	UG/KG
BENZO (K) FLUORANTHENE	330	380 U	UG/KG
BENZYL ALCOHOL	330	380 U	UG/KG
BUTYL BENZYL PHTHALATE	330	380 U	UG/KG
DI - N - BUTYLPHTHALATE	330	470	UG/KG
CARBAZOLE	330	380 U	UG/KG
INDENO (1, 2, 3 - CD) PYRENE	330	380 U	UG/KG
4 - CHLOROANILINE	330	380 U	UG/KG
BIS (- 2 - CHLOROETHOXY) METHANE	330	380 U	UG/KG
BIS (2 - CHLOROETHYL) ETHER	330	380 U	UG/KG
2 - CHLORONAPHTHALENE	330	380 U	UG/KG
2 - CHLOROPHENOL	330	380 U	UG/KG
2, 2' - OXYBIS (1 - CHLOROPROPANE)	330	380 U	UG/KG
CHRYSENE	330	380 U	UG/KG
DIBENZO (A, H) ANTHRACENE	330	380 U	UG/KG
DIBENZOFURAN	330	380 U	UG/KG
1, 3 - DICHLOROBENZENE	330	380 U	UG/KG
1, 2 - DICHLOROBENZENE	330	380 U	UG/KG
1, 4 - DICHLOROBENZENE	330	380 U	UG/KG
3, 3' - DICHLOROBENZIDINE	330	380 U	UG/KG
2, 4 - DICHLOROPHENOL	330	380 U	UG/KG
DIETHYLPHTHALATE	330	380 U	UG/KG
DIMETHYL PHTHALATE	330	380 U	UG/KG
2, 4 - DIMETHYLPHENOL	330	380 U	UG/KG
2, 4 - DINITROPHENOL	1700	2000 U	UG/KG
2, 4 - DINITROTOLUENE	330	380 U	UG/KG
2, 6 - DINITROTOLUENE	330	380 U	UG/KG
BIS (2 - ETHYLHEXYL) PHTHALATE	330	370 J	UG/KG
FLUORANTHENE	330	380 U	UG/KG
FLUORENE	330	380 U	UG/KG
HEXACHLOROBENZENE	330	380 U	UG/KG
HEXACHLOROBUTADIENE	330	380 U	UG/KG
HEXACHLOROCYCLOPENTADIENE	330	380 U	UG/KG
HEXACHLOROETHANE	330	380 U	UG/KG
ISOPHORONE	330	380 U	UG/KG
2 - METHYLNAPHTHALENE	330	380 U	UG/KG
4, 6 - DINITRO - 2 - METHYLPHENOL	1700	2000 U	UG/KG

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8270C SEMIVOLATILES  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
 Client Sample ID : DUP-1-BACKFILL

Date Sampled : 07/16/02      Order #: 568820      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02      Submission #: R2212858      Percent Solid: 86.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/18/02			
DATE ANALYZED : 07/19/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
4-CHLORO-3-METHYLPHENOL	330	380 U	UG/KG
2-METHYLPHENOL	330	380 U	UG/KG
3+4-METHYLPHENOL	330	380 U	UG/KG
NAPHTHALENE	330	380 U	UG/KG
2-NITROANILINE	1700	2000 U	UG/KG
3-NITROANILINE	1700	2000 U	UG/KG
4-NITROANILINE	1700	2000 U	UG/KG
NITROBENZENE	330	380 U	UG/KG
2-NITROPHENOL	330	380 U	UG/KG
4-NITROPHENOL	1700	2000 U	UG/KG
N-NITROSODIMETHYLAMINE	330	380 U	UG/KG
N-NITROSODIPHENYLAMINE	330	380 U	UG/KG
DI-N-OCTYL PHTHALATE	330	380 U	UG/KG
PENTACHLOROPHENOL	1700	2000 U	UG/KG
PHENANTHRENE	330	380 U	UG/KG
PHENOL	330	380 U	UG/KG
4-BROMOPHENYL-PHENYLEETHER	330	380 U	UG/KG
4-CHLOROPHENYL-PHENYLEETHER	330	380 U	UG/KG
N-NITROSO-DI-N-PROPYLAMINE	330	380 U	UG/KG
PYRENE	330	380 U	UG/KG
1,2,4-TRICHLOROBENZENE	330	380 U	UG/KG
2,4,6-TRICHLOROPHENOL	330	380 U	UG/KG
2,4,5-TRICHLOROPHENOL	330	380 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
TERPHENYL-d14	(10 - 152 %)	98	%
NITROBENZENE-d5	(10 - 138 %)	66	%
PHENOL-d6	(11 - 130 %)	76	%
2-FLUOROBIPHENYL	(11 - 112 %)	76	%
2-FLUOROPHENOL	(10 - 130 %)	68	%
2,4,6-TRIBROMOPHENOL	(10 - 130 %)	116	%

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

UP-1-BACKFILL

Lab Name: CAS-ROCH Contract: BBL

Lab Code: 10145 Case No.: R2212858 SAS No.: \_\_\_\_\_ SDG No.: BACKFILL-ccj

Matrix: (soil/water) SOIL Lab Sample ID: 568820 1.0

Sample wt/vol: 30 (g/ml) G Lab File ID: AQ061.D

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: 13.2 decanted: (Y/N) N Date Extracted: 7/18/02

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 7/19/02

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

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

## CONCENTRATION UNITS:

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	unknown	10.63	180	J
2.	unknown hydrocarbon	11.65	200	J
3.	unknown hydrocarbon	12.14	160	J
4.	unknown	12.73	160	J
5.	unknown phenol	12.98	160	J
6.	unknown	13.04	210	J
7.	unknown	13.39	260	J
8.	unknown hydrocarbon	13.70	300	J
9. 004385-04-0	1-Dimethylaminohexane	14.60	270	JN
10.	unknown acid	15.10	2100	J
11.	unknown amine	16.34	430	J
12.	unknown	16.66	160	J
13.	unknown acid	16.81	550	J
14.	unknown phenol	17.40	390	J
15.	unknown	21.35	370	J
16.	unknown	21.57	280	J
17. 007683-64-9	Squalene	21.86	2000	JN
18.	unknown	25.98	3200	J

## PESTICIDE ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8081 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 pesticide analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with 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. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Alternatively, calibration curves may be constructed.

All initial calibrations were within control limits.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. The responses for 4,4'-DDT and methoxychlor were below acceptable limits in one of the continuing calibration verification standards and the response for delta-BHC was below acceptable limits in a second continuing calibration verification standard. All data for 4,4'-DDT, methoxychlor, and delta-BHC have been qualified as estimated based on the deviations.

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. Compound Identification

The retention times of all quantitated peaks must fall within the calculated retention time windows for both the primary and confirmation columns.

All identified compounds met the specified criteria.

7. Matrix Spike/Matrix Spike Duplicate

Matrix spike and matrix spike duplicate data are used to assess the precision and accuracy of the analytical method independent of matrix interferences.

The matrix spike and matrix spike duplicate recoveries for dieldrin were above control limits. Since no dieldrin was detected in the samples, no data have been qualified based on the deviation. All other matrix spike and matrix spike duplicate recoveries and all relative percent differences between recoveries were within control limits.

8. Laboratory Control Sample

The laboratory control sample recoveries for 4,4'-DDT and heptachlor were above control limits. Since neither of the analytes were detected in the samples, the high recoveries have no impact on the reported data.

9. Field Duplicate

Results for duplicate samples are summarized below:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
Backfill-03-071602 / DUP-1-Backfill	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

## Pesticide 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?	_____	X	_____
Is there a narrative or cover letter present?	X	_____	_____
Are the sample numbers included in the narrative?	_____	X	_____
Are the sample chain-of-custodies present?	X	_____	_____
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	_____	X	_____
<b><u>Holding Times</u></b>			
Have any holding times been exceeded?	_____	X	_____
<b><u>Surrogate Recovery</u></b>			
Are the surrogate recovery forms present?	_____	X	_____
Are all samples listed on the surrogate recovery form?	_____	_____	X
Were recoveries of any surrogate outside control limits for any sample or blank?	_____	X	_____
If yes, were the samples reanalyzed?	_____	_____	X
Are there any transcription/calculation errors between the raw data and the summary form?	_____	X	_____
<b><u>Matrix Spikes</u></b>			
Is there a matrix spike recovery form present?	X	_____	_____
Were matrix spikes analyzed at the required frequency?	X	_____	_____
How many spike recoveries were outside of QC limits? <u>  2  </u> out of <u>  12  </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? <u>  0  </u> out of <u>  6  </u>			
<b><u>Blanks</u></b>			
Is a method blank summary form present?	X	_____	_____
Has a method blank been extracted for each set of samples or for each 20 samples, whichever is more frequent?	X	_____	_____
Do any method//instrument blanks have positive results?	_____	X	_____
Are field/rinse blanks associated with every sample?	_____	X	_____
Do any field/rinse blanks have positive results?	_____	_____	X
<b><u>Calibration and GC Performance</u></b>			
Are the following chromatograms and integration reports present?			

**Pesticide Data Validation Checklist - Page 2**

	YES	NO	NA
peak resolution check	_____	<u>  X  </u>	_____
INDA	<u>  X  </u>	_____	_____
INDB	<u>  X  </u>	_____	_____
Is a calibration summary form present and complete for each analytical sequence?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the forms?	_____	<u>  X  </u>	_____
Are the %RSD or r2 for the initial calibration within acceptable limits for all analytes?	<u>  X  </u>	_____	_____
Is the resolution between any two adjacent peaks in the resolution check mixture > 60%?	_____	_____	<u>  X  </u>
Have all samples been injected within a 12 hour period beginning with the injection of a calibration standard?	<u>  X  </u>	_____	_____
Is a continuing calibration summary form present and complete for each continuing standard analyzed?	<u>  X  </u>	_____	_____
Are there any transcription/calculation errors between the raw data and the form?	_____	<u>  X  </u>	_____
Are all the percent difference (%D) for all continuing calibration standards within acceptable limits?	_____	<u>  X  </u>	_____
<b><u>Analytical Sequence</u></b>			
Is an analytical sequence summary form present and complete for each column and each period of analyses?	<u>  X  </u>	_____	_____
Was the proper analytical sequence followed?	<u>  X  </u>	_____	_____
<b><u>Cleanup Efficiency Verification</u></b>			
Are percent recoveries of the compounds used to check the efficiency of the cleanup procedure within QC limits?	_____	<u>  X  </u>	_____
<b><u>Pesticide Identification</u></b>			
Are RT of sample compounds within the established RT windows?	<u>  X  </u>	_____	_____
Were all positively identified compounds confirmed on a second column?	_____	_____	<u>  X  </u>
Was GC/MS confirmation provided when required?	_____	_____	<u>  X  </u>
Were there any false negatives?	_____	<u>  X  </u>	_____
<b><u>Compound Quantitation and Reported 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 waters, sample moisture?	<u>  X  </u>	_____	_____

Pesticide Data Validation Checklist - Page 3

	YES	NO	NA
<b><u>Chromatogram Quality</u></b>			
Were the baselines stable?	<u>  X  </u>	<u>      </u>	<u>      </u>
Were any electronegative displacement (negative peaks) or unusual peaks detected?	<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>





### Pesticide Calibration Summary

Instrument: HP5890-F  
 Column: STX-CLP

Date:	7/13/02-7/14/02	8/02/02	8/02/02	8/02/02	8/02/02	8/02/02
Time:		0916	1027	1117	2029	2119
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
	PEM	INDA	INDB	INDA	INDB	
	%RSD	%D	%D	%D	%D	%D
Aldrin						
Alpha-BHC						
Beta-BHC						
Delta-BHC						-19.4
Gamma-BHC (Lindane)						
Alpha-Chlordane						
Gamma-Chlordane						
4,4'-DDD						
4,4'-DDE						
4,4'-DDT					-40.9	
Dieldrin						
Alpha-Endosulfan						
Beta-Endosulfan						
Endosulfan Sulfate						
Endrin						
Endrin Aldehyde						
Endrin Ketone						
Heptachlor						
Heptachlor Epoxide						
Methoxychlor					-31.8	
Toxaphene						
Affected Samples:					all samples	all samples

**Pesticide Calibration Summary - Page 2**

Instrument: HP5890-F  
 Column: STX-CLP II

Date:	7/13/02-7/14/02	8/02/02	8/02/02	8/02/02	8/02/02	8/02/02
Time:		0916	1027	1117	2029	2119
	Initial Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.	Cont. Cal.
		PEM	INDA	INDB	INDA	INDB
	%RSD	%D	%D	%D	%D	%D
Aldrin						
Alpha-BHC						
Beta-BHC						
Delta-BHC						
Gamma-BHC (Lindane)						
Alpha-Chlordane						
Gamma-Chlordane						
4,4'-DDD						
4,4'-DDE						
4,4'-DDT					-32.2	
Dieldrin						
Alpha-Endosulfan						
Beta-Endosulfan						
Endosulfan Sulfate						
Endrin						
Endrin Aldehyde						
Endrin Ketone						
Heptachlor						
Heptachlor Epoxide						
Methoxychlor					-26.2	
Toxaphene						
Affected Samples:					all samples	

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS  
 METHOD 8081A  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL STREET PROJECT #36458.011

Client Sample ID : BACKFILL-01-071602

Date Sampled : 07/16/02 15:00 Order #: 568818 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 86.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/24/02			
DATE ANALYZED : 08/02/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
ALDRIN	1.7	2.0 U	UG/KG
ALPHA-BHC	1.7	2.0 U	UG/KG
BETA-BHC	1.7	2.0 U	UG/KG
DELTA-BHC	1.7	2.0 U	UG/KG
GAMMA-BHC (LINDANE)	1.7	2.0 U	UG/KG
ALPHA-CHLORDANE	1.7	2.0 U	UG/KG
GAMMA-CHLORDANE	1.7	2.0 U	UG/KG
4,4'-DDD	1.7	2.0 U	UG/KG
4,4'-DDE	1.7	2.0 U	UG/KG
4,4'-DDT	3.3	3.8 U	UG/KG
DIELDRIN	1.7	2.0 U	UG/KG
ALPHA-ENDOSULFAN	1.7	2.0 U	UG/KG
BETA-ENDOSULFAN	3.3	3.8 U	UG/KG
ENDOSULFAN SULFATE	3.3	3.8 U	UG/KG
ENDRIN	1.7	2.0 U	UG/KG
ENDRIN ALDEHYDE	3.3	3.8 U	UG/KG
ENDRIN KETONE	3.3	3.8 U	UG/KG
HEPTACHLOR	1.7	2.0 U	UG/KG
HEPTACHLOR EPOXIDE	1.7	2.0 U	UG/KG
METHOXYCHLOR	17	20 U	UG/KG
TOXAPHENE	33	38 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL (DCB)	(10 - 164 %)	96	%
TETRACHLORO-META-XYLENE (TCMX)	(36 - 119 %)	84	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8081A

Reported: 08/15/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL STREET PROJECT #36458.011

Client Sample ID : BACKFILL-02-071602

Date Sampled : 07/16/02 14:40 Order #: 568819      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02 Submission #: R2212858      Percent Solid: 96.4

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/24/02			
DATE ANALYZED : 08/02/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
ALDRIN	1.7	1.8 U	UG/KG
ALPHA-BHC	1.7	1.8 U	UG/KG
BETA-BHC	1.7	1.8 U	UG/KG
DELTA-BHC	1.7	1.8 U	UG/KG
GAMMA-BHC (LINDANE)	1.7	1.8 <del>U</del> U	UG/KG
ALPHA-CHLORDANE	1.7	1.8 U	UG/KG
GAMMA-CHLORDANE	1.7	1.8 U	UG/KG
4,4'-DDD	1.7	1.8 U	UG/KG
4,4'-DDE	1.7	1.8 U	UG/KG
4,4'-DDT	1.7	1.8 U	UG/KG
DIELDRIN	3.3	3.4 <del>U</del> U	UG/KG
ALPHA-ENDOSULFAN	1.7	1.8 U	UG/KG
BETA-ENDOSULFAN	1.7	1.8 U	UG/KG
ENDOSULFAN SULFATE	3.3	3.4 U	UG/KG
ENDRIN	3.3	3.4 U	UG/KG
ENDRIN ALDEHYDE	1.7	1.8 U	UG/KG
ENDRIN KETONE	3.3	3.4 U	UG/KG
HEPTACHLOR	3.3	3.4 U	UG/KG
HEPTACHLOR EPOXIDE	1.7	1.8 U	UG/KG
METHOXYCHLOR	17	18 <del>U</del> U	UG/KG
TOXAPHENE	33	34 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
DECACHLOROBIPHENYL (DCB)	(10 - 164 %)	92	%
TETRACHLORO-META-XYLENE (TCMX)	(36 - 119 %)	82	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8081A

Reported: 08/15/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL STREET PROJECT #36458.011

Client Sample ID : BACKFILL-03-071602

Date Sampled : 07/16/02 15:00 Order #: 568821      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02 Submission #: R2212858      Percent Solid: 86.6

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/24/02			
DATE ANALYZED : 08/02/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
ALDRIN	1.7	2.0 U	UG/KG
ALPHA-BHC	1.7	2.0 U	UG/KG
BETA-BHC	1.7	2.0 U	UG/KG
DELTA-BHC	1.7	2.0 U	UG/KG
GAMMA-BHC (LINDANE)	1.7	2.0 U <i>UJ</i>	UG/KG
ALPHA-CHLORDANE	1.7	2.0 U	UG/KG
GAMMA-CHLORDANE	1.7	2.0 U	UG/KG
4,4'-DDD	1.7	2.0 U	UG/KG
4,4'-DDE	1.7	2.0 U	UG/KG
4,4'-DDT	1.7	2.0 U	UG/KG
DIELDRIN	3.3	3.8 U <i>UJ</i>	UG/KG
ALPHA-ENDOSULFAN	1.7	2.0 U	UG/KG
BETA-ENDOSULFAN	1.7	2.0 U	UG/KG
ENDOSULFAN SULFATE	3.3	3.8 U	UG/KG
ENDRIN	3.3	3.8 U	UG/KG
ENDRIN ALDEHYDE	1.7	2.0 U	UG/KG
ENDRIN KETONE	3.3	3.8 U	UG/KG
HEPTACHLOR	3.3	3.8 U	UG/KG
HEPTACHLOR EPOXIDE	1.7	2.0 U	UG/KG
METHOXYCHLOR	1.7	2.0 U	UG/KG
TOXAPHENE	17	20 U <i>UJ</i>	UG/KG
	33	38 U	UG/KG

<u>SURROGATE RECOVERIES</u>	<u>QC LIMITS</u>		
DECACHLOROBIPHENYL (DCB)	(10 - 164 %)	77	%
TETRACHLORO-META-XYLENE (TCMX)	(36 - 119 %)	81	%

COLUMBIA ANALYTICAL SERVICES

EXTRACTABLE ORGANICS

METHOD 8081A

Reported: 08/15/02

Blasland, Bouck & Lee, Inc.

Project Reference: NM - SCHOOL STREET PROJECT #36458.011

Client Sample ID : DUP-1-BACKFILL

Date Sampled : 07/16/02

Order #: 568820

Sample Matrix: SOIL/SEDIMENT

Date Received: 07/17/02

Submission #: R2212858

Percent Solid: 86.8

ANALYTE	PQL	RESULT	UNITS
DATE EXTRACTED : 07/24/02			
DATE ANALYZED : 08/02/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
ALDRIN	1.7	2.0 U	UG/KG
ALPHA-BHC	1.7	2.0 U	UG/KG
BETA-BHC	1.7	2.0 U	UG/KG
DELTA-BHC	1.7	2.0 U	UG/KG
GAMMA-BHC (LINDANE)	1.7	2.0 U	UG/KG
ALPHA-CHLORDANE	1.7	2.0 U	UG/KG
GAMMA-CHLORDANE	1.7	2.0 U	UG/KG
4,4'-DDD	1.7	2.0 U	UG/KG
4,4'-DDE	1.7	2.0 U	UG/KG
4,4'-DDT	3.3	3.8 U	UG/KG
DIELDRIN	1.7	2.0 U	UG/KG
ALPHA-ENDOSULFAN	1.7	2.0 U	UG/KG
BETA-ENDOSULFAN	3.3	3.8 U	UG/KG
ENDOSULFAN SULFATE	3.3	3.8 U	UG/KG
ENDRIN	1.7	2.0 U	UG/KG
ENDRIN ALDEHYDE	3.3	3.8 U	UG/KG
ENDRIN KETONE	3.3	3.8 U	UG/KG
HEPTACHLOR	1.7	2.0 U	UG/KG
HEPTACHLOR EPOXIDE	1.7	2.0 U	UG/KG
METHOXYCHLOR	17	20 U	UG/KG
TOXAPHENE	33	38 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

DECACHLOROBIPHENYL (DCB)	(10 - 164 %)	100	%
TETRACHLORO-META-XYLENE (TCMX)	(36 - 119 %)	84	%

## PCB ANALYSES

## Introduction

Analyses were performed according to USEPA SW-846 Method 8082 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.
- C Identification confirmed by GC/MS.
- 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 tests, 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 PCB analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times for soils are 14 days from sample collection to extraction and 40 days to analysis.

All samples were extracted and analyzed with the specified holding time.

### 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 Aroclors were detected in the method blanks.

### 3. System Performance

System performance and column resolution were acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

A maximum RSD of 20% is allowed. Alternatively, calibration curves may be constructed.

Multi-point calibration was performed for Aroclors 1016 and 1260 only. Single-point calibrations were performed for the remaining Aroclors.

#### 4.2 Continuing Calibration

A maximum %D of 15 is allowed. All continuing calibrations were within the specified limit.

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
 METHOD 8260B TCL  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
 Client Sample ID : BACKFILL-03-071602

Date Sampled : 07/16/02 15:00 Order #: 568821 Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02 Submission #: R2212858 Percent Solid: 86.6

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/18/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
ACETONE	20	23 U	UG/KG
BENZENE	5.0	5.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.8 U	UG/KG
BROMOFORM	5.0	5.8 U	UG/KG
BROMOMETHANE	5.0	5.8 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.8 U	UG/KG
CHLOROBENZENE	5.0	5.8 U	UG/KG
CHLOROETHANE	5.0	5.8 U	UG/KG
CHLOROFORM	5.0	5.8 U	UG/KG
CHLOROMETHANE	5.0	5.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
ETHYLBENZENE	5.0	5.8 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
METHYLENE CHLORIDE	5.0	5.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.8 U	UG/KG
TETRACHLOROETHENE	5.0	5.8 U	UG/KG
TOLUENE	5.0	5.8 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.8 U	UG/KG
TRICHLOROETHENE	5.0	5.8 U	UG/KG
VINYL CHLORIDE	5.0	5.8 U	UG/KG
O-XYLENE	5.0	5.8 U	UG/KG
M+P-XYLENE	5.0	5.8 U	UG/KG

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(42 - 149 %)	99	%
TOLUENE-D8	(71 - 128 %)	103	%
DIBROMOFLUOROMETHANE	(70 - 127 %)	91	%

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

03-071602
-----------

Lab Name: CASI\ROCH Contract: BLA

Lab Code: 10145 Case No.: R2-12858 SAS No.: \_\_\_\_\_ SDG No.: BACKFILL

Matrix: (soil/water) SOIL Lab Sample ID: 568821 1.0

Sample wt/vol: 5.0 (g/ml) G Lab File ID: A2450.D

Level: (low/med) LOW Date Received: \_\_\_\_\_

% Moisture: not dec. 0 Date Analyzed: 07/18/02

GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0

Soil Extract Volume 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS  
 METHOD 8260B TCL  
 Reported: 08/15/02

Blasland, Bouck & Lee, Inc.  
 Project Reference: NM - SCHOOL STREET PROJECT #36458.011  
 Client Sample ID : DUP-1-BACKFILL

Date Sampled : 07/16/02      Order #: 568820      Sample Matrix: SOIL/SEDIMENT  
 Date Received: 07/17/02      Submission #: R2212858      Percent Solid: 86.8

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 07/18/02			
ANALYTICAL DILUTION: 1.00			Dry Weight
ACETONE	20	23 U	UG/KG
BENZENE	5.0	5.8 U	UG/KG
BROMODICHLOROMETHANE	5.0	5.8 U	UG/KG
BROMOFORM	5.0	5.8 U	UG/KG
BROMOMETHANE	5.0	5.8 U	UG/KG
2-BUTANONE (MEK)	10	12 U	UG/KG
CARBON DISULFIDE	10	12 U	UG/KG
CARBON TETRACHLORIDE	5.0	5.8 U	UG/KG
CHLOROENZENE	5.0	5.8 U	UG/KG
CHLOROETHANE	5.0	5.8 U	UG/KG
CHLOROFORM	5.0	5.8 U	UG/KG
CHLOROMETHANE	5.0	5.8 U	UG/KG
DIBROMOCHLOROMETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,2-DICHLOROETHANE	5.0	5.8 U	UG/KG
1,1-DICHLOROETHENE	5.0	5.8 U	UG/KG
CIS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
TRANS-1,2-DICHLOROETHENE	5.0	5.8 U	UG/KG
1,2-DICHLOROPROPANE	5.0	5.8 U	UG/KG
CIS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
TRANS-1,3-DICHLOROPROPENE	5.0	5.8 U	UG/KG
ETHYLBENZENE	5.0	5.8 U	UG/KG
2-HEXANONE	10	12 U	UG/KG
METHYLENE CHLORIDE	5.0	5.8 U	UG/KG
4-METHYL-2-PENTANONE (MIBK)	10	12 U	UG/KG
STYRENE	5.0	5.8 U	UG/KG
1,1,2,2-TETRACHLOROETHANE	5.0	5.8 U	UG/KG
TETRACHLOROETHENE	5.0	5.8 U	UG/KG
TOLUENE	5.0	5.8 U	UG/KG
1,1,1-TRICHLOROETHANE	5.0	5.8 U	UG/KG
1,1,2-TRICHLOROETHANE	5.0	5.8 U	UG/KG
TRICHLOROETHENE	5.0	5.8 U	UG/KG
VINYL CHLORIDE	5.0	5.8 U	UG/KG
O-XYLENE	5.0	5.8 U	UG/KG
M+P-XYLENE	5.0	5.8 U	UG/KG

SURROGATE RECOVERIES

QC LIMITS

4-BROMOFLUOROBENZENE	(42 - 149 %)	97	%
TOLUENE-D8	(71 - 128 %)	102	%
DIBROMOFLUOROMETHANE	(70 - 127 %)	92	%

1E  
VOLATILE ORGANICS ANALYSIS DATA SHEET  
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

**UP-1-BACKFIL**

Lab Name: CAS\ROCH Contract: BLA  
Lab Code: 10145 Case No.: R2-12858 SAS No.: \_\_\_\_\_ SDG No.: BACKFILL  
Matrix: (soil/water) SOIL Lab Sample ID: 568820 1.0  
Sample wt/vol: 5.0 (g/ml) G Lab File ID: A2449.D  
Level: (low/med) LOW Date Received: \_\_\_\_\_  
% Moisture: not dec. 0 Date Analyzed: 07/18/02  
GC Column: DB624 ID: 0.32 (mm) Dilution Factor: 1.0  
Soil Extract Volume 1 (uL) Soil Aliquot Volume: 1 (uL)

CONCENTRATION UNITS:  
(ug/L or ug/Kg) UG/KG

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q
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## SEMIVOLATILE ANALYSES

## Introduction

Analyses were performed according to EPA SW-846 Method 8270 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 tests, 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 method specified holding times for semivolatile analyses under NYSASP are 5 days from sample receipt to extraction and 40 days to analysis. The technical holding times are 14 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, and rinse blanks) are prepared to identify any contamination which may have been introduced in to 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 compounds were detected in the method blank.

### 3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable.

### 4. Calibration

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

#### 4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) limits for select compounds only and allows four outliers. A technical review of the data applies limits 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

The method species percent drift (%D) criteria for select compounds only. A technical review applies limits to all compounds with no exceptions.

All %D were within acceptable limits.



5. Surrogates / System Monitoring Compounds

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

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 responses and retention times were within established limits.

7. Compound Identification

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, matrix spike duplicate data are used to assess the precision and accuracy of the analytical method.

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

9. Laboratory control sample.

All laboratory control sample recoveries were within control limits.

10. Field Duplicate

Results for duplicate samples are summarized below:

Sample ID / Duplicate ID	Analyte	Sample Result	Duplicate Result	RPD
Backfill-03-071602 / DUP-1-Backfill	di-n-butylphthalate	280J	470	50.7%
	bis(2-ethylhexyl)phthalate	350J	370J	5.6%

The duplicate results are acceptable.

## 11. 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

## 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?	_____	X	_____
Is there a narrative or cover letter present?	X	_____	_____
Are the sample numbers included in the narrative?	_____	X	_____
Are the sample chain-of-custodies present?	X	_____	_____
Do the chain-of-custodies indicate any problems with sample receipt or sample condition?	_____	X	_____
<b><u>Holding Times</u></b>			
Have any holding times been exceeded?	_____	X	_____
<b><u>Surrogate Recovery</u></b>			
Are the surrogate recovery forms present?	_____	X	_____
Are all samples listed on the surrogate recovery form?	_____	_____	X
Were two or more b/n or acid surrogate recoveries outside control limits for any sample or blank?	_____	X	_____
If yes, were the samples reanalyzed?	_____	_____	X
Are there any transcription/calculation errors between the raw data and the summary form?	_____	X	_____
<b><u>Matrix Spikes</u></b>			
Is there a matrix spike recovery form present?	X	_____	_____
Were matrix spikes analyzed at the required frequency	X	_____	_____
How many spike recoveries were outside of QC limits? <u>  0  </u> out of <u>  22  </u>			
How many RPDs for matrix spike and matrix spike duplicate were outside of QC limits? <u>  0  </u> out of <u>  11  </u>			
<b><u>Blanks</u></b>			
Is the method blank summary form present?	X	_____	_____
Has a method blank been analyzed for each set of samples or for each 20 samples, whichever is more frequent?	X	_____	_____
Has a blank been analyzed for each system used?	X	_____	_____
Are field/rinse blanks associated with every sample?	_____	X	_____
Do any field/rinse blanks have positive results?	_____	_____	X
<b><u>Tuning and Mass Calibration</u></b>			
Are the GC/MS tuning forms present for DFTPP?	X	_____	_____
Are the bar graph spectrum and mass/charge listing provided for each DFTPP?	X	_____	_____

## Semivolatile Organics Data Validation Checklist - Page 2

	YES	NO	NA
Has a DFTPP been analyzed for each twelve hours of analysis per instrument?	<u>X</u>	_____	_____
Have the ion abundance criteria been met for each instrument used?	<u>X</u>	_____	_____
<b><u>Target Analytes</u></b>			
Is an organics analysis data sheet present for each of the following:			
Samples	<u>X</u>	_____	_____
Matrix spikes	<u>X</u>	_____	_____
Blanks	<u>X</u>	_____	_____
Are the reconstructed ion chromatograms present for each of the following:			
Samples	<u>X</u>	_____	_____
Matrix spikes	<u>X</u>	_____	_____
Blanks	<u>X</u>	_____	_____
Is the chromatographic performance acceptable?	<u>X</u>	_____	_____
Are the mass spectra of the identified compounds present?	<u>X</u>	_____	_____
Are all ions present in the standard mass spectrum at a relative intensity of 10% or greater also present in the sample spectrum?	<u>X</u>	_____	_____
Do the samples and standard relative ion intensities agree within 20%?	<u>X</u>	_____	_____
<b><u>Tentatively Identified Compounds</u></b>			
Are all the TIC summary forms present?	<u>X</u>	_____	_____
Are the mass spectra for the tentatively identified compounds and their "best match" present?	_____	_____	<u>X</u>
Are any target compounds listed as TICs?	_____	_____	<u>X</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>
Do the TIC and "best match" spectrum agree within 20%?	_____	_____	<u>X</u>
<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>	_____	_____

### Semivolatile Organics Data Validation Checklist - Page 3

	YES	NO	NA
<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 initial calibration forms present for each instrument?	<u>X</u>	_____	_____
Are the response factor RSDs within acceptable limits?	<u>X</u>	_____	_____
Are the average RRF $\geq$ minimum requirements?	<u>X</u>	_____	_____
Are there any transcription/calculation error in reporting the RRF or RSD?	_____	<u>X</u>	_____
<b><u>Continuing Calibration</u></b>			
Are continuing calibration forms present for each day and 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 $\geq$ 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 every sample and blank within the upper and lower limits?	<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>	_____	_____