

## ANALYTICAL REPORT

Job Number: 460-111952-1

Job Description: DEC Elmont546; Site: E130150

For:

New York State D.E.C.  
625 Broadway 9th Floor  
Albany, NY 12233-7258

Attention: Mr. Brian Jankauskas



Approved for release.  
Shalini Williams  
Project Management Assistant II  
4/15/2016 8:30 AM

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Designee for  
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04/15/2016

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## **CASE NARRATIVE**

**Client: New York State D.E.C.**

**Project: DEC Elmont546; Site: E130150**

**Report Number: 460-111952-1**

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### **RECEIPT**

The sample was received on 4/11/2016 4:40 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0° C.

### **Receipt Exceptions**

The following sample(s) was collected in an improper container: sample #1. VOC was collected as dirt in jar. Samples were not collected according to 5035L/5035A-L specifications.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

### **VOLATILE ORGANICS**

Sample FORESTRY\_TOPSOIL (460-111952-1) was analyzed for Volatile organics in accordance with EPA SW-846 Method 8260C. The samples were prepared on 04/11/2016 and analyzed on 04/12/2016.

The continuing calibration verification (CCV) analyzed in batch 361975 was outside the method criteria for the following analyte: Trichlorofluoromethane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

Acetone was detected in method blank MB 460-361975/7 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Refer to the QC report for details.

No other difficulties were encountered during the Volatile organics analysis.

All quality control parameters were within the acceptance limits.

### **PESTICIDES**

Sample FORESTRY\_TOPSOIL (460-111952-1) was analyzed for Pesticides in accordance with EPA SW-846 Methods 8081B. The samples were prepared and analyzed on 04/12/2016.

No difficulties were encountered during the Pesticides analysis.

All quality control parameters were within the acceptance limits.

### **POLYCHLORINATED BIPHENYLS**

Sample FORESTRY\_TOPSOIL (460-111952-1) was analyzed for polychlorinated biphenyls in accordance with EPA SW-846 Method 8082A. The samples were prepared and analyzed on 04/12/2016.

No difficulties were encountered during the PCBs analysis.

All quality control parameters were within the acceptance limits.

#### **SEMIVOLATILE ORGANIC COMPOUNDS**

Sample FORESTRY\_TOPSOIL (460-111952-1) was analyzed for Semivolatile organic compounds in accordance with EPA SW-846 Method 8270D. The samples were prepared on 04/11/2016 and analyzed on 04/14/2016.

The continuing calibration verification (CCV) analyzed in batch 460-362222 was outside the method criteria for the following analyte(s): Hexachlorocyclopentadiene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Several analytes failed the recovery criteria low for the MS/MSD of sample 460-111850-3 in batch 460-362222. 4,6-Dinitro-2-methylphenol and Pentachlorophenol exceeded the RPD limit. The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

Sample FORESTRY\_TOPSOIL (460-111952-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the semivolatiles analysis.

All other quality control parameters were within the acceptance limits.

#### **METALS**

Sample FORESTRY\_TOPSOIL (460-111952-1) was analyzed for Metals in accordance with EPA SW-846 Methods 6010C. The samples were prepared and analyzed on 04/12/2016.

Antimony failed the recovery criteria low for the MS of sample 460-111474-4 in batch 460-362155. Aluminum and Iron failed the recovery criteria high.

Refer to the QC report for details.

Sample FORESTRY\_TOPSOIL (460-111952-1)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the Metals analysis.

All other quality control parameters were within the acceptance limits.

#### **TOTAL MERCURY**

Sample FORESTRY\_TOPSOIL (460-111952-1) was analyzed for total mercury in accordance with EPA SW-846 Method 7471B. The samples were prepared and analyzed on 04/12/2016.

No difficulties were encountered during the Hg analysis.

All quality control parameters were within the acceptance limits.

#### **PERCENT SOLIDS/PERCENT MOISTURE**

Sample FORESTRY\_TOPSOIL (460-111952-1) was analyzed for percent solids/percent moisture in accordance with EPA Method CLPISM01.2 (Exhibit D) Modified. The samples were analyzed on 04/11/2016.

No difficulties were encountered during the %solids/moisture analysis.

All quality control parameters were within the acceptance limits.

## EXECUTIVE SUMMARY - Detections

Client: New York State D.E.C.

Job Number: 460-111952-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>460-111952-1</b>	<b>FORESTRY_TOPSOIL</b>					
Acetone		21	B	10	ug/Kg	8260C
Toluene		0.54	J	2.1	ug/Kg	8260C
Anthracene		320	J	3200	ug/Kg	8270D
Benzo[a]pyrene		840		320	ug/Kg	8270D
Benzo[b]fluoranthene		1100		320	ug/Kg	8270D
Benzo[g,h,i]perylene		710	J	3200	ug/Kg	8270D
Benzo[k]fluoranthene		400		320	ug/Kg	8270D
Carbazole		130	J	3200	ug/Kg	8270D
Chrysene		1100	J	3200	ug/Kg	8270D
Fluoranthene		2200	J	3200	ug/Kg	8270D
Fluorene		91	J	3200	ug/Kg	8270D
Indeno[1,2,3-cd]pyrene		740		320	ug/Kg	8270D
Phenanthrene		1500	J	3200	ug/Kg	8270D
Pyrene		1700	J	3200	ug/Kg	8270D
Aluminum		10100		65.7	mg/Kg	6010C
Arsenic		7.2		4.9	mg/Kg	6010C
Barium		96.2		65.7	mg/Kg	6010C
Calcium		13000		1640	mg/Kg	6010C
Chromium		20.1		3.3	mg/Kg	6010C
Cobalt		8.4	J	16.4	mg/Kg	6010C
Copper		47.2		8.2	mg/Kg	6010C
Iron		21600		49.3	mg/Kg	6010C
Lead		139		3.3	mg/Kg	6010C
Magnesium		4250		1640	mg/Kg	6010C
Manganese		816		4.9	mg/Kg	6010C
Nickel		22.6		13.1	mg/Kg	6010C
Potassium		2290		1640	mg/Kg	6010C
Sodium		676	J	1640	mg/Kg	6010C
Vanadium		37.6		16.4	mg/Kg	6010C
Zinc		180		9.9	mg/Kg	6010C
Mercury		0.16		0.030	mg/Kg	7471B
Percent Moisture		48.8		1.0	%	Moisture
Percent Solids		51.2		1.0	%	Moisture

## METHOD SUMMARY

Client: New York State D.E.C.

Job Number: 460-111952-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Solid</b>			
Volatile Organic Compounds by GC/MS	TAL EDI	SW846 8260C	
Closed System Purge and Trap	TAL EDI		SW846 5035
Semivolatile Organic Compounds (GC/MS)	TAL EDI	SW846 8270D	
Microwave Extraction	TAL EDI		SW846 3546
Organochlorine Pesticides (GC)	TAL EDI	SW846 8081B	
Microwave Extraction	TAL EDI		SW846 3546
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL EDI	SW846 8082A	
Microwave Extraction	TAL EDI		SW846 3546
Metals (ICP)	TAL EDI	SW846 6010C	
Preparation, Metals	TAL EDI		SW846 3050B
Mercury (CVAA)	TAL EDI	SW846 7471B	
Preparation, Mercury	TAL EDI		SW846 7471B
Percent Moisture	TAL EDI	EPA Moisture	

### Lab References:

TAL EDI = TestAmerica Edison

### Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## METHOD / ANALYST SUMMARY

Client: New York State D.E.C.

Job Number: 460-111952-1

Method	Analyst	Analyst ID
SW846 8260C	Boykin, Kenneth	KLB
SW846 8270D	Crocco, Michael	MMC
SW846 8081B	Kapoor, Sita	SAK
SW846 8082A	Dalangin, Catalina	CDC
SW846 6010C	Huang, Yixin	YZH
SW846 7471B	Staib, Thomas	TJS
EPA Moisture	Hodge, Joshua D	JDH

## SAMPLE SUMMARY

Client: New York State D.E.C.

Job Number: 460-111952-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
460-111952-1	FORESTRY_TOPSOIL	Solid	04/11/2016 1015	04/11/2016 1640

# **SAMPLE RESULTS**



**Analytical Data**

Client: New York State D.E.C.

Job Number: 460-111952-1

**Client Sample ID: FORESTRY\_TOPSOIL**

Lab Sample ID: 460-111952-1

Date Sampled: 04/11/2016 1015

Client Matrix: Solid

% Moisture: 48.8

Date Received: 04/11/2016 1640

**8260C Volatile Organic Compounds by GC/MS**

Analysis Method: 8260C

Analysis Batch: 460-361975

Instrument ID: CVOAMS9

Prep Method: 5035

Prep Batch: 460-361960

Lab File ID: K52546.D

Dilution: 1.0

Initial Weight/Volume: 4.67 g

Analysis Date: 04/12/2016 0040

Final Weight/Volume: 5 mL

Prep Date: 04/11/2016 1908

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1,1-Trichloroethane		2.1	U	0.79	2.1
1,1,2,2-Tetrachloroethane		2.1	U	0.36	2.1
1,1,2-Trichloro-1,2,2-trifluoroethane		2.1	U	0.92	2.1
1,1,2-Trichloroethane		2.1	U	0.59	2.1
1,1-Dichloroethane		2.1	U	0.71	2.1
1,1-Dichloroethene		2.1	U	0.86	2.1
1,2,3-Trichlorobenzene		2.1	U	0.23	2.1
1,2,4-Trichlorobenzene		2.1	U	0.67	2.1
1,2-Dibromo-3-Chloropropane		2.1	U	0.98	2.1
1,2-Dichlorobenzene		2.1	U	0.29	2.1
1,2-Dichloroethane		2.1	U	0.23	2.1
1,2-Dichloropropane		2.1	U	0.36	2.1
1,3-Dichlorobenzene		2.1	U	0.25	2.1
1,4-Dichlorobenzene		2.1	U	0.27	2.1
1,4-Dioxane		42	U	13	42
2-Butanone (MEK)		10	U	1.6	10
2-Hexanone		10	U	2.0	10
4-Methyl-2-pentanone (MIBK)		10	U	4.6	10
Acetone		21	B	2.2	10
Benzene		2.1	U	0.42	2.1
Bromoform		2.1	U	0.27	2.1
Bromomethane		2.1	U	0.67	2.1
Carbon disulfide		2.1	U	0.90	2.1
Carbon tetrachloride		2.1	U	0.90	2.1
Chlorobenzene		2.1	U	0.29	2.1
Chlorobromomethane		2.1	U	0.36	2.1
Chlorodibromomethane		2.1	U	0.31	2.1
Chloroethane		2.1	U	0.73	2.1
Chloroform		2.1	U	0.44	2.1
Chloromethane		2.1	U	0.79	2.1
cis-1,2-Dichloroethene		2.1	U	0.46	2.1
cis-1,3-Dichloropropene		2.1	U	0.31	2.1
Cyclohexane		2.1	U	0.96	2.1
Dichlorobromomethane		2.1	U	0.79	2.1
Dichlorodifluoromethane		2.1	U	0.67	2.1
Ethylbenzene		2.1	U	0.38	2.1
Ethylene Dibromide		2.1	U	0.25	2.1
Isopropylbenzene		2.1	U	0.36	2.1
Methyl acetate		10	U	1.9	10
Methyl tert-butyl ether		2.1	U	0.36	2.1
Methylcyclohexane		2.1	U	1.0	2.1
Methylene Chloride		2.1	U	0.67	2.1
m-Xylene & p-Xylene		2.1	U	0.23	2.1
o-Xylene		2.1	U	0.33	2.1
Styrene		2.1	U	0.31	2.1
Tetrachloroethene		2.1	U	0.59	2.1

## Analytical Data

Client: New York State D.E.C.

Job Number: 460-111952-1

Client Sample ID: FORESTRY\_TOPSOIL

Lab Sample ID: 460-111952-1

Date Sampled: 04/11/2016 1015

Client Matrix: Solid

% Moisture: 48.8

Date Received: 04/11/2016 1640

### 8260C Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Analysis Batch: 460-361975

Instrument ID: CVOAMS9

Prep Method: 5035

Prep Batch: 460-361960

Lab File ID: K52546.D

Dilution: 1.0

Initial Weight/Volume: 4.67 g

Analysis Date: 04/12/2016 0040

Final Weight/Volume: 5 mL

Prep Date: 04/11/2016 1908

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Toluene		0.54	J	0.40	2.1
trans-1,2-Dichloroethene		2.1	U	0.82	2.1
trans-1,3-Dichloropropene		2.1	U	0.21	2.1
Trichloroethene		2.1	U	0.54	2.1
Trichlorofluoromethane		2.1	U	0.71	2.1
Vinyl chloride		2.1	U	0.82	2.1

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	103		78 - 135
4-Bromofluorobenzene	97		67 - 126
Dibromofluoromethane (Surr)	104		61 - 149
Toluene-d8 (Surr)	108		73 - 121

**Analytical Data**

Client: New York State D.E.C.

Job Number: 460-111952-1

**Client Sample ID: FORESTRY\_TOPSOIL**

Lab Sample ID: 460-111952-1

Date Sampled: 04/11/2016 1015

Client Matrix: Solid

% Moisture: 48.8

Date Received: 04/11/2016 1640

**8270D Semivolatile Organic Compounds (GC/MS)**

Analysis Method: 8270D

Analysis Batch: 460-362367

Instrument ID: CBNAMS12

Prep Method: 3546

Prep Batch: 460-361911

Lab File ID: L132620.D

Dilution: 5.0

Initial Weight/Volume: 15.0259 g

Analysis Date: 04/14/2016 0851

Final Weight/Volume: 1 mL

Prep Date: 04/11/2016 1302

Injection Volume: 1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
1,1'-Biphenyl		3200	U	280	3200
1,2,4,5-Tetrachlorobenzene		3200	U	240	3200
2,2'-oxybis[1-chloropropane]		3200	U	130	3200
2,3,4,6-Tetrachlorophenol		3200	U	300	3200
2,4,5-Trichlorophenol		3200	U	320	3200
2,4,6-Trichlorophenol		1300	U	92	1300
2,4-Dichlorophenol		1300	U	76	1300
2,4-Dimethylphenol		3200	U	710	3200
2,4-Dinitrophenol		2600	U	2400	2600
2,4-Dinitrotoluene		650	U	130	650
2,6-Dinitrotoluene		650	U	170	650
2-Chloronaphthalene		3200	U	73	3200
2-Chlorophenol		3200	U	82	3200
2-Methylnaphthalene		3200	U	71	3200
2-Methylphenol		3200	U	140	3200
2-Nitroaniline		3200	U	110	3200
2-Nitrophenol		3200	U	110	3200
3,3'-Dichlorobenzidine		1300	U	360	1300
3-Nitroaniline		3200	U	96	3200
4,6-Dinitro-2-methylphenol		2600	U	860	2600
4-Bromophenyl phenyl ether		3200	U	100	3200
4-Chloro-3-methylphenol		3200	U	140	3200
4-Chloroaniline		3200	U	83	3200
4-Chlorophenyl phenyl ether		3200	U	97	3200
4-Methylphenol		3200	U	88	3200
4-Nitroaniline		3200	U	120	3200
4-Nitrophenol		6500	U	1600	6500
Acenaphthene		3200	U	78	3200
Acenaphthylene		3200	U	83	3200
Acetophenone		3200	U	70	3200
Anthracene		320	J	310	3200
Atrazine		1300	U	140	1300
Benzaldehyde		3200	U	250	3200
Benzo[a]anthracene		320	U	270	320
Benzo[a]pyrene		840		98	320
Benzo[b]fluoranthene		1100		130	320
Benzo[g,h,i]perylene		710	J	190	3200
Benzo[k]fluoranthene		400		140	320
Bis(2-chloroethoxy)methane		3200	U	100	3200
Bis(2-chloroethyl)ether		320	U	76	320
Bis(2-ethylhexyl) phthalate		3200	U	130	3200
Butyl benzyl phthalate		3200	U	99	3200
Caprolactam		3200	U	230	3200
Carbazole		130	J	80	3200
Chrysene		1100	J	88	3200
Dibenz(a,h)anthracene		320	U	170	320

## Analytical Data

Client: New York State D.E.C.

Job Number: 460-111952-1

Client Sample ID: FORESTRY\_TOPSOIL

Lab Sample ID: 460-111952-1

Date Sampled: 04/11/2016 1015

Client Matrix: Solid

% Moisture: 48.8

Date Received: 04/11/2016 1640

### 8270D Semivolatile Organic Compounds (GC/MS)

Analysis Method: 8270D

Analysis Batch: 460-362367

Instrument ID: CBNAMS12

Prep Method: 3546

Prep Batch: 460-361911

Lab File ID: L132620.D

Dilution: 5.0

Initial Weight/Volume: 15.0259 g

Analysis Date: 04/14/2016 0851

Final Weight/Volume: 1 mL

Prep Date: 04/11/2016 1302

Injection Volume: 1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Dibenzofuran		3200	U	98	3200
Diethyl phthalate		3200	U	92	3200
Dimethyl phthalate		3200	U	94	3200
Di-n-butyl phthalate		3200	U	97	3200
Di-n-octyl phthalate		3200	U	160	3200
Fluoranthene		2200	J	96	3200
Fluorene		91	J	70	3200
Hexachlorobenzene		320	U	130	320
Hexachlorobutadiene		650	U	91	650
Hexachlorocyclopentadiene		3200	U	200	3200
Hexachloroethane		320	U	120	320
Indeno[1,2,3-cd]pyrene		740		210	320
Isophorone		1300	U	69	1300
Naphthalene		3200	U	82	3200
Nitrobenzene		320	U	100	320
N-Nitrosodi-n-propylamine		320	U	110	320
N-Nitrosodiphenylamine		3200	U	290	3200
Pentachlorophenol		2600	U	390	2600
Phenanthrene		1500	J	86	3200
Phenol		3200	U	110	3200
Pyrene		1700	J	150	3200

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol (Surr)	49		10 - 95
2-Fluorobiphenyl	62		27 - 84
2-Fluorophenol (Surr)	52		21 - 84
Nitrobenzene-d5 (Surr)	56		28 - 92
Phenol-d5 (Surr)	50		22 - 88
Terphenyl-d14 (Surr)	52		16 - 114

## Analytical Data

Client: New York State D.E.C.

Job Number: 460-111952-1

Client Sample ID: FORESTRY\_TOPSOIL

Lab Sample ID: 460-111952-1

Date Sampled: 04/11/2016 1015

Client Matrix: Solid

% Moisture: 48.8

Date Received: 04/11/2016 1640

### 8081B Organochlorine Pesticides (GC)

Analysis Method: 8081B

Analysis Batch: 460-362064

Instrument ID: CPESTGC4

Prep Method: 3546

Prep Batch: 460-361999

Initial Weight/Volume: 15.0009 g

Dilution: 1.0

Final Weight/Volume: 10 mL

Analysis Date: 04/12/2016 0912

Injection Volume: 1 uL

Prep Date: 04/12/2016 0106

Result Type: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
4,4'-DDD		13	U	1.7	13
4,4'-DDE		13	U	1.9	13
4,4'-DDT		13	U	1.3	13
Aldrin		13	U	1.6	13
alpha-BHC		3.9	U	1.2	3.9
beta-BHC		3.9	U	1.3	3.9
Chlordane (technical)		130	U	58	130
delta-BHC		3.9	U	1.4	3.9
Dieldrin		3.9	U	1.7	3.9
Endosulfan I		13	U	1.8	13
Endosulfan II		13	U	2.1	13
Endosulfan sulfate		13	U	1.5	13
Endrin		13	U	1.7	13
Endrin aldehyde		13	U	1.6	13
Endrin ketone		13	U	1.8	13
gamma-BHC (Lindane)		3.9	U	1.2	3.9
Heptachlor		13	U	1.7	13
Heptachlor epoxide		13	U	2.6	13
Methoxychlor		13	U	2.8	13
Toxaphene		130	U	38	130

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	139		55 - 148
Tetrachloro-m-xylene	120		55 - 139

## Analytical Data

Client: New York State D.E.C.

Job Number: 460-111952-1

**Client Sample ID: FORESTRY\_TOPSOIL**

Lab Sample ID: 460-111952-1

Date Sampled: 04/11/2016 1015

Client Matrix: Solid

% Moisture: 48.8

Date Received: 04/11/2016 1640

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### 8081B Organochlorine Pesticides (GC)

Analysis Method: 8081B

Analysis Batch: 460-362064

Instrument ID: CPESTGC4

Prep Method: 3546

Prep Batch: 460-361999

Initial Weight/Volume: 15.0009 g

Dilution: 1.0

Final Weight/Volume: 10 mL

Analysis Date: 04/12/2016 0912

Injection Volume: 1 uL

Prep Date: 04/12/2016 0106

Result Type: SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	132		55 - 148
Tetrachloro-m-xylene	116		55 - 139

## Analytical Data

Client: New York State D.E.C.

Job Number: 460-111952-1

Client Sample ID: FORESTRY\_TOPSOIL

Lab Sample ID: 460-111952-1

Date Sampled: 04/11/2016 1015

Client Matrix: Solid

% Moisture: 48.8

Date Received: 04/11/2016 1640

### 8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method: 8082A

Analysis Batch: 460-362071

Instrument ID: CPESTGC11

Prep Method: 3546

Prep Batch: 460-362001

Initial Weight/Volume: 15.0009 g

Dilution: 1.0

Final Weight/Volume: 10 mL

Analysis Date: 04/12/2016 0918

Injection Volume: 1 uL

Prep Date: 04/12/2016 0112

Result Type: PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		130	U	17	130
Aroclor 1221		130	U	17	130
Aroclor 1232		130	U	17	130
Aroclor 1242		130	U	17	130
Aroclor 1248		130	U	17	130
Aroclor 1254		130	U	18	130
Aroclor 1260		130	U	18	130
Aroclor 1268		130	U	18	130
Aroclor-1262		130	U	18	130
Polychlorinated biphenyls, Total		130	U	18	130

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	104		47 - 150

## Analytical Data

Client: New York State D.E.C.

Job Number: 460-111952-1

**Client Sample ID: FORESTRY\_TOPSOIL**

Lab Sample ID: 460-111952-1

Date Sampled: 04/11/2016 1015

Client Matrix: Solid

% Moisture: 48.8

Date Received: 04/11/2016 1640

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### 8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method: 8082A

Analysis Batch: 460-362071

Instrument ID: CPESTGC11

Prep Method: 3546

Prep Batch: 460-362001

Initial Weight/Volume: 15.0009 g

Dilution: 1.0

Final Weight/Volume: 10 mL

Analysis Date: 04/12/2016 0918

Injection Volume: 1 uL

Prep Date: 04/12/2016 0112

Result Type: SECONDARY

Surrogate	%Rec	Qualifier	Acceptance Limits
DCB Decachlorobiphenyl	99		47 - 150

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## Analytical Data

Client: New York State D.E.C.

Job Number: 460-111952-1

Client Sample ID: FORESTRY\_TOPSOIL

Lab Sample ID: 460-111952-1

Client Matrix: Solid

% Moisture: 48.8

Date Sampled: 04/11/2016 1015

Date Received: 04/11/2016 1640

### 6010C Metals (ICP)

Analysis Method: 6010C

Analysis Batch: 460-362155

Instrument ID: ICP4

Prep Method: 3050B

Prep Batch: 460-362066

Lab File ID: 362066.asc

Dilution: 4.0

Initial Weight/Volume: 1.19 g

Analysis Date: 04/12/2016 1442

Final Weight/Volume: 50 mL

Prep Date: 04/12/2016 0742

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		10100		33.8	65.7
Antimony		6.6	U	2.6	6.6
Arsenic		7.2		1.6	4.9
Barium		96.2		2.3	65.7
Beryllium		0.66	U	0.56	0.66
Cadmium		1.3	U	0.68	1.3
Calcium		13000		97.2	1640
Chromium		20.1		1.6	3.3
Cobalt		8.4	J	1.9	16.4
Copper		47.2		2.1	8.2
Iron		21600		37.1	49.3
Lead		139		1.3	3.3
Magnesium		4250		81.9	1640
Manganese		816		1.7	4.9
Nickel		22.6		2.4	13.1
Potassium		2290		49.8	1640
Selenium		6.6	U	2.3	6.6
Silver		3.3	U	0.58	3.3
Sodium		676	J	111	1640
Thallium		6.6	U	2.9	6.6
Vanadium		37.6		1.6	16.4
Zinc		180		2.4	9.9

### 7471B Mercury (CVAA)

Analysis Method: 7471B

Analysis Batch: 460-362132

Instrument ID: LEEMAN5

Prep Method: 7471B

Prep Batch: 460-362032

Lab File ID: 362032HG1.PRN

Dilution: 1.0

Initial Weight/Volume: 0.67 g

Analysis Date: 04/12/2016 0946

Final Weight/Volume: 50 mL

Prep Date: 04/12/2016 0502

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.16		0.021	0.030

## Analytical Data

Client: New York State D.E.C.

Job Number: 460-111952-1

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### General Chemistry

**Client Sample ID:** FORESTRY\_TOPSOIL

Lab Sample ID: 460-111952-1

Client Matrix: Solid

Date Sampled: 04/11/2016 1015

Date Received: 04/11/2016 1640

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	48.8		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-361967	Analysis Date: 04/11/2016	1911				DryWt Corrected: N
Percent Solids	51.2		%	1.0	1.0	1.0	Moisture
	Analysis Batch: 460-361967	Analysis Date: 04/11/2016	1911				DryWt Corrected: N

## DATA REPORTING QUALIFIERS

Client: New York State D.E.C.

Job Number: 460-111952-1

Lab Section	Qualifier	Description
GC/MS VOA	U	Analyzed for but not detected.
	J	Indicates an estimated value.
	B	The analyte was found in an associated blank, as well as in the sample.
GC/MS Semi VOA	U	Analyzed for but not detected.
	*	Duplicate RPD exceeds control limits
	J	Indicates an estimated value.
	*	MS or MSD is outside acceptance limits.
GC Semi VOA	U	Analyzed for but not detected.
	p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
Metals	U	Indicates analyzed for but not detected.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Sample result is greater than the MDL but below the CRDL
	N	Spiked sample recovery is not within control limits.

# **QUALITY CONTROL RESULTS**

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>					
<b>Prep Batch: 460-361960</b>					
LB3 460-361960/1-A	Neutral Leach or MeOH Extraction Blank	T	Solid	5035	
460-111952-1	FORESTRY_TOPSOIL	T	Solid	5035	
<b>Analysis Batch:460-361975</b>					
LCS 460-361975/3	Lab Control Sample	T	Solid	8260C	
LCSD 460-361975/4	Lab Control Sample Duplicate	T	Solid	8260C	
MB 460-361975/7	Method Blank	T	Solid	8260C	
LB3 460-361960/1-A	Neutral Leach or MeOH Extraction Blank	T	Solid	8260C	460-361960
460-111952-1	FORESTRY_TOPSOIL	T	Solid	8260C	460-361960

#### Report Basis

T = Total

### GC/MS Semi VOA

<b>Prep Batch: 460-361911</b>					
LCS 460-361911/2-A	Lab Control Sample	T	Solid	3546	
LCS 460-361911/3-A	Lab Control Sample	T	Solid	3546	
MB 460-361911/1-A	Method Blank	T	Solid	3546	
460-111850-A-3-D MS	Matrix Spike	T	Solid	3546	
460-111850-A-3-E MSD	Matrix Spike Duplicate	T	Solid	3546	
460-111952-1	FORESTRY_TOPSOIL	T	Solid	3546	
<b>Analysis Batch:460-362222</b>					
LCS 460-361911/2-A	Lab Control Sample	T	Solid	8270D	460-361911
LCS 460-361911/3-A	Lab Control Sample	T	Solid	8270D	460-361911
MB 460-361911/1-A	Method Blank	T	Solid	8270D	460-361911
460-111850-A-3-D MS	Matrix Spike	T	Solid	8270D	460-361911
460-111850-A-3-E MSD	Matrix Spike Duplicate	T	Solid	8270D	460-361911
<b>Analysis Batch:460-362367</b>					
460-111952-1	FORESTRY_TOPSOIL	T	Solid	8270D	460-361911

#### Report Basis

T = Total

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC Semi VOA</b>					
<b>Prep Batch: 460-361999</b>					
LCS 460-361999/2-A	Lab Control Sample	T	Solid	3546	
MB 460-361999/1-A	Method Blank	T	Solid	3546	
460-111523-A-1-F MS	Matrix Spike	T	Solid	3546	
460-111523-A-1-G MSD	Matrix Spike Duplicate	T	Solid	3546	
460-111952-1	FORESTRY_TOPSOIL	T	Solid	3546	
<b>Prep Batch: 460-362001</b>					
LCS 460-362001/2-A	Lab Control Sample	T	Solid	3546	
MB 460-362001/1-A	Method Blank	T	Solid	3546	
460-111523-A-1-I MS	Matrix Spike	T	Solid	3546	
460-111523-A-1-J MSD	Matrix Spike Duplicate	T	Solid	3546	
460-111952-1	FORESTRY_TOPSOIL	T	Solid	3546	
<b>Analysis Batch:460-362064</b>					
LCS 460-361999/2-A	Lab Control Sample	T	Solid	8081B	460-361999
MB 460-361999/1-A	Method Blank	T	Solid	8081B	460-361999
460-111523-A-1-F MS	Matrix Spike	T	Solid	8081B	460-361999
460-111523-A-1-G MSD	Matrix Spike Duplicate	T	Solid	8081B	460-361999
460-111952-1	FORESTRY_TOPSOIL	T	Solid	8081B	460-361999
<b>Analysis Batch:460-362071</b>					
LCS 460-362001/2-A	Lab Control Sample	T	Solid	8082A	460-362001
MB 460-362001/1-A	Method Blank	T	Solid	8082A	460-362001
460-111523-A-1-I MS	Matrix Spike	T	Solid	8082A	460-362001
460-111523-A-1-J MSD	Matrix Spike Duplicate	T	Solid	8082A	460-362001
460-111952-1	FORESTRY_TOPSOIL	T	Solid	8082A	460-362001

#### Report Basis

T = Total

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>Metals</b>					
<b>Prep Batch: 460-362032</b>					
LCSSRM 460-362032/11-A ^2	LCS-Certified Reference Material	T	Solid	7471B	
MB 460-362032/10-A	Method Blank	T	Solid	7471B	
460-111686-D-7-E DU	Duplicate	T	Solid	7471B	
460-111686-D-7-F MS	Matrix Spike	T	Solid	7471B	
460-111952-1	FORESTRY_TOPSOIL	T	Solid	7471B	
<b>Prep Batch: 460-362066</b>					
LCSSRM 460-362066/2-A ^4	LCS-Certified Reference Material	T	Solid	3050B	
MB 460-362066/1-A ^2	Method Blank	T	Solid	3050B	
460-111474-C-4-L DU	Duplicate	T	Solid	3050B	
460-111474-C-4-M MS	Matrix Spike	T	Solid	3050B	
460-111952-1	FORESTRY_TOPSOIL	T	Solid	3050B	
<b>Analysis Batch:460-362132</b>					
LCSSRM 460-362032/11-A ^2	LCS-Certified Reference Material	T	Solid	7471B	460-362032
MB 460-362032/10-A	Method Blank	T	Solid	7471B	460-362032
460-111686-D-7-E DU	Duplicate	T	Solid	7471B	460-362032
460-111686-D-7-F MS	Matrix Spike	T	Solid	7471B	460-362032
460-111952-1	FORESTRY_TOPSOIL	T	Solid	7471B	460-362032
<b>Analysis Batch:460-362155</b>					
MB 460-362066/1-A ^2	Method Blank	T	Solid	6010C	460-362066
460-111474-C-4-L DU	Duplicate	T	Solid	6010C	460-362066
460-111474-C-4-M MS	Matrix Spike	T	Solid	6010C	460-362066
460-111952-1	FORESTRY_TOPSOIL	T	Solid	6010C	460-362066
<b>Analysis Batch:460-362357</b>					
LCSSRM 460-362066/2-A ^4	LCS-Certified Reference Material	T	Solid	6010C	460-362066

#### Report Basis

T = Total

### General Chemistry

#### **Analysis Batch:460-361967**

460-111912-C-7 DU	Duplicate	T	Solid	Moisture
460-111952-1	FORESTRY_TOPSOIL	T	Solid	Moisture

#### Report Basis

T = Total

TestAmerica Edison

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Surrogate Recovery Report

#### 8260C Volatile Organic Compounds by GC/MS

##### Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	DBFM %Rec	TOL %Rec
460-111952-1	FORESTRY_TOPSOIL	103	97	104	108
MB 460-361975/7		98	100	96	100
LB3 460-361960/1-A		88	92	89	95
LCS 460-361975/3		94	98	93	101
LCSD 460-361975/4		92	99	95	102

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	78-135
BFB = 4-Bromofluorobenzene	67-126
DBFM = Dibromofluoromethane (Surr)	61-149
TOL = Toluene-d8 (Surr)	73-121



## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Surrogate Recovery Report

#### 8270D Semivolatile Organic Compounds (GC/MS)

##### Client Matrix: Solid

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
460-111952-1	FORESTRY_TOPSOIL	49	62	52	56	50	52
MB 460-361911/1-A		49	73	68	71	67	88
LCS 460-361911/2-A		68	80	70	76	69	90
LCS 460-361911/3-A		48	81	71	78	72	94
460-111850-A-3-D MS		50	68	58	65	58	76
460-111850-A-3-E MSD		51	73	60	68	62	76

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol (Surr)	10-95
FBP = 2-Fluorobiphenyl	27-84
2FP = 2-Fluorophenol (Surr)	21-84
NBZ = Nitrobenzene-d5 (Surr)	28-92
PHL = Phenol-d5 (Surr)	22-88
TPH = Terphenyl-d14 (Surr)	16-114

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Surrogate Recovery Report

#### 8081B Organochlorine Pesticides (GC)

##### Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec	TCX1 %Rec	TCX2 %Rec
460-111952-1	FORESTRY_TOPSOI L	132	139	116	120
MB 460-361999/1-A		110	126	129	116
LCS 460-361999/2-A		107	119	104	113
460-111523-A-1-F MS		122	133	118	123
460-111523-A-1-G MSD		121	128	126	118

Surrogate

Acceptance Limits

DCB = DCB Decachlorobiphenyl

55-148

TCX = Tetrachloro-m-xylene

55-139

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Surrogate Recovery Report

#### 8082A Polychlorinated Biphenyls (PCBs) by Gas Chromatography

##### Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	DCB2 %Rec
460-111952-1	FORESTRY_TOPSOI L	104	99
MB 460-362001/1-A		112	104
LCS 460-362001/2-A		105	98
460-111523-A-1-I MS		111	107
460-111523-A-1-J MSD		116	112

Surrogate

Acceptance Limits

DCB = DCB Decachlorobiphenyl

47-150

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Neutral Leach or MeOH Extraction Blank - Batch: 460-361960

Method: 8260C  
Preparation: 5035

Lab Sample ID:	LB3 460-361960/1-A	Analysis Batch:	460-361975	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	460-361960	Lab File ID:	K52545.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	04/12/2016 0014	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	04/11/2016 1751				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.38	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.17	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.44	1.0
1,1,2-Trichloroethane	1.0	U	0.28	1.0
1,1-Dichloroethane	1.0	U	0.34	1.0
1,1-Dichloroethene	1.0	U	0.41	1.0
1,2,3-Trichlorobenzene	1.0	U	0.11	1.0
1,2,4-Trichlorobenzene	1.0	U	0.32	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.47	1.0
1,2-Dichlorobenzene	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.17	1.0
1,3-Dichlorobenzene	1.0	U	0.12	1.0
1,4-Dichlorobenzene	1.0	U	0.13	1.0
1,4-Dioxane	20	U	6.4	20
2-Butanone (MEK)	5.0	U	0.77	5.0
2-Hexanone	5.0	U	0.94	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	2.2	5.0
Acetone	5.0	U	1.1	5.0
Benzene	1.0	U	0.20	1.0
Bromoform	1.0	U	0.13	1.0
Bromomethane	1.0	U	0.32	1.0
Carbon disulfide	1.0	U	0.43	1.0
Carbon tetrachloride	1.0	U	0.43	1.0
Chlorobenzene	1.0	U	0.14	1.0
Chlorobromomethane	1.0	U	0.17	1.0
Chlorodibromomethane	1.0	U	0.15	1.0
Chloroethane	1.0	U	0.35	1.0
Chloroform	1.0	U	0.21	1.0
Chloromethane	1.0	U	0.38	1.0
cis-1,2-Dichloroethene	1.0	U	0.22	1.0
cis-1,3-Dichloropropene	1.0	U	0.15	1.0
Cyclohexane	1.0	U	0.46	1.0
Dichlorobromomethane	1.0	U	0.38	1.0
Dichlorodifluoromethane	1.0	U	0.32	1.0
Ethylbenzene	1.0	U	0.18	1.0
Ethylene Dibromide	1.0	U	0.12	1.0
Isopropylbenzene	1.0	U	0.17	1.0
Methyl acetate	5.0	U	0.90	5.0
Methyl tert-butyl ether	1.0	U	0.17	1.0
Methylcyclohexane	1.0	U	0.50	1.0
Methylene Chloride	1.0	U	0.32	1.0
m-Xylene & p-Xylene	1.0	U	0.11	1.0
o-Xylene	1.0	U	0.16	1.0
Styrene	1.0	U	0.15	1.0

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Neutral Leach or MeOH Extraction Blank - Batch: 460-361960

Method: 8260C  
Preparation: 5035

Lab Sample ID:	LB3 460-361960/1-A	Analysis Batch:	460-361975	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	460-361960	Lab File ID:	K52545.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 g
Analysis Date:	04/12/2016 0014	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	04/11/2016 1751				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Tetrachloroethene	1.0	U	0.28	1.0
Toluene	1.0	U	0.19	1.0
trans-1,2-Dichloroethene	1.0	U	0.39	1.0
trans-1,3-Dichloropropene	1.0	U	0.10	1.0
Trichloroethene	1.0	U	0.26	1.0
Trichlorofluoromethane	1.0	U	0.34	1.0
Vinyl chloride	1.0	U	0.39	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	88	78 - 135
4-Bromofluorobenzene	92	67 - 126
Dibromofluoromethane (Surr)	89	61 - 149
Toluene-d8 (Surr)	95	73 - 121

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Method Blank - Batch: 460-361975

### Method: 8260C Preparation: N/A

Lab Sample ID: MB 460-361975/7  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 04/11/2016 2318  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 460-361975  
Prep Batch: N/A  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: CVOAMS9  
Lab File ID: K52544.D  
Initial Weight/Volume: 5 mL  
Final Weight/Volume: 5 mL

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.38	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.17	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.44	1.0
1,1,2-Trichloroethane	1.0	U	0.28	1.0
1,1-Dichloroethane	1.0	U	0.34	1.0
1,1-Dichloroethene	1.0	U	0.41	1.0
1,2,3-Trichlorobenzene	1.0	U	0.11	1.0
1,2,4-Trichlorobenzene	1.0	U	0.32	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.47	1.0
1,2-Dichlorobenzene	1.0	U	0.14	1.0
1,2-Dichloroethane	1.0	U	0.11	1.0
1,2-Dichloropropane	1.0	U	0.17	1.0
1,3-Dichlorobenzene	1.0	U	0.12	1.0
1,4-Dichlorobenzene	1.0	U	0.13	1.0
1,4-Dioxane	20	U	6.4	20
2-Butanone (MEK)	5.0	U	0.77	5.0
2-Hexanone	5.0	U	0.94	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	2.2	5.0
Acetone	2.78	J	1.1	5.0
Benzene	1.0	U	0.20	1.0
Bromoform	1.0	U	0.13	1.0
Bromomethane	1.0	U	0.32	1.0
Carbon disulfide	1.0	U	0.43	1.0
Carbon tetrachloride	1.0	U	0.43	1.0
Chlorobenzene	1.0	U	0.14	1.0
Chlorobromomethane	1.0	U	0.17	1.0
Chlorodibromomethane	1.0	U	0.15	1.0
Chloroethane	1.0	U	0.35	1.0
Chloroform	1.0	U	0.21	1.0
Chloromethane	1.0	U	0.38	1.0
cis-1,2-Dichloroethene	1.0	U	0.22	1.0
cis-1,3-Dichloropropene	1.0	U	0.15	1.0
Cyclohexane	1.0	U	0.46	1.0
Dichlorobromomethane	1.0	U	0.38	1.0
Dichlorodifluoromethane	1.0	U	0.32	1.0
Ethylbenzene	1.0	U	0.18	1.0
Ethylene Dibromide	1.0	U	0.12	1.0
Isopropylbenzene	1.0	U	0.17	1.0
Methyl acetate	5.0	U	0.90	5.0
Methyl tert-butyl ether	1.0	U	0.17	1.0
Methylcyclohexane	1.0	U	0.50	1.0
Methylene Chloride	1.0	U	0.32	1.0
m-Xylene & p-Xylene	1.0	U	0.11	1.0
o-Xylene	1.0	U	0.16	1.0
Styrene	1.0	U	0.15	1.0

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Method Blank - Batch: 460-361975

**Method: 8260C**  
**Preparation: N/A**

Lab Sample ID:	MB 460-361975/7	Analysis Batch:	460-361975	Instrument ID:	CVOAMS9
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	K52544.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	04/11/2016 2318	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Tetrachloroethene	1.0	U	0.28	1.0
Toluene	1.0	U	0.19	1.0
trans-1,2-Dichloroethene	1.0	U	0.39	1.0
trans-1,3-Dichloropropene	1.0	U	0.10	1.0
Trichloroethene	1.0	U	0.26	1.0
Trichlorofluoromethane	1.0	U	0.34	1.0
Vinyl chloride	1.0	U	0.39	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98	78 - 135
4-Bromofluorobenzene	100	67 - 126
Dibromofluoromethane (Surr)	96	61 - 149
Toluene-d8 (Surr)	100	73 - 121

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 460-361975

Method: 8260C

Preparation: N/A

LCS Lab Sample ID: LCS 460-361975/3	Analysis Batch: 460-361975	Instrument ID: CVOAMS9
Client Matrix: Solid	Prep Batch: N/A	Lab File ID: K52540.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 04/11/2016 2133	Units: ug/Kg	Final Weight/Volume: 5 mL
Prep Date: N/A		5 mL
Leach Date: N/A		

LCSD Lab Sample ID: LCSD 460-361975/4	Analysis Batch: 460-361975	Instrument ID: CVOAMS9
Client Matrix: Solid	Prep Batch: N/A	Lab File ID: K52541.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 04/11/2016 2159	Units: ug/Kg	Final Weight/Volume: 5 mL
Prep Date: N/A		5 mL
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,1,1-Trichloroethane	98	93	78 - 139	5	30		
1,1,2,2-Tetrachloroethane	96	92	64 - 128	4	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	99	92	83 - 136	8	30		
1,1,2-Trichloroethane	96	92	76 - 118	5	30		
1,1-Dichloroethane	103	94	83 - 131	9	30		
1,1-Dichloroethene	94	90	80 - 120	4	30		
1,2,3-Trichlorobenzene	96	89	77 - 116	8	30		
1,2,4-Trichlorobenzene	98	92	77 - 116	7	30		
1,2-Dibromo-3-Chloropropane	92	91	63 - 131	2	30		
1,2-Dichlorobenzene	100	95	80 - 120	6	30		
1,2-Dichloroethane	97	92	75 - 132	5	30		
1,2-Dichloropropane	103	95	77 - 124	7	30		
1,3-Dichlorobenzene	103	95	80 - 120	8	30		
1,4-Dichlorobenzene	101	95	80 - 120	7	30		
1,4-Dioxane	107	110	80 - 128	3	30		
2-Butanone (MEK)	89	86	58 - 150	4	30		
2-Hexanone	99	95	75 - 137	4	30		
4-Methyl-2-pentanone (MIBK)	102	98	81 - 121	4	30		
Acetone	96	95	66 - 150	1	30		
Benzene	105	98	78 - 122	7	30		
Bromoform	87	83	47 - 150	5	30		
Bromomethane	89	89	74 - 125	0	30		
Carbon disulfide	97	91	82 - 127	6	30		
Carbon tetrachloride	99	93	62 - 150	6	30		
Chlorobenzene	99	94	80 - 120	5	30		
Chlorobromomethane	94	91	73 - 132	3	30		
Chlorodibromomethane	94	89	68 - 132	5	30		
Chloroethane	99	96	63 - 143	3	30		
Chloroform	98	92	80 - 120	6	30		
Chloromethane	111	110	73 - 130	0	30		
cis-1,2-Dichloroethene	97	92	80 - 120	6	30		
cis-1,3-Dichloropropene	100	93	75 - 118	7	30		
Cyclohexane	109	103	77 - 137	5	30		
Dichlorobromomethane	97	91	76 - 130	6	30		
Dichlorodifluoromethane	91	89	73 - 122	2	30		



## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Lab Control Sample/

Lab Control Sample Duplicate Recovery Report - Batch: 460-361975

Method: 8260C

Preparation: N/A

LCS Lab Sample ID: LCS 460-361975/3	Analysis Batch: 460-361975	Instrument ID: CVOAMS9
Client Matrix: Solid	Prep Batch: N/A	Lab File ID: K52540.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 04/11/2016 2133	Units: ug/Kg	Final Weight/Volume: 5 mL
Prep Date: N/A		5 mL
Leach Date: N/A		

LCSD Lab Sample ID: LCSD 460-361975/4	Analysis Batch: 460-361975	Instrument ID: CVOAMS9
Client Matrix: Solid	Prep Batch: N/A	Lab File ID: K52541.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 5 mL
Analysis Date: 04/11/2016 2159	Units: ug/Kg	Final Weight/Volume: 5 mL
Prep Date: N/A		5 mL
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Ethylbenzene	104	97	80 - 120	6	30		
Ethylene Dibromide	96	90	80 - 120	7	30		
Isopropylbenzene	105	100	80 - 120	5	30		
Methyl acetate	101	102	66 - 150	0	30		
Methyl tert-butyl ether	97	95	80 - 120	2	30		
Methylcyclohexane	104	98	84 - 127	6	30		
Methylene Chloride	95	88	80 - 120	7	30		
m-Xylene & p-Xylene	104	98	80 - 120	6	30		
o-Xylene	104	99	80 - 120	4	30		
Styrene	104	98	80 - 120	6	30		
Tetrachloroethene	97	92	68 - 130	6	30		
Toluene	100	94	80 - 120	6	30		
trans-1,2-Dichloroethene	97	91	86 - 126	6	30		
trans-1,3-Dichloropropene	99	94	73 - 118	6	30		
Trichloroethene	96	91	80 - 120	6	30		
Trichlorofluoromethane	82	81	73 - 134	1	30		
Vinyl chloride	101	99	77 - 130	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94	92	78 - 135
4-Bromofluorobenzene	98	99	67 - 126
Dibromofluoromethane (Surr)	93	95	61 - 149
Toluene-d8 (Surr)	101	102	73 - 121

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Method Blank - Batch: 460-361911

### Method: 8270D Preparation: 3546

Lab Sample ID: MB 460-361911/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 04/13/2016 0817  
Prep Date: 04/11/2016 1302  
Leach Date: N/A

Analysis Batch: 460-362222  
Prep Batch: 460-361911  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: CBNAMS12  
Lab File ID: L132575.D  
Initial Weight/Volume: 15.0000 g  
Final Weight/Volume: 1 mL  
Injection Volume: 1 uL

Analyte	Result	Qual	MDL	RL
1,1'-Biphenyl	330	U	28	330
1,2,4,5-Tetrachlorobenzene	330	U	25	330
2,2'-oxybis[1-chloropropane]	330	U	14	330
2,3,4,6-Tetrachlorophenol	330	U	31	330
2,4,5-Trichlorophenol	330	U	33	330
2,4,6-Trichlorophenol	130	U	9.4	130
2,4-Dichlorophenol	130	U	7.8	130
2,4-Dimethylphenol	330	U	73	330
2,4-Dinitrophenol	270	U	250	270
2,4-Dinitrotoluene	67	U	13	67
2,6-Dinitrotoluene	67	U	18	67
2-Chloronaphthalene	330	U	7.5	330
2-Chlorophenol	330	U	8.4	330
2-Methylnaphthalene	330	U	7.3	330
2-Methylphenol	330	U	14	330
2-Nitroaniline	330	U	11	330
2-Nitrophenol	330	U	11	330
3,3'-Dichlorobenzidine	130	U	37	130
3-Nitroaniline	330	U	9.8	330
4,6-Dinitro-2-methylphenol	270	U	88	270
4-Bromophenyl phenyl ether	330	U	10	330
4-Chloro-3-methylphenol	330	U	14	330
4-Chloroaniline	330	U	8.5	330
4-Chlorophenyl phenyl ether	330	U	9.9	330
4-Methylphenol	330	U	9.0	330
4-Nitroaniline	330	U	13	330
4-Nitrophenol	670	U	160	670
Acenaphthene	330	U	8.0	330
Acenaphthylene	330	U	8.5	330
Acetophenone	330	U	7.2	330
Anthracene	330	U	31	330
Atrazine	130	U	15	130
Benzaldehyde	330	U	25	330
Benzo[a]anthracene	33	U	28	33
Benzo[a]pyrene	33	U	10	33
Benzo[b]fluoranthene	33	U	13	33
Benzo[g,h,i]perylene	330	U	19	330
Benzo[k]fluoranthene	33	U	14	33
Bis(2-chloroethoxy)methane	330	U	10	330
Bis(2-chloroethyl)ether	33	U	7.8	33
Bis(2-ethylhexyl) phthalate	330	U	13	330
Butyl benzyl phthalate	330	U	10	330
Caprolactam	330	U	24	330
Carbazole	330	U	8.2	330
Chrysene	330	U	9.0	330

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Method Blank - Batch: 460-361911

### Method: 8270D Preparation: 3546

Lab Sample ID:	MB 460-361911/1-A	Analysis Batch:	460-362222	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-361911	Lab File ID:	L132575.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	04/13/2016 0817	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	04/11/2016 1302			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Dibenz(a,h)anthracene	33	U	17	33
Dibenzofuran	330	U	10	330
Diethyl phthalate	330	U	9.4	330
Dimethyl phthalate	330	U	9.6	330
Di-n-butyl phthalate	330	U	9.9	330
Di-n-octyl phthalate	330	U	17	330
Fluoranthene	330	U	9.8	330
Fluorene	330	U	7.2	330
Hexachlorobenzene	33	U	13	33
Hexachlorobutadiene	67	U	9.3	67
Hexachlorocyclopentadiene	330	U	21	330
Hexachloroethane	33	U	12	33
Indeno[1,2,3-cd]pyrene	33	U	22	33
Isophorone	130	U	7.1	130
Naphthalene	330	U	8.4	330
Nitrobenzene	33	U	10	33
N-Nitrosodi-n-propylamine	33	U	11	33
N-Nitrosodiphenylamine	330	U	30	330
Pentachlorophenol	270	U	40	270
Phenanthrene	330	U	8.8	330
Phenol	330	U	11	330
Pyrene	330	U	15	330

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	49	10 - 95
2-Fluorobiphenyl	73	27 - 84
2-Fluorophenol (Surr)	68	21 - 84
Nitrobenzene-d5 (Surr)	71	28 - 92
Phenol-d5 (Surr)	67	22 - 88
Terphenyl-d14 (Surr)	88	16 - 114

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Lab Control Sample - Batch: 460-361911

**Method: 8270D**  
**Preparation: 3546**

Lab Sample ID:	LCS 460-361911/2-A	Analysis Batch:	460-362222	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-361911	Lab File ID:	L132576.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	04/13/2016 0842	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	04/11/2016 1302			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1'-Biphenyl	3330	2720	82	64 - 103	
1,2,4,5-Tetrachlorobenzene	3330	2820	85	62 - 109	
2,2'-oxybis[1-chloropropane]	3330	2390	72	42 - 119	
2,3,4,6-Tetrachlorophenol	3330	2390	72	57 - 113	
2,4,5-Trichlorophenol	3330	2390	72	59 - 105	
2,4,6-Trichlorophenol	3330	2570	77	61 - 107	
2,4-Dichlorophenol	3330	2440	73	59 - 99	
2,4-Dimethylphenol	3330	2410	72	60 - 98	
2,4-Dinitrophenol	6670	4360	65	26 - 137	
2,4-Dinitrotoluene	3330	2580	78	61 - 118	
2,6-Dinitrotoluene	3330	2630	79	63 - 112	
2-Chloronaphthalene	3330	2770	83	63 - 102	
2-Chlorophenol	3330	2420	72	58 - 95	
2-Methylnaphthalene	3330	2410	72	64 - 102	
2-Methylphenol	3330	2320	70	56 - 99	
2-Nitroaniline	3330	2650	79	46 - 113	
2-Nitrophenol	3330	2590	78	63 - 103	
3,3'-Dichlorobenzidine	3330	1530	46	18 - 92	
3-Nitroaniline	3330	1750	52	23 - 89	
4,6-Dinitro-2-methylphenol	6670	5330	80	51 - 124	
4-Bromophenyl phenyl ether	3330	3000	90	65 - 114	
4-Chloro-3-methylphenol	3330	2410	72	58 - 108	
4-Chloroaniline	3330	1400	42	10 - 82	
4-Chlorophenyl phenyl ether	3330	2560	77	63 - 107	
4-Methylphenol	3330	2320	70	53 - 103	
4-Nitroaniline	3330	2240	67	44 - 109	
4-Nitrophenol	6670	4560	68	45 - 125	
Acenaphthene	3330	2460	74	59 - 102	
Acenaphthylene	3330	2720	82	63 - 102	
Acetophenone	3330	2300	69	56 - 107	
Anthracene	3330	2880	86	66 - 105	
Benzo[a]anthracene	3330	2760	83	65 - 106	
Benzo[a]pyrene	3330	2990	90	68 - 111	
Benzo[b]fluoranthene	3330	2940	88	67 - 116	
Benzo[g,h,i]perylene	3330	2920	88	49 - 124	
Benzo[k]fluoranthene	3330	3010	90	65 - 114	
Bis(2-chloroethoxy)methane	3330	2510	75	61 - 102	
Bis(2-chloroethyl)ether	3330	2450	73	58 - 102	
Bis(2-ethylhexyl) phthalate	3330	2840	85	60 - 125	
Butyl benzyl phthalate	3330	2880	86	62 - 123	
Carbazole	3330	2700	81	62 - 107	

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Lab Control Sample - Batch: 460-361911

**Method: 8270D**  
**Preparation: 3546**

Lab Sample ID:	LCS 460-361911/2-A	Analysis Batch:	460-362222	Instrument ID:	CBNAMS12
Client Matrix:	Solid	Prep Batch:	460-361911	Lab File ID:	L132576.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	04/13/2016 0842	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	04/11/2016 1302			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chrysene	3330	2920	88	64 - 105	
Dibenz(a,h)anthracene	3330	3080	92	54 - 126	
Dibenzofuran	3330	2630	79	62 - 102	
Diethyl phthalate	3330	2510	75	61 - 110	
Dimethyl phthalate	3330	2590	78	64 - 108	
Di-n-butyl phthalate	3330	2680	80	62 - 114	
Di-n-octyl phthalate	3330	2970	89	52 - 137	
Fluoranthene	3330	2610	78	59 - 109	
Fluorene	3330	2540	76	65 - 108	
Hexachlorobenzene	3330	2880	86	65 - 117	
Hexachlorobutadiene	3330	2580	77	60 - 105	
Hexachlorocyclopentadiene	3330	3490	105	37 - 119	
Hexachloroethane	3330	2420	72	60 - 94	
Indeno[1,2,3-cd]pyrene	3330	3610	108	50 - 134	
Isophorone	3330	2610	78	60 - 102	
Naphthalene	3330	2560	77	64 - 99	
Nitrobenzene	3330	2690	81	59 - 102	
N-Nitrosodi-n-propylamine	3330	2410	72	56 - 112	
N-Nitrosodiphenylamine	3330	2960	89	71 - 119	
Pentachlorophenol	6670	4860	73	47 - 115	
Phenanthrene	3330	2770	83	66 - 105	
Phenol	3330	2360	71	55 - 99	
Pyrene	3330	3040	91	55 - 126	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	68	10 - 95
2-Fluorobiphenyl	80	27 - 84
2-Fluorophenol (Surr)	70	21 - 84
Nitrobenzene-d5 (Surr)	76	28 - 92
Phenol-d5 (Surr)	69	22 - 88
Terphenyl-d14 (Surr)	90	16 - 114

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Lab Control Sample - Batch: 460-361911

**Method: 8270D**  
**Preparation: 3546**

Lab Sample ID:	LCS 460-361911/3-A	Analysis Batch:	460-362222	Instrument ID:	CBNAM12
Client Matrix:	Solid	Prep Batch:	460-361911	Lab File ID:	L132577.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	04/13/2016 0908	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	04/11/2016 1302			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Atrazine	6670	5820	87	41 - 116	
Benzaldehyde	6670	5040	76	55 - 116	
Caprolactam	6670	5840	88	44 - 129	

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol (Surr)	48	10 - 95
2-Fluorobiphenyl	81	27 - 84
2-Fluorophenol (Surr)	71	21 - 84
Nitrobenzene-d5 (Surr)	78	28 - 92
Phenol-d5 (Surr)	72	22 - 88
Terphenyl-d14 (Surr)	94	16 - 114

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 460-361911

Method: 8270D  
Preparation: 3546

MS Lab Sample ID: 460-111850-A-3-D MS	Analysis Batch: 460-362222	Instrument ID: CBNAMS12
Client Matrix: Solid	Prep Batch: 460-361911	Lab File ID: L132581.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0247 g
Analysis Date: 04/13/2016 1052		Final Weight/Volume: 1 mL
Prep Date: 04/11/2016 1302		Injection Volume: 1 uL
Leach Date: N/A		

MSD Lab Sample ID: 460-111850-A-3-E MSD	Analysis Batch: 460-362222	Instrument ID: CBNAMS12
Client Matrix: Solid	Prep Batch: 460-361911	Lab File ID: L132582.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0255 g
Analysis Date: 04/13/2016 1118		Final Weight/Volume: 1 mL
Prep Date: 04/11/2016 1302		Injection Volume: 1 uL
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
1,1'-Biphenyl	70	75	64 - 103	7	30		
1,2,4,5-Tetrachlorobenzene	73	77	62 - 109	6	30		
2,2'-oxybis[1-chloropropane]	62	64	42 - 119	4	30		
2,3,4,6-Tetrachlorophenol	36	42	57 - 113	13	30	*	*
2,4,5-Trichlorophenol	50	53	59 - 105	7	30	*	*
2,4,6-Trichlorophenol	55	58	61 - 107	6	30	*	*
2,4-Dichlorophenol	56	58	59 - 99	5	30	*	*
2,4-Dimethylphenol	59	62	60 - 98	6	30	*	
2,4-Dinitrophenol	5	6	26 - 137	21	30	*	*
2,4-Dinitrotoluene	67	72	61 - 118	7	30		
2,6-Dinitrotoluene	69	72	63 - 112	5	30		
2-Chloronaphthalene	71	75	63 - 102	5	30		
2-Chlorophenol	60	62	58 - 95	3	30		
2-Methylnaphthalene	61	64	64 - 102	4	30	*	
2-Methylphenol	59	61	56 - 99	4	30		
2-Nitroaniline	68	72	46 - 113	6	30		
2-Nitrophenol	50	53	63 - 103	5	30	*	*
3,3'-Dichlorobenzidine	58	59	18 - 92	2	30		
3-Nitroaniline	57	57	23 - 89	0	30		
4,6-Dinitro-2-methylphenol	12	20	51 - 124	48	30	*	*
4-Bromophenyl phenyl ether	75	79	65 - 114	6	30		
4-Chloro-3-methylphenol	58	60	58 - 108	3	30		
4-Chloroaniline	38	34	10 - 82	13	30		
4-Chlorophenyl phenyl ether	65	69	63 - 107	6	30		
4-Methylphenol	59	61	53 - 103	3	30		
4-Nitroaniline	60	62	44 - 109	4	30		
4-Nitrophenol	48	50	45 - 125	6	30		
Acenaphthene	60	63	59 - 102	5	30		
Acenaphthylene	70	75	63 - 102	7	30		
Acetophenone	60	62	56 - 107	4	30		
Anthracene	72	77	66 - 105	7	30		
Atrazine	73	77	41 - 116	6	30		

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 460-361911

Method: 8270D  
Preparation: 3546

MS Lab Sample ID: 460-111850-A-3-D MS	Analysis Batch: 460-362222	Instrument ID: CBNAMS12
Client Matrix: Solid	Prep Batch: 460-361911	Lab File ID: L132581.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0247 g
Analysis Date: 04/13/2016 1052		Final Weight/Volume: 1 mL
Prep Date: 04/11/2016 1302		Injection Volume: 1 uL
Leach Date: N/A		

MSD Lab Sample ID: 460-111850-A-3-E MSD	Analysis Batch: 460-362222	Instrument ID: CBNAMS12
Client Matrix: Solid	Prep Batch: 460-361911	Lab File ID: L132582.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0255 g
Analysis Date: 04/13/2016 1118		Final Weight/Volume: 1 mL
Prep Date: 04/11/2016 1302		Injection Volume: 1 uL
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzaldehyde	61	61	55 - 116	1	30		
Benzo[a]anthracene	68	72	65 - 106	6	30		
Benzo[a]pyrene	74	78	68 - 111	4	30		
Benzo[b]fluoranthene	72	75	67 - 116	4	30		
Benzo[g,h,i]perylene	74	77	49 - 124	3	30		
Benzo[k]fluoranthene	74	78	65 - 114	5	30		
Bis(2-chloroethoxy)methane	66	68	61 - 102	3	30		
Bis(2-chloroethyl)ether	63	66	58 - 102	5	30		
Bis(2-ethylhexyl) phthalate	72	76	60 - 125	5	30		
Butyl benzyl phthalate	75	77	62 - 123	3	30		
Caprolactam	51	46	44 - 129	10	30		
Carbazole	68	73	62 - 107	7	30		
Chrysene	72	76	64 - 105	5	30		
Dibenz(a,h)anthracene	80	84	54 - 126	4	30		
Dibenzofuran	67	70	62 - 102	5	30		
Diethyl phthalate	65	69	61 - 110	6	30		
Dimethyl phthalate	67	71	64 - 108	6	30		
Di-n-butyl phthalate	69	73	62 - 114	5	30		
Di-n-octyl phthalate	75	77	52 - 137	4	30		
Fluoranthene	64	69	59 - 109	7	30		
Fluorene	65	69	65 - 108	5	30		
Hexachlorobenzene	73	77	65 - 117	5	30		
Hexachlorobutadiene	68	70	60 - 105	3	30		
Hexachlorocyclopentadiene	83	88	37 - 119	6	30		
Hexachloroethane	64	66	60 - 94	4	30		
Indeno[1,2,3-cd]pyrene	91	96	50 - 134	5	30		
Isophorone	68	71	60 - 102	3	30		
Naphthalene	66	69	64 - 99	4	30		
Nitrobenzene	67	70	59 - 102	4	30		
N-Nitrosodi-n-propylamine	64	66	56 - 112	3	30		
N-Nitrosodiphenylamine	73	77	71 - 119	6	30		
Pentachlorophenol	9	21	47 - 115	81	30	*	*



## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 460-361911

Method: 8270D  
Preparation: 3546

MS Lab Sample ID: 460-111850-A-3-D MS	Analysis Batch: 460-362222	Instrument ID: CBNAMS12
Client Matrix: Solid	Prep Batch: 460-361911	Lab File ID: L132581.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0247 g
Analysis Date: 04/13/2016 1052		Final Weight/Volume: 1 mL
Prep Date: 04/11/2016 1302		Injection Volume: 1 uL
Leach Date: N/A		

MSD Lab Sample ID: 460-111850-A-3-E MSD	Analysis Batch: 460-362222	Instrument ID: CBNAMS12
Client Matrix: Solid	Prep Batch: 460-361911	Lab File ID: L132582.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0255 g
Analysis Date: 04/13/2016 1118		Final Weight/Volume: 1 mL
Prep Date: 04/11/2016 1302		Injection Volume: 1 uL
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Phenanthrene	68	73	66 - 105	7	30		
Phenol	59	62	55 - 99	4	30		
Pyrene	75	75	55 - 126	1	30		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
2,4,6-Tribromophenol (Surr)	50		51	10 - 95			
2-Fluorobiphenyl	68		73	27 - 84			
2-Fluorophenol (Surr)	58		60	21 - 84			
Nitrobenzene-d5 (Surr)	65		68	28 - 92			
Phenol-d5 (Surr)	58		62	22 - 88			
Terphenyl-d14 (Surr)	76		76	16 - 114			

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Method Blank - Batch: 460-361999

### Method: 8081B Preparation: 3546

Lab Sample ID:	MB 460-361999/1-A	Analysis Batch:	460-362064	Instrument ID:	CPESTGC4
Client Matrix:	Solid	Prep Batch:	460-361999	Lab File ID:	P4193240.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	04/12/2016 0806	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	04/12/2016 0106			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
4,4'-DDD	6.7	U	0.88	6.7
4,4'-DDE	6.7	U	0.97	6.7
4,4'-DDT	6.7	U	0.69	6.7
Aldrin	6.7	U	0.81	6.7
alpha-BHC	2.0	U	0.61	2.0
beta-BHC	2.0	U	0.65	2.0
Chlordane (technical)	67	U	30	67
delta-BHC	2.0	U	0.73	2.0
Dieldrin	2.0	U	0.87	2.0
Endosulfan I	6.7	U	0.93	6.7
Endosulfan II	6.7	U	1.1	6.7
Endosulfan sulfate	6.7	U	0.78	6.7
Endrin	6.7	U	0.85	6.7
Endrin aldehyde	6.7	U	0.83	6.7
Endrin ketone	6.7	U	0.93	6.7
gamma-BHC (Lindane)	2.0	U	0.60	2.0
Heptachlor	6.7	U	0.86	6.7
Heptachlor epoxide	6.7	U	1.3	6.7
Methoxychlor	6.7	U	1.4	6.7
Toxaphene	67	U	20	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	126	55 - 148
Tetrachloro-m-xylene	129	55 - 139

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	110	55 - 148
Tetrachloro-m-xylene	116	55 - 139

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Lab Control Sample - Batch: 460-361999

**Method: 8081B**  
**Preparation: 3546**

Lab Sample ID:	LCS 460-361999/2-A	Analysis Batch:	460-362064	Instrument ID:	CPESTGC4
Client Matrix:	Solid	Prep Batch:	460-361999	Lab File ID:	P4193241.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	04/12/2016 0820	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	04/12/2016 0106			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	151	114	61 - 140	
4,4'-DDE	133	153	115	61 - 135	
4,4'-DDT	133	159	119	59 - 133	
Aldrin	133	150	112	61 - 133	
alpha-BHC	133	153	115	61 - 137	
beta-BHC	133	154	115	59 - 136	
delta-BHC	133	152	114	60 - 139	
Dieldrin	133	150	112	61 - 137	
Endosulfan I	133	151	113	60 - 135	
Endosulfan II	133	156	117	61 - 130	
Endosulfan sulfate	133	156	117	60 - 129	
Endrin	133	141	106	59 - 133	
Endrin aldehyde	133	159	120	57 - 131	
Endrin ketone	133	157	118	57 - 138	
gamma-BHC (Lindane)	133	149	112	61 - 138	
Heptachlor	133	146	109	61 - 135	
Heptachlor epoxide	133	151	113	61 - 129	
Methoxychlor	133	152	114	60 - 129	
Surrogate	% Rec		Acceptance Limits		
DCB Decachlorobiphenyl	119		55 - 148		
Tetrachloro-m-xylene	113		55 - 139		

### Lab Control Sample - Batch: 460-361999

**Method: 8081B**  
**Preparation: 3546**

Lab Sample ID:	LCS 460-361999/2-A	Analysis Batch:	460-362064	Instrument ID:	CPESTGC4
Client Matrix:	Solid	Prep Batch:	460-361999	Lab File ID:	P4193241.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	04/12/2016 0820	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	04/12/2016 0106			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
4,4'-DDD	133	139	104	61 - 140	
4,4'-DDE	133	136	102	61 - 135	
4,4'-DDT	133	136	102	59 - 133	
Aldrin	133	141	106	61 - 133	
alpha-BHC	133	144	108	61 - 137	
beta-BHC	133	142	107	59 - 136	

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Lab Control Sample - Batch: 460-361999

**Method: 8081B**  
**Preparation: 3546**

Lab Sample ID:	LCS 460-361999/2-A	Analysis Batch:	460-362064	Instrument ID:	CPESTGC4
Client Matrix:	Solid	Prep Batch:	460-361999	Lab File ID:	P4193241.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	04/12/2016 0820	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	04/12/2016 0106			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
delta-BHC	133	144	108	60 - 139	
Dieldrin	133	143	108	61 - 137	
Endosulfan I	133	138	104	60 - 135	
Endosulfan II	133	138	104	61 - 130	
Endosulfan sulfate	133	131	98	60 - 129	
Endrin	133	134	101	59 - 133	
Endrin aldehyde	133	138	103	57 - 131	
Endrin ketone	133	138	103	57 - 138	
gamma-BHC (Lindane)	133	139	104	61 - 138	
Heptachlor	133	138	103	61 - 135	
Heptachlor epoxide	133	138	104	61 - 129	
Methoxychlor	133	125	93	60 - 129	
Surrogate	% Rec		Acceptance Limits		
DCB Decachlorobiphenyl	107		55 - 148		
Tetrachloro-m-xylene	104		55 - 139		

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 460-361999

Method: 8081B  
Preparation: 3546

MS Lab Sample ID: 460-111523-A-1-F MS	Analysis Batch: 460-362064	Instrument ID: CPESTGC4
Client Matrix: Solid	Prep Batch: 460-361999	Lab File ID: P4193242.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0052 g
Analysis Date: 04/12/2016 0833		Final Weight/Volume: 10 mL
Prep Date: 04/12/2016 0106		Injection Volume: 1 uL
Leach Date: N/A		Column ID: PRIMARY

MSD Lab Sample ID: 460-111523-A-1-G MSD	Analysis Batch: 460-362064	Instrument ID: CPESTGC4
Client Matrix: Solid	Prep Batch: 460-361999	Lab File ID: P4193243.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0024 g
Analysis Date: 04/12/2016 0845		Final Weight/Volume: 10 mL
Prep Date: 04/12/2016 0106		Injection Volume: 1 uL
Leach Date: N/A		Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
4,4'-DDD	123	119	61 - 140	3	30		
4,4'-DDE	127	121	61 - 135	5	30		
4,4'-DDT	122	124	59 - 133	2	30		
Aldrin	122	116	61 - 133	5	30		
alpha-BHC	124	118	61 - 137	5	30		
beta-BHC	124	119	59 - 136	5	30		
delta-BHC	124	118	60 - 139	5	30		
Dieldrin	124	118	61 - 137	5	30		
Endosulfan I	124	118	60 - 135	5	30		
Endosulfan II	123	121	61 - 130	2	30		
Endosulfan sulfate	118	120	60 - 129	2	30		
Endrin	117	112	59 - 133	4	30		
Endrin aldehyde	122	122	57 - 131	0	30		
Endrin ketone	126	124	57 - 138	2	30		
gamma-BHC (Lindane)	120	115	61 - 138	5	30		
Heptachlor	119	113	61 - 135	5	30		
Heptachlor epoxide	123	117	61 - 129	5	30		
Methoxychlor	114	124	60 - 129	9	30		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
DCB Decachlorobiphenyl	133		128	55 - 148			
Tetrachloro-m-xylene	123		126	55 - 139			

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 460-361999

Method: 8081B  
Preparation: 3546

MS Lab Sample ID: 460-111523-A-1-F MS	Analysis Batch: 460-362064	Instrument ID: CPESTGC4
Client Matrix: Solid	Prep Batch: 460-361999	Lab File ID: P4193242.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0052 g
Analysis Date: 04/12/2016 0833		Final Weight/Volume: 10 mL
Prep Date: 04/12/2016 0106		Injection Volume: 1 uL
Leach Date: N/A		Column ID: SECONDARY

MSD Lab Sample ID: 460-111523-A-1-G MSD	Analysis Batch: 460-362064	Instrument ID: CPESTGC4
Client Matrix: Solid	Prep Batch: 460-361999	Lab File ID: P4193243.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0024 g
Analysis Date: 04/12/2016 0845		Final Weight/Volume: 10 mL
Prep Date: 04/12/2016 0106		Injection Volume: 1 uL
Leach Date: N/A		Column ID: SECONDARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
4,4'-DDD	119	116	61 - 140	3	30		
4,4'-DDE	115	111	61 - 135	3	30		
4,4'-DDT	120	117	59 - 133	3	30		
Aldrin	118	115	61 - 133	2	30		
alpha-BHC	118	117	61 - 137	1	30		
beta-BHC	117	113	59 - 136	3	30		
delta-BHC	120	116	60 - 139	3	30		
Dieldrin	121	118	61 - 137	3	30		
Endosulfan I	115	112	60 - 135	3	30		
Endosulfan II	118	115	61 - 130	3	30		
Endosulfan sulfate	113	110	60 - 129	2	30		
Endrin	115	111	59 - 133	3	30		
Endrin aldehyde	119	117	57 - 131	2	30		
Endrin ketone	119	116	57 - 138	2	30		
gamma-BHC (Lindane)	114	112	61 - 138	2	30		
Heptachlor	114	111	61 - 135	3	30		
Heptachlor epoxide	116	113	61 - 129	2	30		
Methoxychlor	113	111	60 - 129	2	30		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
DCB Decachlorobiphenyl	122		121	55 - 148			
Tetrachloro-m-xylene	118		118	55 - 139			

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Method Blank - Batch: 460-362001

### Method: 8082A Preparation: 3546

Lab Sample ID: MB 460-362001/1-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 04/12/2016 0806  
Prep Date: 04/12/2016 0112  
Leach Date: N/A

Analysis Batch: 460-362071  
Prep Batch: 460-362001  
Leach Batch: N/A  
Units: ug/Kg

Instrument ID: CPESTGC11  
Lab File ID: T1318246.D  
Initial Weight/Volume: 15.0000 g  
Final Weight/Volume: 10 mL  
Injection Volume: 1 uL  
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	67	U	8.9	67
Aroclor 1221	67	U	8.9	67
Aroclor 1232	67	U	8.9	67
Aroclor 1242	67	U	8.9	67
Aroclor 1248	67	U	8.9	67
Aroclor 1254	67	U	9.2	67
Aroclor 1260	67	U	9.2	67
Aroclor 1268	67	U	9.2	67
Aroclor-1262	67	U	9.2	67
Polychlorinated biphenyls, Total	67	U	9.2	67

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	112	47 - 150
Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	104	47 - 150

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Lab Control Sample - Batch: 460-362001

**Method: 8082A**  
**Preparation: 3546**

Lab Sample ID:	LCS 460-362001/2-A	Analysis Batch:	460-362071	Instrument ID:	CPESTGC11
Client Matrix:	Solid	Prep Batch:	460-362001	Lab File ID:	T1318247.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	04/12/2016 0820	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	04/12/2016 0112			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	318	95	70 - 149	
Aroclor 1260	333	325	97	71 - 150	
Surrogate	% Rec		Acceptance Limits		
DCB Decachlorobiphenyl	105		47 - 150		

### Lab Control Sample - Batch: 460-362001

**Method: 8082A**  
**Preparation: 3546**

Lab Sample ID:	LCS 460-362001/2-A	Analysis Batch:	460-362071	Instrument ID:	CPESTGC11
Client Matrix:	Solid	Prep Batch:	460-362001	Lab File ID:	T1318247.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	15.0000 g
Analysis Date:	04/12/2016 0820	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	04/12/2016 0112			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	SECONDARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	333	317	95	70 - 149	
Aroclor 1260	333	321	96	71 - 150	
Surrogate	% Rec		Acceptance Limits		
DCB Decachlorobiphenyl	98		47 - 150		



## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 460-362001

Method: 8082A  
Preparation: 3546

MS Lab Sample ID: 460-111523-A-1-I MS	Analysis Batch: 460-362071	Instrument ID: CPESTGC11
Client Matrix: Solid	Prep Batch: 460-362001	Lab File ID: T1318249.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0020 g
Analysis Date: 04/12/2016 0849		Final Weight/Volume: 10 mL
Prep Date: 04/12/2016 0112		Injection Volume: 1 uL
Leach Date: N/A		Column ID: PRIMARY

MSD Lab Sample ID: 460-111523-A-1-J MSD	Analysis Batch: 460-362071	Instrument ID: CPESTGC11
Client Matrix: Solid	Prep Batch: 460-362001	Lab File ID: T1318250.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0025 g
Analysis Date: 04/12/2016 0904		Final Weight/Volume: 10 mL
Prep Date: 04/12/2016 0112		Injection Volume: 1 uL
Leach Date: N/A		Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Aroclor 1016	102	108	70 - 149	6	30		
Aroclor 1260	104	110	71 - 150	6	30		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
DCB Decachlorobiphenyl	111		116	47 - 150			

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 460-362001

Method: 8082A  
Preparation: 3546

MS Lab Sample ID: 460-111523-A-1-I MS	Analysis Batch: 460-362071	Instrument ID: CPESTGC11
Client Matrix: Solid	Prep Batch: 460-362001	Lab File ID: T1318249.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0020 g
Analysis Date: 04/12/2016 0849		Final Weight/Volume: 10 mL
Prep Date: 04/12/2016 0112		Injection Volume: 1 uL
Leach Date: N/A		Column ID: SECONDARY

MSD Lab Sample ID: 460-111523-A-1-J MSD	Analysis Batch: 460-362071	Instrument ID: CPESTGC11
Client Matrix: Solid	Prep Batch: 460-362001	Lab File ID: T1318250.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 15.0025 g
Analysis Date: 04/12/2016 0904		Final Weight/Volume: 10 mL
Prep Date: 04/12/2016 0112		Injection Volume: 1 uL
Leach Date: N/A		Column ID: SECONDARY

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Aroclor 1016	99	106	70 - 149	7	30		
Aroclor 1260	103	110	71 - 150	6	30		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
DCB Decachlorobiphenyl	107		112	47 - 150			

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Method Blank - Batch: 460-362066

Method: 6010C

Preparation: 3050B

Lab Sample ID: MB 460-362066/1-A ^2  
Client Matrix: Solid  
Dilution: 2.0  
Analysis Date: 04/12/2016 1354  
Prep Date: 04/12/2016 0742  
Leach Date: N/A

Analysis Batch: 460-362155  
Prep Batch: 460-362066  
Leach Batch: N/A  
Units: mg/Kg

Instrument ID: ICP4  
Lab File ID: 362066.asc  
Initial Weight/Volume: 1.00 g  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Aluminum	20.0	U	10.3	20.0
Antimony	2.0	U	0.79	2.0
Arsenic	1.5	U	0.49	1.5
Barium	20.0	U	0.72	20.0
Beryllium	0.20	U	0.17	0.20
Cadmium	0.40	U	0.21	0.40
Calcium	500	U	29.6	500
Chromium	1.0	U	0.48	1.0
Cobalt	5.0	U	0.58	5.0
Copper	2.5	U	0.65	2.5
Iron	15.0	U	11.3	15.0
Lead	1.0	U	0.39	1.0
Magnesium	500	U	25.0	500
Manganese	1.5	U	0.53	1.5
Nickel	4.0	U	0.73	4.0
Potassium	500	U	15.2	500
Selenium	2.0	U	0.69	2.0
Silver	1.0	U	0.18	1.0
Sodium	500	U	33.9	500
Thallium	2.0	U	0.89	2.0
Vanadium	5.0	U	0.50	5.0
Zinc	3.0	U	0.73	3.0

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### LCS-Certified Reference Material - Batch: 460-362066

Method: 6010C

Preparation: 3050B

Lab Sample ID: LCSSRM 460-362066/2-~~A~~ Analysis Batch: 460-362357  
 Client Matrix: Solid Prep Batch: 460-362066  
 Dilution: 4.0 Leach Batch: N/A  
 Analysis Date: 04/13/2016 1405 Units: mg/Kg  
 Prep Date: 04/12/2016 0742  
 Leach Date: N/A

Instrument ID: ICP4  
 Lab File ID: 361769.asc  
 Initial Weight/Volume: 1.04 g  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	8080	6890	85.3	51.1 - 148.5	
Antimony	123	81.83	66.5	1.0 - 200.0	
Arsenic	145	137.2	94.6	79.3 - 121.4	
Barium	209	222.9	106.6	83.3 - 117.2	
Beryllium	97.3	95.19	97.8	82.6 - 117.2	
Cadmium	87.6	88.81	101.4	82.6 - 117.6	
Calcium	5690	5510	96.8	81.0 - 118.8	
Chromium	143	144.9	101.3	79.7 - 119.6	
Cobalt	154	161.3	104.7	83.8 - 115.6	
Copper	173	169.8	98.2	81.5 - 117.9	
Iron	15000	14540	96.9	46.8 - 154.0	
Lead	146	152.2	104.2	81.5 - 118.5	
Magnesium	2640	2363	89.5	76.5 - 123.5	
Manganese	309	356.7	115.4	81.6 - 118.8	
Nickel	129	138.3	107.2	82.9 - 117.1	
Potassium	2400	2129	88.7	71.7 - 128.3	
Selenium	178	170.3	95.7	78.7 - 121.3	
Silver	31.3	29.15	93.1	75.1 - 124.9	
Sodium	869	780.8	89.8	72.7 - 126.6	J
Thallium	141	152.0	107.8	79.4 - 121.3	
Vanadium	115	113.0	98.2	77.6 - 122.6	
Zinc	194	195.2	100.6	82.0 - 118.0	

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Matrix Spike - Batch: 460-362066

Method: 6010C  
Preparation: 3050B

Lab Sample ID: 460-111474-C-4-M MS  
Client Matrix: Solid  
Dilution: 4.0  
Analysis Date: 04/12/2016 1426  
Prep Date: 04/12/2016 0742  
Leach Date: N/A

Analysis Batch: 460-362155  
Prep Batch: 460-362066  
Leach Batch: N/A  
Units: mg/Kg

Instrument ID: ICP4  
Lab File ID: 362066.asc  
Initial Weight/Volume: 1.03 g  
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	15400	493	21630	1265	75 - 125	4
Antimony	9.5 U	123	58.92	48	75 - 125	N
Arsenic	13.3	493	444.9	87	75 - 125	
Barium	56.8 J	493	526.1	95	75 - 125	
Beryllium	1.0	12.3	12.96	97	75 - 125	
Cadmium	1.9 U	12.3	11.26	91	75 - 125	
Calcium	2580	4930	7348	97	75 - 125	
Chromium	48.7	49.3	100.4	105	75 - 125	
Cobalt	13.4 J	123	130.6	95	75 - 125	
Copper	26.9	61.7	83.60	92	75 - 125	
Iron	30200	247	31830	659	75 - 125	4
Lead	33.7	123	139.0	85	75 - 125	
Magnesium	5990	4930	10730	96	75 - 125	
Manganese	945	123	1045	81	75 - 125	4
Nickel	25.7	123	144.6	96	75 - 125	
Potassium	2830	4930	7644	98	75 - 125	
Selenium	9.5 U	493	434.7	88	75 - 125	
Silver	4.8 U	12.3	11.78	96	75 - 125	
Sodium	2100 J	4930	6479	89	75 - 125	
Thallium	9.5 U	493	484.2	98	75 - 125	
Vanadium	43.4	123	166.8	100	75 - 125	
Zinc	171	123	284.2	91	75 - 125	

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

**Duplicate - Batch: 460-362066**

**Method: 6010C**  
**Preparation: 3050B**

Lab Sample ID: 460-111474-C-4-L DU  
Client Matrix: Solid  
Dilution: 4.0  
Analysis Date: 04/12/2016 1402  
Prep Date: 04/12/2016 0742  
Leach Date: N/A

Analysis Batch: 460-362155  
Prep Batch: 460-362066  
Leach Batch: N/A  
Units: mg/Kg

Instrument ID: ICP4  
Lab File ID: 362066.asc  
Initial Weight/Volume: 1.09 g  
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	15400		15120	2	20	
Antimony	9.5	U	9.3	NC	20	U
Arsenic	13.3		12.83	3	20	
Barium	56.8	J	56.19	1	20	J
Beryllium	1.0		0.941	6	20	
Cadmium	1.9	U	1.9	NC	20	U
Calcium	2580		2548	1	20	
Chromium	48.7		48.68	0.1	20	
Cobalt	13.4	J	13.36	0.6	20	J
Copper	26.9		26.72	0.8	20	
Iron	30200		29790	1	20	
Lead	33.7		34.02	1	20	
Magnesium	5990		5941	0.8	20	
Manganese	945		933.6	1	20	
Nickel	25.7		25.23	2	20	
Potassium	2830		2767	2	20	
Selenium	9.5	U	9.3	NC	20	U
Silver	4.8	U	4.7	NC	20	U
Sodium	2100	J	2072	1	20	J
Thallium	9.5	U	9.3	NC	20	U
Vanadium	43.4		42.93	1	20	
Zinc	171		168.4	2	20	

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Method Blank - Batch: 460-362032

Method: 7471B

Preparation: 7471B

Lab Sample ID: MB 460-362032/10-A  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 04/12/2016 0919  
Prep Date: 04/12/2016 0502  
Leach Date: N/A

Analysis Batch: 460-362132  
Prep Batch: 460-362032  
Leach Batch: N/A  
Units: mg/Kg

Instrument ID: LEEMAN5  
Lab File ID: 362032HG1.PRN  
Initial Weight/Volume: 0.60 g  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.017	U	0.012	0.017

### LCS-Certified Reference Material - Batch: 460-362032

Method: 7471B

Preparation: 7471B

Lab Sample ID: LCSSRM 460-362032/11-  
Client Matrix: Solid  
Dilution: 20  
Analysis Date: 04/12/2016 0921  
Prep Date: 04/12/2016 0502  
Leach Date: N/A

Analysis Batch: 460-362132  
Prep Batch: 460-362032  
Leach Batch: N/A  
Units: mg/Kg

Instrument ID: LEEMAN5  
Lab File ID: 362032HG1.PRN  
Initial Weight/Volume: 0.60 g  
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	12.3	11.58	94.2	71.5 - 128.5	

### Matrix Spike - Batch: 460-362032

Method: 7471B

Preparation: 7471B

Lab Sample ID: 460-111686-D-7-F MS  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 04/12/2016 0927  
Prep Date: 04/12/2016 0502  
Leach Date: N/A

Analysis Batch: 460-362132  
Prep Batch: 460-362032  
Leach Batch: N/A  
Units: mg/Kg

Instrument ID: LEEMAN5  
Lab File ID: 362032HG1.PRN  
Initial Weight/Volume: 0.62 g  
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.022	0.105	0.137	110	75 - 125	

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Duplicate - Batch: 460-362032

Method: 7471B

Preparation: 7471B

Lab Sample ID: 460-111686-D-7-E DU  
Client Matrix: Solid  
Dilution: 1.0  
Analysis Date: 04/12/2016 0925  
Prep Date: 04/12/2016 0502  
Leach Date: N/A

Analysis Batch: 460-362132  
Prep Batch: 460-362032  
Leach Batch: N/A  
Units: mg/Kg

Instrument ID: LEEMAN5  
Lab File ID: 362032HG1.PRN  
Initial Weight/Volume: 0.62 g  
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.022	0.0225	0.5	20	

## Quality Control Results

Client: New York State D.E.C.

Job Number: 460-111952-1

### Duplicate - Batch: 460-361967

**Method: Moisture**  
**Preparation: N/A**

Lab Sample ID:	460-111912-C-7 DU	Analysis Batch:	460-361967	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	04/11/2016 1911	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	14.5	13.9	4	20	
Percent Solids	85.5	86.1	0.7	20	



### CHAIN OF CUSTODY / ANALYSIS REQUEST

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04/15/2016

## Water Metals Filtered (Yes/No)?

TAL - 0016 (0715)

Massachusetts (M-NJ312), North Carolina (No. 578)

1.D / 2.0.  $\pm 14\%$  Nb C.

11/952

# REGISTRATION

**● 2015 年 11 月**

	R/W	CORRECTED		R/W	CORRECTED		R/W	CORRECTED
Cooler #1	-0.9C	16.8C	Cooler #4	.7C	.7C	Cooler #7	-.1C	17.0C
Cooler #2	.0C	.0C	Cooler #5	.0C	.0C	Cooler #8	-.1C	17.0C
Cooler #3	.0C	.0C	Cooler #6	.0C	.0C	Cooler #9	-.1C	17.0C

[illegible][illegible]

**If pH adjustments are required record the information below:**

**Sample No(s).- adjusted:**

Preservative Name/Conc.:

**Lot # of Preservative(s):**

Volume of Preservative used (ml):

**Expiration Date:**

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

**Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis**

EDS-M-038, Rev 4, 06/09/2014

**Initials:**

Date:

## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 460-111952-1

**Login Number: 111952**

**List Source: TestAmerica Edison**

**List Number: 1**

**Creator: Lysy, Susan**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0°C IR#6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	See NCM
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.