APPENDIX A

SITE INVESTIGATION PHOTOGRAPHS

Photo 1: Location 1 prior to sample collection.

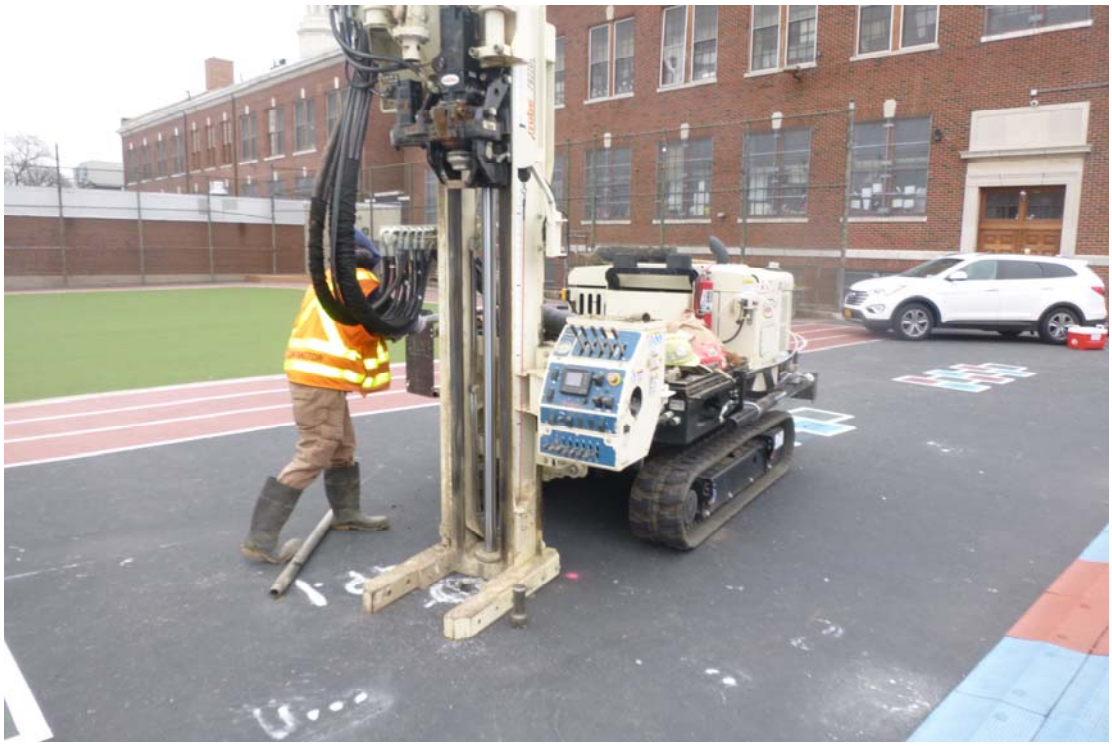

Photo 2: Location 1 during sample collection.

Photo 3: Location 1 following sample collection.

Photo 4: Location 2 prior to sample collection.

Photo 5: Location 2 during sample collection.

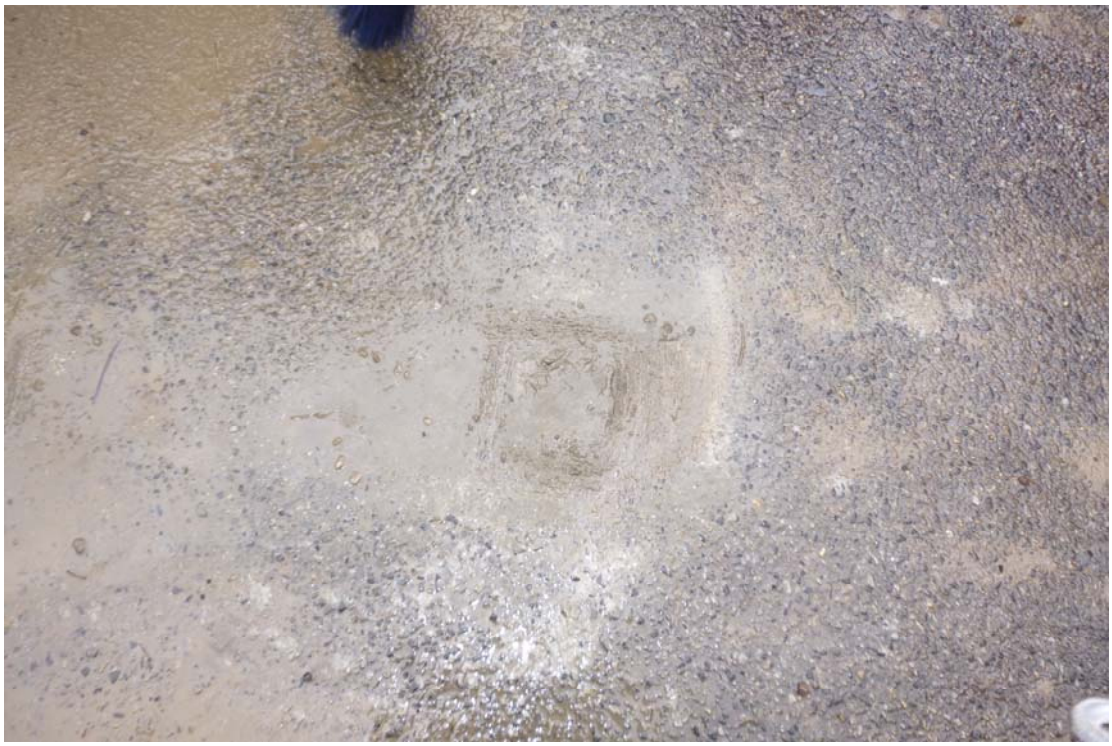

Photo 6: Location 2 following sample collection.

Photo 7: Location 3 prior to sample collection.

Photo 8: Location 3 during sample collection.

Photo 9: Location 3 during sample collection

Photo 10: Location 3 following sample collection.

APPENDIX B

GEOPHYSICAL SURVEY REPORT

CASCADE
DRILLING | TECHNICAL SERVICES

75 EAST 2nd STREET
MINEOLA, NY 11501
P 516.326.0586 F 516.616.6194
WWW.CASCADE-ENV.COM

12 April 2016

Mr. Keith Robins, Senior Geologist
D&B Engineers And Architects, P.C.
330 Crossways Park Drive
Woodbury, NY 11797

Re: **Site Geophysics –P.S. 131 Queens** **Via Email**

Dear Mr. Robins:

On Thursday, April 7th, 2016 Diversified Geophysics, Inc. (DGI) performed a geophysical investigation on the property known as Public School 131 Abigail Adams, located at 170-45 84th Avenue, in Jamaica, Queens, New York, 11432. Cascade Technical Services personnel met with you at the site, and followed your directives throughout the course of the investigation.

The area of investigation (AOI) included the western portion of the schoolyard from fence-line to fence-line between 84th and 83rd Avenues; and the western fence-line to an easterly point in line with the westernmost exterior wall of the school building (as represented on Figures 1. & 2. of this report).

The purpose of the investigation was to clear a 400sqft area around each of three (3) proposed boring locations and locate all utilities, obstructions, structures (to include UST's), and anomalies within the AOI, which includes three (3) temporary classroom structures in addition to an above-ground electric network located in the SW corner of the school property.

Ground Penetrating Radar (GPR) data was collected in the playground with a Sensors and Software 250 MHz NogginPlus® unit (penetration depth set to ten (10) feet below grade). In addition, radio frequency instrumentation in the form of a Ridgid® SeekTech ST-33Q / SR-60 Pipe & Cable Locator was employed in an effort to locate utilities using radio frequency (RF) and electromagnetic (EM) technology.

An initial interior and exterior site reconnoiter was made with the facilities manager, and all services to the school were located and recorded, prior to the onset of work.

During this investigation, single-line NogginPlus® GPR traverses were advanced in directions both parallel and perpendicular to the footprint of the AOI (north/south and east/west) using a two (2) to eight (8) foot spacing between traverses.

All utilities located and traced were recorded and their surface expressions were painted upon the surface of the asphalt.

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Results:

Gas service to the school building enters from the east on 172nd Street. Communications are overhead and also enter from 172nd Street. Water, sewer and electric services enter the school from 84th Avenue (to the east of a point marked by the residence 170-30), and do not impact the AOI. Roof and yard drainage lines run to the east, parallel to the southern exterior wall of the school building, and turn 90° to the north onto 172nd Street where they terminate in a vault to the north of the gas service lines.

Utility services that were located and traced within the AOI were services to the temporary classroom units (TCU's) and are:

Primary electric power to each of the TCU's has its origin in the SW corner of the schoolyard and enters each of the three (3) units from the west. A secondary subsurface power source terminated at a wall-mounted breaker box on the south exterior wall of the northernmost TCU, and trends subsurface from south to north between the two southern TCU's.

Sanitary drainage connects each of the TCU's with a manhole located inside the schoolyard near the southern perimeter fence and approximately 15 feet west of the east exterior wall of the southernmost TCU.

Water, communications and FDNY fire alarm system services run subsurface from a point beneath the central window on the west exterior wall of the school facing the TCU's. These services trend predominately in an east to west orientation, with the exception of a water service that connects the school with the northernmost TCU, which trends to the northwest and is evidenced by a double road-cut in the asphalt surface of the playground.

No anomalies within the AOI had signatures indicative of buried underground storage tanks or tank graves.

The three (3) proposed boring locations were cleared of obstructions, anomalies, utilities and structures in preparation for drilling on Saturday, April 9th, 2016.

Please contact me with any questions.

Respectfully yours,

Andrew D. Silver
General Manager / Engineering Geologist

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Figure 1. Satellite View Of Site Showing Area Of Survey Outlined In Red

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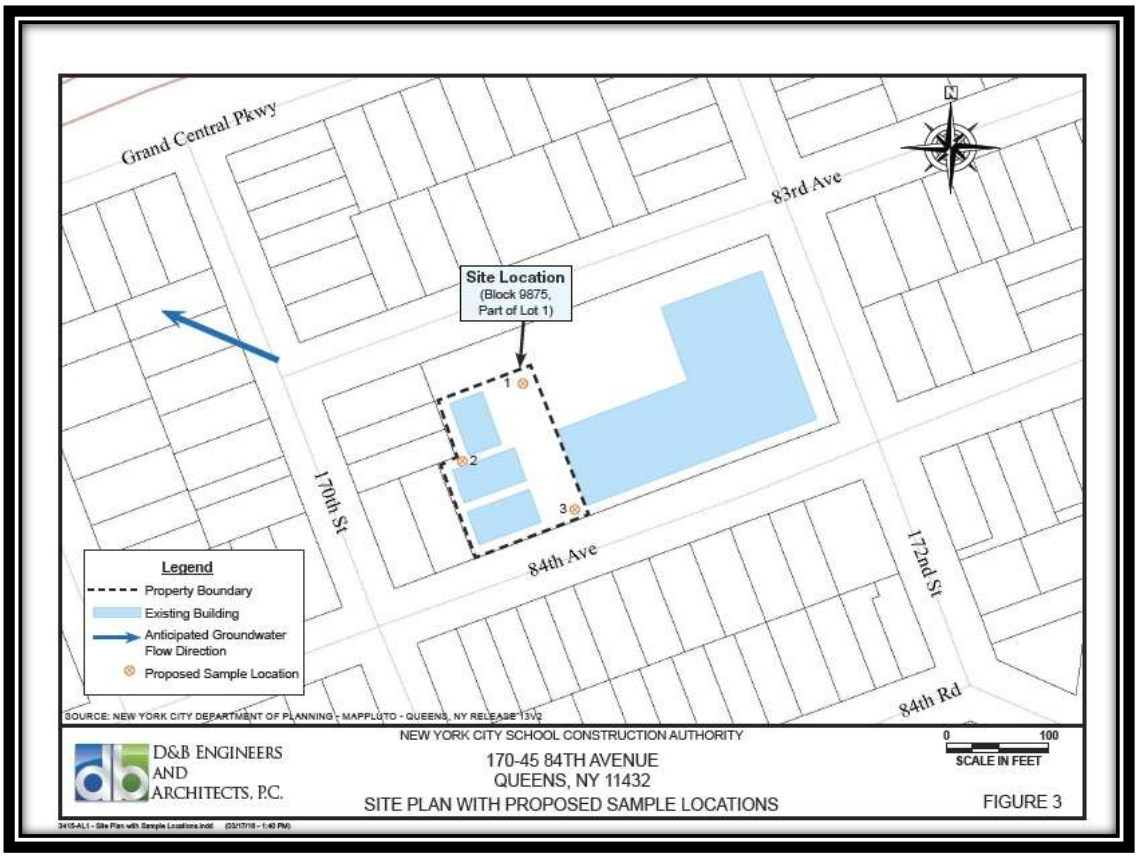

Figure 2. Site Plan PS 131Q Showing Proposed Boring Locations And AOI Outline

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Photographs

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Photo 1. View NE Showing Boring GP-1

Photo 2. View East Showing Origin Of Subsurface Water, Communications And FDNY Service From School To TCU's

Photo 3. View North Of Water Service To TCU's (southernmost)

Photo 4. View West Of Water And Sewer Services Between Southernmost TCU's

Photo 5. View East Showing Water Supply Crossing Schoolyard From Fountain To TCU And School And Northernmost TCU

Photo 6. View North Showing Water Services Between TCU's And School

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Photo 7. View West Showing Water Or Communications Service To TCU

Photo 8. View East Showing Water Or Communications Services From School To TCU's

Photo 9. View West Showing Electric And Sanitary Sewer Services To Northernmost TCU

Photo 10. View West Showing Location Of Sewer Manhole And Drainage Lines

Photo 11. View NW Of TCU #3 (Northernmost) Showing RF Trace Of Unknown Utility

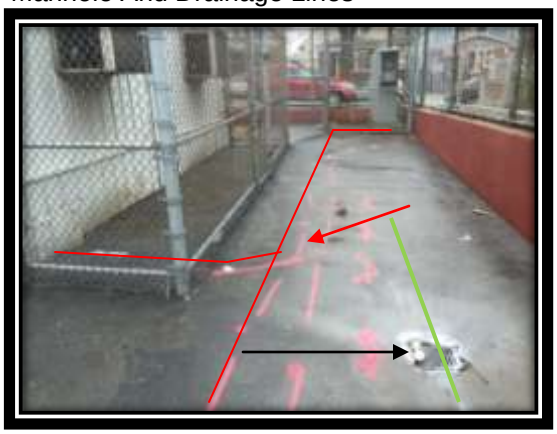

Photo 12. View South Of Area West Of TCU's Showing Electric Service And Yard Drainage

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Photo 13. View North Of Electric Service To Central TCU #2 Yard Drainage In Green

Photo 14. View NE Showing Electric Service To TCU (see next Photo 14.) Proximal To Boring GP-3 Under Cone. Yard Drain In Lower Left Corner

Photo 15. View North Of Electric Service To Rear Of Northernmost TCU –Proximal To GP-3

APPENDIX C

SOIL BORING LOGS

D&B ENGINEERS AND ARCHITECTS, P.C. KNOWN AS DVIRKA AND BARTILUCCI CONSULTING ENGINEERS	**Project No.:** 3415-AL2 **Project Name:** Q131 170-45 84th Avenue Queens, New York 11432	**Boring No.:** GP-1 **Sheet** 1 **of** 1 **By:** Keith Robins
Drilling Contractor: ADT **Drill Rig:** Track mounted 7822DT **Date Started:** 4/9/16	**Geologist:** Keith Robins **Drilling Method:** Geoprobe **Drive Hammer Weight:** N/A **Date Completed:** 4/9/16	**Boring Completion Depth:** 35' **Ground Surface Elevation:** --- **Boring Diameter:** 2"

Depth (ft.)	No.	Type	Rec.	PID (ppb)	Sample Description
0-5'	1	GP	47"	-- 0.0 ppb	0" - 4" Asphalt 4"- 47" Brown fine-medium SAND, trace to little silt, trace fine gravel, compacted to dense, poorly sorted, dry to damp, no staining, no odor.
5'-10'	2	GP	57"	0.0 ppb	0" - 57" Brown fine-medium SAND, some to little silt, trace fine subrounded gravel, poorly sorted, compacted to dense, damp, no staining, no odor.
10'-15'	3	GP	37"	0.0 ppb	0" – 37"Brown fine-medium SAND, trace to little silt, trace subrounded gravel, trace rock and stone, poorly sorted, compacted to dense, damp, no staining, no odor.
15'-20'	4	GP	56"	0.0 ppb	0" – 56" Brown fine-medium SAND, trace to little silt, trace subrounded gravel, trace crushed weathered rock, poorly sorted, compacted to dense, damp to moist, no staining, no odor.
20'-25'	5	GP	47"	0.0 ppb	0" – 47" Gray-Brown fine-medium SAND, some silt, trace fine subrounded gravel, trace crushed rock fragments, poorly sorted, dense to compact, slightly moist, no staining, no odor.
25'-30'	6	GP	50"	0.0 ppb 0.0 ppb	0" – 18" Gray silty fine SAND, trace clay, trace fine gravel, well sorted, damp to moist, no staining, no odor. 18" – 50" Brown fine-medium SAND, trace subrounded gravel, some rock, poorly sorted, compacted to dense, damp to moist, no staining, no odor.
30'-35'	7	GP	41"	0.0 ppb	0" – 41" Brown fine-medium SAND, trace to little subrounded and subangular gravel, trace clay, trace silt, poorly sorted, no staining, no odor.

Sample Types: **GP** = Geoprobe Macrocore	**NOTES:** Soil sample GP-1 (0'-5') submitted for TCL and CP-51 listed VOCs plus TICs and TCL and CP-51 SVOCs plus TICs, PCBs, selected TAL Metals, TCL Pesticides/Herbicides, Cyanide, Hexavalent Chromium, TPH DRO/GRO and RCRA Characteristics. PID background 0.0 ppb.

D&B ENGINEERS AND ARCHITECTS, P.C. KNOWN AS DVIRKA AND BARTILUCCI CONSULTING ENGINEERS	**Project No.:** 3415-AL2 **Project Name:** Q131 170-45 84th Avenue Queens, New York 11432	**Boring No.:** GP-2 **Sheet** 1 **of** 1 **By:** Keith Robins
Drilling Contractor: ADT **Drill Rig:** Track mounted 7822DT **Date Started:** 4/9/16	**Geologist:** Keith Robins **Drilling Method:** Geoprobe **Drive Hammer Weight:** N/A **Date Completed:** 4/9/16	**Boring Completion Depth:** 30' **Ground Surface Elevation:** --- **Boring Diameter:** 2"

Depth (ft.)	No.	Type	Rec.	PID (ppb)	Sample Description
0-5'	1	GP	35"	--	0" - 3" Asphalt
				0.0 ppb	3"- 22" Brown to Dark-Brown medium-coarse SAND, some subangular gravel, dense, poorly sorted, no staining, no odor.
				0.0 ppb	22" – 24" Gray fine-medium SAND, large cobble.
				0.0 ppb	24" – 35" Brown medium-coarse SAND, some medium-coarse subangular gravel, dense, poorly sorted, damp, no staining, no odor.
5'-10'	2	GP	33"	0.0 ppb	0" - 6" Brown-Tan fine-medium SAND, trace silt, trace fine-medium gravel, dense, no staining, no odor.
				0.0 ppb	6"-8" Cobble
				0.0 ppb	8"- 29" Brown-Gray fine-medium SAND, some silt, well sorted, dense, no staining, no odor.
				0.0 ppb	29"- 33" Brown-Gray fine-medium SAND, trace silt, trace medium-coarse subrounded gravel, loose, moist, no staining, no odor.
10'-15'	3	GP	45"	0.0 ppb	0" – 7" Brown fine-medium SAND, some medium-coarse subrounded gravel, loose, moist, no staining, no odor.
				0.0 ppb	7"-45" Brown fine-medium SAND, some fine silt, trace medium-coarse gravel, dense, well sorted, dry, no staining, no odor.
15'-20'	4	GP	55"	0.0 ppb	0" – 20" Brown fine-medium SAND, some fine silt, trace medium-coarse gravel, loose, moist, no staining, no odor.
				0.0 ppb	20"-55" Brown fine-medium SAND, trace silt, some medium-coarse gravel, dense, dry, no staining, no odor.
20'-25'	5	GP	58"	0.0 ppb	0" – 18" Gray-Brown fine-medium SAND, trace medium-coarse gravel, well sorted, no staining, no odor.
				0.0 ppb	18"-21" Brown fine-medium SAND, trace silt, loose, wet, no staining, no odor.
				0.0 ppb	21"-47" Brown fine-medium SAND, trace medium-coarse subrounded gravel, dense, well sorted, dry, no staining no odor.
				0.0 ppb	47"-58" Brown medium-coarse SAND, trace medium-coarse subrounded gravel, dense, well sorted, dry no staining, no odor.

D&B ENGINEERS AND ARCHITECTS, P.C. (KNOWN AS DVIRKA AND BARTILUCCI CONSULTING ENGINEERS)	**Project No.:** 3415-AL2 **Project Name:** Q131 170-45 84th Avenue Queens, New York 11432	**Boring No.:** GP-2 **Sheet** 1 **of** 1 **By:** Keith Robins
Drilling Contractor: ADT **Drill Rig:** Track mounted 7822DT **Date Started:** 4/9/16	**Geologist:** Keith Robins **Drilling Method:** Geoprobe **Drive Hammer Weight:** N/A **Date Completed:** 4/9/16	**Boring Completion Depth:** 30' **Ground Surface Elevation:** --- **Boring Diameter:** 2"

Depth (ft.)	No.	Type	Rec.	PID (ppb)	Sample Description
25'-30'	6	GP	58"	0.0 ppb	0" – 28" Gray fine-medium SAND, some silt, poorly sorted, loose, wet, no staining, no odor.
				0.0 ppb	28" – 58" Gray fine-medium SAND, some fine silt, trace medium-coarse gravel, well sorted, dense, dry, no staining, no odor.

Sample Types:
GP = Geoprobe Macrocore

NOTES:
Soil sample GP-2 (0'-5') submitted for TCL and CP-51 listed VOCs plus TICs and TCL and CP-51 SVOCs plus TICs, PCBs, selected TAL Metals, TCL Pesticides/Herbicides, Cyanide, Hexavalent Chromium, TPH DRO/GRO and RCRA Characteristics. PID background 0.0 ppb.

D&B ENGINEERS AND ARCHITECTS, P.C. KNOWN AS DVIRKA AND BARTILUCCI CONSULTING ENGINEERS	**Project No.:** 3415-AL2 **Project Name:** Q131 170-45 84th Avenue Queens, New York 11432	**Boring No.:** GP-3 **Sheet** 1 **of** 1 **By:** Keith Robins
Drilling Contractor: ADT **Drill Rig:** Track mounted 7822DT **Date Started:** 4/9/16	**Geologist:** Keith Robins **Drilling Method:** Geoprobe **Drive Hammer Weight:** N/A **Date Completed:** 4/9/16	**Boring Completion Depth:** 20' **Ground Surface Elevation:** --- **Boring Diameter:** 2"

Depth (ft.)	No.	Type	Rec.	PID (ppb)	Sample Description
0-5'	1	GP	42"	-- 0.0 ppb	0" - 4" Asphalt 4"- 42" Brown fine-medium SAND, some subrounded gravel, trace stone and rock pieces, medium dense, poorly sorted, fill material, dry, no staining, no odor.
5'-10'	2	GP	28"	0.0 ppb	0" - 28" Brown fine-medium SAND, trace silt, some medium-coarse subrounded gravel, trace stone and rock, medium compaction, poorly sorted, damp, no staining, no odor.
10'-15'	3	GP	45"	0.0 ppb	0" –45" Brown fine-medium SAND, some silt, trace fine subrounded gravel, trace rock, compacted, poorly sorted, very moist-wet, no staining, no odor. *Perched water encountered at approximately 10' below grade
15'-20'	4	GP	48"	0.0 ppb	0" – 48" Brown fine-medium SAND, trace silt, trace fine gravel, poorly sorted, medium compaction, saturated, no staining, no odor.

Sample Types: **GP** = Geoprobe Macrocore	**NOTES:** Soil sample GP-3 (0'-5') submitted for TCL and CP-51 listed VOCs plus TICs and TCL and CP-51 SVOCs plus TICs, PCBs, selected TAL Metals, TCL Pesticides/Herbicides, Cyanide, Hexavalent Chromium, TPH DRO/GRO and RCRA Characteristics. PID background 0.0 ppb.

APPENDIX D

SAMPLE COLLECTION LOGS

D&B ENGINEERS AND ARCHITECTS, P.C.
KNOWN AS DVIRKA AND BARTILUCCI CONSULTING ENGINEERS

Date: 4/9/16

SAMPLE INFORMATION RECORD

Site: 170-45 84th Avenue
Queens, New York 11432

Sample Crew: Keith Robins

Sample Location/Well No. Location 1

Field Sample I.D. Number GP-1 (0-5) **Time** 11:20 am

Weather Partly Cloudy **Temperature** 35°F

Sample Type:

Groundwater _____ **Sediment** _____

Surface Water/Stream _____ **Air** _____

Soil Soil sample from 0 - 5 feet bgs **Other (describe, i.e. water, septage, etc.)** _____

Well Information (fill out for groundwater samples)

Depth to Water _____ **Measurement Method** _____

Depth of Well _____ **Measurement Method** _____

Volume Removed _____ **Removal Method** _____

Field Test Results

Color Brown to Gray **pH** _____ **Odor** No Odor

Temperature (ºF) _____ **Specific Conductance (umhos/cm)** _____

Other (OVA, Methane Meter, etc. PID readings up to 0.0 ppb.

No odor or staining observed.

Constituents Sampled

TCL and CP-51 VOCs + TICs	TCL and CP-51 SVOCs + TICs	PCBs	Selected TAL Metals
Pesticides/Herbicides	Cyanide and Hexavalent Chromium	TPH DRO/GRO	RCRA Characteristics

Remarks:

Soil Boring Logs are located in Appendix C

D&B ENGINEERS AND ARCHITECTS, P.C.
KNOWN AS DVIRKA AND BARTILUCCI CONSULTING ENGINEERS

Date: 4/9/16

SAMPLE INFORMATION RECORD

Site: 170-45 84th Avenue
Queens, New York 11432

Sample Crew: Keith Robins

Sample Location/Well No. Location 2

Field Sample I.D. Number GP-2 (0-5)

Time 10:05 am

Weather Partly Cloudy

Temperature 35°F

Sample Type:

Groundwater _____

Sediment _____

Surface Water/Stream _____

Air _____

Soil Soil sample from 0 - 5 feet bgs

Other (describe, i.e. water, septage, etc.) _____

Well Information (fill out for groundwater samples)

Depth to Water _____

Measurement Method _____

Depth of Well _____

Measurement Method _____

Volume Removed _____

Removal Method _____

Field Test Results

Color Brown to Gray

pH _____

Odor No Odor

Temperature (ºF) _____

Specific Conductance (umhos/cm) _____

Other (OVA, Methane Meter, etc. PID readings up to 0.0 ppb.

No odor or staining observed.

Constituents Sampled

TCL and CP-51 VOCs + TICs	TCL and CP-51 SVOCs + TICs	PCBs	Selected TAL Metals
Pesticides/Herbicides	Cyanide and Hexavalent Chromium	TPH DRO/GRO	RCRA Characteristics

Remarks:

Soil Boring Logs are located in Appendix C

D&B ENGINEERS AND ARCHITECTS, P.C.
KNOWN AS DVIRKA AND BARTILUCCI CONSULTING ENGINEERS

Date: 4/9/16

SAMPLE INFORMATION RECORD

Site: 170-45 84th Avenue
Queens, New York 11432

Sample Crew: Keith Robins

Sample Location/Well No. Location 3

Field Sample I.D. Number GP-3 (0-5)

Time 07:48 am

Weather Partly Cloudy

Temperature 35°F

Sample Type:

Groundwater _____

Sediment _____

Surface Water/Stream _____

Air _____

Soil Soil sample from 0 - 5 feet bgs

Other (describe, i.e. water, septage, etc.) _____

Well Information (fill out for groundwater samples)

Depth to Water _____

Measurement Method _____

Depth of Well _____

Measurement Method _____

Volume Removed _____

Removal Method _____

Field Test Results

Color Brown

pH _____

Odor No Odor

Temperature (ºF) _____

Specific Conductance (umhos/cm) _____

Other (OVA, Methane Meter, etc. PID readings up to 0.0 ppb.

No odor or staining observed.

Constituents Sampled

TCL and CP-51 VOCs + TICs	TCL and CP-51 SVOCs + TICs	PCBs	Selected TAL Metals
Pesticides/Herbicides	Cyanide and Hexavalent Chromium	TPH DRO/GRO	RCRA Characteristics

Remarks:

Soil Boring Logs are located in Appendix C

D&B ENGINEERS AND ARCHITECTS, P.C.
KNOWN AS DVIRKA AND BARTILUCCI CONSULTING ENGINEERS

Date: 4/9/16

SAMPLE INFORMATION RECORD

Site: 170-45 84th Avenue
Queens, New York 11432

Sample Crew: Keith Robins

Sample Location/Well No. Location 1

Field Sample I.D. Number SV-1

Time 1:46 pm - 2:18 pm

Weather Partly Cloudy

Temperature 35°F

Sample Type:

Groundwater _____

Sediment _____

Surface Water/Stream _____

Air Soil Vapor

Soil _____

Other (describe, i.e. water, septage, etc.) _____

Well Information (fill out for groundwater samples)

Depth to Water _____

Measurement Method _____

Depth of Well _____

Measurement Method _____

Volume Removed _____

Removal Method _____

Field Test Results

Color _____

pH _____

Odor No Odor

Temperature (ºF) _____

Specific Conductance (umhos/cm) _____

Other (OVA, Methane Meter, etc. PID readings at 2.1 ppm

Constituents Sampled

TO-15 with Selective ion Monitoring (SIM)

Remarks:

D&B ENGINEERS AND ARCHITECTS, P.C.
KNOWN AS DVIRKA AND BARTILUCCI CONSULTING ENGINEERS

Date: 4/9/16

SAMPLE INFORMATION RECORD

Site: 170-45 84th Avenue
Queens, New York 11432

Sample Crew: Keith Robins

Sample Location/Well No. Location 2

Field Sample I.D. Number SV-2

Time 12:26 pm - 12:56 pm

Weather Partly Cloudy

Temperature 35°F

Sample Type:

Groundwater _____

Sediment _____

Surface Water/Stream _____

Air Soil Vapor

Soil _____

Other (describe, i.e. water, septage, etc.) _____

Well Information (fill out for groundwater samples)

Depth to Water _____

Measurement Method _____

Depth of Well _____

Measurement Method _____

Volume Removed _____

Removal Method _____

Field Test Results

Color _____

pH _____

Odor No Odor

Temperature (ºF) _____

Specific Conductance (umhos/cm) _____

Other (OVA, Methane Meter, etc. PID readings at 1.2 ppm

Constituents Sampled

TO-15 with Selective ion Monitoring (SIM)

Remarks:

D&B ENGINEERS AND ARCHITECTS, P.C.
KNOWN AS DVIRKA AND BARTILUCCI CONSULTING ENGINEERS

Date: 4/9/16

SAMPLE INFORMATION RECORD

Site: 170-45 84th Avenue
Queens, New York 11432

Sample Crew: Keith Robins

Sample Location/Well No. Location 3

Field Sample I.D. Number SV-3

Time 11:00 am – 11:30 am

Weather Partly Cloudy

Temperature 35°F

Sample Type:

Groundwater _____

Sediment _____

Surface Water/Stream _____

Air Soil Vapor

Soil _____

Other (describe, i.e. water, septage, etc.) _____

Well Information (fill out for groundwater samples)

Depth to Water _____

Measurement Method _____

Depth of Well _____

Measurement Method _____

Volume Removed _____

Removal Method _____

Field Test Results

Color _____

pH _____

Odor No Odor

Temperature (ºF) _____

Specific Conductance (umhos/cm) _____

Other (OVA, Methane Meter, etc. PID readings at 1.2 ppm

Constituents Sampled

TO-15 with Selective ion Monitoring (SIM)

Remarks:

D&B ENGINEERS AND ARCHITECTS, P.C.
KNOWN AS DVIRKA AND BARTILUCCI CONSULTING ENGINEERS

Date: 4/9/2016

SAMPLE INFORMATION RECORD

Site: 170-45 84th Avenue
Queens, New York 11432

Sample Crew: Keith Robins

Sample Location/Well No. Location 3

Field Sample I.D. Number GW-3 **Time** 10:00 am

Weather Partly Cloudy **Temperature** 35°F

Sample Type:

Groundwater groundwater **Sediment**

Surface Water/Stream **Air**

Soil **Other (describe, i.e. water, septage, etc.)**

Well Information (fill out for groundwater samples)

Depth to Water 9.5 feet bgs **Measurement Method** Water Level Meter

Depth of Temporary Well 20 feet bgs **Measurement Method** Water Level Meter

Volume Removed Approximately five gallons **Removal Method** Poly tubing with check valve

Field Test Results

Color Turbid/Silty **pH** 7.04 **Odor** No Odor

Temperature (ºC) 13.85 **Specific Conductance (ms/cm)** 1.31

Other (OVA, Methane Meter, etc. Turbidity = 580; Dissolved Oxygen = 5.68; ORP = -5; No sheen.

Constituents Sampled

TCL and CP-51 VOCs + TICs	TCL and CP-51 SVOCs + TICs	PCBs	Selected TAL Metals (Total and Dissolved)
NYCDEP Discharge Parameters			

Remarks:

APPENDIX E

LABORATORY ANALYTICAL DATA REPORTS

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

May 31, 2016

Mike Hofgren
Dvirka And Bartilucci
330 Crossways Park Drive
Woodbury, NY 11797-2015

Project Location: 170-45 84th Ave. Queens, NY
Client Job Number:
Project Number: 3415-AL2-131Q
Laboratory Work Order Number: 16D0488

Enclosed are results of analyses for samples received by the laboratory on April 11, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

QA Officer
Katherine Allen

Laboratory Manager
Daren Damboragian

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Dvirka And Bartilucci
330 Crossways Park Drive
Woodbury, NY 11797-2015
ATTN: Mike Hofgren

REPORT DATE: 5/31/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 3415-AL2-131Q

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16D0488

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: 170-45 84th Ave. Queens, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SV-1	16D0488-01	Soil Gas		-	
				EPA TO-15	
SV-2	16D0488-02	Soil Gas		-	
				EPA TO-15	
SV-3	16D0488-03	Soil Gas		-	
				EPA TO-15	
Accessories	16D0488-04	Soil Gas		-	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT 05/31/16: Report revised to update client project number.

REVISED REPORT 04/25/2016: Report revised to report results both in ppbv and ug/m3 to the MDL.

EPA TO-15

Qualifications:

Surrogate outside of control limits.

Analyte & Samples(s) Qualified:

Bromochloromethane (1)

S011166-CCV1

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

2-Hexanone (MBK), 4-Methyl-2-pentanone (MIBK)

S011166-CCV1

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)

S011166-CCV1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Aaron L. Benoit
Project Manager

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ANALYTICAL RESULTS

Project Location: 170-45 84th Ave. Queens, NY
Date Received: 4/11/2016
Field Sample #: SV-1
Sample ID: 16D0488-01
Sample Matrix: Soil Gas
Sampled: 4/9/2016 14:18

Sample Description/Location:
Sub Description/Location:
Canister ID:
Canister Size: 6 liter
Flow Controller ID:
Sample Type: 30 min

Work Order: 16D0488
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv Results	ppbv RL	ppbv MDL	Flag/Qual	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Dilution	Date/Time Analyzed	Analyst
Benzene	2.7	0.10	0.052		8.5	0.32	0.17	2	4/14/16 0:33	CMR
Carbon Tetrachloride	0.036	0.10	0.024	J	0.23	0.63	0.15	2	4/14/16 0:33	CMR
Chlorobenzene	ND	0.10	0.035		ND	0.46	0.16	2	4/14/16 0:33	CMR
Chloroethane	0.12	0.10	0.038		0.32	0.26	0.10	2	4/14/16 0:33	CMR
Chloromethane	0.65	0.20	0.044		1.4	0.41	0.090	2	4/14/16 0:33	CMR
1,2-Dichlorobenzene	ND	0.10	0.027		ND	0.60	0.16	2	4/14/16 0:33	CMR
1,3-Dichlorobenzene	0.052	0.10	0.022	J	0.31	0.60	0.13	2	4/14/16 0:33	CMR
1,1-Dichloroethane	ND	0.10	0.028		ND	0.40	0.11	2	4/14/16 0:33	CMR
1,2-Dichloroethane	ND	0.10	0.028		ND	0.40	0.11	2	4/14/16 0:33	CMR
1,1-Dichloroethylene	ND	0.10	0.024		ND	0.40	0.097	2	4/14/16 0:33	CMR
cis-1,2-Dichloroethylene	ND	0.10	0.038		ND	0.40	0.15	2	4/14/16 0:33	CMR
trans-1,2-Dichloroethylene	ND	0.10	0.026		ND	0.40	0.10	2	4/14/16 0:33	CMR
1,2-Dichloropropane	ND	0.10	0.035		ND	0.46	0.16	2	4/14/16 0:33	CMR
Ethylbenzene	1.5	0.10	0.028		6.6	0.43	0.12	2	4/14/16 0:33	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.10	0.031		ND	0.36	0.11	2	4/14/16 0:33	CMR
Methylene Chloride	0.26	1.0	0.12	J	0.91	3.5	0.42	2	4/14/16 0:33	CMR
Naphthalene	0.33	0.10	0.054		1.8	0.52	0.29	2	4/14/16 0:33	CMR
Tetrachloroethylene	1.6	0.10	0.028		11	0.68	0.19	2	4/14/16 0:33	CMR
Toluene	47	0.10	0.031		180	0.38	0.12	2	4/14/16 0:33	CMR
1,1,1-Trichloroethane	ND	0.10	0.018		ND	0.55	0.098	2	4/14/16 0:33	CMR
Trichloroethylene	0.63	0.10	0.030		3.4	0.54	0.16	2	4/14/16 0:33	CMR
1,2,4-Trimethylbenzene	4.9	0.10	0.025		24	0.49	0.12	2	4/14/16 0:33	CMR
1,3,5-Trimethylbenzene	1.2	0.10	0.020		5.9	0.49	0.098	2	4/14/16 0:33	CMR
Vinyl Chloride	ND	0.10	0.043		ND	0.26	0.11	2	4/14/16 0:33	CMR
m&p-Xylene	6.1	0.20	0.050		26	0.87	0.22	2	4/14/16 0:33	CMR
o-Xylene	2.2	0.10	0.029		9.4	0.43	0.13	2	4/14/16 0:33	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	118	70-130	4/14/16 0:33

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ANALYTICAL RESULTS

Project Location: 170-45 84th Ave. Queens, NY
Date Received: 4/11/2016
Field Sample #: SV-2
Sample ID: 16D0488-02
Sample Matrix: Soil Gas
Sampled: 4/9/2016 12:56

Sample Description/Location:
Sub Description/Location:
Canister ID:
Canister Size: 6 liter
Flow Controller ID:
Sample Type: 30 min

Work Order: 16D0488
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Benzene	1.4	0.10	0.052		4.6	0.32	0.17	2	4/14/16 1:14	CMR
Carbon Tetrachloride	0.030	0.10	0.024	J	0.19	0.63	0.15	2	4/14/16 1:14	CMR
Chlorobenzene	ND	0.10	0.035		ND	0.46	0.16	2	4/14/16 1:14	CMR
Chloroethane	ND	0.10	0.038		ND	0.26	0.10	2	4/14/16 1:14	CMR
Chloromethane	0.20	0.20	0.044		0.41	0.41	0.090	2	4/14/16 1:14	CMR
1,2-Dichlorobenzene	ND	0.10	0.027		ND	0.60	0.16	2	4/14/16 1:14	CMR
1,3-Dichlorobenzene	ND	0.10	0.022		ND	0.60	0.13	2	4/14/16 1:14	CMR
1,1-Dichloroethane	ND	0.10	0.028		ND	0.40	0.11	2	4/14/16 1:14	CMR
1,2-Dichloroethane	ND	0.10	0.028		ND	0.40	0.11	2	4/14/16 1:14	CMR
1,1-Dichloroethylene	ND	0.10	0.024		ND	0.40	0.097	2	4/14/16 1:14	CMR
cis-1,2-Dichloroethylene	ND	0.10	0.038		ND	0.40	0.15	2	4/14/16 1:14	CMR
trans-1,2-Dichloroethylene	ND	0.10	0.026		ND	0.40	0.10	2	4/14/16 1:14	CMR
1,2-Dichloropropane	ND	0.10	0.035		ND	0.46	0.16	2	4/14/16 1:14	CMR
Ethylbenzene	1.5	0.10	0.028		6.5	0.43	0.12	2	4/14/16 1:14	CMR
Methyl tert-Butyl Ether (MTBE)	ND	0.10	0.031		ND	0.36	0.11	2	4/14/16 1:14	CMR
Methylene Chloride	0.21	1.0	0.12	J	0.74	3.5	0.42	2	4/14/16 1:14	CMR
Naphthalene	0.34	0.10	0.054		1.8	0.52	0.29	2	4/14/16 1:14	CMR
Tetrachloroethylene	0.95	0.10	0.028		6.5	0.68	0.19	2	4/14/16 1:14	CMR
Toluene	45	0.10	0.031		170	0.38	0.12	2	4/14/16 1:14	CMR
1,1,1-Trichloroethane	0.024	0.10	0.018	J	0.13	0.55	0.098	2	4/14/16 1:14	CMR
Trichloroethylene	0.60	0.10	0.030		3.2	0.54	0.16	2	4/14/16 1:14	CMR
1,2,4-Trimethylbenzene	6.3	0.10	0.025		31	0.49	0.12	2	4/14/16 1:14	CMR
1,3,5-Trimethylbenzene	2.2	0.10	0.020		11	0.49	0.098	2	4/14/16 1:14	CMR
Vinyl Chloride	ND	0.10	0.043		ND	0.26	0.11	2	4/14/16 1:14	CMR
m&p-Xylene	6.2	0.20	0.050		27	0.87	0.22	2	4/14/16 1:14	CMR
o-Xylene	2.5	0.10	0.029		11	0.43	0.13	2	4/14/16 1:14	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	119	70-130	4/14/16 1:14

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ANALYTICAL RESULTS

Project Location: 170-45 84th Ave. Queens, NY
Date Received: 4/11/2016
Field Sample #: SV-3
Sample ID: 16D0488-03
Sample Matrix: Soil Gas
Sampled: 4/9/2016 11:30

Sample Description/Location:
Sub Description/Location:
Canister ID:
Canister Size: 6 liter
Flow Controller ID:
Sample Type: 30 min

Work Order: 16D0488
Initial Vacuum(in Hg):
Final Vacuum(in Hg):
Receipt Vacuum(in Hg):
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv				ug/m3				Date/Time	
Analyte	**Results**	**RL**	**MDL**	**Flag/Qual**	**Results**	**RL**	**MDL**	**Dilution**	**Analyzed**	**Analyst**
Benzene	0.70	0.10	0.052		2.2	0.32	0.17	2	4/14/16 1:54	CMR
Carbon Tetrachloride	ND	0.10	0.024		ND	0.63	0.15	2	4/14/16 1:54	CMR
Chlorobenzene	0.44	0.10	0.035		2.0	0.46	0.16	2	4/14/16 1:54	CMR
Chloroethane	0.21	0.10	0.038		0.55	0.26	0.10	2	4/14/16 1:54	CMR
Chloromethane	0.33	0.20	0.044		0.69	0.41	0.090	2	4/14/16 1:54	CMR
1,2-Dichlorobenzene	ND	0.10	0.027		ND	0.60	0.16	2	4/14/16 1:54	CMR
1,3-Dichlorobenzene	ND	0.10	0.022		ND	0.60	0.13	2	4/14/16 1:54	CMR
1,1-Dichloroethane	0.086	0.10	0.028	J	0.35	0.40	0.11	2	4/14/16 1:54	CMR
1,2-Dichloroethane	ND	0.10	0.028		ND	0.40	0.11	2	4/14/16 1:54	CMR
1,1-Dichloroethylene	ND	0.10	0.024		ND	0.40	0.097	2	4/14/16 1:54	CMR
cis-1,2-Dichloroethylene	ND	0.10	0.038		ND	0.40	0.15	2	4/14/16 1:54	CMR
trans-1,2-Dichloroethylene	ND	0.10	0.026		ND	0.40	0.10	2	4/14/16 1:54	CMR
1,2-Dichloropropane	ND	0.10	0.035		ND	0.46	0.16	2	4/14/16 1:54	CMR
Ethylbenzene	0.78	0.10	0.028		3.4	0.43	0.12	2	4/14/16 1:54	CMR
Methyl tert-Butyl Ether (MTBE)	0.15	0.10	0.031		0.55	0.36	0.11	2	4/14/16 1:54	CMR
Methylene Chloride	0.48	1.0	0.12	J	1.7	3.5	0.42	2	4/14/16 1:54	CMR
Naphthalene	0.49	0.10	0.054		2.6	0.52	0.29	2	4/14/16 1:54	CMR
Tetrachloroethylene	0.54	0.10	0.028		3.7	0.68	0.19	2	4/14/16 1:54	CMR
Toluene	17	0.10	0.031		65	0.38	0.12	2	4/14/16 1:54	CMR
1,1,1-Trichloroethane	ND	0.10	0.018		ND	0.55	0.098	2	4/14/16 1:54	CMR
Trichloroethylene	0.59	0.10	0.030		3.1	0.54	0.16	2	4/14/16 1:54	CMR
1,2,4-Trimethylbenzene	4.6	0.10	0.025		23	0.49	0.12	2	4/14/16 1:54	CMR
1,3,5-Trimethylbenzene	1.1	0.10	0.020		5.6	0.49	0.098	2	4/14/16 1:54	CMR
Vinyl Chloride	ND	0.10	0.043		ND	0.26	0.11	2	4/14/16 1:54	CMR
m&p-Xylene	3.5	0.20	0.050		15	0.87	0.22	2	4/14/16 1:54	CMR
o-Xylene	1.2	0.10	0.029		5.3	0.43	0.13	2	4/14/16 1:54	CMR

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	117	70-130	4/14/16 1:54

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Sample Extraction Data

Prep Method: TO-15 Prep-EPA TO-15

Lab Number [Field ID]	Batch	Pressure Dilution	Pre Dilution	Pre-Dil Initial mL	Pre-Dil Final mL	Default Injection mL	Actual Injection mL	Date
16D0488-01 [SV-1]	B146928	1.5	1	N/A	1000	400	300	04/13/16
16D0488-02 [SV-2]	B146928	1.5	1	N/A	1000	400	300	04/13/16
16D0488-03 [SV-3]	B146928	1.5	1	N/A	1000	400	300	04/13/16

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B146928 - TO-15 Prep											
Blank (B146928-BLK1)					Prepared & Analyzed: 04/13/16						
Benzene	ND	0.035									
Carbon Tetrachloride	ND	0.035									
Chlorobenzene	ND	0.035									
Chloroethane	ND	0.035									
Chloromethane	ND	0.070									
1,2-Dichlorobenzene	ND	0.035									
1,3-Dichlorobenzene	ND	0.035									
1,1-Dichloroethane	ND	0.035									
1,2-Dichloroethane	ND	0.035									
1,1-Dichloroethylene	ND	0.035									
cis-1,2-Dichloroethylene	ND	0.035									
trans-1,2-Dichloroethylene	ND	0.035									
1,2-Dichloropropane	ND	0.035									
Ethylbenzene	ND	0.035									
Methyl tert-Butyl Ether (MTBE)	ND	0.035									
Methylene Chloride	ND	0.35									
Naphthalene	ND	0.035									
Tetrachloroethylene	ND	0.035									
Toluene	ND	0.035									
1,1,1-Trichloroethane	ND	0.035									
Trichloroethylene	ND	0.035									
1,2,4-Trimethylbenzene	ND	0.035									
1,3,5-Trimethylbenzene	ND	0.035									
Vinyl Chloride	ND	0.035									
m&p-Xylene	ND	0.070									
o-Xylene	ND	0.035									
Surrogate: 4-Bromofluorobenzene (1)	*9.25*				*8.00*		*116*	*70-130*			

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QUALITY CONTROL

Air Toxics by EPA Compendium Methods - Quality Control

Analyte	ppbv Results	ppbv RL	ug/m3 Results	ug/m3 RL	Spike Level ppbv	Source Result	%REC	%REC Limits	RPD	RPD Limit	Flag/Qual
Batch B146928 - TO-15 Prep											
LCS (B146928-BS1)					Prepared & Analyzed: 04/13/16						
Benzene	3.90				5.00		78.1	70-130			
Carbon Tetrachloride	4.24				5.00		84.7	70-130			
Chlorobenzene	4.95				5.00		98.9	70-130			
Chloroethane	5.37				5.00		107	70-130			
Chloromethane	5.04				5.00		101	70-130			
1,2-Dichlorobenzene	5.53				5.00		111	70-130			
1,3-Dichlorobenzene	5.42				5.00		108	70-130			
1,1-Dichloroethane	5.12				5.00		102	70-130			
1,2-Dichloroethane	4.79				5.00		95.8	70-130			
1,1-Dichloroethylene	5.06				5.00		101	70-130			
cis-1,2-Dichloroethylene	4.95				5.00		99.0	70-130			
trans-1,2-Dichloroethylene	4.82				5.00		96.4	70-130			
1,2-Dichloropropane	3.63				5.00		72.7	70-130			
Ethylbenzene	5.05				5.00		101	70-130			
Methyl tert-Butyl Ether (MTBE)	5.16				5.00		103	70-130			
Methylene Chloride	4.67				5.00		93.3	70-130			
Naphthalene	3.95				5.00		79.0	70-130			
Tetrachloroethylene	5.56				5.00		111	70-130			
Toluene	5.00				5.00		100	70-130			
1,1,1-Trichloroethane	4.30				5.00		86.0	70-130			
Trichloroethylene	4.54				5.00		90.9	70-130			
1,2,4-Trimethylbenzene	5.19				5.00		104	70-130			
1,3,5-Trimethylbenzene	5.10				5.00		102	70-130			
Vinyl Chloride	5.03				5.00		101	70-130			
m&p-Xylene	10.5				10.0		105	70-130			
o-Xylene	4.94				5.00		98.7	70-130			
Surrogate: 4-Bromofluorobenzene (1)	*9.58*				*8.00*		*120*	*70-130*			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
RL	Reporting Limit
MDL	Method Detection Limit
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
LCS Dup	Duplicate Laboratory Control Sample
MS	Matrix Spike Sample
MS Dup	Duplicate Matrix Spike Sample
REC	Recovery
QC	Quality Control
ppbv	Parts per billion volume
EPA	United States Environmental Protection Agency
% REC	Percent Recovery
ND	Not Detected
N/A	Not Applicable
DL	Detection Limit
NC	Not Calculated
LFB/LCS	Lab Fortified Blank/Lab Control Sample
ORP	Oxidation-Reduction Potential
wet	Not dry weight corrected
% wt	Percent weight
Kg	Kilogram
g	Gram
mg	Milligram
µg	Microgram
ng	Nanogram
L	Liter
mL	Milliliter
µL	Microliter
m3	Cubic Meter
EPH	Extractable Petroleum Hydrocarbons
VPH	Volatile Petroleum Hydrocarbons
APH	Air Petroleum Hydrocarbons
FID	Flame Ionization Detector
PID	Photo Ionization Detector
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
S-26	Surrogate outside of control limits.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

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ANALYST

TPH	Thomas P. Hnitecki
RLF	Rebecca Faust
CMR	Catherine M. Rouleau
ALB	Aaron L. Benoit

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INTERNAL STANDARD AREA AND RT SUMMARY

EPA TO-15

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (S011166-CCV1)			Lab File ID: B041303.D			Analyzed: 04/13/16 14:30			
Bromochloromethane (1)	134726	8.25	241397	8.28	56	60 - 140	-0.0300	+/-0.50	
1,4-Difluorobenzene (1)	349379	10.137	438709	10.172	80	60 - 140	-0.0350	+/-0.50	
Chlorobenzene-d5 (1)	300249	14.896	404360	14.947	74	60 - 140	-0.0510	+/-0.50	
LCS (B146928-BS1)			Lab File ID: B041306.D			Analyzed: 04/13/16 16:26			
Bromochloromethane (1)	133531	8.251	134726	8.25	99	60 - 140	0.0010	+/-0.50	
1,4-Difluorobenzene (1)	344706	10.138	349379	10.137	99	60 - 140	0.0010	+/-0.50	
Chlorobenzene-d5 (1)	289365	14.903	300249	14.896	96	60 - 140	0.0070	+/-0.50	
Blank (B146928-BLK1)			Lab File ID: B041309.D			Analyzed: 04/13/16 18:42			
Bromochloromethane (1)	122511	8.25	134726	8.25	91	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	313312	10.137	349379	10.137	90	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	264731	14.895	300249	14.896	88	60 - 140	-0.0010	+/-0.50	
SV-1 (16D0488-01)			Lab File ID: B041317.D			Analyzed: 04/14/16 00:33			
Bromochloromethane (1)	136472	8.25	134726	8.25	101	60 - 140	0.0000	+/-0.50	
1,4-Difluorobenzene (1)	348700	10.137	349379	10.137	100	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	297564	14.896	300249	14.896	99	60 - 140	0.0000	+/-0.50	
SV-2 (16D0488-02)			Lab File ID: B041318.D			Analyzed: 04/14/16 01:14			
Bromochloromethane (1)	136847	8.247	134726	8.25	102	60 - 140	-0.0030	+/-0.50	
1,4-Difluorobenzene (1)	355349	10.133	349379	10.137	102	60 - 140	-0.0040	+/-0.50	
Chlorobenzene-d5 (1)	302747	14.898	300249	14.896	101	60 - 140	0.0020	+/-0.50	
SV-3 (16D0488-03)			Lab File ID: B041319.D			Analyzed: 04/14/16 01:54			
Bromochloromethane (1)	140549	8.251	134726	8.25	104	60 - 140	0.0010	+/-0.50	
1,4-Difluorobenzene (1)	356170	10.137	349379	10.137	102	60 - 140	0.0000	+/-0.50	
Chlorobenzene-d5 (1)	307549	14.896	300249	14.896	102	60 - 140	0.0000	+/-0.50	

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CONTINUING CALIBRATION CHECK

EPA TO-15

S011166-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
Acetone	A	5.00	6.16	0.8283546	1.020406		23.2	30
Benzene	A	5.00	3.87	0.9413509	0.7283506		-22.6	30
Benzyl chloride	A	5.00	4.30	0.9366321	0.8057206		-14.0	30
Bromodichloromethane	A	5.00	4.13	0.6896837	0.5691836		-17.5	30
Bromoform	A	5.00	5.29	0.6450373	0.6818714		5.7	30
Bromomethane	A	5.00	4.69	0.6831357	0.6411353		-6.1	30
1,3-Butadiene	A	5.00	4.36	0.3631511	0.3170286		-12.7	30
2-Butanone (MEK)	A	5.00	4.44	1.545372	1.371922		-11.2	30
Carbon Disulfide	A	5.00	5.78	1.787941	2.066879		15.6	30
Carbon Tetrachloride	A	5.00	4.17	0.5349463	0.4463004		-16.6	30
Chlorobenzene	A	5.00	4.69	0.7669336	0.7198399		-6.1	30
Chloroethane	A	5.00	4.57	0.2783443	0.2545136		-8.6	30
Chloroform	A	5.00	5.38	1.212155	1.304158		7.6	30
Chloromethane	A	5.00	4.62	0.5419496	0.5011059		-7.5	30
Cyclohexane	A	5.00	4.22	0.3674421	0.3103472		-15.5	30
Dibromochloromethane	A	5.00	4.68	0.7473385	0.698812		-6.5	30
1,2-Dibromoethane (EDB)	A	5.00	4.62	0.6600501	0.6102348		-7.5	30
1,2-Dichlorobenzene	A	5.00	5.24	0.6481301	0.6786794		4.7	30
1,3-Dichlorobenzene	A	5.00	5.24	0.7015668	0.7348674		4.7	30
1,4-Dichlorobenzene	A	5.00	5.12	0.7092826	0.7265703		2.4	30
Dichlorodifluoromethane (Freon 12)	A	5.00	5.44	1.429498	1.55695		8.9	30
1,1-Dichloroethane	A	5.00	4.87	1.092829	1.064798		-2.6	30
1,2-Dichloroethane	A	5.00	4.64	0.7865236	0.7305375		-7.1	30
1,1-Dichloroethylene	A	5.00	4.80	0.9569238	0.917667		-4.1	30
cis-1,2-Dichloroethylene	A	5.00	4.70	0.8321314	0.7830055		-5.9	30
trans-1,2-Dichloroethylene	A	5.00	4.65	0.8759026	0.8140611		-7.1	30
1,2-Dichloropropane	A	5.00	3.60	0.360087	0.2591386		-28.0	30
cis-1,3-Dichloropropene	A	5.00	4.09	0.523818	0.428518		-18.2	30
trans-1,3-Dichloropropene	A	5.00	3.80	0.4919749	0.3734168		-24.1	30
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 1	A	5.00	4.39	1.685769	1.481644		-12.1	30
1,4-Dioxane	A	5.00	4.06	0.193588	0.1573947		-18.7	30
Ethanol	A	5.00	6.18	0.1804198	0.2229354		23.6	30
Ethyl Acetate	A	5.00	4.61	0.2296375	0.2116414		-7.8	30
Ethylbenzene	A	5.00	4.72	1.243091	1.172493		-5.7	30
4-Ethyltoluene	A	5.00	4.91	1.17607	1.155089		-1.8	30
Heptane	A	5.00	3.52	0.2781826	0.1955332		-29.7	30
Hexachlorobutadiene	A	5.00	5.41	0.3871347	0.418879		8.2	30
Hexane	A	5.00	4.41	0.7062516	0.6230958		-11.8	30

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CONTINUING CALIBRATION CHECK

EPA TO-15

S011166-CCV1

COMPOUND	TYPE	CONC. (ppbv)		RESPONSE FACTOR			% DIFF / DRIFT	
		STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)
2-Hexanone (MBK)	A	5.00	3.26	0.9700782	0.6332611		-34.7	30 *
Isopropanol	A	5.00	6.32	0.8060302	1.017995		26.3	30
Methyl tert-Butyl Ether (MTBE)	A	5.00	4.92	1.499911	1.475576		-1.6	30
Methylene Chloride	A	5.00	4.40	0.8355231	0.7352998		-12.0	30
4-Methyl-2-pentanone (MIBK)	A	5.00	3.19	0.9094714	0.5805867		-36.2	30 *
Naphthalene	A	5.00	3.70	1.246215	0.9212354		-26.1	30
Propene	A	5.00	5.38	0.4569349	0.4917952		7.6	30
Styrene	A	5.00	4.88	0.6679813	0.6513953		-2.5	30
1,1,2,2-Tetrachloroethane	A	5.00	4.29	0.9452754	0.810799		-14.2	30
Tetrachloroethylene	A	5.00	5.34	0.4528223	0.4833855		6.7	30
Tetrahydrofuran	A	5.00	4.11	0.7343196	0.6034529		-17.8	30
Toluene	A	5.00	4.85	0.957834	0.9286426		-3.0	30
1,2,4-Trichlorobenzene	A	5.00	5.08	0.4479159	0.4545667		1.5	30
1,1,1-Trichloroethane	A	5.00	3.99	0.5392166	0.4298919		-20.3	30
1,1,2-Trichloroethane	A	5.00	4.85	0.3726131	0.3612628		-3.0	30
Trichloroethylene	A	5.00	4.20	0.3742704	0.3141895		-16.1	30
Trichlorofluoromethane (Freon 11)	A	5.00	6.01	1.248934	1.500206		20.1	30
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113	A	5.00	6.65	1.044253	1.389332		33.0	30 *
1,2,4-Trimethylbenzene	A	5.00	4.86	0.9274325	0.9020353		-2.7	30
1,3,5-Trimethylbenzene	A	5.00	4.74	0.9520193	0.901625		-5.3	30
Vinyl Acetate	A	5.00	4.40	1.884799	1.657171		-12.1	30
Vinyl Chloride	A	5.00	4.49	0.5783172	0.5195256		-10.2	30
m&p-Xylene	A	10.0	9.96	0.9562107	0.952239		-0.4	30
o-Xylene	A	5.00	4.63	0.9589857	0.8880363		-7.4	30

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA TO-15 in Air	
Benzene	AIHA,FL,NJ,NY,VA,ME
Carbon Tetrachloride	AIHA,FL,NJ,NY,VA,ME
Chlorobenzene	AIHA,FL,NJ,NY,VA,ME
Chloroethane	AIHA,FL,NJ,NY,VA,ME
Chloromethane	AIHA,FL,NJ,NY,VA,ME
1,2-Dichlorobenzene	AIHA,FL,NJ,NY,VA,ME
1,3-Dichlorobenzene	AIHA,NJ,NY,ME
1,1-Dichloroethane	AIHA,FL,NJ,NY,VA,ME
1,2-Dichloroethane	AIHA,FL,NJ,NY,VA,ME
1,1-Dichloroethylene	AIHA,FL,NJ,NY,VA,ME
cis-1,2-Dichloroethylene	AIHA,FL,NY,VA,ME
trans-1,2-Dichloroethylene	AIHA,NJ,NY,VA,ME
1,2-Dichloropropane	AIHA,FL,NJ,NY,VA,ME
Ethylbenzene	AIHA,FL,NJ,NY,VA,ME
Methyl tert-Butyl Ether (MTBE)	AIHA,FL,NJ,NY,VA,ME
Methylene Chloride	AIHA,FL,NJ,NY,VA,ME
Naphthalene	NY,ME
Tetrachloroethylene	AIHA,FL,NJ,NY,VA,ME
Toluene	AIHA,FL,NJ,NY,VA,ME
1,1,1-Trichloroethane	AIHA,FL,NJ,NY,VA,ME
Trichloroethylene	AIHA,FL,NJ,NY,VA,ME
1,2,4-Trimethylbenzene	AIHA,NJ,NY,ME
1,3,5-Trimethylbenzene	AIHA,NJ,NY,ME
Vinyl Chloride	AIHA,FL,NJ,NY,VA,ME
m&p-Xylene	AIHA,FL,NJ,NY,VA,ME
o-Xylene	AIHA,FL,NJ,NY,VA,ME

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2016
FL	Florida Department of Health	E871027 NELAP	06/30/2016
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

WD0488

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD (AIR)

39 Spruce Street
East Longmeadow, MA 01028

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Other: (5 day)

Rush Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☒ EXCEL ☒
Other:
Enhanced Data Package Required: ☐
Email To: MHofgren@db-eng.com
Fax To #:

Company Name: D+B Engineers + Architects, P.C.
Address: 330 Crossways Park Drive Woodbury
Phone: 516 364-9890
Project Name: SCA - 131 Q Addition
Project Location: 170-45 84th Avenue Queens NY
Project Number: 3415-AL2
Project Manager: Mike Hofgren
Con-Test Bid:
Invoice Recipient:
Sampled By: Keith Robins

ANALYSIS REQUESTED

Please fill out completely, sign, date and retain the yellow copy for your records

Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply

For summa canister and flow controller information please refer to Con-Test's Air Media Agreement

Lab Use: Con-Test Work Order#	Client Use: Client Sample ID / Description	Collection Data: Beginning Date/Time	Collection Data: Ending Date/Time	Duration: Total Minutes Sampled	Flow Rate (m³/min, L/min)	Matrix: Code	Volume (Liters, m³)	Method TO-15				" Hg Initial Pressure	" Hg Final Pressure	Lab Receipt Pressure	Summa Can ID	Flow Controller ID
01	SV-1 (Soil vapor)	4/9/16 1346	4/9/16 1748	32 minutes	0.2 L/m	SG		✓				-28	-8	29	2018	4101
02	SV-2 (Soil vapor)	4/9/16 1236 pm	4/9/16 1236 pm	30 minutes	0.2 L/m	SG		✓				-30	-6	29	2165	4174
03	SV-3 (Soil vapor)	4/9/16 1100 am	4/9/16 1130 am	30 minutes	0.2 L/m	SG		✓				-27	-4	29	1067	4207

Comments: Provide detection limits of 0.25 micrograms/cubic meter for vinyl chloride, TCE and carbon tetrachloride. All other components have a detection limit of 1 microgram/cubic meter.

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:
SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other_____

Relinquished by: (signature)	Date/Time:
Keith Robins	4/11/16 9:30 am
Received by: (signature)	Date/Time:
Joe E	4/11/16 10
Relinquished by: (signature)	Date/Time:
Joe E	4/11 5
Received by: (signature)	Date/Time:
William West	4/11/16 1700
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements		Special Requirements
MA		☐ MA MCP Required
CT		☐ CT RCP Required
Other:	See comments	☐ Enhanced Data Package Required

NELAC and AIHA-LAP, LLC Accredited

TURNAROUND TIME (BUSINESS DAYS) STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON THIS CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME CANNOT START UNTIL ALL QUESTIONS HAVE BEEN ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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con-test® ANALYTICAL LABORATORY

39 Spruce St.
East Longmeadow, MA.
01028
P: 413-525-2332
F: 413-525-6405

AIR Only Receipt Checklist

CLIENT NAME D&B **RECEIVED BY**: RLF **DATE**: 4/11/2016

1) Was the chain(s) of custody relinquished and signed? **Yes** X **No** ____

2) Does the chain agree with the samples? **Yes** X **No** ____

If not, explain:

3) Are all the samples in good condition? **Yes** X **No** ____

If not, explain:

4) Are there any samples "On Hold"? **Yes** ____ **No** X Stored where:

5) Are there any RUSH or SHORT HOLDING TIME samples? **Yes** ____ **No** X

Who was notified ____ Date ____ Time ____

6) Location where samples are stored: Air Lab

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

7) Number of cans Individually Certified or Batch Certified? ____ 3

Containers received at Con-Test

		# of Containers	Types (Size, Duration)
Summa Cans (TO-14/TO-15/APH)		3	6L
Tedlar Bags			
TO-17 Tubes			
Regulators		3	30 min
Restrictors			
Hg/Hopcalite Tube (NIOSH 6009)			
(TO-4A/ TO-10A/TO-13) PUFs			
PCB Florisil Tubes (NIOSH 5503)			
Air cassette			
PM 2.5/PM 10			
TO-11A Cartridges			
Other			

Unused Summas/PUF Media:

Unused Regulators:

1) Was all media (used & unused) checked into the WASP?

2) Were all returned summa cans, Restrictors & Regulators and PUF's documented as returned in the Air Lab Inbound/Outbound Excel Spreadsheet?

Laboratory Comments:																
	2018								4101							
	2165								4174							
	1067								4207							

Login Sample Receipt Checklist
(Rejection Criteria Listing - Using Sample Acceptance Policy)
Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The coolers'/boxes' custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	N/A	
4) Cooler Temperature is acceptable.	N/A	
5) Cooler Temperature is recorded.	N/A	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) Samples are received within Holding Time.	T	
10) Sample containers have legible labels.	T	
11) Containers/media are not broken or leaking and valves and caps are closed tightly.	T	
12) Sample collection date/times are provided.	T	
13) Appropriate sample/media containers are used.	T	
14) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
15) Trip blanks provided if applicable.	T	

Who notified of False statements? **Date/Time:**

Doc #278 Rev. 5 October 2014 **Log-In Technician Initials: RLF** **Apr. 11 2016 17:00**

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May 31, 2016

Mike Hofgren
Dvirka And Bartilucci
330 Crossways Park Drive
Woodbury, NY 11797-2015

Project Location: SCA 131Q
Client Job Number:
Project Number: 3415-AL2-131Q
Laboratory Work Order Number: 16D0458

Enclosed are results of analyses for samples received by the laboratory on April 11, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

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Dvirka And Bartilucci
330 Crossways Park Drive
Woodbury, NY 11797-2015
ATTN: Mike Hofgren

REPORT DATE: 5/31/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 3415-AL2-131Q

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16D0458

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: SCA 131Q

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
GP-1 (0-5)	16D0458-01	Soil		SM 2540G	
				SW-846 1030	
				SW-846 6010C-D	
				SW-846 7196A	
				SW-846 7471B	
				SW-846 8015C	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	
GP-2 (0-5)	16D0458-02	Soil		SM 2540G	
				SW-846 1030	
				SW-846 6010C-D	
				SW-846 7196A	
				SW-846 7471B	
				SW-846 8015C	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	

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Dvirka And Bartilucci
330 Crossways Park Drive
Woodbury, NY 11797-2015
ATTN: Mike Hofgren

REPORT DATE: 5/31/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 3415-AL2-131Q

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16D0458

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: SCA 131Q

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
GP-3 (0-5)	16D0458-03	Soil		SM 2540G	
				SW-846 1030	
				SW-846 6010C-D	
				SW-846 7196A	
				SW-846 7471B	
				SW-846 8015C	
				SW-846 8081B	
				SW-846 8082A	
				SW-846 8151A	
				SW-846 8260C	
				SW-846 8270D	
				SW-846 9014	
				SW-846 9030A	
				SW-846 9045C	
				SW-846 9095B	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT 05/31/16: Report revised to update client project number.

For method 8151, samples were derivatized on 04/12/16.

For method 8151, sample analysis bracketed by LCS to monitor esterification. All recoveries in the bracketing LCS met method criteria.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

SW-846 7196A

Qualifications:

DL-03

Elevated reporting limit due to matrix.

Analyte & Samples(s) Qualified:

Hexavalent Chromium
16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)]

MS-16

For solid method SW846-7196A, the matrix spike is outside of control limits. pH and ORP results were indicative of reducing conditions. Reanalysis is not required. Analysis is in control based on LCS recoveries.

Analyte & Samples(s) Qualified:

Hexavalent Chromium
16D0458-01[GP-1 (0-5)], B146802-MS1, B146802-MS2

SW-846 8151A

Qualifications:

P-08

Sample RPD between primary and confirmatory analysis exceeded 100%. Per EPA method 8000, the lower value was reported due to obvious chromatographic interference on the column with the higher result.

Analyte & Samples(s) Qualified:

MCPA
16D0458-03[GP-3 (0-5)]

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

Dalapon [2C]
B146390-MS1, B146390-MSD1

SW-846 8260C

Qualifications:

L-02

Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.

Analyte & Samples(s) Qualified:

2-Butanone (MEK)
B146458-BS1, B146458-BSD1

Acetone
B146458-BS1, B146458-BSD1

Bromochloromethane
B146458-BS1, B146458-BSD1

Methyl Acetate
B146458-BS1, B146458-BSD1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

Dichlorodifluoromethane (Freon 1
B146458-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Chloroethane
B146458-BS1, B146458-BSD1

Chloromethane
B146458-BS1, B146458-BSD1

SW-846 8270D

Qualifications:

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V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:

Benzidine

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)], B146384-BLK1, B146384-BS1, B146384-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Benzidine

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)], B146384-BLK1, B146384-BS1, B146384-BSD1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

Pentachloronitrobenzene

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)], B146384-BLK1, B146384-BS1, B146384-BSD1

V-19

Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

2,4-Dinitrophenol

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)], B146384-BLK1, B146384-BS1, B146384-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

1,2-Diphenylhydrazine (as Azobenz

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)], B146384-BLK1, B146384-BS1, B146384-BSD1

2-Nitroaniline

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)], B146384-BLK1, B146384-BS1, B146384-BSD1

2-Nitrophenol

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)], B146384-BLK1, B146384-BS1, B146384-BSD1

Benzoic Acid

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)], B146384-BLK1, B146384-BS1, B146384-BSD1

Bis(2-Ethylhexyl)phthalate

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)], B146384-BLK1, B146384-BS1, B146384-BSD1

Butylbenzylphthalate

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)], B146384-BLK1, B146384-BS1, B146384-BSD1

Di-n-octylphthalate

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)], B146384-BLK1, B146384-BS1, B146384-BSD1

SW-846 9045C

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

pH

16D0458-01[GP-1 (0-5)], 16D0458-02[GP-2 (0-5)], 16D0458-03[GP-3 (0-5)]

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SW-846 6010C/D SW-846 6020A/B

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed.

SW-846 8015C

Gasoline Range Organics (2-Methylpentane through 1,2,4-Trimethylbenzene) is quantitated against a calibration made with an unleaded gasoline composite standard.

Diesel Range Organics (C10-C28) is quantitated against a calibration made with a #2 fuel oil standard.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Aaron L. Benoit
Project Manager

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20
Sample ID: 16D0458-01
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.066	0.015	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Acrylonitrile	ND	0.0040	0.0016	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
tert-Amyl Methyl Ether (TAME)	ND	0.00066	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Benzene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Bromobenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Bromochloromethane	ND	0.0013	0.00092	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Bromodichloromethane	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Bromoform	ND	0.0013	0.00092	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Bromomethane	ND	0.0066	0.0011	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
2-Butanone (MEK)	ND	0.026	0.012	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
tert-Butyl Alcohol (TBA)	ND	0.026	0.014	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
n-Butylbenzene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
sec-Butylbenzene	ND	0.0013	0.00066	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
tert-Butylbenzene	ND	0.0013	0.00059	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
tert-Butyl Ethyl Ether (TBEE)	ND	0.00066	0.00040	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Carbon Disulfide	ND	0.0040	0.0023	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Carbon Tetrachloride	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Chlorobenzene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Chlorodibromomethane	ND	0.00066	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Chloroethane	ND	0.013	0.00099	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Chloroform	ND	0.0026	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Chloromethane	ND	0.0066	0.00059	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
2-Chlorotoluene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
4-Chlorotoluene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0026	0.00072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,2-Dibromoethane (EDB)	ND	0.00066	0.00066	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Dibromomethane	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,2-Dichlorobenzene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,3-Dichlorobenzene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,4-Dichlorobenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
trans-1,4-Dichloro-2-butene	ND	0.0026	0.00079	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Dichlorodifluoromethane (Freon 12)	ND	0.013	0.00086	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,1-Dichloroethane	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,2-Dichloroethane	ND	0.0013	0.00086	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,1-Dichloroethylene	ND	0.0026	0.00072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
cis-1,2-Dichloroethylene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
trans-1,2-Dichloroethylene	ND	0.0013	0.00059	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,2-Dichloropropane	ND	0.0013	0.00086	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,3-Dichloropropane	ND	0.00066	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
2,2-Dichloropropane	ND	0.0013	0.00059	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,1-Dichloropropene	ND	0.0013	0.00059	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
cis-1,3-Dichloropropene	ND	0.00066	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
trans-1,3-Dichloropropene	ND	0.00066	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Diethyl Ether	ND	0.013	0.0012	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD

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Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458

Date Received: 4/11/2016

Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20

Sample ID: 16D0458-01

Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00066	0.00040	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,4-Dioxane	ND	0.066	0.038	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Ethylbenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Hexachlorobutadiene	ND	0.0013	0.00066	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
2-Hexanone (MBK)	ND	0.013	0.0072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Isopropylbenzene (Cumene)	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
p-Isopropyltoluene (p-Cymene)	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Methyl Acetate	ND	0.0013	0.0011	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Methyl tert-Butyl Ether (MTBE)	ND	0.0026	0.00059	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Methyl Cyclohexane	ND	0.0013	0.00066	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Methylene Chloride	0.0048	0.013	0.0047	mg/Kg dry	1	J	SW-846 8260C	4/12/16	4/12/16 10:40	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.013	0.0050	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Naphthalene	ND	0.0026	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
n-Propylbenzene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Styrene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,1,1,2-Tetrachloroethane	ND	0.0013	0.0012	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,1,2,2-Tetrachloroethane	ND	0.0013	0.00059	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Tetrachloroethylene	ND	0.0013	0.00086	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Tetrahydrofuran	ND	0.0066	0.0014	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Toluene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,2,3-Trichlorobenzene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,2,4-Trichlorobenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,3,5-Trichlorobenzene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,1,1-Trichloroethane	ND	0.0013	0.00066	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,1,2-Trichloroethane	ND	0.0026	0.00079	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Trichloroethylene	ND	0.0013	0.00066	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Trichlorofluoromethane (Freon 11)	ND	0.0066	0.00072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,2,3-Trichloropropane	ND	0.0013	0.00072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0066	0.00059	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,2,4-Trimethylbenzene	ND	0.0013	0.00053	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
1,3,5-Trimethylbenzene	ND	0.0013	0.00040	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
Vinyl Chloride	ND	0.0066	0.00072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
m+p Xylene	ND	0.0026	0.0011	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD
o-Xylene	ND	0.0013	0.00046	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:40	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	109	70-130		4/12/16 10:40
Toluene-d8	101	70-130		4/12/16 10:40
4-Bromofluorobenzene	98.2	70-130		4/12/16 10:40

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20
Sample ID: 16D0458-01
Sample Matrix: Soil

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	mg/Kg dry			1			SW-846 8260C	4/12/16	4/12/16 10:40	WSD

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Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20
Sample ID: 16D0458-01
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.19	0.056	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Acenaphthylene	ND	0.19	0.063	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Acetophenone	ND	0.38	0.074	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Aniline	ND	0.38	0.11	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Anthracene	ND	0.19	0.054	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Benzidine	ND	0.73	0.47	mg/Kg dry	1	V-04, V-05	SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Benzo(a)anthracene	ND	0.19	0.050	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Benzo(a)pyrene	ND	0.19	0.059	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Benzo(b)fluoranthene	ND	0.19	0.053	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Benzo(g,h,i)perylene	ND	0.19	0.083	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Benzo(k)fluoranthene	ND	0.19	0.059	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Benzoic Acid	0.31	1.1	0.20	mg/Kg dry	1	V-20, J	SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Bis(2-chloroethoxy)methane	ND	0.38	0.072	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Bis(2-chloroethyl)ether	ND	0.38	0.074	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Bis(2-chloroisopropyl)ether	ND	0.38	0.081	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.38	0.15	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 14:38	BGL
4-Bromophenylphenylether	ND	0.38	0.063	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Butylbenzylphthalate	ND	0.38	0.090	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Carbazole	ND	0.19	0.049	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
4-Chloroaniline	ND	0.73	0.086	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
4-Chloro-3-methylphenol	ND	0.73	0.081	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2-Chloronaphthalene	ND	0.38	0.071	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2-Chlorophenol	ND	0.38	0.067	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
4-Chlorophenylphenylether	ND	0.38	0.063	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Chrysene	ND	0.19	0.059	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Dibenz(a,h)anthracene	ND	0.19	0.11	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Dibenzofuran	ND	0.38	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Di-n-butylphthalate	ND	0.38	0.082	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
1,2-Dichlorobenzene	ND	0.38	0.066	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
1,3-Dichlorobenzene	ND	0.38	0.064	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
1,4-Dichlorobenzene	ND	0.38	0.067	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
3,3-Dichlorobenzidine	ND	0.19	0.057	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2,4-Dichlorophenol	ND	0.38	0.064	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Diethylphthalate	ND	0.38	0.067	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2,4-Dimethylphenol	ND	0.38	0.070	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Dimethylphthalate	ND	0.38	0.066	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
4,6-Dinitro-2-methylphenol	ND	0.38	0.36	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2,4-Dinitrophenol	ND	0.73	0.21	mg/Kg dry	1	V-19	SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2,4-Dinitrotoluene	ND	0.38	0.061	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2,6-Dinitrotoluene	ND	0.38	0.066	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Di-n-octylphthalate	ND	0.38	0.20	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 14:38	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.38	0.061	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Fluoranthene	ND	0.19	0.062	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Fluorene	ND	0.19	0.061	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20
Sample ID: 16D0458-01
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.38	0.066	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Hexachlorobutadiene	ND	0.38	0.066	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Hexachlorocyclopentadiene	ND	0.38	0.080	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Hexachloroethane	ND	0.38	0.075	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Indeno(1,2,3-cd)pyrene	ND	0.19	0.13	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Isophorone	ND	0.38	0.073	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
1-Methylnaphthalene	ND	0.19	0.072	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2-Methylnaphthalene	ND	0.19	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2-Methylphenol	ND	0.38	0.094	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
3/4-Methylphenol	ND	0.38	0.12	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Naphthalene	ND	0.19	0.096	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2-Nitroaniline	ND	0.38	0.063	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 14:38	BGL
3-Nitroaniline	ND	0.38	0.054	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
4-Nitroaniline	ND	0.38	0.063	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Nitrobenzene	ND	0.38	0.071	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2-Nitrophenol	ND	0.38	0.099	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 14:38	BGL
4-Nitrophenol	ND	0.73	0.082	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
N-Nitrosodimethylamine	ND	0.38	0.24	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
N-Nitrosodiphenylamine	ND	0.38	0.077	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
N-Nitrosodi-n-propylamine	ND	0.38	0.077	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Pentachloronitrobenzene	ND	0.38	0.090	mg/Kg dry	1	V-16	SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Pentachlorophenol	ND	0.38	0.091	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Phenanthrene	ND	0.19	0.097	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Phenol	ND	0.38	0.064	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Pyrene	ND	0.19	0.062	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
Pyridine	ND	0.38	0.061	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
1,2,4,5-Tetrachlorobenzene	ND	0.38	0.067	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
1,2,4-Trichlorobenzene	ND	0.38	0.067	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2,4,5-Trichlorophenol	ND	0.38	0.085	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL
2,4,6-Trichlorophenol	ND	0.38	0.063	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 14:38	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	82.9	30-130		4/13/16 14:38
Phenol-d6	93.4	30-130		4/13/16 14:38
Nitrobenzene-d5	95.1	30-130		4/13/16 14:38
2-Fluorobiphenyl	93.2	30-130		4/13/16 14:38
2,4,6-Tribromophenol	81.7	30-130		4/13/16 14:38
p-Terphenyl-d14	109	30-130		4/13/16 14:38

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20
Sample ID: 16D0458-01
Sample Matrix: Soil

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	mg/Kg dry			1			SW-846 8270D	4/11/16	4/13/16 14:38	BGL

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Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20
Sample ID: 16D0458-01
Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
alpha-Chlordane [1]	ND	0.0055	0.00031	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
gamma-Chlordane [1]	ND	0.0055	0.00031	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Alachlor [1]	ND	0.022	0.0012	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Aldrin [1]	ND	0.0022	0.00033	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
alpha-BHC [1]	ND	0.0055	0.00044	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
beta-BHC [1]	ND	0.0055	0.00055	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
delta-BHC [1]	ND	0.0055	0.00044	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
gamma-BHC (Lindane) [1]	ND	0.0022	0.00055	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Chlordane [1]	ND	0.022	0.0064	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
4,4'-DDD [1]	ND	0.0011	0.00044	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
4,4'-DDE [1]	ND	0.0011	0.00033	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
4,4'-DDT [1]	ND	0.0011	0.00044	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Dieldrin [1]	ND	0.0011	0.00033	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Endosulfan I [1]	ND	0.0055	0.00044	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Endosulfan II [1]	ND	0.0089	0.00033	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Endosulfan sulfate [1]	ND	0.0089	0.0014	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Endrin [1]	ND	0.0089	0.00033	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Endrin aldehyde [1]	ND	0.0089	0.0013	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Endrin ketone [1]	ND	0.0089	0.00044	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Heptachlor [1]	ND	0.0055	0.00055	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Heptachlor epoxide [1]	ND	0.0055	0.00044	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Hexachlorobenzene [1]	ND	0.0067	0.00078	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Methoxychlor [1]	ND	0.055	0.00067	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL
Toxaphene [1]	ND	0.11	0.048	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:08	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.0	30-150		4/13/16 20:08
Decachlorobiphenyl [2]	89.9	30-150		4/13/16 20:08
Tetrachloro-m-xylene [1]	82.1	30-150		4/13/16 20:08
Tetrachloro-m-xylene [2]	80.5	30-150		4/13/16 20:08

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20
Sample ID: 16D0458-01
Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.063	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:12	PJG
Aroclor-1221 [1]	ND	0.11	0.069	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:12	PJG
Aroclor-1232 [1]	ND	0.11	0.048	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:12	PJG
Aroclor-1242 [1]	ND	0.11	0.053	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:12	PJG
Aroclor-1248 [1]	ND	0.11	0.063	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:12	PJG
Aroclor-1254 [1]	ND	0.11	0.069	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:12	PJG
Aroclor-1260 [1]	ND	0.11	0.074	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:12	PJG
Aroclor-1262 [1]	ND	0.11	0.053	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:12	PJG
Aroclor-1268 [1]	ND	0.11	0.042	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:12	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	80.7	30-150		4/13/16 16:12
Decachlorobiphenyl [2]	80.8	30-150		4/13/16 16:12
Tetrachloro-m-xylene [1]	82.4	30-150		4/13/16 16:12
Tetrachloro-m-xylene [2]	82.0	30-150		4/13/16 16:12

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458

Date Received: 4/11/2016

Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20

Sample ID: 16D0458-01

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	2.4	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 2:45	KAL
2,4-DB [1]	ND	27	5.5	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 2:45	KAL
2,4,5-TP (Silvex) [1]	ND	2.7	0.30	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 2:45	KAL
2,4,5-T [1]	ND	2.7	0.37	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 2:45	KAL
Dalalpon [1]	ND	69	4.1	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 2:45	KAL
Dicamba [1]	ND	2.7	0.38	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 2:45	KAL
Dichloroprop [1]	ND	27	5.2	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 2:45	KAL
Dinoseb [1]	ND	14	0.57	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 2:45	KAL
MCPA [1]	ND	2700	420	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 2:45	KAL
MCPP [1]	ND	2700	360	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 2:45	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,4-Dichlorophenylacetic acid [1]	71.9	30-150		4/14/16 2:45
2,4-Dichlorophenylacetic acid [2]	69.9	30-150		4/14/16 2:45

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20
Sample ID: 16D0458-01
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	2.1	2.0	mg/Kg dry	1		SW-846 8015C	4/14/16	4/14/16 16:52	EEH
Diesel Range Organics	2.6	9.2	2.1	mg/Kg dry	1	J	SW-846 8015C	4/11/16	4/12/16 20:55	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1-Chloro-3-fluorobenzene	72.3	70-130		4/14/16 16:52
o-Terphenyl	65.3	40-140		4/12/16 20:55

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458

Date Received: 4/11/2016

Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20

Sample ID: 16D0458-01

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	1.0	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:46	AME
Arsenic	ND	2.7	0.50	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:46	AME
Barium	65	2.7	0.84	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:46	AME
Beryllium	0.34	0.27	0.22	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:46	AME
Cadmium	0.25	0.27	0.13	mg/Kg dry	1	J	SW-846 6010C-D	4/15/16	4/15/16 15:46	AME
Chromium	15	0.54	0.26	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:46	AME
Cobalt	6.1	2.7	0.84	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:46	AME
Copper	12	0.54	0.20	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:46	AME
Lead	3.7	0.82	0.29	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:46	AME
Manganese	400	0.54	0.38	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:46	AME
Mercury	ND	0.029	0.0048	mg/Kg dry	1		SW-846 7471B	4/12/16	4/13/16 10:25	TGW
Nickel	16	0.55	0.16	mg/Kg dry	1		SW-846 6010C-D	4/14/16	4/18/16 19:07	AME
Selenium	ND	5.5	0.85	mg/Kg dry	1		SW-846 6010C-D	4/14/16	4/18/16 19:07	AME
Silver	ND	0.55	0.44	mg/Kg dry	1		SW-846 6010C-D	4/14/16	4/18/16 19:07	AME
Thallium	ND	2.8		mg/Kg dry	1		SW-846 6010C-D	4/14/16	4/18/16 19:07	AME
Vanadium	23	1.1	0.32	mg/Kg dry	1		SW-846 6010C-D	4/14/16	4/18/16 19:07	AME
Zinc	29	1.1	0.91	mg/Kg dry	1		SW-846 6010C-D	4/14/16	4/18/16 19:07	AME

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-1 (0-5)
Sampled: 4/9/2016 11:20
Sample ID: 16D0458-01
Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.30	0.14	mg/Kg dry	1		SW-846 9014	4/18/16	4/18/16 13:50	VAK
Free Liquid	Absent			present/absent	1		SW-846 9095B	4/12/16	4/12/16 14:30	LL
Hexavalent Chromium	0.29	0.18	0.13	mg/Kg dry	1	MS-16	SW-846 7196A	4/15/16	4/18/16 12:00	LL
Ignitability	Absent			present/absent	1		SW-846 1030	4/12/16	4/12/16 18:00	DJM
pH @23.1°C	7.7			pH Units	1	H-03	SW-846 9045C	4/12/16	4/12/16 9:50	MMH
Reactive Cyanide	ND	3.9	3.9	mg/Kg	1		SW-846 9014	4/14/16	4/14/16 23:00	DJM
Reactive Sulfide	ND	20	20	mg/Kg	1		SW-846 9030A	4/14/16	4/14/16 20:30	DJM
% Solids	90.2			% Wt	1		SM 2540G	4/12/16	4/13/16 7:53	MRL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05
Sample ID: 16D0458-02
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.072	0.017	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Acrylonitrile	ND	0.0043	0.0018	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
tert-Amyl Methyl Ether (TAME)	ND	0.00072	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Benzene	ND	0.0014	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Bromobenzene	ND	0.0014	0.00058	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Bromochloromethane	ND	0.0014	0.0010	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Bromodichloromethane	ND	0.0014	0.00043	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Bromoform	ND	0.0014	0.0010	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Bromomethane	ND	0.0072	0.0012	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
2-Butanone (MEK)	ND	0.029	0.013	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
tert-Butyl Alcohol (TBA)	ND	0.029	0.015	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
n-Butylbenzene	ND	0.0014	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
sec-Butylbenzene	ND	0.0014	0.00072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
tert-Butylbenzene	ND	0.0014	0.00065	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
tert-Butyl Ethyl Ether (TBEE)	ND	0.00072	0.00043	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Carbon Disulfide	ND	0.0043	0.0025	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Carbon Tetrachloride	ND	0.0014	0.00058	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Chlorobenzene	ND	0.0014	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Chlorodibromomethane	ND	0.00072	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Chloroethane	ND	0.014	0.0011	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Chloroform	ND	0.0029	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Chloromethane	ND	0.0072	0.00065	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
2-Chlorotoluene	ND	0.0014	0.00058	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
4-Chlorotoluene	ND	0.0014	0.00058	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0029	0.00080	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,2-Dibromoethane (EDB)	ND	0.00072	0.00072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Dibromomethane	ND	0.0014	0.00043	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,2-Dichlorobenzene	ND	0.0014	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,3-Dichlorobenzene	ND	0.0014	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,4-Dichlorobenzene	ND	0.0014	0.00058	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
trans-1,4-Dichloro-2-butene	ND	0.0029	0.00087	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Dichlorodifluoromethane (Freon 12)	ND	0.014	0.00094	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,1-Dichloroethane	ND	0.0014	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,2-Dichloroethane	ND	0.0014	0.00094	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,1-Dichloroethylene	ND	0.0029	0.00080	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
cis-1,2-Dichloroethylene	ND	0.0014	0.00058	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
trans-1,2-Dichloroethylene	ND	0.0014	0.00065	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,2-Dichloropropane	ND	0.0014	0.00094	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,3-Dichloropropane	ND	0.00072	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
2,2-Dichloropropane	ND	0.0014	0.00065	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,1-Dichloropropene	ND	0.0014	0.00065	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
cis-1,3-Dichloropropene	ND	0.00072	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
trans-1,3-Dichloropropene	ND	0.00072	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Diethyl Ether	ND	0.014	0.0013	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05
Sample ID: 16D0458-02
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00072	0.00043	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,4-Dioxane	ND	0.072	0.042	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Ethylbenzene	ND	0.0014	0.00058	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Hexachlorobutadiene	ND	0.0014	0.00072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
2-Hexanone (MBK)	ND	0.014	0.0079	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Isopropylbenzene (Cumene)	ND	0.0014	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
p-Isopropyltoluene (p-Cymene)	ND	0.0014	0.00058	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Methyl Acetate	ND	0.0014	0.0012	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Methyl tert-Butyl Ether (MTBE)	ND	0.0029	0.00065	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Methyl Cyclohexane	ND	0.0014	0.00072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Methylene Chloride	ND	0.014	0.0051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.014	0.0055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Naphthalene	ND	0.0029	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
n-Propylbenzene	ND	0.0014	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Styrene	ND	0.0014	0.00043	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,1,1,2-Tetrachloroethane	ND	0.0014	0.0013	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,1,2,2-Tetrachloroethane	ND	0.0014	0.00065	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Tetrachloroethylene	ND	0.0014	0.00094	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Tetrahydrofuran	ND	0.0072	0.0016	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Toluene	ND	0.0014	0.00058	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,2,3-Trichlorobenzene	ND	0.0014	0.00043	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,2,4-Trichlorobenzene	ND	0.0014	0.00058	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,3,5-Trichlorobenzene	ND	0.0014	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,1,1-Trichloroethane	ND	0.0014	0.00072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,1,2-Trichloroethane	ND	0.0029	0.00087	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Trichloroethylene	ND	0.0014	0.00072	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Trichlorofluoromethane (Freon 11)	ND	0.0072	0.00080	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,2,3-Trichloropropane	ND	0.0014	0.00080	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0072	0.00065	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,2,4-Trimethylbenzene	ND	0.0014	0.00058	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
1,3,5-Trimethylbenzene	ND	0.0014	0.00043	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
Vinyl Chloride	ND	0.0072	0.00080	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
m+p Xylene	ND	0.0029	0.0012	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD
o-Xylene	ND	0.0014	0.00051	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 9:35	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	114	70-130		4/12/16 9:35
Toluene-d8	102	70-130		4/12/16 9:35
4-Bromofluorobenzene	95.3	70-130		4/12/16 9:35

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05
Sample ID: 16D0458-02
Sample Matrix: Soil

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	mg/Kg dry			1			SW-846 8260C	4/12/16	4/12/16 9:35	WSD

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05
Sample ID: 16D0458-02
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.055	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Acenaphthylene	ND	0.18	0.062	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Acetophenone	ND	0.37	0.072	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Aniline	ND	0.37	0.10	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Anthracene	ND	0.18	0.053	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Benzidine	ND	0.71	0.46	mg/Kg dry	1	V-04, V-05	SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Benzo(a)anthracene	ND	0.18	0.049	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Benzo(a)pyrene	ND	0.18	0.057	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Benzo(b)fluoranthene	ND	0.18	0.052	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Benzo(g,h,i)perylene	ND	0.18	0.081	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Benzo(k)fluoranthene	ND	0.18	0.057	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Benzoic Acid	0.30	1.1	0.20	mg/Kg dry	1	V-20, J	SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Bis(2-chloroethoxy)methane	ND	0.37	0.070	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Bis(2-chloroethyl)ether	ND	0.37	0.072	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Bis(2-chloroisopropyl)ether	ND	0.37	0.079	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.37	0.14	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:03	BGL
4-Bromophenylphenylether	ND	0.37	0.062	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Butylbenzylphthalate	ND	0.37	0.087	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Carbazole	ND	0.18	0.048	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
4-Chloroaniline	ND	0.71	0.084	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
4-Chloro-3-methylphenol	ND	0.71	0.079	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2-Chloronaphthalene	ND	0.37	0.069	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2-Chlorophenol	ND	0.37	0.066	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
4-Chlorophenylphenylether	ND	0.37	0.062	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Chrysene	ND	0.18	0.057	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Dibenz(a,h)anthracene	ND	0.18	0.11	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Dibenzofuran	ND	0.37	0.064	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Di-n-butylphthalate	ND	0.37	0.080	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
1,2-Dichlorobenzene	ND	0.37	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
1,3-Dichlorobenzene	ND	0.37	0.063	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
1,4-Dichlorobenzene	ND	0.37	0.066	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
3,3-Dichlorobenzidine	ND	0.18	0.056	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2,4-Dichlorophenol	ND	0.37	0.063	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Diethylphthalate	ND	0.37	0.066	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2,4-Dimethylphenol	ND	0.37	0.068	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Dimethylphthalate	ND	0.37	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
4,6-Dinitro-2-methylphenol	ND	0.37	0.35	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2,4-Dinitrophenol	ND	0.71	0.21	mg/Kg dry	1	V-19	SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2,4-Dinitrotoluene	ND	0.37	0.059	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2,6-Dinitrotoluene	ND	0.37	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Di-n-octylphthalate	ND	0.37	0.19	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:03	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.37	0.059	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Fluoranthene	ND	0.18	0.060	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Fluorene	ND	0.18	0.059	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05
Sample ID: 16D0458-02
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.37	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Hexachlorobutadiene	ND	0.37	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Hexachlorocyclopentadiene	ND	0.37	0.078	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Hexachloroethane	ND	0.37	0.073	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Indeno(1,2,3-cd)pyrene	ND	0.18	0.13	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Isophorone	ND	0.37	0.071	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
1-Methylnaphthalene	ND	0.18	0.070	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2-Methylnaphthalene	ND	0.18	0.064	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2-Methylphenol	ND	0.37	0.092	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
3/4-Methylphenol	ND	0.37	0.12	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Naphthalene	ND	0.18	0.094	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2-Nitroaniline	ND	0.37	0.062	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:03	BGL
3-Nitroaniline	ND	0.37	0.053	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
4-Nitroaniline	ND	0.37	0.062	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Nitrobenzene	ND	0.37	0.069	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2-Nitrophenol	ND	0.37	0.097	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:03	BGL
4-Nitrophenol	ND	0.71	0.080	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
N-Nitrosodimethylamine	ND	0.37	0.23	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
N-Nitrosodiphenylamine	ND	0.37	0.076	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
N-Nitrosodi-n-propylamine	ND	0.37	0.076	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Pentachloronitrobenzene	ND	0.37	0.087	mg/Kg dry	1	V-16	SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Pentachlorophenol	ND	0.37	0.089	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Phenanthrene	ND	0.18	0.095	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Phenol	ND	0.37	0.063	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Pyrene	ND	0.18	0.060	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
Pyridine	ND	0.37	0.059	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
1,2,4,5-Tetrachlorobenzene	ND	0.37	0.066	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
1,2,4-Trichlorobenzene	ND	0.37	0.066	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2,4,5-Trichlorophenol	ND	0.37	0.083	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL
2,4,6-Trichlorophenol	ND	0.37	0.062	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:03	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	88.6	30-130		4/13/16 15:03
Phenol-d6	101	30-130		4/13/16 15:03
Nitrobenzene-d5	102	30-130		4/13/16 15:03
2-Fluorobiphenyl	99.8	30-130		4/13/16 15:03
2,4,6-Tribromophenol	90.1	30-130		4/13/16 15:03
p-Terphenyl-d14	119	30-130		4/13/16 15:03

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05
Sample ID: 16D0458-02
Sample Matrix: Soil

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	mg/Kg dry			1			SW-846 8270D	4/11/16	4/13/16 15:03	BGL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05
Sample ID: 16D0458-02
Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
alpha-Chlordane [1]	ND	0.0054	0.00030	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
gamma-Chlordane [1]	ND	0.0054	0.00030	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Alachlor [1]	ND	0.022	0.0012	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Aldrin [1]	ND	0.0022	0.00033	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
alpha-BHC [1]	ND	0.0054	0.00043	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
beta-BHC [1]	ND	0.0054	0.00054	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
delta-BHC [1]	ND	0.0054	0.00043	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
gamma-BHC (Lindane) [1]	ND	0.0022	0.00054	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Chlordane [1]	ND	0.022	0.0063	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
4,4'-DDD [1]	ND	0.0011	0.00043	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
4,4'-DDE [1]	ND	0.0011	0.00033	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
4,4'-DDT [1]	ND	0.0011	0.00043	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Dieldrin [1]	ND	0.0011	0.00033	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Endosulfan I [1]	ND	0.0054	0.00043	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Endosulfan II [1]	ND	0.0087	0.00033	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Endosulfan sulfate [1]	ND	0.0087	0.0014	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Endrin [1]	ND	0.0087	0.00033	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Endrin aldehyde [1]	ND	0.0087	0.0013	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Endrin ketone [1]	ND	0.0087	0.00043	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Heptachlor [1]	ND	0.0054	0.00054	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Heptachlor epoxide [1]	ND	0.0054	0.00043	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Hexachlorobenzene [1]	ND	0.0065	0.00076	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Methoxychlor [1]	ND	0.054	0.00065	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL
Toxaphene [1]	ND	0.11	0.047	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:32	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	91.3	30-150		4/13/16 20:32
Decachlorobiphenyl [2]	88.7	30-150		4/13/16 20:32
Tetrachloro-m-xylene [1]	83.5	30-150		4/13/16 20:32
Tetrachloro-m-xylene [2]	82.2	30-150		4/13/16 20:32

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458

Date Received: 4/11/2016

Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05

Sample ID: 16D0458-02

Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.11	0.065	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:25	PJG
Aroclor-1221 [1]	ND	0.11	0.070	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:25	PJG
Aroclor-1232 [1]	ND	0.11	0.048	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:25	PJG
Aroclor-1242 [1]	ND	0.11	0.054	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:25	PJG
Aroclor-1248 [1]	ND	0.11	0.065	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:25	PJG
Aroclor-1254 [1]	ND	0.11	0.070	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:25	PJG
Aroclor-1260 [1]	ND	0.11	0.075	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:25	PJG
Aroclor-1262 [1]	ND	0.11	0.054	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:25	PJG
Aroclor-1268 [1]	ND	0.11	0.043	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:25	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	82.1	30-150		4/13/16 16:25
Decachlorobiphenyl [2]	81.7	30-150		4/13/16 16:25
Tetrachloro-m-xylene [1]	86.0	30-150		4/13/16 16:25
Tetrachloro-m-xylene [2]	86.0	30-150		4/13/16 16:25

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458

Date Received: 4/11/2016

Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05

Sample ID: 16D0458-02

Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	2.4	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 3:25	KAL
2,4-DB [1]	ND	27	5.4	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 3:25	KAL
2,4,5-TP (Silvex) [1]	ND	2.7	0.30	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 3:25	KAL
2,4,5-T [1]	ND	2.7	0.37	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 3:25	KAL
Dalalpon [1]	ND	68	4.1	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 3:25	KAL
Dicamba [1]	ND	2.7	0.38	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 3:25	KAL
Dichloroprop [1]	ND	27	5.1	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 3:25	KAL
Dinoseb [1]	ND	14	0.56	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 3:25	KAL
MCPA [1]	ND	2700	410	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 3:25	KAL
MCPP [1]	ND	2700	360	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 3:25	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,4-Dichlorophenylacetic acid [1]	85.1	30-150		4/14/16 3:25
2,4-Dichlorophenylacetic acid [2]	82.0	30-150		4/14/16 3:25

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05
Sample ID: 16D0458-02
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	2.3	2.3	mg/Kg dry	1		SW-846 8015C	4/14/16	4/14/16 17:28	EEH
Diesel Range Organics	2.2	9.0	2.0	mg/Kg dry	1	J	SW-846 8015C	4/11/16	4/12/16 20:37	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1-Chloro-3-fluorobenzene	70.8	70-130		4/14/16 17:28
o-Terphenyl	65.5	40-140		4/12/16 20:37

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05
Sample ID: 16D0458-02
Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.7	1.0	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Arsenic	ND	2.7	0.49	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Barium	57	2.7	0.83	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Beryllium	0.43	0.27	0.21	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Cadmium	0.30	0.27	0.12	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Chromium	18	0.53	0.25	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Cobalt	7.7	2.7	0.82	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Copper	20	0.53	0.19	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Lead	8.5	0.80	0.28	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Manganese	310	0.53	0.37	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Mercury	ND	0.028	0.0046	mg/Kg dry	1		SW-846 7471B	4/12/16	4/13/16 10:27	TGW
Nickel	16	0.53	0.16	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Selenium	ND	5.3	0.82	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Silver	ND	0.53	0.42	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Thallium	ND	2.7		mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Vanadium	22	1.1	0.31	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME
Zinc	36	1.1	0.88	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:51	AME

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-2 (0-5)
Sampled: 4/9/2016 10:05
Sample ID: 16D0458-02
Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.34	0.16	mg/Kg dry	1		SW-846 9014	4/18/16	4/18/16 13:50	VAK
Free Liquid	Absent			present/absent	1		SW-846 9095B	4/12/16	4/12/16 14:30	LL
Hexavalent Chromium	ND	1.7	1.3	mg/Kg dry	10	DL-03	SW-846 7196A	4/15/16	4/18/16 12:00	LL
Ignitability	Absent			present/absent	1		SW-846 1030	4/12/16	4/12/16 18:00	DJM
pH @23.1°C	7.7			pH Units	1	H-03	SW-846 9045C	4/12/16	4/12/16 9:50	MMH
Reactive Cyanide	ND	4.0	4.0	mg/Kg	1		SW-846 9014	4/14/16	4/14/16 23:00	DJM
Reactive Sulfide	ND	20	20	mg/Kg	1		SW-846 9030A	4/14/16	4/14/16 20:30	DJM
% Solids	92.0			% Wt	1		SM 2540G	4/12/16	4/13/16 7:53	MRL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48
Sample ID: 16D0458-03
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	0.079	0.018	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Acrylonitrile	ND	0.0047	0.0020	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
tert-Amyl Methyl Ether (TAME)	ND	0.00079	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Benzene	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Bromobenzene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Bromochloromethane	ND	0.0016	0.0011	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Bromodichloromethane	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Bromoform	ND	0.0016	0.0011	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Bromomethane	ND	0.0079	0.0013	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
2-Butanone (MEK)	ND	0.032	0.014	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
tert-Butyl Alcohol (TBA)	ND	0.032	0.016	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
n-Butylbenzene	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
sec-Butylbenzene	ND	0.0016	0.00079	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
tert-Butylbenzene	ND	0.0016	0.00071	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
tert-Butyl Ethyl Ether (TBEE)	ND	0.00079	0.00047	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Carbon Disulfide	ND	0.0047	0.0028	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Carbon Tetrachloride	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Chlorobenzene	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Chlorodibromomethane	ND	0.00079	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Chloroethane	ND	0.016	0.0012	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Chloroform	ND	0.0032	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Chloromethane	ND	0.0079	0.00071	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
2-Chlorotoluene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
4-Chlorotoluene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0032	0.00087	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,2-Dibromoethane (EDB)	ND	0.00079	0.00079	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Dibromomethane	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,2-Dichlorobenzene	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,3-Dichlorobenzene	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,4-Dichlorobenzene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
trans-1,4-Dichloro-2-butene	ND	0.0032	0.00095	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Dichlorodifluoromethane (Freon 12)	ND	0.016	0.0010	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,1-Dichloroethane	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,2-Dichloroethane	ND	0.0016	0.0010	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,1-Dichloroethylene	ND	0.0032	0.00087	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
cis-1,2-Dichloroethylene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
trans-1,2-Dichloroethylene	ND	0.0016	0.00071	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,2-Dichloropropane	ND	0.0016	0.0010	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,3-Dichloropropane	ND	0.00079	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
2,2-Dichloropropane	ND	0.0016	0.00071	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,1-Dichloropropene	ND	0.0016	0.00071	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
cis-1,3-Dichloropropene	ND	0.00079	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
trans-1,3-Dichloropropene	ND	0.00079	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Diethyl Ether	ND	0.016	0.0014	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48
Sample ID: 16D0458-03
Sample Matrix: Soil

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.00079	0.00047	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,4-Dioxane	ND	0.079	0.045	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Ethylbenzene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Hexachlorobutadiene	ND	0.0016	0.00079	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
2-Hexanone (MBK)	ND	0.016	0.0086	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Isopropylbenzene (Cumene)	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
p-Isopropyltoluene (p-Cymene)	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Methyl Acetate	ND	0.0016	0.0013	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Methyl tert-Butyl Ether (MTBE)	ND	0.0032	0.00071	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Methyl Cyclohexane	ND	0.0016	0.00079	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Methylene Chloride	ND	0.016	0.0056	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
4-Methyl-2-pentanone (MIBK)	ND	0.016	0.0060	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Naphthalene	ND	0.0032	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
n-Propylbenzene	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Styrene	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,1,1,2-Tetrachloroethane	ND	0.0016	0.0014	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,1,2,2-Tetrachloroethane	ND	0.0016	0.00071	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Tetrachloroethylene	ND	0.0016	0.0010	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Tetrahydrofuran	ND	0.0079	0.0017	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Toluene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,2,3-Trichlorobenzene	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,2,4-Trichlorobenzene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,3,5-Trichlorobenzene	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,1,1-Trichloroethane	ND	0.0016	0.00079	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,1,2-Trichloroethane	ND	0.0032	0.00095	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Trichloroethylene	ND	0.0016	0.00079	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Trichlorofluoromethane (Freon 11)	ND	0.0079	0.00087	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,2,3-Trichloropropane	ND	0.0016	0.00087	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.0079	0.00071	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,2,4-Trimethylbenzene	ND	0.0016	0.00063	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
1,3,5-Trimethylbenzene	ND	0.0016	0.00047	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
Vinyl Chloride	ND	0.0079	0.00087	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
m+p Xylene	ND	0.0032	0.0013	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD
o-Xylene	ND	0.0016	0.00055	mg/Kg dry	1		SW-846 8260C	4/12/16	4/12/16 10:08	WSD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	117	70-130		4/12/16 10:08
Toluene-d8	100	70-130		4/12/16 10:08
4-Bromofluorobenzene	93.2	70-130		4/12/16 10:08

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48
Sample ID: 16D0458-03
Sample Matrix: Soil

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	mg/Kg dry			1			SW-846 8260C	4/12/16	4/12/16 10:08	WSD

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Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48
Sample ID: 16D0458-03
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	0.18	0.054	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Acenaphthylene	ND	0.18	0.061	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Acetophenone	ND	0.36	0.072	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Aniline	ND	0.36	0.10	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Anthracene	ND	0.18	0.052	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Benzidine	ND	0.70	0.45	mg/Kg dry	1	V-04, V-05	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Benzo(a)anthracene	0.82	0.18	0.048	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Benzo(a)pyrene	0.87	0.18	0.057	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Benzo(b)fluoranthene	1.1	0.18	0.051	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Benzo(g,h,i)perylene	0.55	0.18	0.080	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Benzo(k)fluoranthene	0.41	0.18	0.057	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Benzoic Acid	ND	1.1	0.19	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Bis(2-chloroethoxy)methane	ND	0.36	0.069	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Bis(2-chloroethyl)ether	ND	0.36	0.072	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Bis(2-chloroisopropyl)ether	ND	0.36	0.078	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Bis(2-Ethylhexyl)phthalate	ND	0.36	0.14	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
4-Bromophenylphenylether	ND	0.36	0.061	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Butylbenzylphthalate	ND	0.36	0.086	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Carbazole	ND	0.18	0.047	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
4-Chloroaniline	ND	0.70	0.083	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
4-Chloro-3-methylphenol	ND	0.70	0.078	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2-Chloronaphthalene	ND	0.36	0.068	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2-Chlorophenol	ND	0.36	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
4-Chlorophenylphenylether	ND	0.36	0.061	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Chrysene	0.73	0.18	0.057	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Dibenz(a,h)anthracene	0.16	0.18	0.11	mg/Kg dry	1	J	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Dibenzofuran	ND	0.36	0.063	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Di-n-butylphthalate	ND	0.36	0.079	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
1,2-Dichlorobenzene	ND	0.36	0.064	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
1,3-Dichlorobenzene	ND	0.36	0.062	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
1,4-Dichlorobenzene	ND	0.36	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
3,3-Dichlorobenzidine	ND	0.18	0.055	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2,4-Dichlorophenol	ND	0.36	0.062	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Diethylphthalate	ND	0.36	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2,4-Dimethylphenol	ND	0.36	0.067	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Dimethylphthalate	ND	0.36	0.064	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
4,6-Dinitro-2-methylphenol	ND	0.36	0.34	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2,4-Dinitrophenol	ND	0.70	0.21	mg/Kg dry	1	V-19	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2,4-Dinitrotoluene	ND	0.36	0.059	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2,6-Dinitrotoluene	ND	0.36	0.064	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Di-n-octylphthalate	ND	0.36	0.19	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.36	0.059	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Fluoranthene	1.4	0.18	0.060	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Fluorene	ND	0.18	0.059	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48
Sample ID: 16D0458-03
Sample Matrix: Soil

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	0.36	0.064	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Hexachlorobutadiene	ND	0.36	0.064	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Hexachlorocyclopentadiene	ND	0.36	0.077	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Hexachloroethane	ND	0.36	0.073	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Indeno(1,2,3-cd)pyrene	0.56	0.18	0.13	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Isophorone	ND	0.36	0.070	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
1-Methylnaphthalene	ND	0.18	0.069	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2-Methylnaphthalene	ND	0.18	0.063	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2-Methylphenol	ND	0.36	0.091	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
3/4-Methylphenol	ND	0.36	0.12	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Naphthalene	ND	0.18	0.093	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2-Nitroaniline	ND	0.36	0.061	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
3-Nitroaniline	ND	0.36	0.052	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
4-Nitroaniline	ND	0.36	0.061	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Nitrobenzene	ND	0.36	0.068	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2-Nitrophenol	ND	0.36	0.096	mg/Kg dry	1	V-20	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
4-Nitrophenol	ND	0.70	0.079	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
N-Nitrosodimethylamine	ND	0.36	0.23	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
N-Nitrosodiphenylamine	ND	0.36	0.075	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
N-Nitrosodi-n-propylamine	ND	0.36	0.075	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Pentachloronitrobenzene	ND	0.36	0.086	mg/Kg dry	1	V-16	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Pentachlorophenol	ND	0.36	0.088	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Phenanthrene	0.10	0.18	0.094	mg/Kg dry	1	J	SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Phenol	ND	0.36	0.062	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Pyrene	1.4	0.18	0.060	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
Pyridine	ND	0.36	0.059	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
1,2,4,5-Tetrachlorobenzene	ND	0.36	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
1,2,4-Trichlorobenzene	ND	0.36	0.065	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2,4,5-Trichlorophenol	ND	0.36	0.082	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL
2,4,6-Trichlorophenol	ND	0.36	0.061	mg/Kg dry	1		SW-846 8270D	4/11/16	4/13/16 15:27	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	78.4	30-130		4/13/16 15:27
Phenol-d6	89.5	30-130		4/13/16 15:27
Nitrobenzene-d5	105	30-130		4/13/16 15:27
2-Fluorobiphenyl	88.8	30-130		4/13/16 15:27
2,4,6-Tribromophenol	70.6	30-130		4/13/16 15:27
p-Terphenyl-d14	95.6	30-130		4/13/16 15:27

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48
Sample ID: 16D0458-03
Sample Matrix: Soil

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo[e]pyrene	0.80	mg/Kg dry	314316	11.041	1	000192-97-2	95	SW-846 8270D	4/11/16	4/13/16 15:27	BGL

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Project Location: SCA 131Q
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Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48
Sample ID: 16D0458-03
Sample Matrix: Soil

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
alpha-Chlordane [1]	ND	0.0053	0.00030	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
gamma-Chlordane [1]	ND	0.0053	0.00030	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Alachlor [1]	ND	0.021	0.0012	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Aldrin [1]	ND	0.0021	0.00032	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
alpha-BHC [1]	ND	0.0053	0.00042	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
beta-BHC [1]	ND	0.0053	0.00053	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
delta-BHC [1]	ND	0.0053	0.00042	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
gamma-BHC (Lindane) [1]	ND	0.0021	0.00053	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Chlordane [1]	ND	0.021	0.0061	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
4,4'-DDD [1]	ND	0.0011	0.00042	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
4,4'-DDE [1]	ND	0.0011	0.00032	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
4,4'-DDT [1]	0.00086	0.0011	0.00042	mg/Kg dry	1	J	SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Dieldrin [1]	ND	0.0011	0.00032	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Endosulfan I [1]	ND	0.0053	0.00042	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Endosulfan II [1]	ND	0.0085	0.00032	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Endosulfan sulfate [1]	ND	0.0085	0.0014	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Endrin [1]	ND	0.0085	0.00032	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Endrin aldehyde [1]	ND	0.0085	0.0013	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Endrin ketone [1]	ND	0.0085	0.00042	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Heptachlor [1]	ND	0.0053	0.00053	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Heptachlor epoxide [1]	ND	0.0053	0.00042	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Hexachlorobenzene [1]	ND	0.0063	0.00074	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Methoxychlor [1]	ND	0.053	0.00063	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL
Toxaphene [1]	ND	0.11	0.045	mg/Kg dry	1		SW-846 8081B	4/12/16	4/13/16 20:56	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	74.2	30-150		4/13/16 20:56
Decachlorobiphenyl [2]	74.1	30-150		4/13/16 20:56
Tetrachloro-m-xylene [1]	71.4	30-150		4/13/16 20:56
Tetrachloro-m-xylene [2]	69.7	30-150		4/13/16 20:56

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48
Sample ID: 16D0458-03
Sample Matrix: Soil

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.10	0.063	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:39	PJG
Aroclor-1221 [1]	ND	0.10	0.068	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:39	PJG
Aroclor-1232 [1]	ND	0.10	0.047	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:39	PJG
Aroclor-1242 [1]	ND	0.10	0.052	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:39	PJG
Aroclor-1248 [1]	ND	0.10	0.063	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:39	PJG
Aroclor-1254 [1]	ND	0.10	0.068	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:39	PJG
Aroclor-1260 [1]	ND	0.10	0.073	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:39	PJG
Aroclor-1262 [1]	ND	0.10	0.052	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:39	PJG
Aroclor-1268 [1]	ND	0.10	0.042	mg/Kg dry	5		SW-846 8082A	4/12/16	4/13/16 16:39	PJG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	68.6	30-150		4/13/16 16:39
Decachlorobiphenyl [2]	69.6	30-150		4/13/16 16:39
Tetrachloro-m-xylene [1]	71.1	30-150		4/13/16 16:39
Tetrachloro-m-xylene [2]	69.7	30-150		4/13/16 16:39

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Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48
Sample ID: 16D0458-03
Sample Matrix: Soil

Herbicides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2,4-D [1]	ND	27	2.3	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 4:04	KAL
2,4-DB [1]	ND	27	5.3	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 4:04	KAL
2,4,5-TP (Silvex) [1]	ND	2.7	0.29	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 4:04	KAL
2,4,5-T [1]	ND	2.7	0.36	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 4:04	KAL
Dalalpon [1]	ND	67	4.0	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 4:04	KAL
Dicamba [1]	ND	2.7	0.37	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 4:04	KAL
Dichloroprop [1]	ND	27	5.0	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 4:04	KAL
Dinoseb [1]	ND	13	0.55	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 4:04	KAL
MCPA [1]	580	2700	410	µg/kg dry	1	P-08, J	SW-846 8151A	4/12/16	4/14/16 4:04	KAL
MCPP [1]	ND	2700	350	µg/kg dry	1		SW-846 8151A	4/12/16	4/14/16 4:04	KAL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2,4-Dichlorophenylacetic acid [1]	99.6	30-150		4/14/16 4:04
2,4-Dichlorophenylacetic acid [2]	84.6	30-150		4/14/16 4:04

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Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458
Date Received: 4/11/2016
Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48
Sample ID: 16D0458-03
Sample Matrix: Soil

Petroleum Hydrocarbons Analyses

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Gasoline Range Organics (GRO)	ND	0.85	0.82	mg/Kg dry	1		SW-846 8015C	4/14/16	4/14/16 18:04	EEH
Diesel Range Organics	27	8.9	2.0	mg/Kg dry	1		SW-846 8015C	4/11/16	4/12/16 21:12	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1-Chloro-3-fluorobenzene	74.1	70-130		4/14/16 18:04
o-Terphenyl	70.7	40-140		4/12/16 21:12

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Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458

Date Received: 4/11/2016

Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48

Sample ID: 16D0458-03

Sample Matrix: Soil

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	2.5	0.92	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Arsenic	0.46	2.5	0.45	mg/Kg dry	1	J	SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Barium	65	2.5	0.77	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Beryllium	0.43	0.25	0.20	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Cadmium	0.40	0.25	0.11	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Chromium	20	0.49	0.23	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Cobalt	7.5	2.5	0.76	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Copper	22	0.49	0.18	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Lead	35	0.74	0.26	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Manganese	250	0.49	0.35	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Mercury	0.38	0.027	0.0046	mg/Kg dry	1		SW-846 7471B	4/12/16	4/13/16 10:28	TGW
Nickel	17	0.49	0.14	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Selenium	ND	4.9	0.76	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Silver	ND	0.49	0.39	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Thallium	ND	2.5		mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Vanadium	25	0.99	0.29	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME
Zinc	55	0.99	0.81	mg/Kg dry	1		SW-846 6010C-D	4/15/16	4/15/16 15:55	AME

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Project Location: SCA 131Q
Sample Description:
Work Order: 16D0458

Date Received: 4/11/2016

Field Sample #: GP-3 (0-5)
Sampled: 4/9/2016 07:48

Sample ID: 16D0458-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Cyanide	ND	0.52	0.25	mg/Kg dry	1		SW-846 9014	4/18/16	4/18/16 13:50	VAK
Free Liquid	Absent			present/absent	1		SW-846 9095B	4/12/16	4/12/16 14:30	LL
Hexavalent Chromium	ND	1.7	1.3	mg/Kg dry	10	DL-03	SW-846 7196A	4/15/16	4/18/16 12:00	LL
Ignitability	Absent			present/absent	1		SW-846 1030	4/12/16	4/12/16 18:00	DJM
pH @22.4°C	7.5			pH Units	1	H-03	SW-846 9045C	4/12/16	4/12/16 9:50	MMH
Reactive Cyanide	ND	3.9	3.9	mg/Kg	1		SW-846 9014	4/14/16	4/14/16 23:00	DJM
Reactive Sulfide	ND	19	19	mg/Kg	1		SW-846 9030A	4/14/16	4/14/16 20:30	DJM
% Solids	93.7			% Wt	1		SM 2540G	4/12/16	4/13/16 7:53	MRL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
16D0458-01 [GP-1 (0-5)]	B146430	04/12/16
16D0458-02 [GP-2 (0-5)]	B146430	04/12/16
16D0458-03 [GP-3 (0-5)]	B146430	04/12/16

SW-846 1030

Lab Number [Field ID]	Batch	Initial [g]	Date
16D0458-01 [GP-1 (0-5)]	B146485	50.0	04/12/16
16D0458-02 [GP-2 (0-5)]	B146485	50.0	04/12/16
16D0458-03 [GP-3 (0-5)]	B146485	50.0	04/12/16

Prep Method: SW-846 3050B-SW-846 6010C-D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146698	1.00	50.0	04/14/16

Prep Method: SW-846 3050B-SW-846 6010C-D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146777	1.02	50.0	04/15/16
16D0458-02 [GP-2 (0-5)]	B146777	1.02	50.0	04/15/16
16D0458-03 [GP-3 (0-5)]	B146777	1.08	50.0	04/15/16

SW-846 7196A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146802	2.50	100	04/15/16
16D0458-02 [GP-2 (0-5)]	B146802	2.50	100	04/15/16
16D0458-03 [GP-3 (0-5)]	B146802	2.56	100	04/15/16

Prep Method: SW-846 7471-SW-846 7471B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146400	0.582	50.0	04/12/16
16D0458-02 [GP-2 (0-5)]	B146400	0.589	50.0	04/12/16
16D0458-03 [GP-3 (0-5)]	B146400	0.587	50.0	04/12/16

Prep Method: SW-846 3546-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146383	30.0	1.00	04/11/16
16D0458-02 [GP-2 (0-5)]	B146383	30.2	1.00	04/11/16
16D0458-03 [GP-3 (0-5)]	B146383	30.0	1.00	04/11/16

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 5035/5030B-SW-846 8015C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146689	8.50	15.8	04/14/16
16D0458-02 [GP-2 (0-5)]	B146689	7.30	15.6	04/14/16
16D0458-03 [GP-3 (0-5)]	B146689	6.80	5.40	04/14/16

Prep Method: SW-846 3546-SW-846 8081B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146416	10.0	10.0	04/12/16
16D0458-02 [GP-2 (0-5)]	B146416	10.0	10.0	04/12/16
16D0458-03 [GP-3 (0-5)]	B146416	10.1	10.0	04/12/16

Prep Method: SW-846 3546-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146392	10.5	10.0	04/12/16
16D0458-02 [GP-2 (0-5)]	B146392	10.1	10.0	04/12/16
16D0458-03 [GP-3 (0-5)]	B146392	10.2	10.0	04/12/16

Prep Method: SW-846 8151-SW-846 8151A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146390	20.2	5.00	04/12/16
16D0458-02 [GP-2 (0-5)]	B146390	20.1	5.00	04/12/16
16D0458-03 [GP-3 (0-5)]	B146390	20.0	5.00	04/12/16

Prep Method: SW-846 5035-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146458	8.42	10.0	04/12/16
16D0458-02 [GP-2 (0-5)]	B146458	7.51	10.0	04/12/16
16D0458-03 [GP-3 (0-5)]	B146458	6.77	10.0	04/12/16

Prep Method: SW-846 3546-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146384	30.1	1.00	04/11/16
16D0458-02 [GP-2 (0-5)]	B146384	30.2	1.00	04/11/16
16D0458-03 [GP-3 (0-5)]	B146384	30.0	1.00	04/11/16

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146656	25.6	250	04/14/16
16D0458-02 [GP-2 (0-5)]	B146656	25.2	250	04/14/16
16D0458-03 [GP-3 (0-5)]	B146656	25.6	250	04/14/16

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Sample Extraction Data

SW-846 9014

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146950	1.84	50.0	04/18/16
16D0458-02 [GP-2 (0-5)]	B146950	1.59	50.0	04/18/16
16D0458-03 [GP-3 (0-5)]	B146950	1.02	50.0	04/18/16

SW-846 9030A

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146657	25.6	250	04/14/16
16D0458-02 [GP-2 (0-5)]	B146657	25.2	250	04/14/16
16D0458-03 [GP-3 (0-5)]	B146657	25.6	250	04/14/16

SW-846 9045C

Lab Number [Field ID]	Batch	Initial [g]	Date
16D0458-01 [GP-1 (0-5)]	B146447	20.0	04/12/16
16D0458-02 [GP-2 (0-5)]	B146447	20.0	04/12/16
16D0458-03 [GP-3 (0-5)]	B146447	20.0	04/12/16

SW-846 9095B

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16D0458-01 [GP-1 (0-5)]	B146408	100	100	04/12/16
16D0458-02 [GP-2 (0-5)]	B146408	100	100	04/12/16
16D0458-03 [GP-3 (0-5)]	B146408	100	100	04/12/16

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146458 - SW-846 5035										
Blank (B146458-BLK1)				Prepared & Analyzed: 04/12/16						
Acetone	ND	0.10	mg/Kg wet							
Acrylonitrile	ND	0.0060	mg/Kg wet							
tert-Amyl Methyl Ether (TAME)	ND	0.0010	mg/Kg wet							
Benzene	ND	0.0020	mg/Kg wet							
Bromobenzene	ND	0.0020	mg/Kg wet							
Bromochloromethane	ND	0.0020	mg/Kg wet							
Bromodichloromethane	ND	0.0020	mg/Kg wet							
Bromoform	ND	0.0020	mg/Kg wet							
Bromomethane	ND	0.010	mg/Kg wet							
2-Butanone (MEK)	ND	0.040	mg/Kg wet							
tert-Butyl Alcohol (TBA)	ND	0.040	mg/Kg wet							
n-Butylbenzene	ND	0.0020	mg/Kg wet							
sec-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butylbenzene	ND	0.0020	mg/Kg wet							
tert-Butyl Ethyl Ether (TBEE)	ND	0.0010	mg/Kg wet							
Carbon Disulfide	ND	0.0060	mg/Kg wet							
Carbon Tetrachloride	ND	0.0020	mg/Kg wet							
Chlorobenzene	ND	0.0020	mg/Kg wet							
Chlorodibromomethane	ND	0.0010	mg/Kg wet							
Chloroethane	ND	0.020	mg/Kg wet							
Chloroform	ND	0.0040	mg/Kg wet							
Chloromethane	ND	0.010	mg/Kg wet							
2-Chlorotoluene	ND	0.0020	mg/Kg wet							
4-Chlorotoluene	ND	0.0020	mg/Kg wet							
1,2-Dibromo-3-chloropropane (DBCP)	ND	0.0040	mg/Kg wet							
1,2-Dibromoethane (EDB)	ND	0.0010	mg/Kg wet							
Dibromomethane	ND	0.0020	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.0020	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.0020	mg/Kg wet							
trans-1,4-Dichloro-2-butene	ND	0.0040	mg/Kg wet							
Dichlorodifluoromethane (Freon 12)	ND	0.020	mg/Kg wet							
1,1-Dichloroethane	ND	0.0020	mg/Kg wet							
1,2-Dichloroethane	ND	0.0020	mg/Kg wet							
1,1-Dichloroethylene	ND	0.0040	mg/Kg wet							
cis-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
trans-1,2-Dichloroethylene	ND	0.0020	mg/Kg wet							
1,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,3-Dichloropropane	ND	0.0010	mg/Kg wet							
2,2-Dichloropropane	ND	0.0020	mg/Kg wet							
1,1-Dichloropropene	ND	0.0020	mg/Kg wet							
cis-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
trans-1,3-Dichloropropene	ND	0.0010	mg/Kg wet							
Diethyl Ether	ND	0.020	mg/Kg wet							
Diisopropyl Ether (DIPE)	ND	0.0010	mg/Kg wet							
1,4-Dioxane	ND	0.10	mg/Kg wet							
Ethylbenzene	ND	0.0020	mg/Kg wet							
Hexachlorobutadiene	ND	0.0020	mg/Kg wet							
2-Hexanone (MBK)	ND	0.020	mg/Kg wet							
Isopropylbenzene (Cumene)	ND	0.0020	mg/Kg wet							
p-Isopropyltoluene (p-Cymene)	ND	0.0020	mg/Kg wet							
Methyl Acetate	ND	0.0020	mg/Kg wet							

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B146458 - SW-846 5035												
Blank (B146458-BLK1)				Prepared & Analyzed: 04/12/16								
Methyl tert-Butyl Ether (MTBE)	ND	0.0040	mg/Kg wet									
Methyl Cyclohexane	ND	0.0020	mg/Kg wet									
Methylene Chloride	ND	0.020	mg/Kg wet									
4-Methyl-2-pentanone (MIBK)	ND	0.020	mg/Kg wet									
Naphthalene	ND	0.0040	mg/Kg wet									
n-Propylbenzene	ND	0.0020	mg/Kg wet									
Styrene	ND	0.0020	mg/Kg wet									
1,1,1,2-Tetrachloroethane	ND	0.0020	mg/Kg wet									
1,1,2,2-Tetrachloroethane	ND	0.0020	mg/Kg wet									
Tetrachloroethylene	ND	0.0020	mg/Kg wet									
Tetrahydrofuran	ND	0.010	mg/Kg wet									
Toluene	ND	0.0020	mg/Kg wet									
1,2,3-Trichlorobenzene	ND	0.0020	mg/Kg wet									
1,2,4-Trichlorobenzene	ND	0.0020	mg/Kg wet									
1,3,5-Trichlorobenzene	ND	0.0020	mg/Kg wet									
1,1,1-Trichloroethane	ND	0.0020	mg/Kg wet									
1,1,2-Trichloroethane	ND	0.0040	mg/Kg wet									
Trichloroethylene	ND	0.0020	mg/Kg wet									
Trichlorofluoromethane (Freon 11)	ND	0.010	mg/Kg wet									
1,2,3-Trichloropropane	ND	0.0020	mg/Kg wet									
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.010	mg/Kg wet									
1,2,4-Trimethylbenzene	ND	0.0020	mg/Kg wet									
1,3,5-Trimethylbenzene	ND	0.0020	mg/Kg wet									
Vinyl Chloride	ND	0.010	mg/Kg wet									
m+p Xylene	ND	0.0040	mg/Kg wet									
o-Xylene	ND	0.0020	mg/Kg wet									
Surrogate: 1,2-Dichloroethane-d4	*0.0580*		mg/Kg wet	0.0500		116		70-130				
Surrogate: Toluene-d8	*0.0516*		mg/Kg wet	0.0500		103		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0491*		mg/Kg wet	0.0500		98.1		70-130				
LCS (B146458-BS1)				Prepared & Analyzed: 04/12/16								
Acetone	0.416	0.10	mg/Kg wet	0.200		**208**	*	70-160			L-02	†
Acrylonitrile	0.0226	0.0060	mg/Kg wet	0.0200		113		70-130				
tert-Amyl Methyl Ether (TAME)	0.0220	0.0010	mg/Kg wet	0.0200		110		70-130				
Benzene	0.0220	0.0020	mg/Kg wet	0.0200		110		70-130				
Bromobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7		70-130				
Bromochloromethane	0.0266	0.0020	mg/Kg wet	0.0200		**133**	*	70-130			L-02	
Bromodichloromethane	0.0207	0.0020	mg/Kg wet	0.0200		103		70-130				
Bromoform	0.0208	0.0020	mg/Kg wet	0.0200		104		70-130				
Bromomethane	0.0142	0.010	mg/Kg wet	0.0200		70.8		40-130				†
2-Butanone (MEK)	0.322	0.040	mg/Kg wet	0.200		**161**	*	70-160			L-02	†
tert-Butyl Alcohol (TBA)	0.204	0.040	mg/Kg wet	0.200		102		40-130				†
n-Butylbenzene	0.0204	0.0020	mg/Kg wet	0.0200		102		70-130				
sec-Butylbenzene	0.0202	0.0020	mg/Kg wet	0.0200		101		70-130				
tert-Butylbenzene	0.0186	0.0020	mg/Kg wet	0.0200		93.2		70-160				†
tert-Butyl Ethyl Ether (TBEE)	0.0236	0.0010	mg/Kg wet	0.0200		118		70-130				
Carbon Disulfide	0.0204	0.0060	mg/Kg wet	0.0200		102		70-130				
Carbon Tetrachloride	0.0245	0.0020	mg/Kg wet	0.0200		123		70-130				
Chlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.6		70-130				
Chlorodibromomethane	0.0224	0.0010	mg/Kg wet	0.0200		112		70-130				
Chloroethane	0.0250	0.020	mg/Kg wet	0.0200		125		70-130			V-20	
Chloroform	0.0232	0.0040	mg/Kg wet	0.0200		116		70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B146458 - SW-846 5035												
LCS (B146458-BS1)				Prepared & Analyzed: 04/12/16								
Chloromethane	0.0162	0.010	mg/Kg wet	0.0200		81.1		70-130			V-20	
2-Chlorotoluene	0.0198	0.0020	mg/Kg wet	0.0200		98.9		70-130				
4-Chlorotoluene	0.0189	0.0020	mg/Kg wet	0.0200		94.3		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.0225	0.0040	mg/Kg wet	0.0200		113		70-130				
1,2-Dibromoethane (EDB)	0.0207	0.0010	mg/Kg wet	0.0200		104		70-130				
Dibromomethane	0.0243	0.0020	mg/Kg wet	0.0200		121		70-130				
1,2-Dichlorobenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.5		70-130				
1,3-Dichlorobenzene	0.0196	0.0020	mg/Kg wet	0.0200		97.9		70-130				
1,4-Dichlorobenzene	0.0187	0.0020	mg/Kg wet	0.0200		93.3		70-130				
trans-1,4-Dichloro-2-butene	0.0214	0.0040	mg/Kg wet	0.0200		107		70-130				
Dichlorodifluoromethane (Freon 12)	0.00804	0.020	mg/Kg wet	0.0200		40.2		40-160			J	†
1,1-Dichloroethane	0.0239	0.0020	mg/Kg wet	0.0200		120		70-130				
1,2-Dichloroethane	0.0229	0.0020	mg/Kg wet	0.0200		114		70-130				
1,1-Dichloroethylene	0.0225	0.0040	mg/Kg wet	0.0200		113		70-130				
cis-1,2-Dichloroethylene	0.0226	0.0020	mg/Kg wet	0.0200		113		70-130				
trans-1,2-Dichloroethylene	0.0226	0.0020	mg/Kg wet	0.0200		113		70-130				
1,2-Dichloropropane	0.0225	0.0020	mg/Kg wet	0.0200		112		70-130				
1,3-Dichloropropane	0.0215	0.0010	mg/Kg wet	0.0200		107		70-130				
2,2-Dichloropropane	0.0226	0.0020	mg/Kg wet	0.0200		113		70-130				
1,1-Dichloropropene	0.0206	0.0020	mg/Kg wet	0.0200		103		70-130				
cis-1,3-Dichloropropene	0.0205	0.0010	mg/Kg wet	0.0200		102		70-130				
trans-1,3-Dichloropropene	0.0223	0.0010	mg/Kg wet	0.0200		112		70-130				
Diethyl Ether	0.0233	0.020	mg/Kg wet	0.0200		116		70-130				
Diisopropyl Ether (DIPE)	0.0222	0.0010	mg/Kg wet	0.0200		111		70-130				
1,4-Dioxane	0.199	0.10	mg/Kg wet	0.200		99.6		40-160				†
Ethylbenzene	0.0193	0.0020	mg/Kg wet	0.0200		96.4		70-130				
Hexachlorobutadiene	0.0205	0.0020	mg/Kg wet	0.0200		103		70-160				
2-Hexanone (MBK)	0.277	0.020	mg/Kg wet	0.200		139		70-160				†
Isopropylbenzene (Cumene)	0.0202	0.0020	mg/Kg wet	0.0200		101		70-130				
p-Isopropyltoluene (p-Cymene)	0.0198	0.0020	mg/Kg wet	0.0200		98.8		70-130				
Methyl Acetate	0.0428	0.0020	mg/Kg wet	0.0200		**214**	*	70-130			L-02	
Methyl tert-Butyl Ether (MTBE)	0.0222	0.0040	mg/Kg wet	0.0200		111		70-130				
Methyl Cyclohexane	0.0212	0.0020	mg/Kg wet	0.0200		106		70-130				
Methylene Chloride	0.0227	0.020	mg/Kg wet	0.0200		114		40-160				†
4-Methyl-2-pentanone (MIBK)	0.234	0.020	mg/Kg wet	0.200		117		70-160				†
Naphthalene	0.0205	0.0040	mg/Kg wet	0.0200		102		40-130				†
n-Propylbenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.1		70-130				
Styrene	0.0194	0.0020	mg/Kg wet	0.0200		97.2		70-130				
1,1,1,2-Tetrachloroethane	0.0211	0.0020	mg/Kg wet	0.0200		106		70-130				
1,1,2,2-Tetrachloroethane	0.0213	0.0020	mg/Kg wet	0.0200		107		70-130				
Tetrachloroethylene	0.0206	0.0020	mg/Kg wet	0.0200		103		70-130				
Tetrahydrofuran	0.0222	0.010	mg/Kg wet	0.0200		111		70-130				
Toluene	0.0205	0.0020	mg/Kg wet	0.0200		102		70-130				
1,2,3-Trichlorobenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.7		70-130				
1,2,4-Trichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.3		70-130				
1,3,5-Trichlorobenzene	0.0179	0.0020	mg/Kg wet	0.0200		89.6		70-130				
1,1,1-Trichloroethane	0.0206	0.0020	mg/Kg wet	0.0200		103		70-130				
1,1,2-Trichloroethane	0.0235	0.0040	mg/Kg wet	0.0200		118		70-130				
Trichloroethylene	0.0224	0.0020	mg/Kg wet	0.0200		112		70-130				
Trichlorofluoromethane (Freon 11)	0.0194	0.010	mg/Kg wet	0.0200		97.2		70-130				
1,2,3-Trichloropropane	0.0197	0.0020	mg/Kg wet	0.0200		98.4		70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B146458 - SW-846 5035												
LCS (B146458-BS1)				Prepared & Analyzed: 04/12/16								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0218	0.010	mg/Kg wet	0.0200		109		70-130				
1,2,4-Trimethylbenzene	0.0196	0.0020	mg/Kg wet	0.0200		98.2		70-130				
1,3,5-Trimethylbenzene	0.0199	0.0020	mg/Kg wet	0.0200		99.4		70-130				
Vinyl Chloride	0.0172	0.010	mg/Kg wet	0.0200		85.8		40-130				†
m+p Xylene	0.0396	0.0040	mg/Kg wet	0.0400		99.0		70-130				
o-Xylene	0.0192	0.0020	mg/Kg wet	0.0200		96.2		70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0580*		mg/Kg wet	0.0500		116		70-130				
Surrogate: Toluene-d8	*0.0509*		mg/Kg wet	0.0500		102		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0504*		mg/Kg wet	0.0500		101		70-130				
LCS Dup (B146458-BSD1)				Prepared & Analyzed: 04/12/16								
Acetone	0.389	0.10	mg/Kg wet	0.200		**194**	*	70-160	6.68	25	L-02	†
Acrylonitrile	0.0231	0.0060	mg/Kg wet	0.0200		115		70-130	2.01	25		
tert-Amyl Methyl Ether (TAME)	0.0231	0.0010	mg/Kg wet	0.0200		115		70-130	4.61	25		
Benzene	0.0229	0.0020	mg/Kg wet	0.0200		114		70-130	4.10	25		
Bromobenzene	0.0210	0.0020	mg/Kg wet	0.0200		105		70-130	5.18	25		
Bromochloromethane	0.0263	0.0020	mg/Kg wet	0.0200		**132**	*	70-130	0.983	25	L-02	
Bromodichloromethane	0.0219	0.0020	mg/Kg wet	0.0200		109		70-130	5.55	25		
Bromoform	0.0217	0.0020	mg/Kg wet	0.0200		109		70-130	4.23	25		
Bromomethane	0.0155	0.010	mg/Kg wet	0.0200		77.7		40-130	9.29	25		†
2-Butanone (MEK)	0.327	0.040	mg/Kg wet	0.200		**164**	*	70-160	1.64	25	L-02	†
tert-Butyl Alcohol (TBA)	0.208	0.040	mg/Kg wet	0.200		104		40-130	1.80	25		†
n-Butylbenzene	0.0211	0.0020	mg/Kg wet	0.0200		106		70-130	3.56	25		
sec-Butylbenzene	0.0210	0.0020	mg/Kg wet	0.0200		105		70-130	3.88	25		
tert-Butylbenzene	0.0195	0.0020	mg/Kg wet	0.0200		97.7		70-160	4.71	25		†
tert-Butyl Ethyl Ether (TBEE)	0.0244	0.0010	mg/Kg wet	0.0200		122		70-130	3.00	25		
Carbon Disulfide	0.0218	0.0060	mg/Kg wet	0.0200		109		70-130	6.73	25		
Carbon Tetrachloride	0.0250	0.0020	mg/Kg wet	0.0200		125		70-130	1.94	25		
Chlorobenzene	0.0200	0.0020	mg/Kg wet	0.0200		100		70-130	1.61	25		
Chlorodibromomethane	0.0230	0.0010	mg/Kg wet	0.0200		115		70-130	2.91	25		
Chloroethane	0.0240	0.020	mg/Kg wet	0.0200		120		70-130	4.08	25	V-20	
Chloroform	0.0232	0.0040	mg/Kg wet	0.0200		116		70-130	0.259	25		
Chloromethane	0.0160	0.010	mg/Kg wet	0.0200		79.9		70-130	1.49	25	V-20	
2-Chlorotoluene	0.0196	0.0020	mg/Kg wet	0.0200		98.2		70-130	0.710	25		
4-Chlorotoluene	0.0194	0.0020	mg/Kg wet	0.0200		96.9		70-130	2.72	25		
1,2-Dibromo-3-chloropropane (DBCP)	0.0242	0.0040	mg/Kg wet	0.0200		121		70-130	6.94	25		
1,2-Dibromoethane (EDB)	0.0226	0.0010	mg/Kg wet	0.0200		113		70-130	8.60	25		
Dibromomethane	0.0247	0.0020	mg/Kg wet	0.0200		123		70-130	1.64	25		
1,2-Dichlorobenzene	0.0203	0.0020	mg/Kg wet	0.0200		101		70-130	4.95	25		
1,3-Dichlorobenzene	0.0202	0.0020	mg/Kg wet	0.0200		101		70-130	3.02	25		
1,4-Dichlorobenzene	0.0197	0.0020	mg/Kg wet	0.0200		98.4		70-130	5.32	25		
trans-1,4-Dichloro-2-butene	0.0218	0.0040	mg/Kg wet	0.0200		109		70-130	1.76	25		
Dichlorodifluoromethane (Freon 12)	0.00710	0.020	mg/Kg wet	0.0200		**35.5**	*	40-160	12.4	25	L-07, J	†
1,1-Dichloroethane	0.0250	0.0020	mg/Kg wet	0.0200		125		70-130	4.58	25		
1,2-Dichloroethane	0.0244	0.0020	mg/Kg wet	0.0200		122		70-130	6.51	25		
1,1-Dichloroethylene	0.0231	0.0040	mg/Kg wet	0.0200		115		70-130	2.37	25		
cis-1,2-Dichloroethylene	0.0235	0.0020	mg/Kg wet	0.0200		117		70-130	3.91	25		
trans-1,2-Dichloroethylene	0.0235	0.0020	mg/Kg wet	0.0200		117		70-130	3.91	25		
1,2-Dichloropropane	0.0232	0.0020	mg/Kg wet	0.0200		116		70-130	3.33	25		
1,3-Dichloropropane	0.0223	0.0010	mg/Kg wet	0.0200		112		70-130	3.75	25		
2,2-Dichloropropane	0.0233	0.0020	mg/Kg wet	0.0200		117		70-130	3.31	25		
1,1-Dichloropropene	0.0218	0.0020	mg/Kg wet	0.0200		109		70-130	5.56	25		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B146458 - SW-846 5035												
LCS Dup (B146458-BSD1)				Prepared & Analyzed: 04/12/16								
cis-1,3-Dichloropropene	0.0212	0.0010	mg/Kg wet	0.0200		106		70-130	3.74	25		
trans-1,3-Dichloropropene	0.0229	0.0010	mg/Kg wet	0.0200		114		70-130	2.30	25		
Diethyl Ether	0.0244	0.020	mg/Kg wet	0.0200		122		70-130	4.70	25		
Diisopropyl Ether (DIPE)	0.0227	0.0010	mg/Kg wet	0.0200		114		70-130	2.49	25		
1,4-Dioxane	0.175	0.10	mg/Kg wet	0.200		87.6		40-160	12.7	50		† ‡
Ethylbenzene	0.0198	0.0020	mg/Kg wet	0.0200		98.9		70-130	2.56	25		
Hexachlorobutadiene	0.0213	0.0020	mg/Kg wet	0.0200		107		70-160	3.82	25		
2-Hexanone (MBK)	0.272	0.020	mg/Kg wet	0.200		136		70-160	1.91	25		†
Isopropylbenzene (Cumene)	0.0204	0.0020	mg/Kg wet	0.0200		102		70-130	0.987	25		
p-Isopropyltoluene (p-Cymene)	0.0202	0.0020	mg/Kg wet	0.0200		101		70-130	2.40	25		
Methyl Acetate	0.0440	0.0020	mg/Kg wet	0.0200		**220**	*	70-130	2.90	25	L-02	
Methyl tert-Butyl Ether (MTBE)	0.0234	0.0040	mg/Kg wet	0.0200		117		70-130	5.17	25		
Methyl Cyclohexane	0.0212	0.0020	mg/Kg wet	0.0200		106		70-130	0.283	25		
Methylene Chloride	0.0238	0.020	mg/Kg wet	0.0200		119		40-160	4.81	25		†
4-Methyl-2-pentanone (MIBK)	0.239	0.020	mg/Kg wet	0.200		119		70-160	1.96	25		†
Naphthalene	0.0204	0.0040	mg/Kg wet	0.0200		102		40-130	0.588	25		†
n-Propylbenzene	0.0191	0.0020	mg/Kg wet	0.0200		95.4		70-130	2.79	25		
Styrene	0.0198	0.0020	mg/Kg wet	0.0200		98.9		70-130	1.73	25		
1,1,1,2-Tetrachloroethane	0.0212	0.0020	mg/Kg wet	0.0200		106		70-130	0.0946	25		
1,1,2,2-Tetrachloroethane	0.0217	0.0020	mg/Kg wet	0.0200		108		70-130	1.67	25		
Tetrachloroethylene	0.0208	0.0020	mg/Kg wet	0.0200		104		70-130	0.868	25		
Tetrahydrofuran	0.0217	0.010	mg/Kg wet	0.0200		108		70-130	2.37	25		
Toluene	0.0207	0.0020	mg/Kg wet	0.0200		103		70-130	0.972	25		
1,2,3-Trichlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103		70-130	3.16	25		
1,2,4-Trichlorobenzene	0.0206	0.0020	mg/Kg wet	0.0200		103		70-130	4.48	25		
1,3,5-Trichlorobenzene	0.0181	0.0020	mg/Kg wet	0.0200		90.3		70-130	0.778	25		
1,1,1-Trichloroethane	0.0229	0.0020	mg/Kg wet	0.0200		115		70-130	10.8	25		
1,1,2-Trichloroethane	0.0247	0.0040	mg/Kg wet	0.0200		124		70-130	4.98	25		
Trichloroethylene	0.0222	0.0020	mg/Kg wet	0.0200		111		70-130	0.808	25		
Trichlorofluoromethane (Freon 11)	0.0206	0.010	mg/Kg wet	0.0200		103		70-130	5.99	25		
1,2,3-Trichloropropane	0.0201	0.0020	mg/Kg wet	0.0200		101		70-130	2.21	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.0233	0.010	mg/Kg wet	0.0200		116		70-130	6.47	25		
1,2,4-Trimethylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		101		70-130	3.21	25		
1,3,5-Trimethylbenzene	0.0203	0.0020	mg/Kg wet	0.0200		102		70-130	2.29	25		
Vinyl Chloride	0.0174	0.010	mg/Kg wet	0.0200		87.0		40-130	1.39	25		†
m+p Xylene	0.0392	0.0040	mg/Kg wet	0.0400		98.1		70-130	0.914	25		
o-Xylene	0.0193	0.0020	mg/Kg wet	0.0200		96.7		70-130	0.518	25		
Surrogate: 1,2-Dichloroethane-d4	*0.0583*		mg/Kg wet	0.0500		117		70-130				
Surrogate: Toluene-d8	*0.0508*		mg/Kg wet	0.0500		102		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0510*		mg/Kg wet	0.0500		102		70-130				

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QUALITY CONTROL

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146458 - SW-846 5035										
Blank (B146458-BLK1)				Prepared & Analyzed: 04/12/16						
No TICs Found	0.0		mg/Kg wet							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146384 - SW-846 3546										
Blank (B146384-BLK1)				Prepared: 04/11/16 Analyzed: 04/13/16						
Acenaphthene	ND	0.17	mg/Kg wet							
Acenaphthylene	ND	0.17	mg/Kg wet							
Acetophenone	ND	0.34	mg/Kg wet							
Aniline	ND	0.34	mg/Kg wet							
Anthracene	ND	0.17	mg/Kg wet							
Benzidine	ND	0.66	mg/Kg wet							V-04, V-05
Benzo(a)anthracene	ND	0.17	mg/Kg wet							
Benzo(a)pyrene	ND	0.17	mg/Kg wet							
Benzo(b)fluoranthene	ND	0.17	mg/Kg wet							
Benzo(g,h,i)perylene	ND	0.17	mg/Kg wet							
Benzo(k)fluoranthene	ND	0.17	mg/Kg wet							
Benzoic Acid	ND	1.0	mg/Kg wet							V-20
Bis(2-chloroethoxy)methane	ND	0.34	mg/Kg wet							
Bis(2-chloroethyl)ether	ND	0.34	mg/Kg wet							
Bis(2-chloroisopropyl)ether	ND	0.34	mg/Kg wet							
Bis(2-Ethylhexyl)phthalate	ND	0.34	mg/Kg wet							V-20
4-Bromophenylphenylether	ND	0.34	mg/Kg wet							
Butylbenzylphthalate	ND	0.34	mg/Kg wet							V-20
Carbazole	ND	0.17	mg/Kg wet							
4-Chloroaniline	ND	0.66	mg/Kg wet							
4-Chloro-3-methylphenol	ND	0.66	mg/Kg wet							
2-Chloronaphthalene	ND	0.34	mg/Kg wet							
2-Chlorophenol	ND	0.34	mg/Kg wet							
4-Chlorophenylphenylether	ND	0.34	mg/Kg wet							
Chrysene	ND	0.17	mg/Kg wet							
Dibenz(a,h)anthracene	ND	0.17	mg/Kg wet							
Dibenzofuran	ND	0.34	mg/Kg wet							
Di-n-butylphthalate	ND	0.34	mg/Kg wet							
1,2-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,3-Dichlorobenzene	ND	0.34	mg/Kg wet							
1,4-Dichlorobenzene	ND	0.34	mg/Kg wet							
3,3-Dichlorobenzidine	ND	0.17	mg/Kg wet							
2,4-Dichlorophenol	ND	0.34	mg/Kg wet							
Diethylphthalate	ND	0.34	mg/Kg wet							
2,4-Dimethylphenol	ND	0.34	mg/Kg wet							
Dimethylphthalate	ND	0.34	mg/Kg wet							
4,6-Dinitro-2-methylphenol	ND	0.34	mg/Kg wet							
2,4-Dinitrophenol	ND	0.66	mg/Kg wet							V-19
2,4-Dinitrotoluene	ND	0.34	mg/Kg wet							
2,6-Dinitrotoluene	ND	0.34	mg/Kg wet							
Di-n-octylphthalate	ND	0.34	mg/Kg wet							V-20
1,2-Diphenylhydrazine (as Azobenzene)	ND	0.34	mg/Kg wet							V-20
Fluoranthene	ND	0.17	mg/Kg wet							
Fluorene	ND	0.17	mg/Kg wet							
Hexachlorobenzene	ND	0.34	mg/Kg wet							
Hexachlorobutadiene	ND	0.34	mg/Kg wet							
Hexachlorocyclopentadiene	ND	0.34	mg/Kg wet							
Hexachloroethane	ND	0.34	mg/Kg wet							
Indeno(1,2,3-cd)pyrene	ND	0.17	mg/Kg wet							
Isophorone	ND	0.34	mg/Kg wet							
1-Methylnaphthalene	ND	0.17	mg/Kg wet							
2-Methylnaphthalene	ND	0.17	mg/Kg wet							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B146384 - SW-846 3546											
Blank (B146384-BLK1)				Prepared: 04/11/16 Analyzed: 04/13/16							
2-Methylphenol	ND	0.34	mg/Kg wet								
3/4-Methylphenol	ND	0.34	mg/Kg wet								
Naphthalene	ND	0.17	mg/Kg wet								
2-Nitroaniline	ND	0.34	mg/Kg wet							V-20	
3-Nitroaniline	ND	0.34	mg/Kg wet								
4-Nitroaniline	ND	0.34	mg/Kg wet								
Nitrobenzene	ND	0.34	mg/Kg wet								
2-Nitrophenol	ND	0.34	mg/Kg wet							V-20	
4-Nitrophenol	ND	0.66	mg/Kg wet								
N-Nitrosodimethylamine	ND	0.34	mg/Kg wet								
N-Nitrosodiphenylamine	ND	0.34	mg/Kg wet								
N-Nitrosodi-n-propylamine	ND	0.34	mg/Kg wet								
Pentachloronitrobenzene	ND	0.34	mg/Kg wet							V-16	
Pentachlorophenol	ND	0.34	mg/Kg wet								
Phenanthrene	ND	0.17	mg/Kg wet								
Phenol	ND	0.34	mg/Kg wet								
Pyrene	ND	0.17	mg/Kg wet								
Pyridine	ND	0.34	mg/Kg wet								
1,2,4,5-Tetrachlorobenzene	ND	0.34	mg/Kg wet								
1,2,4-Trichlorobenzene	ND	0.34	mg/Kg wet								
2,4,5-Trichlorophenol	ND	0.34	mg/Kg wet								
2,4,6-Trichlorophenol	ND	0.34	mg/Kg wet								
Surrogate: 2-Fluorophenol	*5.71*		mg/Kg wet	6.67		85.7	30-130				
Surrogate: Phenol-d6	*6.44*		mg/Kg wet	6.67		96.6	30-130				
Surrogate: Nitrobenzene-d5	*3.25*		mg/Kg wet	3.33		97.4	30-130				
Surrogate: 2-Fluorobiphenyl	*3.14*		mg/Kg wet	3.33		94.1	30-130				
Surrogate: 2,4,6-Tribromophenol	*5.09*		mg/Kg wet	6.67		76.4	30-130				
Surrogate: p-Terphenyl-d14	*3.82*		mg/Kg wet	3.33		115	30-130				
LCS (B146384-BS1)				Prepared: 04/11/16 Analyzed: 04/13/16							
Acenaphthene	1.34	0.17	mg/Kg wet	1.67		80.1	40-140				
Acenaphthylene	1.42	0.17	mg/Kg wet	1.67		85.5	40-140				
Acetophenone	1.36	0.34	mg/Kg wet	1.67		81.7	40-140				
Aniline	0.921	0.34	mg/Kg wet	1.67		55.2	10-140				†
Anthracene	1.45	0.17	mg/Kg wet	1.67		86.8	40-140				
Benzidine	1.02	0.66	mg/Kg wet	1.67		61.4	40-140			V-04, V-05	
Benzo(a)anthracene	1.44	0.17	mg/Kg wet	1.67		86.7	40-140				
Benzo(a)pyrene	1.48	0.17	mg/Kg wet	1.67		88.7	40-140				
Benzo(b)fluoranthene	1.41	0.17	mg/Kg wet	1.67		84.6	40-140				
Benzo(g,h,i)perylene	1.67	0.17	mg/Kg wet	1.67		100	40-140				
Benzo(k)fluoranthene	1.42	0.17	mg/Kg wet	1.67		85.0	40-140				
Benzoic Acid	1.14	1.0	mg/Kg wet	1.67		68.6	30-130			V-20	
Bis(2-chloroethoxy)methane	1.51	0.34	mg/Kg wet	1.67		90.8	40-140				
Bis(2-chloroethyl)ether	1.40	0.34	mg/Kg wet	1.67		83.7	40-140				
Bis(2-chloroisopropyl)ether	1.54	0.34	mg/Kg wet	1.67		92.3	40-140				
Bis(2-Ethylhexyl)phthalate	1.85	0.34	mg/Kg wet	1.67		111	40-140			V-20	
4-Bromophenylphenylether	1.46	0.34	mg/Kg wet	1.67		87.9	40-140				
Butylbenzylphthalate	1.89	0.34	mg/Kg wet	1.67		113	40-140			V-20	
Carbazole	1.52	0.17	mg/Kg wet	1.67		91.2	40-140				
4-Chloroaniline	0.632	0.66	mg/Kg wet	1.67		37.9	10-140			J	†
4-Chloro-3-methylphenol	1.45	0.66	mg/Kg wet	1.67		87.2	30-130				
2-Chloronaphthalene	1.27	0.34	mg/Kg wet	1.67		76.1	40-140				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B146384 - SW-846 3546											
LCS (B146384-BS1)				Prepared: 04/11/16 Analyzed: 04/13/16							
2-Chlorophenol	1.29	0.34	mg/Kg wet	1.67		77.6	30-130				
4-Chlorophenylphenylether	1.38	0.34	mg/Kg wet	1.67		82.7	40-140				
Chrysene	1.46	0.17	mg/Kg wet	1.67		87.4	40-140				
Dibenz(a,h)anthracene	1.63	0.17	mg/Kg wet	1.67		97.6	40-140				
Dibenzofuran	1.46	0.34	mg/Kg wet	1.67		87.6	40-140				
Di-n-butylphthalate	1.62	0.34	mg/Kg wet	1.67		97.1	40-140				
1,2-Dichlorobenzene	1.18	0.34	mg/Kg wet	1.67		70.6	40-140				
1,3-Dichlorobenzene	1.12	0.34	mg/Kg wet	1.67		67.5	40-140				
1,4-Dichlorobenzene	1.15	0.34	mg/Kg wet	1.67		68.8	40-140				
3,3-Dichlorobenzidine	0.729	0.17	mg/Kg wet	1.67		43.7	20-140				†
2,4-Dichlorophenol	1.39	0.34	mg/Kg wet	1.67		83.2	30-130				
Diethylphthalate	1.45	0.34	mg/Kg wet	1.67		86.9	40-140				
2,4-Dimethylphenol	1.35	0.34	mg/Kg wet	1.67		80.9	30-130				
Dimethylphthalate	1.44	0.34	mg/Kg wet	1.67		86.1	40-140				
4,6-Dinitro-2-methylphenol	1.34	0.34	mg/Kg wet	1.67		80.1	30-130				
2,4-Dinitrophenol	0.863	0.66	mg/Kg wet	1.67		51.8	30-130			V-19	
2,4-Dinitrotoluene	1.53	0.34	mg/Kg wet	1.67		92.0	40-140				
2,6-Dinitrotoluene	1.63	0.34	mg/Kg wet	1.67		97.6	40-140				
Di-n-octylphthalate	1.82	0.34	mg/Kg wet	1.67		109	40-140			V-20	
1,2-Diphenylhydrazine (as Azobenzene)	1.85	0.34	mg/Kg wet	1.67		111	40-140			V-20	
Fluoranthene	1.34	0.17	mg/Kg wet	1.67		80.5	40-140				
Fluorene	1.43	0.17	mg/Kg wet	1.67		85.8	40-140				
Hexachlorobenzene	1.44	0.34	mg/Kg wet	1.67		86.5	40-140				
Hexachlorobutadiene	1.16	0.34	mg/Kg wet	1.67		69.5	40-140				
Hexachlorocyclopentadiene	1.29	0.34	mg/Kg wet	1.67		77.3	40-140				
Hexachloroethane	1.21	0.34	mg/Kg wet	1.67		72.5	40-140				
Indeno(1,2,3-cd)pyrene	1.59	0.17	mg/Kg wet	1.67		95.5	40-140				
Isophorone	1.59	0.34	mg/Kg wet	1.67		95.3	40-140				
1-Methylnaphthalene	1.25	0.17	mg/Kg wet	1.67		75.1	40-140				
2-Methylnaphthalene	1.33	0.17	mg/Kg wet	1.67		80.0	40-140				
2-Methylphenol	1.37	0.34	mg/Kg wet	1.67		82.0	30-130				
3/4-Methylphenol	1.46	0.34	mg/Kg wet	1.67		87.6	30-130				
Naphthalene	1.27	0.17	mg/Kg wet	1.67		76.2	40-140				
2-Nitroaniline	2.25	0.34	mg/Kg wet	1.67		135	40-140			V-20	
3-Nitroaniline	1.29	0.34	mg/Kg wet	1.67		77.4	30-140				†
4-Nitroaniline	1.50	0.34	mg/Kg wet	1.67		90.3	40-140				
Nitrobenzene	1.53	0.34	mg/Kg wet	1.67		91.5	40-140				
2-Nitrophenol	1.50	0.34	mg/Kg wet	1.67		89.9	30-130			V-20	
4-Nitrophenol	1.56	0.66	mg/Kg wet	1.67		93.4	30-130				
N-Nitrosodimethylamine	1.22	0.34	mg/Kg wet	1.67		73.4	40-140				
N-Nitrosodiphenylamine	1.87	0.34	mg/Kg wet	1.67		112	40-140				
N-Nitrosodi-n-propylamine	1.50	0.34	mg/Kg wet	1.67		89.9	40-140				
Pentachloronitrobenzene	1.48	0.34	mg/Kg wet	1.67		88.8	40-140			V-16	
Pentachlorophenol	1.34	0.34	mg/Kg wet	1.67		80.7	30-130				
Phenanthrene	1.47	0.17	mg/Kg wet	1.67		88.4	40-140				
Phenol	1.41	0.34	mg/Kg wet	1.67		84.4	30-130				
Pyrene	1.65	0.17	mg/Kg wet	1.67		98.8	40-140				
Pyridine	0.847	0.34	mg/Kg wet	1.67		50.8	30-140				†
1,2,4,5-Tetrachlorobenzene	1.26	0.34	mg/Kg wet	1.67		75.5	40-140				
1,2,4-Trichlorobenzene	1.17	0.34	mg/Kg wet	1.67		70.5	40-140				
2,4,5-Trichlorophenol	1.44	0.34	mg/Kg wet	1.67		86.4	30-130				
2,4,6-Trichlorophenol	1.51	0.34	mg/Kg wet	1.67		90.4	30-130				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B146384 - SW-846 3546											
LCS (B146384-BS1)				Prepared: 04/11/16 Analyzed: 04/13/16							
Surrogate: 2-Fluorophenol	*5.33*		mg/Kg wet	6.67		79.9	30-130				
Surrogate: Phenol-d6	*6.03*		mg/Kg wet	6.67		90.4	30-130				
Surrogate: Nitrobenzene-d5	*3.09*		mg/Kg wet	3.33		92.8	30-130				
Surrogate: 2-Fluorobiphenyl	*3.06*		mg/Kg wet	3.33		91.8	30-130				
Surrogate: 2,4,6-Tribromophenol	*5.14*		mg/Kg wet	6.67		77.0	30-130				
Surrogate: p-Terphenyl-d14	*3.52*		mg/Kg wet	3.33		106	30-130				
LCS Dup (B146384-BSD1)				Prepared: 04/11/16 Analyzed: 04/13/16							
Acenaphthene	1.31	0.17	mg/Kg wet	1.67		78.7	40-140	1.86	30		
Acenaphthylene	1.38	0.17	mg/Kg wet	1.67		83.0	40-140	2.90	30		
Acetophenone	1.35	0.34	mg/Kg wet	1.67		81.0	40-140	0.885	30		
Aniline	0.944	0.34	mg/Kg wet	1.67		56.7	10-140	2.54	50		† ‡
Anthracene	1.42	0.17	mg/Kg wet	1.67		85.4	40-140	1.65	30		
Benzidine	0.997	0.66	mg/Kg wet	1.67		59.8	40-140	2.64	30	V-04, V-05	
Benzo(a)anthracene	1.38	0.17	mg/Kg wet	1.67		83.1	40-140	4.24	30		
Benzo(a)pyrene	1.43	0.17	mg/Kg wet	1.67		85.8	40-140	3.25	30		
Benzo(b)fluoranthene	1.36	0.17	mg/Kg wet	1.67		81.5	40-140	3.73	30		
Benzo(g,h,i)perylene	1.58	0.17	mg/Kg wet	1.67		95.1	40-140	5.13	30		
Benzo(k)fluoranthene	1.33	0.17	mg/Kg wet	1.67		80.0	40-140	6.09	30		
Benzoic Acid	1.21	1.0	mg/Kg wet	1.67		72.8	30-130	5.86	50	V-20	‡
Bis(2-chloroethoxy)methane	1.50	0.34	mg/Kg wet	1.67		90.3	40-140	0.596	30		
Bis(2-chloroethyl)ether	1.44	0.34	mg/Kg wet	1.67		86.3	40-140	3.08	30		
Bis(2-chloroisopropyl)ether	1.59	0.34	mg/Kg wet	1.67		95.6	40-140	3.49	30		
Bis(2-Ethylhexyl)phthalate	1.76	0.34	mg/Kg wet	1.67		105	40-140	5.23	30	V-20	
4-Bromophenylphenylether	1.41	0.34	mg/Kg wet	1.67		84.5	40-140	3.88	30		
Butylbenzylphthalate	1.76	0.34	mg/Kg wet	1.67		106	40-140	6.83	30	V-20	
Carbazole	1.50	0.17	mg/Kg wet	1.67		90.0	40-140	1.39	30		
4-Chloroaniline	0.696	0.66	mg/Kg wet	1.67		41.8	10-140	9.69	30		†
4-Chloro-3-methylphenol	1.40	0.66	mg/Kg wet	1.67		84.1	30-130	3.64	30		
2-Chloronaphthalene	1.27	0.34	mg/Kg wet	1.67		76.1	40-140	0.0788	30		
2-Chlorophenol	1.32	0.34	mg/Kg wet	1.67		79.5	30-130	2.42	30		
4-Chlorophenylphenylether	1.33	0.34	mg/Kg wet	1.67		79.7	40-140	3.64	30		
Chrysene	1.39	0.17	mg/Kg wet	1.67		83.3	40-140	4.80	30		
Dibenz(a,h)anthracene	1.51	0.17	mg/Kg wet	1.67		90.8	40-140	7.20	30		
Dibenzofuran	1.41	0.34	mg/Kg wet	1.67		84.7	40-140	3.44	30		
Di-n-butylphthalate	1.56	0.34	mg/Kg wet	1.67		93.9	40-140	3.37	30		
1,2-Dichlorobenzene	1.24	0.34	mg/Kg wet	1.67		74.7	40-140	5.56	30		
1,3-Dichlorobenzene	1.19	0.34	mg/Kg wet	1.67		71.4	40-140	5.65	30		
1,4-Dichlorobenzene	1.23	0.34	mg/Kg wet	1.67		73.6	40-140	6.74	30		
3,3-Dichlorobenzidine	0.690	0.17	mg/Kg wet	1.67		41.4	20-140	5.50	50		† ‡
2,4-Dichlorophenol	1.44	0.34	mg/Kg wet	1.67		86.3	30-130	3.66	30		
Diethylphthalate	1.37	0.34	mg/Kg wet	1.67		82.2	40-140	5.46	30		
2,4-Dimethylphenol	1.32	0.34	mg/Kg wet	1.67		79.3	30-130	1.90	30		
Dimethylphthalate	1.39	0.34	mg/Kg wet	1.67		83.1	40-140	3.50	30		
4,6-Dinitro-2-methylphenol	1.35	0.34	mg/Kg wet	1.67		81.2	30-130	1.26	30		
2,4-Dinitrophenol	0.846	0.66	mg/Kg wet	1.67		50.8	30-130	1.95	30	V-19	
2,4-Dinitrotoluene	1.51	0.34	mg/Kg wet	1.67		90.4	40-140	1.78	30		
2,6-Dinitrotoluene	1.58	0.34	mg/Kg wet	1.67		94.6	40-140	3.04	30		
Di-n-octylphthalate	1.70	0.34	mg/Kg wet	1.67		102	40-140	6.64	30	V-20	
1,2-Diphenylhydrazine (as Azobenzene)	1.81	0.34	mg/Kg wet	1.67		108	40-140	2.30	30	V-20	
Fluoranthene	1.34	0.17	mg/Kg wet	1.67		80.6	40-140	0.149	30		
Fluorene	1.39	0.17	mg/Kg wet	1.67		83.3	40-140	2.91	30		

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B146384 - SW-846 3546											
LCS Dup (B146384-BSD1)				Prepared: 04/11/16 Analyzed: 04/13/16							
Hexachlorobenzene	1.43	0.34	mg/Kg wet	1.67		86.1	40-140	0.487	30		
Hexachlorobutadiene	1.21	0.34	mg/Kg wet	1.67		72.6	40-140	4.33	30		
Hexachlorocyclopentadiene	1.33	0.34	mg/Kg wet	1.67		79.8	40-140	3.26	30		
Hexachloroethane	1.26	0.34	mg/Kg wet	1.67		75.5	40-140	4.05	30		
Indeno(1,2,3-cd)pyrene	1.53	0.17	mg/Kg wet	1.67		91.7	40-140	4.00	30		
Isophorone	1.59	0.34	mg/Kg wet	1.67		95.3	40-140	0.0630	30		
1-Methylnaphthalene	1.25	0.17	mg/Kg wet	1.67		75.0	40-140	0.107	30		
2-Methylnaphthalene	1.33	0.17	mg/Kg wet	1.67		79.6	40-140	0.526	30		
2-Methylphenol	1.34	0.34	mg/Kg wet	1.67		80.4	30-130	2.04	30		
3/4-Methylphenol	1.41	0.34	mg/Kg wet	1.67		84.7	30-130	3.32	30		
Naphthalene	1.32	0.17	mg/Kg wet	1.67		79.1	40-140	3.79	30		
2-Nitroaniline	2.18	0.34	mg/Kg wet	1.67		131	40-140	3.14	30	V-20	
3-Nitroaniline	1.29	0.34	mg/Kg wet	1.67		77.6	30-140	0.232	30		†
4-Nitroaniline	1.48	0.34	mg/Kg wet	1.67		88.9	40-140	1.54	30		
Nitrobenzene	1.56	0.34	mg/Kg wet	1.67		93.3	40-140	1.93	30		
2-Nitrophenol	1.57	0.34	mg/Kg wet	1.67		94.2	30-130	4.61	30	V-20	
4-Nitrophenol	1.50	0.66	mg/Kg wet	1.67		90.0	30-130	3.71	50		‡
N-Nitrosodimethylamine	1.45	0.34	mg/Kg wet	1.67		87.1	40-140	17.0	30		
N-Nitrosodiphenylamine	1.78	0.34	mg/Kg wet	1.67		107	40-140	4.97	30		
N-Nitrosodi-n-propylamine	1.45	0.34	mg/Kg wet	1.67		87.1	40-140	3.19	30		
Pentachloronitrobenzene	1.47	0.34	mg/Kg wet	1.67		88.1	40-140	0.814	30	V-16	
Pentachlorophenol	1.34	0.34	mg/Kg wet	1.67		80.3	30-130	0.422	30		
Phenanthrene	1.44	0.17	mg/Kg wet	1.67		86.2	40-140	2.47	30		
Phenol	1.39	0.34	mg/Kg wet	1.67		83.6	30-130	1.02	30		
Pyrene	1.57	0.17	mg/Kg wet	1.67		94.0	40-140	4.96	30		
Pyridine	0.992	0.34	mg/Kg wet	1.67		59.5	30-140	15.8	30		†
1,2,4,5-Tetrachlorobenzene	1.28	0.34	mg/Kg wet	1.67		76.5	40-140	1.29	30		
1,2,4-Trichlorobenzene	1.24	0.34	mg/Kg wet	1.67		74.6	40-140	5.68	30		
2,4,5-Trichlorophenol	1.38	0.34	mg/Kg wet	1.67		82.9	30-130	4.16	30		
2,4,6-Trichlorophenol	1.47	0.34	mg/Kg wet	1.67		87.9	30-130	2.71	30		
Surrogate: 2-Fluorophenol	*5.49*		mg/Kg wet	6.67		82.3	30-130				
Surrogate: Phenol-d6	*5.93*		mg/Kg wet	6.67		88.9	30-130				
Surrogate: Nitrobenzene-d5	*3.14*		mg/Kg wet	3.33		94.2	30-130				
Surrogate: 2-Fluorobiphenyl	*3.03*		mg/Kg wet	3.33		90.8	30-130				
Surrogate: 2,4,6-Tribromophenol	*4.91*		mg/Kg wet	6.67		73.7	30-130				
Surrogate: p-Terphenyl-d14	*3.32*		mg/Kg wet	3.33		99.7	30-130				

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QUALITY CONTROL

Tentatively Identified Compounds - SV Compounds (ESTIMATED VALUES REPORTED) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146384 - SW-846 3546										
Blank (B146384-BLK1)				Prepared: 04/11/16 Analyzed: 04/13/16						
No TICs Found	0.0		mg/Kg wet							

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146416 - SW-846 3546										
Blank (B146416-BLK1)				Prepared: 04/12/16 Analyzed: 04/13/16						
alpha-Chlordane	ND	0.0050	mg/Kg wet							
alpha-Chlordane [2C]	ND	0.0050	mg/Kg wet							
gamma-Chlordane	ND	0.0050	mg/Kg wet							
gamma-Chlordane [2C]	ND	0.0050	mg/Kg wet							
Alachlor	ND	0.020	mg/Kg wet							
Alachlor [2C]	ND	0.020	mg/Kg wet							
Aldrin	ND	0.0020	mg/Kg wet							
Aldrin [2C]	ND	0.0020	mg/Kg wet							
alpha-BHC	ND	0.0050	mg/Kg wet							
alpha-BHC [2C]	ND	0.0050	mg/Kg wet							
beta-BHC	ND	0.0050	mg/Kg wet							
beta-BHC [2C]	ND	0.0050	mg/Kg wet							
delta-BHC	ND	0.0050	mg/Kg wet							
delta-BHC [2C]	ND	0.0050	mg/Kg wet							
gamma-BHC (Lindane)	ND	0.0020	mg/Kg wet							
gamma-BHC (Lindane) [2C]	ND	0.0020	mg/Kg wet							
Chlordane	ND	0.020	mg/Kg wet							
Chlordane [2C]	ND	0.020	mg/Kg wet							
4,4'-DDD	ND	0.0010	mg/Kg wet							
4,4'-DDD [2C]	ND	0.0010	mg/Kg wet							
4,4'-DDE	ND	0.0010	mg/Kg wet							
4,4'-DDE [2C]	ND	0.0010	mg/Kg wet							
4,4'-DDT	ND	0.0010	mg/Kg wet							
4,4'-DDT [2C]	ND	0.0010	mg/Kg wet							
Dieldrin	ND	0.0010	mg/Kg wet							
Dieldrin [2C]	ND	0.0010	mg/Kg wet							
Endosulfan I	ND	0.0050	mg/Kg wet							
Endosulfan I [2C]	ND	0.0050	mg/Kg wet							
Endosulfan II	ND	0.0080	mg/Kg wet							
Endosulfan II [2C]	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate	ND	0.0080	mg/Kg wet							
Endosulfan Sulfate [2C]	ND	0.0080	mg/Kg wet							
Endrin	ND	0.0080	mg/Kg wet							
Endrin [2C]	ND	0.0080	mg/Kg wet							
Endrin Aldehyde	ND	0.0080	mg/Kg wet							
Endrin Aldehyde [2C]	ND	0.0080	mg/Kg wet							
Endrin Ketone	ND	0.0080	mg/Kg wet							
Endrin Ketone [2C]	ND	0.0080	mg/Kg wet							
Heptachlor	ND	0.0050	mg/Kg wet							
Heptachlor [2C]	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide	ND	0.0050	mg/Kg wet							
Heptachlor Epoxide [2C]	ND	0.0050	mg/Kg wet							
Hexachlorobenzene	ND	0.0060	mg/Kg wet							
Hexachlorobenzene [2C]	ND	0.0060	mg/Kg wet							
Methoxychlor	ND	0.050	mg/Kg wet							
Methoxychlor [2C]	ND	0.050	mg/Kg wet							
Toxaphene	ND	0.10	mg/Kg wet							
Toxaphene [2C]	ND	0.10	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.168*		mg/Kg wet	0.200		83.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.156*		mg/Kg wet	0.200		78.1	30-150			
Surrogate: Tetrachloro-m-xylene	*0.144*		mg/Kg wet	0.200		71.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.142*		mg/Kg wet	0.200		70.8	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146416 - SW-846 3546										
LCS (B146416-BS1)				Prepared: 04/12/16 Analyzed: 04/13/16						
alpha-Chlordane	0.10	0.0050	mg/Kg wet	0.100		103	40-140			
alpha-Chlordane [2C]	0.10	0.0050	mg/Kg wet	0.100		103	40-140			
gamma-Chlordane	0.11	0.0050	mg/Kg wet	0.100		106	40-140			
gamma-Chlordane [2C]	0.10	0.0050	mg/Kg wet	0.100		104	40-140			
Alachlor	0.12	0.020	mg/Kg wet	0.100		121	40-140			
Alachlor [2C]	0.11	0.020	mg/Kg wet	0.100		115	40-140			
Aldrin	0.10	0.0020	mg/Kg wet	0.100		105	40-140			
Aldrin [2C]	0.10	0.0020	mg/Kg wet	0.100		103	40-140			
alpha-BHC	0.10	0.0050	mg/Kg wet	0.100		102	40-140			
alpha-BHC [2C]	0.097	0.0050	mg/Kg wet	0.100		97.2	40-140			
beta-BHC	0.10	0.0050	mg/Kg wet	0.100		99.6	40-140			
beta-BHC [2C]	0.089	0.0050	mg/Kg wet	0.100		89.3	40-140			
delta-BHC	0.098	0.0050	mg/Kg wet	0.100		98.1	40-140			
delta-BHC [2C]	0.097	0.0050	mg/Kg wet	0.100		97.0	40-140			
gamma-BHC (Lindane)	0.11	0.0020	mg/Kg wet	0.100		106	40-140			
gamma-BHC (Lindane) [2C]	0.10	0.0020	mg/Kg wet	0.100		104	40-140			
4,4'-DDD	0.11	0.0010	mg/Kg wet	0.100		110	40-140			
4,4'-DDD [2C]	0.11	0.0010	mg/Kg wet	0.100		109	40-140			
4,4'-DDE	0.11	0.0010	mg/Kg wet	0.100		105	40-140			
4,4'-DDE [2C]	0.11	0.0010	mg/Kg wet	0.100		105	40-140			
4,4'-DDT	0.11	0.0010	mg/Kg wet	0.100		112	40-140			
4,4'-DDT [2C]	0.11	0.0010	mg/Kg wet	0.100		106	40-140			
Dieldrin	0.11	0.0010	mg/Kg wet	0.100		110	40-140			
Dieldrin [2C]	0.11	0.0010	mg/Kg wet	0.100		107	40-140			
Endosulfan I	0.10	0.0050	mg/Kg wet	0.100		102	40-140			
Endosulfan I [2C]	0.10	0.0050	mg/Kg wet	0.100		102	40-140			
Endosulfan II	0.10	0.0080	mg/Kg wet	0.100		104	40-140			
Endosulfan II [2C]	0.10	0.0080	mg/Kg wet	0.100		102	40-140			
Endosulfan Sulfate	0.10	0.0080	mg/Kg wet	0.100		101	40-140			
Endosulfan Sulfate [2C]	0.099	0.0080	mg/Kg wet	0.100		98.9	40-140			
Endrin	0.11	0.0080	mg/Kg wet	0.100		112	40-140			
Endrin [2C]	0.11	0.0080	mg/Kg wet	0.100		109	40-140			
Endrin Aldehyde	0.099	0.0080	mg/Kg wet	0.100		99.4	40-140			
Endrin Aldehyde [2C]	0.099	0.0080	mg/Kg wet	0.100		99.1	40-140			
Endrin Ketone	0.11	0.0080	mg/Kg wet	0.100		109	40-140			
Endrin Ketone [2C]	0.10	0.0080	mg/Kg wet	0.100		104	40-140			
Heptachlor	0.11	0.0050	mg/Kg wet	0.100		108	40-140			
Heptachlor [2C]	0.10	0.0050	mg/Kg wet	0.100		104	40-140			
Heptachlor Epoxide	0.10	0.0050	mg/Kg wet	0.100		104	40-140			
Heptachlor Epoxide [2C]	0.10	0.0050	mg/Kg wet	0.100		102	40-140			
Hexachlorobenzene	0.085	0.0060	mg/Kg wet	0.100		85.2	40-140			
Hexachlorobenzene [2C]	0.083	0.0060	mg/Kg wet	0.100		83.0	40-140			
Methoxychlor	0.11	0.050	mg/Kg wet	0.100		110	40-140			
Methoxychlor [2C]	0.11	0.050	mg/Kg wet	0.100		107	40-140			
Surrogate: Decachlorobiphenyl	*0.187*		mg/Kg wet	0.200		93.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.179*		mg/Kg wet	0.200		89.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.165*		mg/Kg wet	0.200		82.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.162*		mg/Kg wet	0.200		81.2	30-150			

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QUALITY CONTROL

Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146416 - SW-846 3546										
LCS Dup (B146416-BSD1)				Prepared: 04/12/16 Analyzed: 04/13/16						
alpha-Chlordane	0.095	0.0050	mg/Kg wet	0.100		94.6	40-140	8.67	30	
alpha-Chlordane [2C]	0.094	0.0050	mg/Kg wet	0.100		94.2	40-140	8.50	30	
gamma-Chlordane	0.096	0.0050	mg/Kg wet	0.100		95.6	40-140	10.2	30	
gamma-Chlordane [2C]	0.096	0.0050	mg/Kg wet	0.100		95.6	40-140	8.59	30	
Alachlor	0.11	0.020	mg/Kg wet	0.100		108	40-140	11.8	30	
Alachlor [2C]	0.11	0.020	mg/Kg wet	0.100		110	40-140	4.57	30	
Aldrin	0.097	0.0020	mg/Kg wet	0.100		96.7	40-140	8.26	30	
Aldrin [2C]	0.095	0.0020	mg/Kg wet	0.100		95.4	40-140	8.06	30	
alpha-BHC	0.094	0.0050	mg/Kg wet	0.100		93.8	40-140	7.95	30	
alpha-BHC [2C]	0.089	0.0050	mg/Kg wet	0.100		89.1	40-140	8.67	30	
beta-BHC	0.092	0.0050	mg/Kg wet	0.100		92.3	40-140	7.61	30	
beta-BHC [2C]	0.082	0.0050	mg/Kg wet	0.100		82.2	40-140	8.26	30	
delta-BHC	0.092	0.0050	mg/Kg wet	0.100		91.5	40-140	6.96	30	
delta-BHC [2C]	0.090	0.0050	mg/Kg wet	0.100		89.9	40-140	7.54	30	
gamma-BHC (Lindane)	0.097	0.0020	mg/Kg wet	0.100		97.4	40-140	8.16	30	
gamma-BHC (Lindane) [2C]	0.096	0.0020	mg/Kg wet	0.100		95.5	40-140	8.79	30	
4,4'-DDD	0.10	0.0010	mg/Kg wet	0.100		100	40-140	9.06	30	
4,4'-DDD [2C]	0.099	0.0010	mg/Kg wet	0.100		99.5	40-140	8.69	30	
4,4'-DDE	0.096	0.0010	mg/Kg wet	0.100		96.3	40-140	9.08	30	
4,4'-DDE [2C]	0.097	0.0010	mg/Kg wet	0.100		96.7	40-140	8.56	30	
4,4'-DDT	0.10	0.0010	mg/Kg wet	0.100		102	40-140	9.80	30	
4,4'-DDT [2C]	0.099	0.0010	mg/Kg wet	0.100		99.1	40-140	6.79	30	
Dieldrin	0.10	0.0010	mg/Kg wet	0.100		100	40-140	9.03	30	
Dieldrin [2C]	0.098	0.0010	mg/Kg wet	0.100		98.1	40-140	8.58	30	
Endosulfan I	0.094	0.0050	mg/Kg wet	0.100		94.2	40-140	7.97	30	
Endosulfan I [2C]	0.094	0.0050	mg/Kg wet	0.100		93.8	40-140	8.25	30	
Endosulfan II	0.095	0.0080	mg/Kg wet	0.100		95.2	40-140	8.56	30	
Endosulfan II [2C]	0.094	0.0080	mg/Kg wet	0.100		94.2	40-140	8.02	30	
Endosulfan Sulfate	0.093	0.0080	mg/Kg wet	0.100		92.9	40-140	7.85	30	
Endosulfan Sulfate [2C]	0.091	0.0080	mg/Kg wet	0.100		91.3	40-140	8.06	30	
Endrin	0.10	0.0080	mg/Kg wet	0.100		103	40-140	8.95	30	
Endrin [2C]	0.10	0.0080	mg/Kg wet	0.100		100	40-140	8.58	30	
Endrin Aldehyde	0.091	0.0080	mg/Kg wet	0.100		90.7	40-140	9.18	30	
Endrin Aldehyde [2C]	0.090	0.0080	mg/Kg wet	0.100		90.3	40-140	9.30	30	
Endrin Ketone	0.099	0.0080	mg/Kg wet	0.100		98.9	40-140	9.55	30	
Endrin Ketone [2C]	0.097	0.0080	mg/Kg wet	0.100		96.6	40-140	7.70	30	
Heptachlor	0.099	0.0050	mg/Kg wet	0.100		99.1	40-140	8.25	30	
Heptachlor [2C]	0.096	0.0050	mg/Kg wet	0.100		95.5	40-140	8.47	30	
Heptachlor Epoxide	0.095	0.0050	mg/Kg wet	0.100		95.1	40-140	8.92	30	
Heptachlor Epoxide [2C]	0.094	0.0050	mg/Kg wet	0.100		94.0	40-140	8.24	30	
Hexachlorobenzene	0.079	0.0060	mg/Kg wet	0.100		79.2	40-140	7.33	30	
Hexachlorobenzene [2C]	0.077	0.0060	mg/Kg wet	0.100		76.8	40-140	7.84	30	
Methoxychlor	0.10	0.050	mg/Kg wet	0.100		99.6	40-140	9.82	30	
Methoxychlor [2C]	0.098	0.050	mg/Kg wet	0.100		97.8	40-140	9.07	30	
Surrogate: Decachlorobiphenyl	*0.167*		mg/Kg wet	0.200		83.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.162*		mg/Kg wet	0.200		80.9	30-150			
Surrogate: Tetrachloro-m-xylene	*0.152*		mg/Kg wet	0.200		76.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.148*		mg/Kg wet	0.200		74.2	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146392 - SW-846 3546										
Blank (B146392-BLK1)				Prepared: 04/12/16 Analyzed: 04/13/16						
Aroclor-1016	ND	0.020	mg/Kg wet							
Aroclor-1016 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1221	ND	0.020	mg/Kg wet							
Aroclor-1221 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1232	ND	0.020	mg/Kg wet							
Aroclor-1232 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1242	ND	0.020	mg/Kg wet							
Aroclor-1242 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1248	ND	0.020	mg/Kg wet							
Aroclor-1248 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1254	ND	0.020	mg/Kg wet							
Aroclor-1254 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1260	ND	0.020	mg/Kg wet							
Aroclor-1260 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1262	ND	0.020	mg/Kg wet							
Aroclor-1262 [2C]	ND	0.020	mg/Kg wet							
Aroclor-1268	ND	0.020	mg/Kg wet							
Aroclor-1268 [2C]	ND	0.020	mg/Kg wet							
Surrogate: Decachlorobiphenyl	*0.180*		mg/Kg wet	0.200		90.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.201*		mg/Kg wet	0.200		100	30-150			
Surrogate: Tetrachloro-m-xylene	*0.162*		mg/Kg wet	0.200		81.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.182*		mg/Kg wet	0.200		91.1	30-150			
LCS (B146392-BS1)				Prepared: 04/12/16 Analyzed: 04/13/16						
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		79.3	40-140			
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		80.7	40-140			
Aroclor-1260	0.16	0.020	mg/Kg wet	0.200		82.3	40-140			
Aroclor-1260 [2C]	0.15	0.020	mg/Kg wet	0.200		76.5	40-140			
Surrogate: Decachlorobiphenyl	*0.186*		mg/Kg wet	0.200		93.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.209*		mg/Kg wet	0.200		105	30-150			
Surrogate: Tetrachloro-m-xylene	*0.169*		mg/Kg wet	0.200		84.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.189*		mg/Kg wet	0.200		94.4	30-150			
LCS Dup (B146392-BSD1)				Prepared: 04/12/16 Analyzed: 04/13/16						
Aroclor-1016	0.16	0.020	mg/Kg wet	0.200		80.8	40-140	1.84	30	
Aroclor-1016 [2C]	0.16	0.020	mg/Kg wet	0.200		82.1	40-140	1.69	30	
Aroclor-1260	0.17	0.020	mg/Kg wet	0.200		85.0	40-140	3.24	30	
Aroclor-1260 [2C]	0.16	0.020	mg/Kg wet	0.200		79.5	40-140	3.91	30	
Surrogate: Decachlorobiphenyl	*0.191*		mg/Kg wet	0.200		95.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.215*		mg/Kg wet	0.200		107	30-150			
Surrogate: Tetrachloro-m-xylene	*0.173*		mg/Kg wet	0.200		86.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.196*		mg/Kg wet	0.200		97.8	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146392 - SW-846 3546										
Matrix Spike (B146392-MS1)		**Source: 16D0458-01**		Prepared: 04/12/16 Analyzed: 04/13/16						
Aroclor-1016	0.18	0.11	mg/Kg dry	0.211	ND	85.9	40-140			
Aroclor-1016 [2C]	0.17	0.11	mg/Kg dry	0.211	ND	80.0	40-140			
Aroclor-1260	0.18	0.11	mg/Kg dry	0.211	ND	83.3	40-140			
Aroclor-1260 [2C]	0.16	0.11	mg/Kg dry	0.211	ND	75.1	40-140			
Surrogate: Decachlorobiphenyl	*0.187*		mg/Kg dry	0.211		88.4	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.180*		mg/Kg dry	0.211		85.4	30-150			
Surrogate: Tetrachloro-m-xylene	*0.183*		mg/Kg dry	0.211		86.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.182*		mg/Kg dry	0.211		86.3	30-150			
Matrix Spike Dup (B146392-MSD1)		**Source: 16D0458-01**		Prepared: 04/12/16 Analyzed: 04/13/16						
Aroclor-1016	0.20	0.11	mg/Kg dry	0.211	ND	93.4	40-140	8.47	30	
Aroclor-1016 [2C]	0.19	0.11	mg/Kg dry	0.211	ND	87.6	40-140	9.04	30	
Aroclor-1260	0.20	0.11	mg/Kg dry	0.211	ND	92.9	40-140	10.9	30	
Aroclor-1260 [2C]	0.17	0.11	mg/Kg dry	0.211	ND	81.9	40-140	8.66	30	
Surrogate: Decachlorobiphenyl	*0.202*		mg/Kg dry	0.211		95.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*0.200*		mg/Kg dry	0.211		94.5	30-150			
Surrogate: Tetrachloro-m-xylene	*0.202*		mg/Kg dry	0.211		95.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*0.202*		mg/Kg dry	0.211		95.7	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146390 - SW-846 8151										
Blank (B146390-BLK1)				Prepared: 04/12/16 Analyzed: 04/13/16						
2,4-D	ND	24	µg/kg wet							
2,4-D [2C]	ND	24	µg/kg wet							
2,4-DB	ND	24	µg/kg wet							
2,4-DB [2C]	ND	24	µg/kg wet							
2,4,5-TP (Silvex)	ND	2.4	µg/kg wet							
2,4,5-TP (Silvex) [2C]	ND	2.4	µg/kg wet							
2,4,5-T	ND	2.4	µg/kg wet							
2,4,5-T [2C]	ND	2.4	µg/kg wet							
Dalapon	ND	59	µg/kg wet							
Dalapon [2C]	ND	59	µg/kg wet							
Dicamba	ND	2.4	µg/kg wet							
Dicamba [2C]	ND	2.4	µg/kg wet							
Dichloroprop	ND	24	µg/kg wet							
Dichloroprop [2C]	ND	24	µg/kg wet							
Dinoseb	ND	12	µg/kg wet							
Dinoseb [2C]	ND	12	µg/kg wet							
MCPA	ND	2400	µg/kg wet							
MCPA [2C]	ND	2400	µg/kg wet							
MCPP	ND	2400	µg/kg wet							
MCPP [2C]	ND	2400	µg/kg wet							
Surrogate: 2,4-Dichlorophenylacetic acid	*76.4*		µg/kg wet	95.1		80.3	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*74.1*		µg/kg wet	95.1		77.9	30-150			
LCS (B146390-BS1)				Prepared: 04/12/16 Analyzed: 04/14/16						
2,4-D	91.5	25	µg/kg wet	125		73.4	40-140			
2,4-D [2C]	83.5	25	µg/kg wet	125		66.9	40-140			
2,4-DB	102	25	µg/kg wet	125		82.1	40-140			
2,4-DB [2C]	94.8	25	µg/kg wet	125		76.0	40-140			
2,4,5-TP (Silvex)	9.65	2.5	µg/kg wet	12.5		77.3	40-140			
2,4,5-TP (Silvex) [2C]	9.69	2.5	µg/kg wet	12.5		77.7	40-140			
2,4,5-T	9.65	2.5	µg/kg wet	12.5		77.4	40-140			
2,4,5-T [2C]	9.02	2.5	µg/kg wet	12.5		72.3	40-140			
Dalapon	126	62	µg/kg wet	312		40.3	40-140			
Dalapon [2C]	127	62	µg/kg wet	312		40.8	40-140			
Dicamba	10.4	2.5	µg/kg wet	12.5		83.4	40-140			
Dicamba [2C]	9.76	2.5	µg/kg wet	12.5		78.2	40-140			
Dichloroprop	114	25	µg/kg wet	125		91.5	40-140			
Dichloroprop [2C]	117	25	µg/kg wet	125		93.6	40-140			
Dinoseb	14.6	12	µg/kg wet	62.4		23.5	0-42.4			
Dinoseb [2C]	15.2	12	µg/kg wet	62.4		24.4	0-41.1			
MCPA	9400	2500	µg/kg wet	12500		75.3	40-140			
MCPA [2C]	8980	2500	µg/kg wet	12500		72.0	40-140			
MCPP	9340	2500	µg/kg wet	12500		74.8	40-140			
MCPP [2C]	9180	2500	µg/kg wet	12500		73.6	40-140			
Surrogate: 2,4-Dichlorophenylacetic acid	*77.1*		µg/kg wet	99.8		77.3	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*76.3*		µg/kg wet	99.8		76.5	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146390 - SW-846 8151										
LCS Dup (B146390-BSD1)				Prepared: 04/12/16 Analyzed: 04/14/16						
2,4-D	89.7	25	µg/kg wet	125		72.0	40-140	2.05	30	
2,4-D [2C]	82.2	25	µg/kg wet	125		66.0	40-140	1.57	30	
2,4-DB	98.1	25	µg/kg wet	125		78.8	40-140	4.40	30	
2,4-DB [2C]	91.4	25	µg/kg wet	125		73.4	40-140	3.72	30	
2,4,5-TP (Silvex)	9.46	2.5	µg/kg wet	12.5		76.0	40-140	1.95	30	
2,4,5-TP (Silvex) [2C]	9.48	2.5	µg/kg wet	12.5		76.2	40-140	2.16	30	
2,4,5-T	9.46	2.5	µg/kg wet	12.5		76.0	40-140	2.06	30	
2,4,5-T [2C]	8.75	2.5	µg/kg wet	12.5		70.3	40-140	3.04	30	
Dalapon	127	62	µg/kg wet	311		40.8	40-140	0.945	30	
Dalapon [2C]	129	62	µg/kg wet	311		41.4	40-140	1.48	30	
Dicamba	10.0	2.5	µg/kg wet	12.5		80.6	40-140	3.65	30	
Dicamba [2C]	9.76	2.5	µg/kg wet	12.5		78.4	40-140	0.00750	30	
Dichloroprop	112	25	µg/kg wet	125		90.0	40-140	1.80	30	
Dichloroprop [2C]	115	25	µg/kg wet	125		92.2	40-140	1.62	30	
Dinoseb	14.7	12	µg/kg wet	62.3		23.6	0-42.4	0.326	30	
Dinoseb [2C]	15.1	12	µg/kg wet	62.3		24.2	0-41.1	0.888	30	
MCPA	9250	2500	µg/kg wet	12500		74.3	40-140	1.63	30	
MCPA [2C]	8790	2500	µg/kg wet	12500		70.6	40-140	2.07	30	
MCPP	9190	2500	µg/kg wet	12500		73.8	40-140	1.62	30	
MCPP [2C]	8980	2500	µg/kg wet	12500		72.2	40-140	2.18	30	
Surrogate: 2,4-Dichlorophenylacetic acid	*75.8*		µg/kg wet	99.6		76.1	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*75.2*		µg/kg wet	99.6		75.5	30-150			
Matrix Spike (B146390-MS1)		**Source: 16D0458-02**		Prepared: 04/12/16 Analyzed: 04/14/16						
2,4-D	110	27	µg/kg dry	135	ND	81.4	30-150			
2,4-D [2C]	98.0	27	µg/kg dry	135	ND	72.6	30-150			
2,4-DB	116	27	µg/kg dry	135	ND	85.9	30-150			
2,4-DB [2C]	113	27	µg/kg dry	135	ND	83.4	30-150			
2,4,5-TP (Silvex)	11.0	2.7	µg/kg dry	13.5	ND	81.6	30-150			
2,4,5-TP (Silvex) [2C]	11.2	2.7	µg/kg dry	13.5	ND	83.2	30-150			
2,4,5-T	11.3	2.7	µg/kg dry	13.5	ND	83.5	30-150			
2,4,5-T [2C]	11.1	2.7	µg/kg dry	13.5	ND	82.0	30-150			
Dalapon	129	67	µg/kg dry	337	ND	38.3	30-150			
Dalapon [2C]	133	67	µg/kg dry	337	ND	39.4	30-150			V-06
Dicamba	11.9	2.7	µg/kg dry	13.5	ND	87.8	30-150			
Dicamba [2C]	11.3	2.7	µg/kg dry	13.5	ND	83.6	30-150			
Dichloroprop	130	27	µg/kg dry	135	ND	96.4	30-150			
Dichloroprop [2C]	129	27	µg/kg dry	135	ND	95.7	30-150			
Dinoseb	13.1	13	µg/kg dry	67.5	ND	19.5	10-150			J
Dinoseb [2C]	13.2	13	µg/kg dry	67.5	ND	19.6	10-150			J
MCPA	11100	2700	µg/kg dry	13500	ND	82.3	30-150			
MCPA [2C]	10500	2700	µg/kg dry	13500	ND	78.0	30-150			
MCPP	10800	2700	µg/kg dry	13500	ND	80.2	30-150			
MCPP [2C]	10500	2700	µg/kg dry	13500	ND	77.8	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid	*91.6*		µg/kg dry	108		84.8	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*85.8*		µg/kg dry	108		79.5	30-150			

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QUALITY CONTROL

Herbicides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146390 - SW-846 8151										
Matrix Spike Dup (B146390-MSD1)		**Source: 16D0458-02**		Prepared: 04/12/16 Analyzed: 04/14/16						
2,4-D	115	27	µg/kg dry	135	ND	85.0	30-150	4.52	30	
2,4-D [2C]	102	27	µg/kg dry	135	ND	75.5	30-150	4.07	30	
2,4-DB	121	27	µg/kg dry	135	ND	89.8	30-150	4.53	30	
2,4-DB [2C]	117	27	µg/kg dry	135	ND	86.8	30-150	4.14	30	
2,4,5-TP (Silvex)	11.5	2.7	µg/kg dry	13.5	ND	85.1	30-150	4.37	30	
2,4,5-TP (Silvex) [2C]	11.6	2.7	µg/kg dry	13.5	ND	85.8	30-150	3.31	30	
2,4,5-T	11.7	2.7	µg/kg dry	13.5	ND	86.6	30-150	3.79	30	
2,4,5-T [2C]	11.7	2.7	µg/kg dry	13.5	ND	86.2	30-150	5.08	30	
Dalapon	154	68	µg/kg dry	338	ND	45.6	30-150	17.4	30	
Dalapon [2C]	158	68	µg/kg dry	338	ND	46.9	30-150	17.4	30	V-06
Dicamba	12.1	2.7	µg/kg dry	13.5	ND	89.3	30-150	1.78	30	
Dicamba [2C]	11.7	2.7	µg/kg dry	13.5	ND	86.8	30-150	3.86	30	
Dichloroprop	137	27	µg/kg dry	135	ND	102	30-150	5.47	30	
Dichloroprop [2C]	137	27	µg/kg dry	135	ND	102	30-150	6.09	30	
Dinoseb	17.0	14	µg/kg dry	67.6	ND	25.2	10-150	25.8	30	
Dinoseb [2C]	17.2	14	µg/kg dry	67.6	ND	25.4	10-150	26.0	30	
MCPA	11700	2700	µg/kg dry	13500	ND	86.5	30-150	5.14	30	
MCPA [2C]	11200	2700	µg/kg dry	13500	ND	83.0	30-150	6.34	30	
MCPP	11500	2700	µg/kg dry	13500	ND	84.7	30-150	5.69	30	
MCPP [2C]	11100	2700	µg/kg dry	13500	ND	82.3	30-150	5.78	30	
Surrogate: 2,4-Dichlorophenylacetic acid	*96.2*		µg/kg dry	108		89.0	30-150			
Surrogate: 2,4-Dichlorophenylacetic acid [2C]	*92.9*		µg/kg dry	108		85.9	30-150			

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QUALITY CONTROL

Petroleum Hydrocarbons Analyses - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146383 - SW-846 3546										
Blank (B146383-BLK1)				Prepared: 04/11/16 Analyzed: 04/12/16						
Diesel Range Organics	ND	8.3	mg/Kg wet							
Surrogate: o-Terphenyl	*2.51*		mg/Kg wet	3.33		75.3	40-140			
LCS (B146383-BS1)				Prepared: 04/11/16 Analyzed: 04/12/16						
Diesel Range Organics	23.2	8.3	mg/Kg wet	33.3		69.5	40-140			
Surrogate: o-Terphenyl	*2.47*		mg/Kg wet	3.33		74.0	40-140			
LCS Dup (B146383-BSD1)				Prepared: 04/11/16 Analyzed: 04/12/16						
Diesel Range Organics	22.3	8.3	mg/Kg wet	33.3		66.8	40-140	3.97		
Surrogate: o-Terphenyl	*2.40*		mg/Kg wet	3.33		72.1	40-140			
Batch B146689 - SW-846 5035/5030B										
Blank (B146689-BLK1)				Prepared & Analyzed: 04/14/16						
Gasoline Range Organics (GRO)	ND	1.0	mg/Kg wet							
Surrogate: 1-Chloro-3-fluorobenzene	*11.3*		µg/L	15.0		75.3	70-130			
LCS (B146689-BS1)				Prepared & Analyzed: 04/14/16						
Gasoline Range Organics (GRO)	0.203	0.010	mg/Kg wet	0.250		81.2	80-120			
Surrogate: 1-Chloro-3-fluorobenzene	*12.9*		µg/L	15.0		86.2	70-130			
LCS Dup (B146689-BSD1)				Prepared & Analyzed: 04/14/16						
Gasoline Range Organics (GRO)	0.218	0.010	mg/Kg wet	0.250		87.0	80-120	6.88	30	
Surrogate: 1-Chloro-3-fluorobenzene	*11.5*		µg/L	15.0		76.4	70-130			
Matrix Spike (B146689-MS1)		**Source: 16D0458-03**		Prepared & Analyzed: 04/14/16						
Gasoline Range Organics (GRO)	23.9	0.85	mg/Kg dry	21.2	ND	113	80-120			
Surrogate: 1-Chloro-3-fluorobenzene	*11.2*		µg/L	15.0		74.5	70-130			
Matrix Spike Dup (B146689-MSD1)		**Source: 16D0458-03**		Prepared & Analyzed: 04/14/16						
Gasoline Range Organics (GRO)	24.9	0.85	mg/Kg dry	21.2	ND	117	80-120	4.15	30	
Surrogate: 1-Chloro-3-fluorobenzene	*11.3*		µg/L	15.0		75.0	70-130			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146400 - SW-846 7471										
Blank (B146400-BLK1)				Prepared: 04/12/16 Analyzed: 04/13/16						
Mercury	ND	0.025	mg/Kg wet							
LCS (B146400-BS1)				Prepared: 04/12/16 Analyzed: 04/13/16						
Mercury	3.82	0.39	mg/Kg wet	3.98		95.9	73.7-126.3			
LCS Dup (B146400-BSD1)				Prepared: 04/12/16 Analyzed: 04/13/16						
Mercury	3.79	0.40	mg/Kg wet	3.98		95.2	73.7-126.3	0.771	30	
Batch B146698 - SW-846 3050B										
Blank (B146698-BLK1)				Prepared: 04/14/16 Analyzed: 04/18/16						
Nickel	ND	0.50	mg/Kg wet							
Selenium	ND	5.0	mg/Kg wet							
Silver	ND	0.50	mg/Kg wet							
Thallium	ND	2.5	mg/Kg wet							
Vanadium	ND	1.0	mg/Kg wet							
Zinc	ND	1.0	mg/Kg wet							
LCS (B146698-BS1)				Prepared: 04/14/16 Analyzed: 04/18/16						
Nickel	54.6	0.99	mg/Kg wet	56.3		97.0	82.2-117.8			
Selenium	153	9.9	mg/Kg wet	157		97.3	77.1-122.3			
Silver	31.6	0.99	mg/Kg wet	34.2		92.4	74.3-125.4			
Thallium	118	4.9	mg/Kg wet	116		102	78.2-121.6			
Vanadium	65.8	2.0	mg/Kg wet	67.1		98.1	64.8-135.2			
Zinc	206	2.0	mg/Kg wet	207		99.6	79.7-120.8			
LCS Dup (B146698-BSD1)				Prepared: 04/14/16 Analyzed: 04/18/16						
Nickel	54.0	0.98	mg/Kg wet	56.3		95.9	82.2-117.8	1.11	30	
Selenium	151	9.8	mg/Kg wet	157		95.9	77.1-122.3	1.41	30	
Silver	30.3	0.98	mg/Kg wet	34.2		88.7	74.3-125.4	4.09	30	
Thallium	115	4.9	mg/Kg wet	116		99.1	78.2-121.6	2.85	30	
Vanadium	63.6	2.0	mg/Kg wet	67.1		94.8	64.8-135.2	3.48	30	
Zinc	198	2.0	mg/Kg wet	207		95.8	79.7-120.8	3.89	30	
Batch B146777 - SW-846 3050B										
Blank (B146777-BLK1)				Prepared & Analyzed: 04/15/16						
Antimony	ND	2.5	mg/Kg wet							
Arsenic	ND	2.5	mg/Kg wet							
Barium	ND	2.5	mg/Kg wet							
Beryllium	ND	0.25	mg/Kg wet							
Cadmium	ND	0.25	mg/Kg wet							
Chromium	ND	0.50	mg/Kg wet							
Cobalt	ND	2.5	mg/Kg wet							
Copper	ND	0.50	mg/Kg wet							
Lead	ND	0.75	mg/Kg wet							
Manganese	ND	0.50	mg/Kg wet							
Nickel	ND	0.50	mg/Kg wet							
Selenium	ND	5.0	mg/Kg wet							
Silver	ND	0.50	mg/Kg wet							
Thallium	ND	2.5	mg/Kg wet							
Vanadium	ND	1.0	mg/Kg wet							
Zinc	0.89	1.0	mg/Kg wet							J

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146777 - SW-846 3050B										
LCS (B146777-BS1)				Prepared & Analyzed: 04/15/16						
Antimony	99.4	5.2	mg/Kg wet	116		85.7	0-210.3			
Arsenic	116	5.2	mg/Kg wet	122		94.8	77.8-122.1			
Barium	161	5.2	mg/Kg wet	167		96.5	82-117.4			
Beryllium	54.8	0.52	mg/Kg wet	54.3		101	82.3-117.7			
Cadmium	87.4	0.52	mg/Kg wet	88.0		99.3	81.9-118.2			
Chromium	98.2	1.0	mg/Kg wet	102		96.2	78.7-120.6			
Cobalt	97.1	5.2	mg/Kg wet	99.4		97.7	83-116.7			
Copper	73.6	1.0	mg/Kg wet	78.0		94.3	80.4-119.6			
Lead	86.6	1.6	mg/Kg wet	94.5		91.6	82.4-117.8			
Manganese	379	1.0	mg/Kg wet	401		94.6	80.8-119.2			
Nickel	53.2	1.0	mg/Kg wet	56.3		94.6	82.2-117.8			
Selenium	142	10	mg/Kg wet	157		90.5	77.1-122.3			
Silver	31.6	1.0	mg/Kg wet	34.2		92.3	74.3-125.4			
Thallium	119	5.2	mg/Kg wet	116		103	78.2-121.6			
Vanadium	63.7	2.1	mg/Kg wet	67.1		94.9	64.8-135.2			
Zinc	196	2.1	mg/Kg wet	207		94.5	79.7-120.8			
LCS Dup (B146777-BSD1)				Prepared & Analyzed: 04/15/16						
Antimony	102	5.1	mg/Kg wet	116		88.1	0-210.3	2.77	30	
Arsenic	112	5.1	mg/Kg wet	122		92.1	77.8-122.1	2.87	30	
Barium	165	5.1	mg/Kg wet	167		98.7	82-117.4	2.27	30	
Beryllium	56.5	0.51	mg/Kg wet	54.3		104	82.3-117.7	3.04	30	
Cadmium	88.9	0.51	mg/Kg wet	88.0		101	81.9-118.2	1.68	30	
Chromium	98.4	1.0	mg/Kg wet	102		96.5	78.7-120.6	0.284	30	
Cobalt	97.9	5.1	mg/Kg wet	99.4		98.5	83-116.7	0.806	30	
Copper	78.5	1.0	mg/Kg wet	78.0		101	80.4-119.6	6.51	30	
Lead	85.1	1.5	mg/Kg wet	94.5		90.0	82.4-117.8	1.78	30	
Manganese	429	1.0	mg/Kg wet	401		107	80.8-119.2	12.2	30	
Nickel	54.9	1.0	mg/Kg wet	56.3		97.6	82.2-117.8	3.12	30	
Selenium	140	10	mg/Kg wet	157		89.3	77.1-122.3	1.27	30	
Silver	31.3	1.0	mg/Kg wet	34.2		91.4	74.3-125.4	0.978	30	
Thallium	116	5.1	mg/Kg wet	116		99.8	78.2-121.6	2.86	30	
Vanadium	63.1	2.0	mg/Kg wet	67.1		94.1	64.8-135.2	0.913	30	
Zinc	196	2.0	mg/Kg wet	207		94.5	79.7-120.8	0.0778	30	
MRL Check (B146777-MRL1)				Prepared & Analyzed: 04/15/16						
Lead	1.13	0.71	mg/Kg wet	1.41		80.0	80-120			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B146447 - SW-846 9045C											
LCS (B146447-BS1)				Prepared & Analyzed: 04/12/16							
pH	6.02		pH Units	6.00		100		98.6-102			
LCS (B146447-BS2)				Prepared & Analyzed: 04/12/16							
pH	6.01		pH Units	6.00		100		98.6-102			
LCS (B146447-BS3)				Prepared & Analyzed: 04/12/16							
pH	6.03		pH Units	6.00		100		98.6-102			
Batch B146656 - SW-846 9014											
Blank (B146656-BLK1)				Prepared & Analyzed: 04/14/16							
Reactive Cyanide	ND	0.40	mg/Kg								
LCS (B146656-BS1)				Prepared & Analyzed: 04/14/16							
Reactive Cyanide	9.5	0.40	mg/Kg	10.0		95.4		86.4-107			
Batch B146657 - SW-846 9030A											
Blank (B146657-BLK1)				Prepared & Analyzed: 04/14/16							
Reactive Sulfide	ND	2.0	mg/Kg								
LCS (B146657-BS1)				Prepared & Analyzed: 04/14/16							
Reactive Sulfide	15	2.0	mg/Kg	14.8		103		42.9-132			
Batch B146802 - SW-846 7196A											
Blank (B146802-BLK1)				Prepared: 04/15/16 Analyzed: 04/18/16							
Hexavalent Chromium	ND	0.16	mg/Kg wet								
LCS (B146802-BS1)				Prepared: 04/15/16 Analyzed: 04/18/16							
Hexavalent Chromium	89	3.6	mg/Kg wet	99.9		89.3		80-120			
LCS Dup (B146802-BSD1)				Prepared: 04/15/16 Analyzed: 04/18/16							
Hexavalent Chromium	90	3.6	mg/Kg wet	99.6		90.5		80-120	0.944	20	
Matrix Spike (B146802-MS1) Soluble MS	**Source: 16D0458-01**			Prepared: 04/15/16 Analyzed: 04/18/16							
Hexavalent Chromium	33	0.87	mg/Kg dry	43.4	0.29	75.2		75-125			MS-16
Matrix Spike (B146802-MS2) PDMS	**Source: 16D0458-01**			Prepared: 04/15/16 Analyzed: 04/18/16							
Hexavalent Chromium	30	1.8	mg/Kg dry	44.2	0.29	**68.5**	*	75-125			MS-16

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146802 - SW-846 7196A										
Matrix Spike (B146802-MS3) Insoluble MS		**Source: 16D0458-01**		Prepared: 04/15/16 Analyzed: 04/18/16						
Hexavalent Chromium	670	35	mg/Kg dry	696	0.29	96.5	75-125			
Matrix Spike Dup (B146802-MSD1) Soluble MS Dup		**Source: 16D0458-01**		Prepared: 04/15/16 Analyzed: 04/18/16						
Hexavalent Chromium	33	0.86	mg/Kg dry	43.1	0.29	75.8	75-125	0.0598	35	
Batch B146950 - SW-846 9014										
Blank (B146950-BLK1)				Prepared & Analyzed: 04/18/16						
Cyanide	ND	0.50	mg/Kg wet							
LCS (B146950-BS1)				Prepared & Analyzed: 04/18/16						
Cyanide	55	2.3	mg/Kg wet	55.9		98.8	80-120			
LCS Dup (B146950-BSD1)				Prepared & Analyzed: 04/18/16						
Cyanide	53	2.3	mg/Kg wet	55.1		95.3	80-120	5.03	20	

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BREAKDOWN REPORT

Lab Sample ID: **S011158-PEM1** **Analyzed:** **04/13/2016**

Column Number: **1**

Analyte	% Breakdown
4,4'-DDT [1]	0.90
Endrin [1]	3.21

Column Number: **2**

Analyte	% Breakdown
4,4'-DDT [2]	0.70
Endrin [2]	3.37

BREAKDOWN REPORT

Lab Sample ID: **S011158-PEM2** **Analyzed:** **04/13/2016**

Column Number: **1**

Analyte	% Breakdown
4,4'-DDT [1]	0.98
Endrin [1]	3.29

Column Number: **2**

Analyte	% Breakdown
4,4'-DDT [2]	0.82
Endrin [2]	3.45

BREAKDOWN REPORT

Lab Sample ID: **S011158-PEM3** **Analyzed:** **04/14/2016**

Column Number: **1**

Analyte	% Breakdown
4,4'-DDT [1]	1.84
Endrin [1]	2.41

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BREAKDOWN REPORT

Lab Sample ID: **S011158-PEM3** **Analyzed:** **04/14/2016**

Column Number: **2**

Analyte	% Breakdown
4,4'-DDT [2]	1.72
Endrin [2]	2.52

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

GP-3 (0-5)

Lab Sample ID: 16D0458-03 Date(s) Analyzed 04/13/2016 04/13/2016

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDT	1	7.61	7.58	7.64	0.00086	
	2	7.63	7.60	7.66	0.00062	32.1
MCPA	1	9.91	0.00	0.00	580	
	2	9.47	0.00	0.00	9200	176.0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS

Lab Sample ID: B146390-BS1 Date(s) Analyzed 04/14/2016 04/14/2016

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	13.17	0.00	0.00	9.65	
	2	12.81	0.00	0.00	9.02	7
2,4,5-TP (Silvex)	1	12.61	0.00	0.00	9.65	
	2	12.05	0.00	0.00	9.69	0
2,4-D	1	10.99	0.00	0.00	91.5	
	2	10.56	0.00	0.00	83.5	9
2,4-DB	1	14.28	0.00	0.00	102	
	2	13.84	0.00	0.00	94.8	7
Dalapon	1	3.46	0.00	0.00	126	
	2	2.91	0.00	0.00	127	1
Dicamba	1	9.22	0.00	0.00	10.4	
	2	8.77	0.00	0.00	9.76	6
Dichloroprop	1	10.56	0.00	0.00	114	
	2	10.00	0.00	0.00	117	3
Dinoseb	1	16.33	0.00	0.00	14.6	
	2	14.40	0.00	0.00	15.2	4
MCPA	1	9.91	0.00	0.00	9400	
	2	9.45	0.00	0.00	8980	5
MCPP	1	9.64	0.00	0.00	9340	
	2	9.06	0.00	0.00	9180	2

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

LCS Dup

Lab Sample ID: B146390-BSD1 Date(s) Analyzed 04/14/2016 04/14/2016

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	13.17	0.00	0.00	9.46	
	2	12.81	0.00	0.00	8.75	8
2,4,5-TP (Silvex)	1	12.60	0.00	0.00	9.46	
	2	12.05	0.00	0.00	9.48	0
2,4-D	1	10.99	0.00	0.00	89.7	
	2	10.56	0.00	0.00	82.2	9
2,4-DB	1	14.28	0.00	0.00	98.1	
	2	13.84	0.00	0.00	91.4	7
Dalapon	1	3.46	0.00	0.00	127	
	2	2.91	0.00	0.00	129	2
Dicamba	1	9.22	0.00	0.00	10.0	
	2	8.77	0.00	0.00	9.76	2
Dichloroprop	1	10.56	0.00	0.00	112	
	2	10.00	0.00	0.00	115	3
Dinoseb	1	16.33	0.00	0.00	14.7	
	2	14.40	0.00	0.00	15.1	3
MCPA	1	9.91	0.00	0.00	9250	
	2	9.45	0.00	0.00	8790	5
MCPP	1	9.64	0.00	0.00	9190	
	2	9.06	0.00	0.00	8980	2

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

Matrix Spike

Lab Sample ID: B146390-MS1 Date(s) Analyzed 04/14/2016 04/14/2016

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	13.17	0.00	0.00	11.3	
	2	12.81	0.00	0.00	11.1	2
2,4,5-TP (Silvex)	1	12.60	0.00	0.00	11.0	
	2	12.05	0.00	0.00	11.2	2
2,4-D	1	10.99	0.00	0.00	110	
	2	10.56	0.00	0.00	98.0	12
2,4-DB	1	14.28	0.00	0.00	116	
	2	13.84	0.00	0.00	113	3
Dalapon	1	3.46	0.00	0.00	129	
	2	2.92	0.00	0.00	133	3
Dicamba	1	9.22	0.00	0.00	11.9	
	2	8.77	0.00	0.00	11.3	5
Dichloroprop	1	10.56	0.00	0.00	130	
	2	10.00	0.00	0.00	129	1
Dinoseb	1	16.33	0.00	0.00	13.1	
	2	14.40	0.00	0.00	13.2	1
MCPA	1	9.91	0.00	0.00	11100	
	2	9.45	0.00	0.00	10500	6
MCPP	1	9.64	0.00	0.00	10800	
	2	9.06	0.00	0.00	10500	3

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8151A

Matrix Spike Dup

Lab Sample ID: B146390-MSD1 Date(s) Analyzed 04/14/2016 04/14/2016

Instrument ID (1): ECD 8 Instrument ID (2): ECD 8

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
2,4,5-T	1	13.17	0.00	0.00	11.7	
	2	12.81	0.00	0.00	11.7	0
2,4,5-TP (Silvex)	1	12.60	0.00	0.00	11.5	
	2	12.05	0.00	0.00	11.6	1
2,4-D	1	10.99	0.00	0.00	115	
	2	10.56	0.00	0.00	102	12
2,4-DB	1	14.28	0.00	0.00	121	
	2	13.84	0.00	0.00	117	3
Dalapon	1	3.46	0.00	0.00	154	
	2	2.92	0.00	0.00	158	3
Dicamba	1	9.22	0.00	0.00	12.1	
	2	8.77	0.00	0.00	11.7	3
Dichloroprop	1	10.56	0.00	0.00	137	
	2	10.00	0.00	0.00	137	0
Dinoseb	1	16.33	0.00	0.00	17.0	
	2	14.40	0.00	0.00	17.2	1
MCPA	1	9.91	0.00	0.00	11700	
	2	9.45	0.00	0.00	11200	4
MCPP	1	9.64	0.00	0.00	11500	
	2	9.06	0.00	0.00	11100	4

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B146392-BS1

Date(s) Analyzed 04/13/2016 04/13/2016

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.16	
	2	0.00	0.00	0.00	0.16	1
Aroclor-1260	1	0.00	0.00	0.00	0.16	
	2	0.00	0.00	0.00	0.15	10

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B146392-BSD1 Date(s) Analyzed 04/13/2016 04/13/2016

Instrument ID (1): ECD5 Instrument ID (2): ECD5

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.16	
	2	0.00	0.00	0.00	0.16	1
Aroclor-1260	1	0.00	0.00	0.00	0.17	
	2	0.00	0.00	0.00	0.16	6

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike

Lab Sample ID: B146392-MS1

Date(s) Analyzed 04/13/2016 04/13/2016

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.18	
	2	0.00	0.00	0.00	0.17	6
Aroclor-1260	1	0.00	0.00	0.00	0.18	
	2	0.00	0.00	0.00	0.16	10

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

Matrix Spike Dup

Lab Sample ID: B146392-MSD1

Date(s) Analyzed 04/13/2016 04/13/2016

Instrument ID (1): ECD5

Instrument ID (2): ECD5

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.20	
	2	0.00	0.00	0.00	0.19	4
Aroclor-1260	1	0.00	0.00	0.00	0.20	
	2	0.00	0.00	0.00	0.17	14

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B146416-BS1 Date(s) Analyzed 04/13/2016 04/13/2016

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	7.40	7.37	7.43	0.11	
	2	7.39	7.36	7.42	0.11	0
4,4'-DDE	1	6.95	6.92	6.98	0.11	
	2	6.95	6.92	6.98	0.11	5
4,4'-DDT	1	7.61	7.58	7.64	0.11	
	2	7.63	7.60	7.66	0.11	2
Alachlor	1	6.37	6.34	6.40	0.12	
	2	6.12	6.09	6.15	0.11	10
Aldrin	1	6.27	6.24	6.30	0.10	
	2	6.18	6.15	6.21	0.10	5
alpha-BHC	1	5.54	5.51	5.57	0.10	
	2	5.46	5.43	5.49	0.097	5
alpha-Chlordane	1	6.89	6.86	6.92	0.10	
	2	6.82	6.79	6.85	0.10	3
beta-BHC	1	5.80	5.78	5.84	0.10	
	2	5.73	5.70	5.76	0.089	11
delta-BHC	1	5.92	5.89	5.95	0.098	
	2	5.92	5.89	5.95	0.097	1
Dieldrin	1	7.17	7.14	7.20	0.11	
	2	7.06	7.03	7.09	0.11	0
Endosulfan I	1	6.99	6.96	7.02	0.10	
	2	6.86	6.83	6.89	0.10	2
Endosulfan II	1	7.52	7.49	7.55	0.10	
	2	7.46	7.43	7.49	0.10	4
Endosulfan Sulfate	1	8.17	8.14	8.20	0.10	
	2	7.94	7.91	7.97	0.099	2
Endrin	1	7.35	7.32	7.38	0.11	
	2	7.29	7.26	7.32	0.11	2
Endrin Aldehyde	1	7.85	7.82	7.88	0.099	
	2	7.72	7.70	7.76	0.099	0
Endrin Ketone	1	8.36	8.33	8.39	0.11	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS

Lab Sample ID: B146416-BS1 Date(s) Analyzed 04/13/2016 04/13/2016

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	8.32	8.29	8.35	0.10	9
gamma-BHC (Lindane)	1	5.75	5.72	5.78	0.11	
	2	5.68	5.65	5.71	0.10	6
gamma-Chlordane	1	6.79	6.76	6.82	0.11	
	2	6.71	6.68	6.74	0.10	6
Heptachlor	1	6.07	6.04	6.10	0.11	
	2	5.96	5.93	5.99	0.10	8
Heptachlor Epoxide	1	6.70	6.67	6.73	0.10	
	2	6.58	6.55	6.61	0.10	4
Hexachlorobenzene	1	5.44	5.41	5.47	0.085	
	2	5.37	5.34	5.40	0.083	3
Methoxychlor	1	7.99	7.96	8.02	0.11	
	2	8.17	8.14	8.20	0.11	0

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B146416-BSD1 Date(s) Analyzed 04/13/2016 04/13/2016

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
4,4'-DDD	1	7.40	7.37	7.43	0.10	
	2	7.39	7.36	7.42	0.099	1
4,4'-DDE	1	6.95	6.92	6.98	0.096	
	2	6.95	6.92	6.98	0.097	1
4,4'-DDT	1	7.61	7.58	7.64	0.10	
	2	7.63	7.60	7.66	0.099	3
Alachlor	1	6.37	6.34	6.40	0.11	
	2	6.12	6.09	6.15	0.11	2
Aldrin	1	6.27	6.24	6.30	0.097	
	2	6.18	6.15	6.21	0.095	2
alpha-BHC	1	5.55	5.51	5.57	0.094	
	2	5.46	5.43	5.49	0.089	5
alpha-Chlordane	1	6.89	6.86	6.92	0.095	
	2	6.82	6.79	6.85	0.094	1
beta-BHC	1	5.81	5.78	5.84	0.092	
	2	5.73	5.70	5.76	0.082	12
delta-BHC	1	5.92	5.89	5.95	0.092	
	2	5.92	5.89	5.95	0.090	2
Dieldrin	1	7.17	7.14	7.20	0.10	
	2	7.06	7.03	7.09	0.098	2
Endosulfan I	1	6.99	6.96	7.02	0.094	
	2	6.86	6.83	6.89	0.094	0
Endosulfan II	1	7.52	7.49	7.55	0.095	
	2	7.46	7.43	7.49	0.094	1
Endosulfan Sulfate	1	8.17	8.14	8.20	0.093	
	2	7.94	7.91	7.97	0.091	2
Endrin	1	7.35	7.32	7.38	0.10	
	2	7.29	7.26	7.32	0.10	3
Endrin Aldehyde	1	7.85	7.82	7.88	0.091	
	2	7.72	7.70	7.76	0.090	1
Endrin Ketone	1	8.36	8.33	8.39	0.099	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8081B

LCS Dup

Lab Sample ID: B146416-BSD1 Date(s) Analyzed 04/13/2016 04/13/2016

Instrument ID (1): ECD6 Instrument ID (2): ECD6

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
	2	8.32	8.29	8.35	0.097	2
gamma-BHC (Lindane)	1	5.75	5.72	5.78	0.097	
	2	5.68	5.65	5.71	0.096	1
gamma-Chlordane	1	6.79	6.76	6.82	0.096	
	2	6.71	6.68	6.74	0.096	0
Heptachlor	1	6.07	6.04	6.10	0.099	
	2	5.96	5.93	5.99	0.096	3
Heptachlor Epoxide	1	6.70	6.67	6.73	0.095	
	2	6.58	6.55	6.61	0.094	1
Hexachlorobenzene	1	5.44	5.41	5.47	0.079	
	2	5.37	5.34	5.40	0.077	3
Methoxychlor	1	7.99	7.96	8.02	0.10	
	2	8.17	8.14	8.20	0.098	2

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
DL-03	Elevated reporting limit due to matrix.
H-03	Sample received after recommended holding time was exceeded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-02	Laboratory fortified blank/laboratory control sample recovery and duplicate recoveries outside of control limits. Data validation is not affected since all results are "not detected" for associated samples in this batch and bias is on the high side.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
MS-16	For solid method SW846-7196A, the matrix spike is outside of control limits. pH and ORP results were indicative of reducing conditions. Reanalysis is not required. Analysis is in control based on LCS recoveries.
P-08	Sample RPD between primary and confirmatory analysis exceeded 100%. Per EPA method 8000, the lower value was reported due to obvious chromatographic interference on the column with the higher result.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the high side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-19	Initial calibration did not meet method specifications. Compound was calibrated using linear regression with correlation coefficient <0.99. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 1030 in Soil	
Ignitability	NY,NH,CT,NC,ME,VA
SW-846 6010C-D in Soil	
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,NC
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,AIHA,ME,VA,NC
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,ME,VA,NC
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
SW-846 7196A in Soil	
Hexavalent Chromium	NY,CT,NH,NC,ME,VA
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8015C in Soil	
Gasoline Range Organics (GRO)	NY,VA,NH,NC
Diesel Range Organics	NY,VA,NH,NC
SW-846 8081B in Soil	
alpha-Chlordane	NC
alpha-Chlordane [2C]	NC
gamma-Chlordane	NC
gamma-Chlordane [2C]	NC
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Soil	
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8081B in Water	
alpha-Chlordane	NC
alpha-Chlordane [2C]	NC
gamma-Chlordane	NC
gamma-Chlordane [2C]	NC
Alachlor	NC
Alachlor [2C]	NC
Aldrin	CT,NH,NY,ME,NC,VA
Aldrin [2C]	CT,NH,NY,ME,NC,VA
alpha-BHC	CT,NH,NY,ME,NC,VA
alpha-BHC [2C]	CT,NH,NY,ME,NC,VA
beta-BHC	CT,NH,NY,ME,NC,VA
beta-BHC [2C]	CT,NH,NY,ME,NC,VA
delta-BHC	CT,NH,NY,ME,NC,VA
delta-BHC [2C]	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane)	CT,NH,NY,ME,NC,VA
gamma-BHC (Lindane) [2C]	CT,NH,NY,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8081B in Water	
Chlordane	CT,NH,NY,ME,NC,VA
Chlordane [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDD	CT,NH,NY,ME,NC,VA
4,4'-DDD [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDE	CT,NH,NY,ME,NC,VA
4,4'-DDE [2C]	CT,NH,NY,ME,NC,VA
4,4'-DDT	CT,NH,NY,ME,NC,VA
4,4'-DDT [2C]	CT,NH,NY,ME,NC,VA
Dieldrin	CT,NH,NY,ME,NC,VA
Dieldrin [2C]	CT,NH,NY,ME,NC,VA
Endosulfan I	CT,NH,NY,ME,NC,VA
Endosulfan I [2C]	CT,NH,NY,ME,NC,VA
Endosulfan II	CT,NH,NY,ME,NC,VA
Endosulfan II [2C]	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate	CT,NH,NY,ME,NC,VA
Endosulfan Sulfate [2C]	CT,NH,NY,ME,NC,VA
Endrin	CT,NH,NY,ME,NC,VA
Endrin [2C]	CT,NH,NY,ME,NC,VA
Endrin Aldehyde	CT,NH,NY,ME,NC,VA
Endrin Aldehyde [2C]	CT,NH,NY,ME,NC,VA
Endrin Ketone	NC
Endrin Ketone [2C]	NC
Heptachlor	CT,NH,NY,ME,NC,VA
Heptachlor [2C]	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide	CT,NH,NY,ME,NC,VA
Heptachlor Epoxide [2C]	CT,NH,NY,ME,NC,VA
Hexachlorobenzene	NC
Hexachlorobenzene [2C]	NC
Methoxychlor	CT,NH,NY,ME,NC,VA
Methoxychlor [2C]	CT,NH,NY,ME,NC,VA
Toxaphene	CT,NH,NY,ME,NC,VA
Toxaphene [2C]	CT,NH,NY,ME,NC,VA
SW-846 8082A in Soil	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8082A in Soil	
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8151A in Soil	
2,4-D	NY,ME,NC,NH,VA,CT
2,4-D [2C]	NY,ME,NC,NH,VA,CT
2,4-DB	NY,ME,NC,NH,VA,CT
2,4-DB [2C]	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex)	NY,ME,NC,NH,VA,CT
2,4,5-TP (Silvex) [2C]	NY,ME,NC,NH,VA,CT
2,4,5-T	NY,ME,NC,NH,VA,CT
2,4,5-T [2C]	NY,ME,NC,NH,VA,CT
Dalapon	NY,ME,NC,NH,VA,CT
Dalapon [2C]	NY,ME,NC,NH,VA,CT
Dicamba	NY,ME,NC,NH,VA,CT
Dicamba [2C]	NY,ME,NC,NH,VA,CT
Dichloroprop	NY,ME,NC,NH,VA,CT
Dichloroprop [2C]	NY,ME,NC,NH,VA,CT
Dinoseb	NY,ME,NC,NH,VA,CT
Dinoseb [2C]	NY,ME,NC,NH,VA,CT
MCPA	NY,ME,NC,NH,VA,CT
MCPA [2C]	NY,ME,NC,NH,VA,CT
MCPP	NY,ME,NC,NH,VA,CT
MCPP [2C]	NY,ME,NC,NH,VA,CT
SW-846 8151A in Water	

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8151A in Water	
2,4-D	ME,NC,NH,CT,NY,VA
2,4-D [2C]	ME,NC,NH,CT,NY,VA
2,4-DB	ME,NC,NH,CT,NY,VA
2,4-DB [2C]	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex)	ME,NC,NH,CT,NY,VA
2,4,5-TP (Silvex) [2C]	ME,NC,NH,CT,NY,VA
2,4,5-T	ME,NC,NH,CT,NY,VA
2,4,5-T [2C]	ME,NC,NH,CT,NY,VA
Dalapon	ME,NC,NH,CT,NY,VA
Dalapon [2C]	ME,NC,NH,CT,NY,VA
Dicamba	ME,NC,NH,CT,NY,VA
Dicamba [2C]	ME,NC,NH,CT,NY,VA
Dichloroprop	ME,NC,NH,CT,NY,VA
Dichloroprop [2C]	ME,NC,NH,CT,NY,VA
Dinoseb	ME,NC,NH,CT,NY,VA
Dinoseb [2C]	ME,NC,NH,CT,NY,VA
MCPA	NC,CT
MCPA [2C]	NC,CT
MCPP	NC,CT
MCPP [2C]	NC,CT
SW-846 8260C in Soil	
Acetone	CT,NH,NY,ME,VA
Acrylonitrile	CT,NH,NY,ME,VA
Benzene	CT,NH,NY,ME,VA
Bromobenzene	NH,NY,ME,VA
Bromochloromethane	NH,NY,ME,VA
Bromodichloromethane	CT,NH,NY,ME,VA
Bromoform	CT,NH,NY,ME,VA
Bromomethane	CT,NH,NY,ME,VA
2-Butanone (MEK)	CT,NH,NY,ME,VA
n-Butylbenzene	CT,NH,NY,ME,VA
sec-Butylbenzene	CT,NH,NY,ME,VA
tert-Butylbenzene	CT,NH,NY,ME,VA
Carbon Disulfide	CT,NH,NY,ME,VA
Carbon Tetrachloride	CT,NH,NY,ME,VA
Chlorobenzene	CT,NH,NY,ME,VA
Chlorodibromomethane	CT,NH,NY,ME,VA
Chloroethane	CT,NH,NY,ME,VA
Chloroform	CT,NH,NY,ME,VA
Chloromethane	CT,NH,NY,ME,VA
2-Chlorotoluene	CT,NH,NY,ME,VA
4-Chlorotoluene	CT,NH,NY,ME,VA
Dibromomethane	NH,NY,ME,VA
1,2-Dichlorobenzene	CT,NH,NY,ME,VA
1,3-Dichlorobenzene	CT,NH,NY,ME,VA
1,4-Dichlorobenzene	CT,NH,NY,ME,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Soil	
Dichlorodifluoromethane (Freon 12)	NH,NY,ME,VA
1,1-Dichloroethane	CT,NH,NY,ME,VA
1,2-Dichloroethane	CT,NH,NY,ME,VA
1,1-Dichloroethylene	CT,NH,NY,ME,VA
cis-1,2-Dichloroethylene	CT,NH,NY,ME,VA
trans-1,2-Dichloroethylene	CT,NH,NY,ME,VA
1,2-Dichloropropane	CT,NH,NY,ME,VA
1,3-Dichloropropane	NH,NY,ME,VA
2,2-Dichloropropane	NH,NY,ME,VA
1,1-Dichloropropene	NH,NY,ME,VA
cis-1,3-Dichloropropene	CT,NH,NY,ME,VA
trans-1,3-Dichloropropene	CT,NH,NY,ME,VA
Ethylbenzene	CT,NH,NY,ME,VA
Hexachlorobutadiene	NH,NY,ME,VA
2-Hexanone (MBK)	CT,NH,NY,ME,VA
Isopropylbenzene (Cumene)	CT,NH,NY,ME,VA
p-Isopropyltoluene (p-Cymene)	NH,NY
Methyl tert-Butyl Ether (MTBE)	NY,VA
Methylene Chloride	CT,NH,NY,ME,VA
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,VA
Naphthalene	NH,NY,ME,VA
n-Propylbenzene	NH,NY
Styrene	CT,NH,NY,ME,VA
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME,VA
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME,VA
Tetrachloroethylene	CT,NH,NY,ME,VA
Toluene	CT,NH,NY,ME,VA
1,2,3-Trichlorobenzene	ME
1,2,4-Trichlorobenzene	NH,NY,ME,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NH,NY,ME,VA
1,1,2-Trichloroethane	CT,NH,NY,ME,VA
Trichloroethylene	CT,NH,NY,ME,VA
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME,VA
1,2,3-Trichloropropane	NH,NY,ME,VA
1,2,4-Trimethylbenzene	CT,NH,NY,ME,VA
1,3,5-Trimethylbenzene	CT,NH,NY,ME,VA
Vinyl Chloride	CT,NH,NY,ME,VA
m+p Xylene	CT,NH,NY,ME,VA
o-Xylene	CT,NH,NY,ME,VA
SW-846 8270D in Soil	
Acenaphthene	CT,NY,NH,VA
Acenaphthene	CT,NY,NH,ME,NC,VA
Acenaphthylene	CT,NY,NH,VA
Acenaphthylene	CT,NY,NH,ME,NC,VA
Acetophenone	NY,NH,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Soil	
Aniline	NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,ME,NC,VA
Anthracene	CT,NY,NH,VA
Benzidine	CT,NY,NH,ME,NC,VA
Benzo(a)anthracene	CT,NY,NH,VA
Benzo(a)anthracene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,ME,NC,VA
Benzo(a)pyrene	CT,NY,NH,VA
Benzo(b)fluoranthene	CT,NY,NH,VA
Benzo(b)fluoranthene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,ME,NC,VA
Benzo(g,h,i)perylene	CT,NY,NH,VA
Benzo(k)fluoranthene	CT,NY,NH,VA
Benzo(k)fluoranthene	CT,NY,NH,ME,NC,VA
Benzoic Acid	NY,NH,ME,NC,VA
Bis(2-chloroethoxy)methane	CT,NY,NH,ME,NC,VA
Bis(2-chloroethyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-chloroisopropyl)ether	CT,NY,NH,ME,NC,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NH,ME,NC,VA
4-Bromophenylphenylether	CT,NY,NH,ME,NC,VA
Butylbenzylphthalate	CT,NY,NH,ME,NC,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NH,ME,NC,VA
4-Chloro-3-methylphenol	CT,NY,NH,ME,NC,VA
2-Chloronaphthalene	CT,NY,NH,NC,VA
2-Chlorophenol	CT,NY,NH,ME,NC,VA
4-Chlorophenylphenylether	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,ME,NC,VA
Chrysene	CT,NY,NH,VA
Dibenz(a,h)anthracene	CT,NY,NH,ME,NC,VA
Dibenz(a,h)anthracene	CT,NY,NH,VA
Dibenzofuran	CT,NY,NH,ME,NC,VA
Di-n-butylphthalate	CT,NY,NH,ME,NC,VA
1,2-Dichlorobenzene	NY,NH,ME,NC,VA
1,3-Dichlorobenzene	NY,NH,ME,NC,VA
1,4-Dichlorobenzene	NY,NH,ME,NC,VA
3,3-Dichlorobenzidine	CT,NY,NH,ME,NC,VA
2,4-Dichlorophenol	CT,NY,NH,ME,NC,VA
Diethylphthalate	CT,NY,NH,ME,NC,VA
2,4-Dimethylphenol	CT,NY,NH,ME,NC,VA
Dimethylphthalate	CT,NY,NH,ME,NC,VA
4,6-Dinitro-2-methylphenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrophenol	CT,NY,NH,ME,NC,VA
2,4-Dinitrotoluene	CT,NY,NH,ME,NC,VA
2,6-Dinitrotoluene	CT,NY,NH,ME,NC,VA
Di-n-octylphthalate	CT,NY,NH,ME,NC,VA
1,2-Diphenylhydrazine (as Azobenzene)	NY,NH,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Soil	
Fluoranthene	CT,NY,NH,ME,NC,VA
Fluoranthene	CT,NY,NH,VA
Fluorene	CT,NY,NH,VA
Fluorene	NY,NH,ME,NC,VA
Hexachlorobenzene	CT,NY,NH,ME,NC,VA
Hexachlorobutadiene	CT,NY,NH,ME,NC,VA
Hexachlorocyclopentadiene	CT,NY,NH,ME,NC,VA
Hexachloroethane	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,ME,NC,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NH,VA
Isophorone	CT,NY,NH,ME,NC,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NH,ME,NC,VA
2-Methylphenol	CT,NY,NH,ME,NC,VA
3/4-Methylphenol	CT,NY,NH,ME,NC,VA
Naphthalene	CT,NY,NH,VA
Naphthalene	CT,NY,NH,ME,NC,VA
2-Nitroaniline	CT,NY,NH,ME,NC,VA
3-Nitroaniline	CT,NY,NH,ME,NC,VA
4-Nitroaniline	CT,NY,NH,ME,NC,VA
Nitrobenzene	CT,NY,NH,ME,NC,VA
2-Nitrophenol	CT,NY,NH,ME,NC,VA
4-Nitrophenol	CT,NY,NH,ME,NC,VA
N-Nitrosodimethylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodiphenylamine	CT,NY,NH,ME,NC,VA
N-Nitrosodi-n-propylamine	CT,NY,NH,ME,NC,VA
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,ME,NC,VA
Phenanthrene	CT,NY,NH,VA
Phenol	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,ME,NC,VA
Pyrene	CT,NY,NH,VA
Pyridine	CT,NY,NH,ME,NC,VA
1,2,4,5-Tetrachlorobenzene	NC
1,2,4-Trichlorobenzene	CT,NY,NH,ME,NC,VA
2,4,5-Trichlorophenol	CT,NY,NH,ME,NC,VA
2,4,6-Trichlorophenol	CT,NY,NH,ME,NC,VA
2-Fluorophenol	NC
SW-846 8270D in Water	
Acenaphthene	CT,NY,NC,ME,NH,VA
Acenaphthylene	CT,NY,NC,ME,NH,VA
Acetophenone	NC
Aniline	CT,NY,NC,ME,VA
Anthracene	CT,NY,NC,ME,NH,VA
Benzidine	CT,NY,NC,ME,NH,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Water	
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA
Benzoic Acid	NY,NC,ME,NH,VA
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NC,ME,NH,VA
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA
2-Chlorophenol	CT,NY,NC,ME,NH,VA
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA
Chrysene	CT,NY,NC,ME,NH,VA
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA
Dibenzofuran	CT,NY,NC,ME,NH,VA
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA
Diethylphthalate	CT,NY,NC,ME,NH,VA
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA
Dimethylphthalate	CT,NY,NC,ME,NH,VA
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA
1,2-Diphenylhydrazine (as Azobenzene)	NC
Fluoranthene	CT,NY,NC,ME,NH,VA
Fluorene	NY,NC,ME,NH,VA
Hexachlorobenzene	CT,NY,NC,ME,NH,VA
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA
Hexachloroethane	CT,NY,NC,ME,NH,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA
Isophorone	CT,NY,NC,ME,NH,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA
2-Methylphenol	CT,NY,NC,NH,VA

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Water	
3/4-Methylphenol	CT,NY,NC,NH,VA
Naphthalene	CT,NY,NC,ME,NH,VA
2-Nitroaniline	CT,NY,NC,ME,NH,VA
3-Nitroaniline	CT,NY,NC,ME,NH,VA
4-Nitroaniline	CT,NY,NC,ME,NH,VA
Nitrobenzene	CT,NY,NC,ME,NH,VA
2-Nitrophenol	CT,NY,NC,ME,NH,VA
4-Nitrophenol	CT,NY,NC,ME,NH,VA
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodiphenylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NC,ME,NH,VA
Phenanthrene	CT,NY,NC,ME,NH,VA
Phenol	CT,NY,NC,ME,NH,VA
Pyrene	CT,NY,NC,ME,NH,VA
Pyridine	CT,NY,NC,ME,NH,VA
1,2,4,5-Tetrachlorobenzene	NC
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA
2-Fluorophenol	NC
SW-846 9014 in Soil	
Cyanide	NY,CT,NC,ME,NH,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2016
FL	Florida Department of Health	E871027 NELAP	06/30/2016
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016

CHAIN OF CUSTODY RECORD

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39 Spruce Street
East longmeadow, MA 01028

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Rev 04.05.12

1UD0485

Company Name: Dunkin Bellucci Engineers (D+B) and Architects
Telephone: 516 364-9890
Address: 330 Crossways Park Drive, Woodbury NY 11797
Project # 3415-AL2
Client PO#
Attention: Mike Hufgren
Project Location: SCA 1354
Sampled By: Keith Robins

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

DATA DELIVERY (check all that apply)
○ FAX ☒ EMAIL ○ WEBSITE
Fax #
Email: MHufgren@dbelng.com
Format: ☒ PDF ☒ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	TCL and CP-51 VOCs + 10 TICs	TCL and CP-51 SVOCs + 20 TICs	TAL metals (Sb, Al, Ca, Fe, K, Mg, Na)	PCBs	TCL Pesticides/Herbicides	Cyanide and Hexavalent Chromium	TPH DRO/GRO	RCRA Characteristics	TCLP (Held Analysis)		
								V	G	G	G	G	G	V/G	G	G		
								I	I	I	I	I	I	I	I	I		
01	GP-1 (0-5')	4/8/16 am 1120	4/9/16 am 1120	Composite		S	E	✓	✓	✓	✓	✓	✓	✓	✓	✓		
02	GP-2 (0-5')	4/9/16 am 1005	4/9/16 am 1005	Composite		S	E	✓	✓	✓	✓	✓	✓	✓	✓	✓		
03	GP-3 (0-5')	4/9/16 am 748	4/9/16 am 748	Composite		S	E	✓	✓	✓	✓	✓	✓	✓	✓	✓		

ANALYSIS REQUESTED

# of Containers	** Preservation	***Container Code
	I	V
	I	G
	I	G
	I	G
	I	G
	I	G
	I	V/G
	I	G
	I	G

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:**
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other

Comments: Please hold all TCLP analysis until notified by D+B project manager

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature)	Date/Time:
Keith Robins	4/11/16 930
Received by: (signature)	Date/Time:
Joe [illegible] 4/11/16	10
Relinquished by: (signature)	Date/Time:
Joe [illegible] 4/11/16	4:45
Received by: (signature)	Date/Time:
[illegible] 5.16 4/11/16	1645

Turnaround ††
☐ 7-Day
☐ 10-Day
☐ Other 5 day
RUSH†
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
○ MCP Form Required 4/11/16 1645
○ RCP Form Required
○ MA State DW Form Required PWSID #

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certifi

†† TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

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Sample Receipt Checklist

CLIENT NAME: D&B **RECEIVED BY**: RLF **DATE**: 4/11/2016

1) Was the chain(s) of custody relinquished and signed? **Yes** X **No** ____ **No COC Incl.**

2) Does the chain agree with the samples? **Yes** X **No** ____

If not, explain:

3) Are all the samples in good condition? **Yes** X **No** ____

If not, explain:

4) How were the samples received:

On Ice X Direct from Sampling ____ Ambient ____ In Cooler(s) X

Were the samples received in Temperature Compliance of (2-6℃)? **Yes** X **No** ____ **N/A** ____

Temperature ℃ by Temp blank ____ Temperature ℃ by Temp gun 5.6

5) Are there Dissolved samples for the lab to filter? **Yes** ____ **No** X

Who was notified ____ Date ____ Time ____

6) Are there any RUSH or SHORT HOLDING TIME samples? **Yes** X **No** ____

Who was notified ___ David Date ____ Time ____

7) Location where samples are stored:

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

8) Do all samples have the proper Acid pH: **Yes** X **No** ____ **N/A** ____

9) Do all samples have the proper Base pH: **Yes** ____ **No** ____ **N/A** X

10) Was the PC notified of any discrepancies with the CoC vs the samples: **Yes** ____ **N/A** X

Containers received at Con-Test

	# of containers			# of containers
1 Liter Amber			16 oz amber	3
500 mL Amber			8 oz amber/clear jar	6
250 mL Amber (8oz amber)			4 oz amber/clear jar	3
1 Liter Plastic			2 oz amber/clear jar	3
500 mL Plastic			Plastic Bag / Ziploc	
250 mL plastic			SOC Kit	
40 mL Vial - type listed below	12		Perchlorate Kit	
Colisure / bacteria bottle			Flashpoint bottle	
Dissolved Oxygen bottle			Other glass jar	
Encore			Other	

40 mL vials:	# HCl		# Methanol	6
Doc# 277	# Bisulfate		# DI Water	6
Rev. 4 August 2013	# Thiosulfate		Unpreserved	

Time and Date Frozen:
4/11/2016 16:45

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	F	pH past hold
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	N/A	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	T	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** RLF **Date/Time: 4/11/16 16:45**

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

May 31, 2016

Mike Hofgren
Dvirka And Bartilucci
330 Crossways Park Drive
Woodbury, NY 11797-2015

Project Location: SCA 131Q
Client Job Number:
Project Number: 3415-AL2-131Q
Laboratory Work Order Number: 16D0455

Enclosed are results of analyses for samples received by the laboratory on April 11, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Aaron L. Benoit
Project Manager

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con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Dvirka And Bartilucci
330 Crossways Park Drive
Woodbury, NY 11797-2015
ATTN: Mike Hofgren

REPORT DATE: 5/31/2016

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 3415-AL2-131Q

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16D0455

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: SCA 131Q

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Trip Blank	16D0455-01	Trip Blank Water		SW-846 8260C	
GW-3	16D0455-02	Ground Water		EPA 1664B	
				EPA 420.1	
				EPA 608	
				EPA 624	
				SM 21-22 4500 NO3 F	
				SM19-22 4500-N Org B,C-NH3 C	
				SM21-22 2540B	
				SM21-22 2540D	
				SM21-22 4500 CL B	
				SM21-22 4500 H B	
				SM21-22 5210B	
				SW-846 1010A	
				SW-846 6010C-D	
				SW-846 7196A	
				SW-846 7470A	
				SW-846 8082A	
				SW-846 8260C	
				SW-846 8270D	

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT 05/31/16: Report revised to update client project number.

For dissolved metals analysis, samples were received by the laboratory past the recommended holding time.

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

SM 21-22 4500 NO3 F

Qualifications:

L-07A

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:

Nitrate/Nitrite as N
16D0455-02[GW-3], B146479-BS1, B146479-BSD1

SM21-22 4500 H B

Qualifications:

H-05

Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

Analyte & Samples(s) Qualified:

pH
16D0455-02[GW-3]

SM21-22 5210B

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

Carbonaceous BOD
16D0455-02[GW-3]

SW-846 7196A

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

Hexavalent Chromium
16D0455-02[GW-3]

SW-846 8260C

Qualifications:

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Methyl Acetate
16D0455-01[Trip Blank], 16D0455-02[GW-3], B146525-BLK1, B146525-BS1, B146525-BSD1, S011146-CCV1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Methyl Acetate
16D0455-01[Trip Blank], 16D0455-02[GW-3], B146525-BLK1, B146525-BS1, B146525-BSD1, S011146-CCV1

tert-Butyl Alcohol (TBA)
16D0455-01[Trip Blank], 16D0455-02[GW-3], B146525-BLK1, B146525-BS1, B146525-BSD1, S011146-CCV1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Bromomethane
S011146-CCV1

SW-846 8270D

Qualifications:

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L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Benzidine

16D0455-02[GW-3], B146551-BLK1, B146551-BS1, B146551-BSD1

S-07

One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.

Analyte & Samples(s) Qualified:

2,4,6-Tribromophenol

B146551-BS1, B146551-BSD1

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.

Analyte & Samples(s) Qualified:

Benzidine

16D0455-02[GW-3], B146551-BLK1, B146551-BS1, B146551-BSD1

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.

Analyte & Samples(s) Qualified:

Benzidine

16D0455-02[GW-3], B146551-BLK1, B146551-BS1, B146551-BSD1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:

Pentachloronitrobenzene

16D0455-02[GW-3], B146551-BLK1, B146551-BS1, B146551-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Bis(2-chloroisopropyl)ether

16D0455-02[GW-3], B146551-BLK1, B146551-BS1, B146551-BSD1

N-Nitrosodimethylamine

16D0455-02[GW-3], B146551-BLK1, B146551-BS1, B146551-BSD1

SW-846 6010C/D SW-846 6020A/B

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Aaron L. Benoit
Project Manager

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455
Date Received: 4/11/2016
Field Sample #: Trip Blank
Sampled: 4/9/2016 00:00
Sample ID: 16D0455-01
Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	4.9	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Acrylonitrile	ND	5.0	0.58	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.091	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Benzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Bromochloromethane	ND	1.0	0.22	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Bromodichloromethane	ND	0.50	0.088	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Bromoform	ND	1.0	0.21	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Bromomethane	ND	2.0	0.94	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
2-Butanone (MEK)	ND	20	2.4	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
tert-Butyl Alcohol (TBA)	ND	20	2.2	µg/L	1	V-05	SW-846 8260C	4/13/16	4/13/16 13:59	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
tert-Butylbenzene	ND	1.0	0.11	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.080	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Carbon Disulfide	ND	4.0	1.0	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Carbon Tetrachloride	ND	5.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Chlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Chlorodibromomethane	ND	0.50	0.10	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Chloroethane	ND	2.0	0.28	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Chloroform	ND	2.0	0.22	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Chloromethane	ND	2.0	0.32	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.34	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Dibromomethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,2-Dichlorobenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,3-Dichlorobenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,4-Dichlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.18	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,2-Dichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,1-Dichloroethylene	ND	1.0	0.21	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,2-Dichloropropane	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,3-Dichloropropane	ND	0.50	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
2,2-Dichloropropane	ND	1.0	0.16	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,1-Dichloropropene	ND	2.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
cis-1,3-Dichloropropene	ND	0.50	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
trans-1,3-Dichloropropene	ND	0.50	0.11	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Diethyl Ether	ND	2.0	0.22	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455

Date Received: 4/11/2016

Field Sample #: Trip Blank
Sampled: 4/9/2016 00:00

Sample ID: 16D0455-01

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.18	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,4-Dioxane	ND	50	26	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Hexachlorobutadiene	ND	0.50	0.17	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Methyl Acetate	ND	5.0	0.42	µg/L	1	L-04, V-05	SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.090	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Methyl Cyclohexane	ND	1.0	0.63	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Methylene Chloride	ND	5.0	3.2	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.5	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Naphthalene	ND	2.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Tetrahydrofuran	ND	10	1.1	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Toluene	ND	1.0	0.17	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.14	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.19	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,1,1-Trichloroethane	ND	1.0	0.094	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,1,2-Trichloroethane	ND	1.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Trichloroethylene	ND	1.0	0.20	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,2,3-Trichloropropane	ND	2.0	0.19	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.14	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
Vinyl Chloride	ND	2.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
m+p Xylene	ND	2.0	0.25	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH
o-Xylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 13:59	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.0	70-130		4/13/16 13:59
Toluene-d8	100	70-130		4/13/16 13:59
4-Bromofluorobenzene	95.1	70-130		4/13/16 13:59

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455
Date Received: 4/11/2016
Field Sample #: Trip Blank
Sampled: 4/9/2016 00:00
Sample ID: 16D0455-01
Sample Matrix: Trip Blank Water

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)

Analyte	Results	Units	Response	RT	DF	CAS #	Q#	Method	Date Prepared	Date/Time Analyzed	Analyst
No TICs Found	0.0	µg/L			1			SW-846 8260C	4/13/16	4/13/16 13:59	EEH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455
Date Received: 4/11/2016
Field Sample #: GW-3
Sampled: 4/9/2016 10:00
Sample ID: 16D0455-02
Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	4.9	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Acrylonitrile	ND	5.0	0.58	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.091	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Benzene	ND	1.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Bromobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Bromochloromethane	ND	1.0	0.22	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Bromodichloromethane	ND	0.50	0.088	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Bromoform	ND	1.0	0.21	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Bromomethane	ND	2.0	0.94	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
2-Butanone (MEK)	ND	20	2.4	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
tert-Butyl Alcohol (TBA)	ND	20	2.2	µg/L	1	V-05	SW-846 8260C	4/13/16	4/13/16 21:08	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
sec-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
tert-Butylbenzene	ND	1.0	0.11	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	0.080	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Carbon Disulfide	ND	4.0	1.0	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Carbon Tetrachloride	ND	5.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Chlorobenzene	ND	1.0	0.16	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Chlorodibromomethane	ND	0.50	0.10	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Chloroethane	ND	2.0	0.28	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Chloroform	ND	2.0	0.22	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Chloromethane	ND	2.0	0.32	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
2-Chlorotoluene	ND	1.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
4-Chlorotoluene	ND	1.0	0.14	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.34	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Dibromomethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,2-Dichlorobenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,3-Dichlorobenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,4-Dichlorobenzene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
trans-1,4-Dichloro-2-butene	ND	2.0	0.31	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.18	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,1-Dichloroethane	ND	1.0	0.16	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,2-Dichloroethane	ND	1.0	0.19	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,1-Dichloroethylene	ND	1.0	0.21	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,2-Dichloropropane	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,3-Dichloropropane	ND	0.50	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
2,2-Dichloropropane	ND	1.0	0.16	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,1-Dichloropropene	ND	2.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
cis-1,3-Dichloropropene	ND	0.50	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
trans-1,3-Dichloropropene	ND	0.50	0.11	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Diethyl Ether	ND	2.0	0.22	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455

Date Received: 4/11/2016

Field Sample #: GW-3
Sampled: 4/9/2016 10:00

Sample ID: 16D0455-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Diisopropyl Ether (DIPE)	ND	0.50	0.18	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,4-Dioxane	ND	50	26	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Ethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Hexachlorobutadiene	ND	0.50	0.17	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
2-Hexanone (MBK)	ND	10	1.5	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Methyl Acetate	ND	5.0	0.42	µg/L	1	L-04, V-05	SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.090	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Methyl Cyclohexane	ND	1.0	0.63	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Methylene Chloride	ND	5.0	3.2	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.5	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Naphthalene	ND	2.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
n-Propylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Styrene	ND	1.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	0.16	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Tetrachloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Tetrahydrofuran	ND	10	1.1	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Toluene	0.96	1.0	0.17	µg/L	1	J	SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,2,3-Trichlorobenzene	ND	5.0	0.14	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,2,4-Trichlorobenzene	ND	1.0	0.19	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,3,5-Trichlorobenzene	ND	1.0	0.17	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,1,1-Trichloroethane	ND	1.0	0.094	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,1,2-Trichloroethane	ND	1.0	0.12	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Trichloroethylene	ND	1.0	0.20	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,2,3-Trichloropropane	ND	2.0	0.19	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	0.14	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,2,4-Trimethylbenzene	ND	1.0	0.18	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
1,3,5-Trimethylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
Vinyl Chloride	ND	2.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
m+p Xylene	ND	2.0	0.25	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH
o-Xylene	ND	1.0	0.13	µg/L	1		SW-846 8260C	4/13/16	4/13/16 21:08	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.6	70-130		4/13/16 21:08
Toluene-d8	99.2	70-130		4/13/16 21:08
4-Bromofluorobenzene	95.8	70-130		4/13/16 21:08

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455

Date Received: 4/11/2016

Field Sample #: GW-3
Sampled: 4/9/2016 10:00

Sample ID: 16D0455-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzene	ND	1.0	0.12	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Bromodichloromethane	ND	2.0	0.088	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Bromoform	ND	2.0	0.21	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Bromomethane	ND	2.0	0.94	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Carbon Tetrachloride	ND	2.0	0.12	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Chlorobenzene	ND	2.0	0.16	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Chlorodibromomethane	ND	2.0	0.10	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Chloroethane	ND	2.0	0.28	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
2-Chloroethyl Vinyl Ether	ND	10	2.2	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Chloroform	ND	2.0	0.22	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Chloromethane	ND	2.0	0.32	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
1,2-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
1,3-Dichlorobenzene	ND	2.0	0.17	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
1,4-Dichlorobenzene	ND	2.0	0.15	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
1,2-Dichloroethane	ND	2.0	0.19	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
1,1-Dichloroethane	ND	2.0	0.16	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
1,1-Dichloroethylene	ND	2.0	0.21	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
trans-1,2-Dichloroethylene	ND	2.0	0.15	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
1,2-Dichloropropane	ND	2.0	0.13	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
cis-1,3-Dichloropropene	ND	2.0	0.12	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
trans-1,3-Dichloropropene	ND	2.0	0.11	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Ethylbenzene	ND	2.0	0.13	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.090	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Methylene Chloride	ND	5.0	3.2	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
1,1,2,2-Tetrachloroethane	ND	2.0	0.16	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Tetrachloroethylene	ND	2.0	0.17	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Toluene	0.96	1.0	0.17	µg/L	1	J	EPA 624	4/13/16	4/13/16 21:08	EEH
1,1,1-Trichloroethane	ND	2.0	0.094	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
1,1,2-Trichloroethane	ND	2.0	0.12	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Trichloroethylene	ND	2.0	0.20	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	0.15	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
Vinyl Chloride	ND	2.0	0.13	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
m+p Xylene	ND	2.0	0.25	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH
o-Xylene	ND	2.0	0.13	µg/L	1		EPA 624	4/13/16	4/13/16 21:08	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	95.6	70-130		4/13/16 21:08
Toluene-d8	99.2	70-130		4/13/16 21:08
4-Bromofluorobenzene	95.8	70-130		4/13/16 21:08

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455
Date Received: 4/11/2016
Field Sample #: GW-3
Sampled: 4/9/2016 10:00
Sample ID: 16D0455-02
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	4.0	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Acenaphthylene	ND	5.0	4.6	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Acetophenone	ND	10	4.0	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Aniline	ND	5.0	3.7	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Anthracene	ND	5.0	5.0	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Benzidine	ND	20	9.4	µg/L	1	L-04, V-04, V-05	SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Benzo(a)anthracene	ND	5.0	1.8	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Benzo(a)pyrene	ND	5.0	4.9	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Benzo(b)fluoranthene	ND	5.0	5.0	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Benzo(g,h,i)perylene	ND	5.0	4.0	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Benzo(k)fluoranthene	ND	5.0	2.2	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Benzoic Acid	ND	10	2.4	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Bis(2-chloroethoxy)methane	ND	10	4.8	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Bis(2-chloroethyl)ether	ND	10	4.2	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Bis(2-chloroisopropyl)ether	ND	10	3.0	µg/L	1	V-20	SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Bis(2-Ethylhexyl)phthalate	ND	10	4.7	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
4-Bromophenylphenylether	ND	10	2.0	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Butylbenzylphthalate	ND	10	3.0	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Carbazole	ND	10	4.5	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
4-Chloroaniline	ND	10	3.9	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
4-Chloro-3-methylphenol	ND	10	4.9	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2-Chloronaphthalene	ND	10	2.9	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2-Chlorophenol	ND	10	1.6	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
4-Chlorophenylphenylether	ND	10	4.7	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Chrysene	ND	5.0	2.5	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Dibenz(a,h)anthracene	ND	5.0	4.1	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Dibenzofuran	ND	5.0	4.7	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Di-n-butylphthalate	ND	10	4.7	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
1,2-Dichlorobenzene	ND	5.0	1.5	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
1,3-Dichlorobenzene	ND	5.0	1.4	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
1,4-Dichlorobenzene	ND	5.0	1.4	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
3,3-Dichlorobenzidine	ND	10	2.2	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2,4-Dichlorophenol	ND	10	4.6	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Diethylphthalate	ND	10	4.2	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2,4-Dimethylphenol	ND	10	2.4	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Dimethylphthalate	ND	10	4.6	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
4,6-Dinitro-2-methylphenol	ND	10	5.6	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2,4-Dinitrophenol	ND	10	6.7	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2,4-Dinitrotoluene	ND	10	5.2	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2,6-Dinitrotoluene	ND	10	4.9	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Di-n-octylphthalate	ND	10	4.3	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	2.4	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Fluoranthene	ND	5.0	4.4	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Fluorene	ND	5.0	4.9	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455
Date Received: 4/11/2016
Field Sample #: GW-3
Sampled: 4/9/2016 10:00
Sample ID: 16D0455-02
Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobenzene	ND	10	4.6	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Hexachlorobutadiene	ND	10	1.8	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Hexachlorocyclopentadiene	ND	10	6.0	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Hexachloroethane	ND	10	1.5	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Indeno(1,2,3-cd)pyrene	ND	5.0	4.2	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Isophorone	ND	10	1.8	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
1-Methylnaphthalene	ND	5.0	1.4	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2-Methylnaphthalene	ND	5.0	1.4	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2-Methylphenol	ND	10	2.6	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
3/4-Methylphenol	ND	10	4.1	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Naphthalene	ND	5.0	1.4	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2-Nitroaniline	ND	10	6.3	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
3-Nitroaniline	ND	10	4.3	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
4-Nitroaniline	ND	10	3.7	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Nitrobenzene	ND	10	4.3	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2-Nitrophenol	ND	10	2.0	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
4-Nitrophenol	ND	10	2.3	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
N-Nitrosodimethylamine	ND	10	1.3	µg/L	1	V-20	SW-846 8270D	4/13/16	4/14/16 10:38	BGL
N-Nitrosodiphenylamine	ND	10	1.9	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
N-Nitrosodi-n-propylamine	ND	10	4.6	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Pentachloronitrobenzene	ND	10	2.9	µg/L	1	V-16	SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Pentachlorophenol	ND	10	3.4	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Phenanthrene	ND	5.0	2.9	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Phenol	ND	10	2.5	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Pyrene	ND	5.0	2.6	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
Pyridine	ND	5.0	4.7	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
1,2,4,5-Tetrachlorobenzene	ND	10	2.1	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
1,2,4-Trichlorobenzene	ND	5.0	1.7	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2,4,5-Trichlorophenol	ND	10	4.0	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL
2,4,6-Trichlorophenol	ND	10	3.7	µg/L	1		SW-846 8270D	4/13/16	4/14/16 10:38	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	49.4	15-110		4/14/16 10:38
Phenol-d6	34.9	15-110		4/14/16 10:38
Nitrobenzene-d5	81.3	30-130		4/14/16 10:38
2-Fluorobiphenyl	82.3	30-130		4/14/16 10:38
2,4,6-Tribromophenol	96.6	15-110		4/14/16 10:38
p-Terphenyl-d14	99.1	30-130		4/14/16 10:38

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455
Date Received: 4/11/2016
Field Sample #: GW-3
Sampled: 4/9/2016 10:00
Sample ID: 16D0455-02
Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.040	0.023	µg/L	1		EPA 608	4/13/16	4/14/16 13:22	JMB
Aroclor-1016 [1]	ND	0.040	0.023	µg/L	1		SW-846 8082A	4/13/16	4/14/16 13:22	JMB
Aroclor-1221 [1]	ND	0.040	0.025	µg/L	1		EPA 608	4/13/16	4/14/16 13:22	JMB
Aroclor-1221 [1]	ND	0.040	0.025	µg/L	1		SW-846 8082A	4/13/16	4/14/16 13:22	JMB
Aroclor-1232 [1]	ND	0.040	0.015	µg/L	1		EPA 608	4/13/16	4/14/16 13:22	JMB
Aroclor-1232 [1]	ND	0.040	0.015	µg/L	1		SW-846 8082A	4/13/16	4/14/16 13:22	JMB
Aroclor-1242 [1]	ND	0.040	0.021	µg/L	1		EPA 608	4/13/16	4/14/16 13:22	JMB
Aroclor-1242 [1]	ND	0.040	0.021	µg/L	1		SW-846 8082A	4/13/16	4/14/16 13:22	JMB
Aroclor-1248 [1]	ND	0.040	0.026	µg/L	1		EPA 608	4/13/16	4/14/16 13:22	JMB
Aroclor-1248 [1]	ND	0.040	0.026	µg/L	1		SW-846 8082A	4/13/16	4/14/16 13:22	JMB
Aroclor-1254 [1]	ND	0.040	0.028	µg/L	1		EPA 608	4/13/16	4/14/16 13:22	JMB
Aroclor-1254 [1]	ND	0.040	0.028	µg/L	1		SW-846 8082A	4/13/16	4/14/16 13:22	JMB
Aroclor-1260 [1]	ND	0.040	0.029	µg/L	1		EPA 608	4/13/16	4/14/16 13:22	JMB
Aroclor-1260 [1]	ND	0.040	0.029	µg/L	1		SW-846 8082A	4/13/16	4/14/16 13:22	JMB
Aroclor-1262 [1]	ND	0.040	0.025	µg/L	1		SW-846 8082A	4/13/16	4/14/16 13:22	JMB
Aroclor-1268 [1]	ND	0.040	0.016	µg/L	1		SW-846 8082A	4/13/16	4/14/16 13:22	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	58.9	30-150		4/14/16 13:22
Decachlorobiphenyl [1]	58.9	30-150		4/14/16 13:22
Decachlorobiphenyl [2]	57.2	30-150		4/14/16 13:22
Decachlorobiphenyl [2]	57.2	30-150		4/14/16 13:22
Tetrachloro-m-xylene [1]	84.3	30-150		4/14/16 13:22
Tetrachloro-m-xylene [1]	84.3	30-150		4/14/16 13:22
Tetrachloro-m-xylene [2]	82.3	30-150		4/14/16 13:22
Tetrachloro-m-xylene [2]	82.3	30-150		4/14/16 13:22

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455

Date Received: 4/11/2016

Field Sample #: GW-3
Sampled: 4/9/2016 10:00

Sample ID: 16D0455-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	0.050	0.045	mg/L	1		SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Arsenic	ND	0.010	0.0078	mg/L	1		SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Barium	0.039	0.050	0.0063	mg/L	1	J	SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Beryllium	ND	0.0040	0.0010	mg/L	1		SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Cadmium	ND	0.0040	0.00070	mg/L	1		SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Chromium	0.0025	0.010	0.00080	mg/L	1	J	SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Cobalt	ND	0.050	0.0073	mg/L	1		SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Copper	0.0068	0.010	0.0047	mg/L	1	J	SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Lead	ND	0.010	0.0025	mg/L	1		SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Manganese	0.66	0.010	0.0012	mg/L	1		SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Mercury	ND	0.00010	0.000019	mg/L	1		SW-846 7470A	4/15/16	4/19/16 14:58	TGW
Nickel	0.0096	0.010	0.0036	mg/L	1	J	SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Selenium	ND	0.050	0.013	mg/L	1		SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Silver	ND	0.0050	0.0029	mg/L	1		SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Thallium	ND	0.050	0.022	mg/L	1		SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Vanadium	0.0095	0.010	0.0038	mg/L	1	J	SW-846 6010C-D	4/12/16	4/13/16 20:44	AME
Zinc	ND	0.020	0.0094	mg/L	1		SW-846 6010C-D	4/12/16	4/13/16 20:44	AME

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455

Date Received: 4/11/2016

Field Sample #: GW-3
Sampled: 4/9/2016 10:00

Sample ID: 16D0455-02

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	0.050	0.045	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Arsenic	ND	0.010	0.0078	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Barium	0.040	0.050	0.0063	mg/L	1	J	SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Beryllium	ND	0.0040	0.0010	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Cadmium	ND	0.0040	0.00070	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Chromium	0.0035	0.010	0.00080	mg/L	1	J	SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Cobalt	ND	0.050	0.0073	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Copper	ND	0.010	0.0047	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Lead	ND	0.010	0.0025	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Manganese	0.70	0.010	0.0012	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Mercury	ND	0.00010	0.000019	mg/L	1		SW-846 7470A	4/18/16	4/18/16 13:50	TGW
Nickel	0.0095	0.010	0.0036	mg/L	1	J	SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Selenium	ND	0.050	0.013	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Silver	ND	0.0050	0.0029	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Thallium	ND	0.050	0.022	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Vanadium	0.011	0.010	0.0038	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME
Zinc	ND	0.020	0.0094	mg/L	1		SW-846 6010C-D	4/18/16	4/20/16 13:20	AME

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: SCA 131Q
Sample Description:
Work Order: 16D0455

Date Received: 4/11/2016

Field Sample #: GW-3
Sampled: 4/9/2016 10:00

Sample ID: 16D0455-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Carbonaceous BOD	ND	4.0		mg/L	1	H-03	SM21-22 5210B	4/11/16	4/11/16 22:45	AMM
Chloride	200	10	8.7	mg/L	10		SM21-22 4500 CL B	4/12/16	4/12/16 22:40	DJM
Flashpoint	> 212 °F			°F	1		SW-846 1010A	4/13/16	4/13/16 18:00	AG
Hexavalent Chromium	ND	0.0040	0.0030	mg/L	1	H-03	SW-846 7196A	4/11/16	4/11/16 23:40	DJM
Nitrate/Nitrite as N	2.0	0.050	0.0070	mg/L	1	L-07A	SM 21-22 4500 NO3 F	4/12/16	4/12/16 17:15	AG
pH @17.9°C	7.1			pH Units	1	H-05	SM21-22 4500 H B	4/12/16	4/12/16 9:50	MMH
Phenol	0.049	0.050	0.047	mg/L	1	J	EPA 420.1	4/12/16	4/13/16 11:30	LL
Total Kjeldahl Nitrogen	0.53	1.0	0.17	mg/L	1	J	SM19-22 4500-N Org B,C-NH3 C	4/13/16	4/14/16 14:16	MMH
Total Nitrogen	2.0	0.050		mg/L	1		SM19-22 4500-N Org B,C-NH3 C	4/15/16	4/15/16 13:24	LL
Total Solids	680	10	9.8	mg/L	1		SM21-22 2540B	4/13/16	4/13/16 10:20	LL
Total Suspended Solids	56	5.0	4.2	mg/L	1		SM21-22 2540D	4/13/16	4/13/16 11:20	LL
Oil & Grease (HEM)	ND	1.6	1.3	mg/L	1		EPA 1664B	4/12/16	4/12/16 13:30	LL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

EPA 1664B

Lab Number [Field ID]	Batch	Initial [mL]	Date
16D0455-02 [GW-3]	B146406	900	04/12/16

EPA 420.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146409	50.0	50.0	04/12/16

Prep Method: SW-846 3510C-EPA 608

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146521	1000	2.00	04/13/16

Prep Method: SW-846 5030B-EPA 624

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146526	5	5.00	04/13/16

SM 21-22 4500 NO3 F

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146479	25.0	25.0	04/12/16

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146533	25.0	25.0	04/13/16

SM19-22 4500-N Org B,C-NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146829	50.0	50.0	04/15/16

SM21-22 2540B

Lab Number [Field ID]	Batch	Initial [mL]	Date
16D0455-02 [GW-3]	B146511	50.0	04/13/16

SM21-22 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Date
16D0455-02 [GW-3]	B146512	100	04/13/16

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

SM21-22 4500 CL B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146488	100	100	04/12/16

SM21-22 4500 H B

Lab Number [Field ID]	Batch	Initial [mL]	Date
16D0455-02 [GW-3]	B146449	50.0	04/12/16

SM21-22 5210B

Lab Number [Field ID]	Batch	Initial [mL]	Date
16D0455-02 [GW-3]	B146387	150	04/11/16

SW-846 1010A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146542	50.0	50.0	04/13/16

Prep Method: SW-846 3005A-SW-846 6010C-D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146424	50.0	50.0	04/12/16

Prep Method: SW-846 3005A Dissolved-SW-846 6010C-D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146909	50.0	50.0	04/18/16

SW-846 7196A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146389	50.0	50.0	04/11/16

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146771	6.00	6.00	04/15/16

Prep Method: SW-846 7470A Prep-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146946	6.00	6.00	04/18/16

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Sample Extraction Data

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146521	1000	2.00	04/13/16

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-01 [Trip Blank]	B146525	5	5.00	04/13/16
16D0455-02 [GW-3]	B146525	5	5.00	04/13/16

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
16D0455-02 [GW-3]	B146551	1000	1.00	04/13/16

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146525 - SW-846 5030B										
Blank (B146525-BLK1)				Prepared & Analyzed: 04/13/16						
Acetone	ND	50	µg/L							
Acrylonitrile	ND	5.0	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	0.50	µg/L							
Bromoform	ND	1.0	µg/L							
Bromomethane	ND	2.0	µg/L							
2-Butanone (MEK)	ND	20	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							V-05
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	4.0	µg/L							
Carbon Tetrachloride	ND	5.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
trans-1,4-Dichloro-2-butene	ND	2.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	0.50	µg/L							
trans-1,3-Dichloropropene	ND	0.50	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.50	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl Acetate	ND	5.0	µg/L							L-04, V-05

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B146525 - SW-846 5030B											
Blank (B146525-BLK1)				Prepared & Analyzed: 04/13/16							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L								
Methyl Cyclohexane	ND	1.0	µg/L								
Methylene Chloride	ND	5.0	µg/L								
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L								
Naphthalene	ND	2.0	µg/L								
n-Propylbenzene	ND	1.0	µg/L								
Styrene	ND	1.0	µg/L								
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L								
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L								
Tetrachloroethylene	ND	1.0	µg/L								
Tetrahydrofuran	ND	10	µg/L								
Toluene	ND	1.0	µg/L								
1,2,3-Trichlorobenzene	ND	5.0	µg/L								
1,2,4-Trichlorobenzene	ND	1.0	µg/L								
1,3,5-Trichlorobenzene	ND	1.0	µg/L								
1,1,1-Trichloroethane	ND	1.0	µg/L								
1,1,2-Trichloroethane	ND	1.0	µg/L								
Trichloroethylene	ND	1.0	µg/L								
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L								
1,2,3-Trichloropropane	ND	2.0	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L								
1,2,4-Trimethylbenzene	ND	1.0	µg/L								
1,3,5-Trimethylbenzene	ND	1.0	µg/L								
Vinyl Chloride	ND	2.0	µg/L								
m+p Xylene	ND	2.0	µg/L								
o-Xylene	ND	1.0	µg/L								
Surrogate: 1,2-Dichloroethane-d4	*23.6*		µg/L	25.0		94.6	70-130				
Surrogate: Toluene-d8	*25.0*		µg/L	25.0		100	70-130				
Surrogate: 4-Bromofluorobenzene	*23.8*		µg/L	25.0		95.0	70-130				
LCS (B146525-BS1)				Prepared & Analyzed: 04/13/16							
Acetone	99.4	50	µg/L	100		99.4	70-160				†
Acrylonitrile	8.52	5.0	µg/L	10.0		85.2	70-130				
tert-Amyl Methyl Ether (TAME)	8.43	0.50	µg/L	10.0		84.3	70-130				
Benzene	10.0	1.0	µg/L	10.0		100	70-130				
Bromobenzene	9.62	1.0	µg/L	10.0		96.2	70-130				
Bromochloromethane	10.1	1.0	µg/L	10.0		101	70-130				
Bromodichloromethane	9.46	0.50	µg/L	10.0		94.6	70-130				
Bromoform	11.1	1.0	µg/L	10.0		111	70-130				
Bromomethane	5.55	2.0	µg/L	10.0		55.5	40-160				†
2-Butanone (MEK)	102	20	µg/L	100		102	40-160				†
tert-Butyl Alcohol (TBA)	69.3	20	µg/L	100		69.3	40-160			V-05	†
n-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130				
sec-Butylbenzene	9.54	1.0	µg/L	10.0		95.4	70-130				
tert-Butylbenzene	9.73	1.0	µg/L	10.0		97.3	70-130				
tert-Butyl Ethyl Ether (TBEE)	9.18	0.50	µg/L	10.0		91.8	70-130				
Carbon Disulfide	9.05	4.0	µg/L	10.0		90.5	70-130				
Carbon Tetrachloride	10.1	5.0	µg/L	10.0		101	70-130				
Chlorobenzene	9.67	1.0	µg/L	10.0		96.7	70-130				
Chlorodibromomethane	9.44	0.50	µg/L	10.0		94.4	70-130				
Chloroethane	9.91	2.0	µg/L	10.0		99.1	70-130				
Chloroform	9.67	2.0	µg/L	10.0		96.7	70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B146525 - SW-846 5030B												
LCS (B146525-BS1)				Prepared & Analyzed: 04/13/16								
Chloromethane	8.67	2.0	µg/L	10.0		86.7		40-160				†
2-Chlorotoluene	9.05	1.0	µg/L	10.0		90.5		70-130				
4-Chlorotoluene	9.43	1.0	µg/L	10.0		94.3		70-130				
1,2-Dibromo-3-chloropropane (DBCP)	10.0	5.0	µg/L	10.0		100		70-130				
1,2-Dibromoethane (EDB)	9.57	0.50	µg/L	10.0		95.7		70-130				
Dibromomethane	10.4	1.0	µg/L	10.0		104		70-130				
1,2-Dichlorobenzene	9.31	1.0	µg/L	10.0		93.1		70-130				
1,3-Dichlorobenzene	9.17	1.0	µg/L	10.0		91.7		70-130				
1,4-Dichlorobenzene	9.32	1.0	µg/L	10.0		93.2		70-130				
trans-1,4-Dichloro-2-butene	11.7	2.0	µg/L	10.0		117		70-130				
Dichlorodifluoromethane (Freon 12)	6.16	2.0	µg/L	10.0		61.6		40-160				†
1,1-Dichloroethane	9.93	1.0	µg/L	10.0		99.3		70-130				
1,2-Dichloroethane	9.12	1.0	µg/L	10.0		91.2		70-130				
1,1-Dichloroethylene	8.18	1.0	µg/L	10.0		81.8		70-130				
cis-1,2-Dichloroethylene	9.47	1.0	µg/L	10.0		94.7		70-130				
trans-1,2-Dichloroethylene	9.43	1.0	µg/L	10.0		94.3		70-130				
1,2-Dichloropropane	9.50	1.0	µg/L	10.0		95.0		70-130				
1,3-Dichloropropane	9.08	0.50	µg/L	10.0		90.8		70-130				
2,2-Dichloropropane	8.56	1.0	µg/L	10.0		85.6		40-130				†
1,1-Dichloropropene	10.0	2.0	µg/L	10.0		100		70-130				
cis-1,3-Dichloropropene	8.25	0.50	µg/L	10.0		82.5		70-130				
trans-1,3-Dichloropropene	8.58	0.50	µg/L	10.0		85.8		70-130				
Diethyl Ether	8.80	2.0	µg/L	10.0		88.0		70-130				
Diisopropyl Ether (DIPE)	8.86	0.50	µg/L	10.0		88.6		70-130				
1,4-Dioxane	115	50	µg/L	100		115		40-130				†
Ethylbenzene	10.0	1.0	µg/L	10.0		100		70-130				
Hexachlorobutadiene	10.9	0.50	µg/L	10.0		109		70-130				
2-Hexanone (MBK)	95.7	10	µg/L	100		95.7		70-160				†
Isopropylbenzene (Cumene)	9.48	1.0	µg/L	10.0		94.8		70-130				
p-Isopropyltoluene (p-Cymene)	9.92	1.0	µg/L	10.0		99.2		70-130				
Methyl Acetate	5.88	5.0	µg/L	10.0		**58.8**	*	70-130			L-04, V-05	
Methyl tert-Butyl Ether (MTBE)	8.36	1.0	µg/L	10.0		83.6		70-130				
Methyl Cyclohexane	10.7	1.0	µg/L	10.0		107		70-130				
Methylene Chloride	7.73	5.0	µg/L	10.0		77.3		70-130				
4-Methyl-2-pentanone (MIBK)	94.5	10	µg/L	100		94.5		70-160				†
Naphthalene	10.5	2.0	µg/L	10.0		105		40-130				†
n-Propylbenzene	9.35	1.0	µg/L	10.0		93.5		70-130				
Styrene	9.35	1.0	µg/L	10.0		93.5		70-130				
1,1,1,2-Tetrachloroethane	9.95	1.0	µg/L	10.0		99.5		70-130				
1,1,2,2-Tetrachloroethane	10.0	0.50	µg/L	10.0		100		70-130				
Tetrachloroethylene	10.5	1.0	µg/L	10.0		105		70-130				
Tetrahydrofuran	8.36	10	µg/L	10.0		83.6		70-130			J	
Toluene	9.59	1.0	µg/L	10.0		95.9		70-130				
1,2,3-Trichlorobenzene	10.4	5.0	µg/L	10.0		104		70-130				
1,2,4-Trichlorobenzene	10.2	1.0	µg/L	10.0		102		70-130				
1,3,5-Trichlorobenzene	9.96	1.0	µg/L	10.0		99.6		70-130				
1,1,1-Trichloroethane	9.80	1.0	µg/L	10.0		98.0		70-130				
1,1,2-Trichloroethane	9.88	1.0	µg/L	10.0		98.8		70-130				
Trichloroethylene	10.3	1.0	µg/L	10.0		103		70-130				
Trichlorofluoromethane (Freon 11)	8.96	2.0	µg/L	10.0		89.6		70-130				
1,2,3-Trichloropropane	9.86	2.0	µg/L	10.0		98.6		70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B146525 - SW-846 5030B											
LCS (B146525-BS1)				Prepared & Analyzed: 04/13/16							
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.47	1.0	µg/L	10.0		94.7	70-130				
1,2,4-Trimethylbenzene	9.83	1.0	µg/L	10.0		98.3	70-130				
1,3,5-Trimethylbenzene	9.65	1.0	µg/L	10.0		96.5	70-130				
Vinyl Chloride	9.55	2.0	µg/L	10.0		95.5	40-160				†
m+p Xylene	19.3	2.0	µg/L	20.0		96.4	70-130				
o-Xylene	9.46	1.0	µg/L	10.0		94.6	70-130				
Surrogate: 1,2-Dichloroethane-d4	*23.6*		µg/L	25.0		94.4	70-130				
Surrogate: Toluene-d8	*24.8*		µg/L	25.0		99.4	70-130				
Surrogate: 4-Bromofluorobenzene	*24.3*		µg/L	25.0		97.3	70-130				
LCS Dup (B146525-BSD1)				Prepared & Analyzed: 04/13/16							
Acetone	108	50	µg/L	100		108	70-160	8.28	25		†
Acrylonitrile	8.94	5.0	µg/L	10.0		89.4	70-130	4.81	25		
tert-Amyl Methyl Ether (TAME)	8.53	0.50	µg/L	10.0		85.3	70-130	1.18	25		
Benzene	10.1	1.0	µg/L	10.0		101	70-130	0.794	25		
Bromobenzene	9.54	1.0	µg/L	10.0		95.4	70-130	0.835	25		
Bromochloromethane	10.4	1.0	µg/L	10.0		104	70-130	3.61	25		
Bromodichloromethane	9.52	0.50	µg/L	10.0		95.2	70-130	0.632	25		
Bromoform	10.4	1.0	µg/L	10.0		104	70-130	6.81	25		
Bromomethane	7.06	2.0	µg/L	10.0		70.6	40-160	23.9	25		†
2-Butanone (MEK)	110	20	µg/L	100		110	40-160	7.37	25		†
tert-Butyl Alcohol (TBA)	75.2	20	µg/L	100		75.2	40-160	8.15	25	V-05	†
n-Butylbenzene	10.6	1.0	µg/L	10.0		106	70-130	0.189	25		
sec-Butylbenzene	9.63	1.0	µg/L	10.0		96.3	70-130	0.939	25		
tert-Butylbenzene	9.88	1.0	µg/L	10.0		98.8	70-130	1.53	25		
tert-Butyl Ethyl Ether (TBEE)	9.17	0.50	µg/L	10.0		91.7	70-130	0.109	25		
Carbon Disulfide	8.85	4.0	µg/L	10.0		88.5	70-130	2.23	25		
Carbon Tetrachloride	10.2	5.0	µg/L	10.0		102	70-130	1.48	25		
Chlorobenzene	9.75	1.0	µg/L	10.0		97.5	70-130	0.824	25		
Chlorodibromomethane	9.39	0.50	µg/L	10.0		93.9	70-130	0.531	25		
Chloroethane	10.1	2.0	µg/L	10.0		101	70-130	1.90	25		
Chloroform	9.89	2.0	µg/L	10.0		98.9	70-130	2.25	25		
Chloromethane	9.27	2.0	µg/L	10.0		92.7	40-160	6.69	25		†
2-Chlorotoluene	9.14	1.0	µg/L	10.0		91.4	70-130	0.990	25		
4-Chlorotoluene	9.49	1.0	µg/L	10.0		94.9	70-130	0.634	25		
1,2-Dibromo-3-chloropropane (DBCP)	10.8	5.0	µg/L	10.0		108	70-130	6.93	25		
1,2-Dibromoethane (EDB)	9.68	0.50	µg/L	10.0		96.8	70-130	1.14	25		
Dibromomethane	10.2	1.0	µg/L	10.0		102	70-130	2.24	25		
1,2-Dichlorobenzene	9.67	1.0	µg/L	10.0		96.7	70-130	3.79	25		
1,3-Dichlorobenzene	9.46	1.0	µg/L	10.0		94.6	70-130	3.11	25		
1,4-Dichlorobenzene	9.46	1.0	µg/L	10.0		94.6	70-130	1.49	25		
trans-1,4-Dichloro-2-butene	12.2	2.0	µg/L	10.0		122	70-130	4.36	25		
Dichlorodifluoromethane (Freon 12)	6.23	2.0	µg/L	10.0		62.3	40-160	1.13	25		†
1,1-Dichloroethane	9.96	1.0	µg/L	10.0		99.6	70-130	0.302	25		
1,2-Dichloroethane	9.03	1.0	µg/L	10.0		90.3	70-130	0.992	25		
1,1-Dichloroethylene	8.25	1.0	µg/L	10.0		82.5	70-130	0.852	25		
cis-1,2-Dichloroethylene	9.41	1.0	µg/L	10.0		94.1	70-130	0.636	25		
trans-1,2-Dichloroethylene	9.42	1.0	µg/L	10.0		94.2	70-130	0.106	25		
1,2-Dichloropropane	9.41	1.0	µg/L	10.0		94.1	70-130	0.952	25		
1,3-Dichloropropane	9.15	0.50	µg/L	10.0		91.5	70-130	0.768	25		
2,2-Dichloropropane	8.42	1.0	µg/L	10.0		84.2	40-130	1.65	25		†
1,1-Dichloropropene	10.0	2.0	µg/L	10.0		100	70-130	0.300	25		

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B146525 - SW-846 5030B												
LCS Dup (B146525-BSD1)				Prepared & Analyzed: 04/13/16								
cis-1,3-Dichloropropene	8.28	0.50	µg/L	10.0		82.8		70-130	0.363	25		
trans-1,3-Dichloropropene	8.73	0.50	µg/L	10.0		87.3		70-130	1.73	25		
Diethyl Ether	9.01	2.0	µg/L	10.0		90.1		70-130	2.36	25		
Diisopropyl Ether (DIPE)	8.70	0.50	µg/L	10.0		87.0		70-130	1.82	25		
1,4-Dioxane	115	50	µg/L	100		115		40-130	0.791	50		† ‡
Ethylbenzene	10.1	1.0	µg/L	10.0		101		70-130	0.994	25		
Hexachlorobutadiene	11.3	0.50	µg/L	10.0		113		70-130	3.24	25		
2-Hexanone (MBK)	103	10	µg/L	100		103		70-160	7.39	25		†
Isopropylbenzene (Cumene)	9.49	1.0	µg/L	10.0		94.9		70-130	0.105	25		
p-Isopropyltoluene (p-Cymene)	10.1	1.0	µg/L	10.0		101		70-130	1.80	25		
Methyl Acetate	5.83	5.0	µg/L	10.0		**58.3**	*	70-130	0.854	25	L-04, V-05	
Methyl tert-Butyl Ether (MTBE)	8.45	1.0	µg/L	10.0		84.5		70-130	1.07	25		
Methyl Cyclohexane	10.8	1.0	µg/L	10.0		108		70-130	1.12	25		
Methylene Chloride	7.88	5.0	µg/L	10.0		78.8		70-130	1.92	25		
4-Methyl-2-pentanone (MIBK)	97.1	10	µg/L	100		97.1		70-160	2.70	25		†
Naphthalene	10.9	2.0	µg/L	10.0		109		40-130	3.91	25		†
n-Propylbenzene	9.41	1.0	µg/L	10.0		94.1		70-130	0.640	25		
Styrene	9.48	1.0	µg/L	10.0		94.8		70-130	1.38	25		
1,1,1,2-Tetrachloroethane	9.93	1.0	µg/L	10.0		99.3		70-130	0.201	25		
1,1,2,2-Tetrachloroethane	10.1	0.50	µg/L	10.0		101		70-130	0.696	25		
Tetrachloroethylene	10.4	1.0	µg/L	10.0		104		70-130	1.05	25		
Tetrahydrofuran	8.87	10	µg/L	10.0		88.7		70-130	5.92	25	J	
Toluene	9.44	1.0	µg/L	10.0		94.4		70-130	1.58	25		
1,2,3-Trichlorobenzene	11.0	5.0	µg/L	10.0		110		70-130	5.71	25		
1,2,4-Trichlorobenzene	10.5	1.0	µg/L	10.0		105		70-130	3.01	25		
1,3,5-Trichlorobenzene	10.2	1.0	µg/L	10.0		102		70-130	2.48	25		
1,1,1-Trichloroethane	9.74	1.0	µg/L	10.0		97.4		70-130	0.614	25		
1,1,2-Trichloroethane	9.83	1.0	µg/L	10.0		98.3		70-130	0.507	25		
Trichloroethylene	10.7	1.0	µg/L	10.0		107		70-130	3.92	25		
Trichlorofluoromethane (Freon 11)	9.10	2.0	µg/L	10.0		91.0		70-130	1.55	25		
1,2,3-Trichloropropane	9.96	2.0	µg/L	10.0		99.6		70-130	1.01	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.47	1.0	µg/L	10.0		94.7		70-130	0.00	25		
1,2,4-Trimethylbenzene	10.0	1.0	µg/L	10.0		100		70-130	2.11	25		
1,3,5-Trimethylbenzene	9.60	1.0	µg/L	10.0		96.0		70-130	0.519	25		
Vinyl Chloride	9.19	2.0	µg/L	10.0		91.9		40-160	3.84	25		†
m+p Xylene	19.5	2.0	µg/L	20.0		97.4		70-130	1.08	25		
o-Xylene	9.49	1.0	µg/L	10.0		94.9		70-130	0.317	25		
Surrogate: 1,2-Dichloroethane-d4	*23.3*		µg/L	25.0		93.3		70-130				
Surrogate: Toluene-d8	*24.6*		µg/L	25.0		98.4		70-130				
Surrogate: 4-Bromofluorobenzene	*23.8*		µg/L	25.0		95.2		70-130				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146526 - SW-846 5030B										
Blank (B146526-BLK1)				Prepared & Analyzed: 04/13/16						
Benzene	ND	1.0	µg/L							
Bromodichloromethane	ND	2.0	µg/L							
Bromoform	ND	2.0	µg/L							
Bromomethane	ND	2.0	µg/L							
Carbon Tetrachloride	ND	2.0	µg/L							
Chlorobenzene	ND	2.0	µg/L							
Chlorodibromomethane	ND	2.0	µg/L							
Chloroethane	ND	2.0	µg/L							
2-Chloroethyl Vinyl Ether	ND	10	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
1,2-Dichlorobenzene	ND	2.0	µg/L							
1,3-Dichlorobenzene	ND	2.0	µg/L							
1,4-Dichlorobenzene	ND	2.0	µg/L							
1,2-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethylene	ND	2.0	µg/L							
trans-1,2-Dichloroethylene	ND	2.0	µg/L							
1,2-Dichloropropane	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	2.0	µg/L							
trans-1,3-Dichloropropene	ND	2.0	µg/L							
Ethylbenzene	ND	2.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L							
Tetrachloroethylene	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	2.0	µg/L							
1,1,2-Trichloroethane	ND	2.0	µg/L							
Trichloroethylene	ND	2.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	2.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	*23.6*		µg/L	25.0		94.6	70-130			
Surrogate: Toluene-d8	*25.0*		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	*23.8*		µg/L	25.0		95.0	70-130			
LCS (B146526-BS1)				Prepared & Analyzed: 04/13/16						
Benzene	10.3	1.0	µg/L	10.0		103	37-151			
Bromodichloromethane	9.95	2.0	µg/L	10.0		99.5	35-155			
Bromoform	10.7	2.0	µg/L	10.0		107	45-169			
Bromomethane	13.3	2.0	µg/L	10.0		133	20-242			
Carbon Tetrachloride	10.4	2.0	µg/L	10.0		104	70-140			
Chlorobenzene	10.0	2.0	µg/L	10.0		100	37-160			
Chlorodibromomethane	9.47	2.0	µg/L	10.0		94.7	53-149			
Chloroethane	8.75	2.0	µg/L	10.0		87.5	70-130			
2-Chloroethyl Vinyl Ether	85.5	10	µg/L	100		85.5	10-305			
Chloroform	9.69	2.0	µg/L	10.0		96.9	51-138			
Chloromethane	13.6	2.0	µg/L	10.0		136	20-273			
1,2-Dichlorobenzene	10.2	2.0	µg/L	10.0		102	18-190			
1,3-Dichlorobenzene	9.86	2.0	µg/L	10.0		98.6	59-156			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146526 - SW-846 5030B										
LCS (B146526-BS1)				Prepared & Analyzed: 04/13/16						
1,4-Dichlorobenzene	10.0	2.0	µg/L	10.0		100	18-190			
1,2-Dichloroethane	8.98	2.0	µg/L	10.0		89.8	49-155			
1,1-Dichloroethane	10.0	2.0	µg/L	10.0		100	59-155			
1,1-Dichloroethylene	8.83	2.0	µg/L	10.0		88.3	20-234			
trans-1,2-Dichloroethylene	10.0	2.0	µg/L	10.0		100	54-156			
1,2-Dichloropropane	9.58	2.0	µg/L	10.0		95.8	20-210			
cis-1,3-Dichloropropene	9.10	2.0	µg/L	10.0		91.0	20-227			
trans-1,3-Dichloropropene	8.60	2.0	µg/L	10.0		86.0	17-183			
Ethylbenzene	10.1	2.0	µg/L	10.0		101	37-162			
Methyl tert-Butyl Ether (MTBE)	8.72	2.0	µg/L	10.0		87.2	70-130			
Methylene Chloride	8.38	5.0	µg/L	10.0		83.8	50-221			
1,1,2,2-Tetrachloroethane	10.1	2.0	µg/L	10.0		101	46-157			
Tetrachloroethylene	10.3	2.0	µg/L	10.0		103	64-148			
Toluene	9.32	1.0	µg/L	10.0		93.2	47-150			
1,1,1-Trichloroethane	10.1	2.0	µg/L	10.0		101	52-162			
1,1,2-Trichloroethane	9.72	2.0	µg/L	10.0		97.2	52-150			
Trichloroethylene	10.2	2.0	µg/L	10.0		102	71-157			
Trichlorofluoromethane (Freon 11)	9.26	2.0	µg/L	10.0		92.6	17-181			
Vinyl Chloride	12.2	2.0	µg/L	10.0		122	20-251			
m+p Xylene	20.1	2.0	µg/L	20.0		101	70-130			
o-Xylene	9.95	2.0	µg/L	10.0		99.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	*23.8*		µg/L	25.0		95.0	70-130			
Surrogate: Toluene-d8	*24.5*		µg/L	25.0		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	*24.3*		µg/L	25.0		97.0	70-130			

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QUALITY CONTROL

Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146525 - SW-846 5030B										
Blank (B146525-BLK1)				Prepared & Analyzed: 04/13/16						
No TICs Found	0.0		µg/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146551 - SW-846 3510C										
Blank (B146551-BLK1)				Prepared: 04/13/16 Analyzed: 04/14/16						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Aniline	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							L-04, V-04, V-05
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
Benzoic Acid	ND	10	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							V-20
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
Carbazole	ND	10	µg/L							
4-Chloroaniline	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Dibenzofuran	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							
Hexachloroethane	ND	10	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
1-Methylnaphthalene	ND	5.0	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B146551 - SW-846 3510C											
Blank (B146551-BLK1)				Prepared: 04/13/16 Analyzed: 04/14/16							
2-Methylphenol	ND	10	µg/L								
3/4-Methylphenol	ND	10	µg/L								
Naphthalene	ND	5.0	µg/L								
2-Nitroaniline	ND	10	µg/L								
3-Nitroaniline	ND	10	µg/L								
4-Nitroaniline	ND	10	µg/L								
Nitrobenzene	ND	10	µg/L								
2-Nitrophenol	ND	10	µg/L								
4-Nitrophenol	ND	10	µg/L								
N-Nitrosodimethylamine	ND	10	µg/L								V-20
N-Nitrosodiphenylamine	ND	10	µg/L								
N-Nitrosodi-n-propylamine	ND	10	µg/L								
Pentachloronitrobenzene	ND	10	µg/L								V-16
Pentachlorophenol	ND	10	µg/L								
Phenanthrene	ND	5.0	µg/L								
Phenol	ND	10	µg/L								
Pyrene	ND	5.0	µg/L								
Pyridine	ND	5.0	µg/L								
1,2,4,5-Tetrachlorobenzene	ND	10	µg/L								
1,2,4-Trichlorobenzene	ND	5.0	µg/L								
2,4,5-Trichlorophenol	ND	10	µg/L								
2,4,6-Trichlorophenol	ND	10	µg/L								
Surrogate: 2-Fluorophenol	*121*		µg/L	200		60.5		15-110			
Surrogate: Phenol-d6	*85.0*		µg/L	200		42.5		15-110			
Surrogate: Nitrobenzene-d5	*94.7*		µg/L	100		94.7		30-130			
Surrogate: 2-Fluorobiphenyl	*91.1*		µg/L	100		91.1		30-130			
Surrogate: 2,4,6-Tribromophenol	*220*		µg/L	200		110		15-110			
Surrogate: p-Terphenyl-d14	*113*		µg/L	100		113		30-130			
LCS (B146551-BS1)				Prepared: 04/13/16 Analyzed: 04/14/16							
Acenaphthene	87.8	5.0	µg/L	100		87.8		40-140			
Acenaphthylene	82.2	5.0	µg/L	100		82.2		40-140			
Acetophenone	82.2	10	µg/L	100		82.2		40-140			
Aniline	57.3	5.0	µg/L	100		57.3		40-140			
Anthracene	87.4	5.0	µg/L	100		87.4		40-140			
Benzidine	34.6	20	µg/L	100		**34.6**	*	40-140			L-04, V-04, V-05
Benzo(a)anthracene	84.4	5.0	µg/L	100		84.4		40-140			
Benzo(a)pyrene	92.6	5.0	µg/L	100		92.6		40-140			
Benzo(b)fluoranthene	91.9	5.0	µg/L	100		91.9		40-140			
Benzo(g,h,i)perylene	93.1	5.0	µg/L	100		93.1		40-140			
Benzo(k)fluoranthene	90.4	5.0	µg/L	100		90.4		40-140			
Benzoic Acid	36.0	10	µg/L	100		36.0		10-130			†
Bis(2-chloroethoxy)methane	84.6	10	µg/L	100		84.6		40-140			
Bis(2-chloroethyl)ether	77.6	10	µg/L	100		77.6		40-140			
Bis(2-chloroisopropyl)ether	91.1	10	µg/L	100		91.1		40-140			V-20
Bis(2-Ethylhexyl)phthalate	95.4	10	µg/L	100		95.4		40-140			
4-Bromophenylphenylether	93.4	10	µg/L	100		93.4		40-140			
Butylbenzylphthalate	92.1	10	µg/L	100		92.1		40-140			
Carbazole	88.1	10	µg/L	100		88.1		40-140			
4-Chloroaniline	50.2	10	µg/L	100		50.2		40-140			
4-Chloro-3-methylphenol	87.6	10	µg/L	100		87.6		30-130			
2-Chloronaphthalene	75.8	10	µg/L	100		75.8		40-140			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B146551 - SW-846 3510C											
LCS (B146551-BS1)				Prepared: 04/13/16 Analyzed: 04/14/16							
2-Chlorophenol	73.8	10	µg/L	100		73.8	30-130				
4-Chlorophenylphenylether	96.8	10	µg/L	100		96.8	40-140				
Chrysene	87.1	5.0	µg/L	100		87.1	40-140				
Dibenz(a,h)anthracene	95.2	5.0	µg/L	100		95.2	40-140				
Dibenzofuran	90.2	5.0	µg/L	100		90.2	40-140				
Di-n-butylphthalate	93.1	10	µg/L	100		93.1	40-140				
1,2-Dichlorobenzene	67.8	5.0	µg/L	100		67.8	40-140				
1,3-Dichlorobenzene	64.9	5.0	µg/L	100		64.9	40-140				
1,4-Dichlorobenzene	67.0	5.0	µg/L	100		67.0	40-140				
3,3-Dichlorobenzidine	65.7	10	µg/L	100		65.7	40-140				
2,4-Dichlorophenol	85.2	10	µg/L	100		85.2	30-130				
Diethylphthalate	94.0	10	µg/L	100		94.0	40-140				
2,4-Dimethylphenol	76.1	10	µg/L	100		76.1	30-130				
Dimethylphthalate	91.5	10	µg/L	100		91.5	40-140				
4,6-Dinitro-2-methylphenol	84.3	10	µg/L	100		84.3	30-130				
2,4-Dinitrophenol	86.8	10	µg/L	100		86.8	30-130				
2,4-Dinitrotoluene	96.4	10	µg/L	100		96.4	40-140				
2,6-Dinitrotoluene	98.0	10	µg/L	100		98.0	40-140				
Di-n-octylphthalate	94.5	10	µg/L	100		94.5	40-140				
1,2-Diphenylhydrazine (as Azobenzene)	91.8	10	µg/L	100		91.8	40-140				
Fluoranthene	88.5	5.0	µg/L	100		88.5	40-140				
Fluorene	92.6	5.0	µg/L	100		92.6	40-140				
Hexachlorobenzene	97.4	10	µg/L	100		97.4	40-140				
Hexachlorobutadiene	84.8	10	µg/L	100		84.8	40-140				
Hexachlorocyclopentadiene	80.9	10	µg/L	100		80.9	30-140				†
Hexachloroethane	69.6	10	µg/L	100		69.6	40-140				
Indeno(1,2,3-cd)pyrene	89.3	5.0	µg/L	100		89.3	40-140				
Isophorone	93.3	10	µg/L	100		93.3	40-140				
1-Methylnaphthalene	80.0	5.0	µg/L	100		80.0	40-140				
2-Methylnaphthalene	83.9	5.0	µg/L	100		83.9	40-140				
2-Methylphenol	65.1	10	µg/L	100		65.1	30-130				
3/4-Methylphenol	69.9	10	µg/L	100		69.9	30-130				
Naphthalene	75.3	5.0	µg/L	100		75.3	40-140				
2-Nitroaniline	98.3	10	µg/L	100		98.3	40-140				
3-Nitroaniline	67.0	10	µg/L	100		67.0	40-140				
4-Nitroaniline	90.9	10	µg/L	100		90.9	40-140				
Nitrobenzene	88.3	10	µg/L	100		88.3	40-140				
2-Nitrophenol	84.2	10	µg/L	100		84.2	30-130				
4-Nitrophenol	59.7	10	µg/L	100		59.7	10-130				†
N-Nitrosodimethylamine	72.0	10	µg/L	100		72.0	40-140			V-20	
N-Nitrosodiphenylamine	103	10	µg/L	100		103	40-140				
N-Nitrosodi-n-propylamine	87.9	10	µg/L	100		87.9	40-140				
Pentachloronitrobenzene	106	10	µg/L	100		106	40-140			V-16	
Pentachlorophenol	83.1	10	µg/L	100		83.1	30-130				
Phenanthrene	89.1	5.0	µg/L	100		89.1	40-140				
Phenol	36.5	10	µg/L	100		36.5	20-130				†
Pyrene	84.9	5.0	µg/L	100		84.9	40-140				
Pyridine	37.5	5.0	µg/L	100		37.5	10-140				†
1,2,4,5-Tetrachlorobenzene	88.9	10	µg/L	100		88.9	40-140				
1,2,4-Trichlorobenzene	79.6	5.0	µg/L	100		79.6	40-140				
2,4,5-Trichlorophenol	80.3	10	µg/L	100		80.3	30-130				
2,4,6-Trichlorophenol	86.5	10	µg/L	100		86.5	30-130				

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B146551 - SW-846 3510C												
LCS (B146551-BS1)				Prepared: 04/13/16 Analyzed: 04/14/16								
Surrogate: 2-Fluorophenol	*117*		µg/L	200		58.3		15-110				
Surrogate: Phenol-d6	*83.4*		µg/L	200		41.7		15-110				
Surrogate: Nitrobenzene-d5	*92.1*		µg/L	100		92.1		30-130				
Surrogate: 2-Fluorobiphenyl	*95.5*		µg/L	100		95.5		30-130				
Surrogate: 2,4,6-Tribromophenol	*251*		µg/L	200		**126**	*	15-110			S-07	
Surrogate: p-Terphenyl-d14	*97.6*		µg/L	100		97.6		30-130				
LCS Dup (B146551-BSD1)				Prepared: 04/13/16 Analyzed: 04/14/16								
Acenaphthene	87.0	5.0	µg/L	100		87.0		40-140	0.961	20		
Acenaphthylene	80.3	5.0	µg/L	100		80.3		40-140	2.42	20		
Acetophenone	84.0	10	µg/L	100		84.0		40-140	2.14	20		
Aniline	58.8	5.0	µg/L	100		58.8		40-140	2.58	50		‡
Anthracene	87.3	5.0	µg/L	100		87.3		40-140	0.0916	20		
Benzidine	37.6	20	µg/L	100		**37.6**	*	40-140	8.45	20	L-04, V-04, V-05	
Benzo(a)anthracene	86.7	5.0	µg/L	100		86.7		40-140	2.59	20		
Benzo(a)pyrene	91.7	5.0	µg/L	100		91.7		40-140	0.955	20		
Benzo(b)fluoranthene	90.5	5.0	µg/L	100		90.5		40-140	1.51	20		
Benzo(g,h,i)perylene	88.9	5.0	µg/L	100		88.9		40-140	4.56	20		
Benzo(k)fluoranthene	89.0	5.0	µg/L	100		89.0		40-140	1.57	20		
Benzoic Acid	34.1	10	µg/L	100		34.1		10-130	5.36	50		† ‡
Bis(2-chloroethoxy)methane	87.7	10	µg/L	100		87.7		40-140	3.55	20		
Bis(2-chloroethyl)ether	79.8	10	µg/L	100		79.8		40-140	2.79	20		
Bis(2-chloroisopropyl)ether	93.8	10	µg/L	100		93.8		40-140	2.89	20	V-20	
Bis(2-Ethylhexyl)phthalate	96.4	10	µg/L	100		96.4		40-140	0.991	20		
4-Bromophenylphenylether	94.0	10	µg/L	100		94.0		40-140	0.683	20		
Butylbenzylphthalate	92.3	10	µg/L	100		92.3		40-140	0.217	20		
Carbazole	88.7	10	µg/L	100		88.7		40-140	0.713	20		
4-Chloroaniline	51.6	10	µg/L	100		51.6		40-140	2.73	20		
4-Chloro-3-methylphenol	89.0	10	µg/L	100		89.0		30-130	1.58	20		
2-Chloronaphthalene	74.0	10	µg/L	100		74.0		40-140	2.35	20		
2-Chlorophenol	76.1	10	µg/L	100		76.1		30-130	3.07	20		
4-Chlorophenylphenylether	92.8	10	µg/L	100		92.8		40-140	4.25	20		
Chrysene	88.6	5.0	µg/L	100		88.6		40-140	1.72	20		
Dibenz(a,h)anthracene	93.1	5.0	µg/L	100		93.1		40-140	2.22	20		
Dibenzofuran	86.6	5.0	µg/L	100		86.6		40-140	4.07	20		
Di-n-butylphthalate	93.5	10	µg/L	100		93.5		40-140	0.354	20		
1,2-Dichlorobenzene	67.1	5.0	µg/L	100		67.1		40-140	1.13	20		
1,3-Dichlorobenzene	63.9	5.0	µg/L	100		63.9		40-140	1.51	20		
1,4-Dichlorobenzene	65.5	5.0	µg/L	100		65.5		40-140	2.35	20		
3,3-Dichlorobenzidine	62.2	10	µg/L	100		62.2		40-140	5.44	20		
2,4-Dichlorophenol	87.1	10	µg/L	100		87.1		30-130	2.28	20		
Diethylphthalate	94.1	10	µg/L	100		94.1		40-140	0.0319	20		
2,4-Dimethylphenol	77.0	10	µg/L	100		77.0		30-130	1.16	20		
Dimethylphthalate	89.5	10	µg/L	100		89.5		40-140	2.21	50		‡
4,6-Dinitro-2-methylphenol	83.7	10	µg/L	100		83.7		30-130	0.667	50		‡
2,4-Dinitrophenol	85.6	10	µg/L	100		85.6		30-130	1.40	50		‡
2,4-Dinitrotoluene	95.3	10	µg/L	100		95.3		40-140	1.14	20		
2,6-Dinitrotoluene	99.4	10	µg/L	100		99.4		40-140	1.42	20		
Di-n-octylphthalate	95.4	10	µg/L	100		95.4		40-140	0.938	20		
1,2-Diphenylhydrazine (as Azobenzene)	91.4	10	µg/L	100		91.4		40-140	0.448	20		
Fluoranthene	90.0	5.0	µg/L	100		90.0		40-140	1.71	20		
Fluorene	91.0	5.0	µg/L	100		91.0		40-140	1.84	20		

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B146551 - SW-846 3510C												
LCS Dup (B146551-BSD1)				Prepared: 04/13/16 Analyzed: 04/14/16								
Hexachlorobenzene	96.7	10	µg/L	100		96.7		40-140	0.670	20		
Hexachlorobutadiene	84.3	10	µg/L	100		84.3		40-140	0.520	20		
Hexachlorocyclopentadiene	80.4	10	µg/L	100		80.4		30-140	0.670	50		† ‡
Hexachloroethane	68.8	10	µg/L	100		68.8		40-140	1.16	50		‡
Indeno(1,2,3-cd)pyrene	87.4	5.0	µg/L	100		87.4		40-140	2.20	50		‡
Isophorone	97.1	10	µg/L	100		97.1		40-140	3.99	20		
1-Methylnaphthalene	82.3	5.0	µg/L	100		82.3		40-140	2.83	20		
2-Methylnaphthalene	84.3	5.0	µg/L	100		84.3		40-140	0.559	20		
2-Methylphenol	67.6	10	µg/L	100		67.6		30-130	3.87	20		
3/4-Methylphenol	71.3	10	µg/L	100		71.3		30-130	1.94	20		
Naphthalene	76.8	5.0	µg/L	100		76.8		40-140	1.95	20		
2-Nitroaniline	95.3	10	µg/L	100		95.3		40-140	3.09	20		
3-Nitroaniline	63.0	10	µg/L	100		63.0		40-140	6.11	20		
4-Nitroaniline	90.5	10	µg/L	100		90.5		40-140	0.386	20		
Nitrobenzene	89.8	10	µg/L	100		89.8		40-140	1.72	20		
2-Nitrophenol	85.9	10	µg/L	100		85.9		30-130	2.03	20		
4-Nitrophenol	60.9	10	µg/L	100		60.9		10-130	1.96	50		† ‡
N-Nitrosodimethylamine	71.6	10	µg/L	100		71.6		40-140	0.432	20	V-20	
N-Nitrosodiphenylamine	101	10	µg/L	100		101		40-140	1.37	20		
N-Nitrosodi-n-propylamine	90.7	10	µg/L	100		90.7		40-140	3.18	20		
Pentachloronitrobenzene	109	10	µg/L	100		109		40-140	3.02	20	V-16	
Pentachlorophenol	83.8	10	µg/L	100		83.8		30-130	0.827	50		‡
Phenanthrene	87.9	5.0	µg/L	100		87.9		40-140	1.45	20		
Phenol	37.3	10	µg/L	100		37.3		20-130	2.30	20		†
Pyrene	84.7	5.0	µg/L	100		84.7		40-140	0.236	20		
Pyridine	36.5	5.0	µg/L	100		36.5		10-140	2.54	50		† ‡
1,2,4,5-Tetrachlorobenzene	86.7	10	µg/L	100		86.7		40-140	2.60	20		
1,2,4-Trichlorobenzene	81.2	5.0	µg/L	100		81.2		40-140	1.99	20		
2,4,5-Trichlorophenol	80.6	10	µg/L	100		80.6		30-130	0.360	20		
2,4,6-Trichlorophenol	83.5	10	µg/L	100		83.5		30-130	3.45	50		‡
Surrogate: 2-Fluorophenol	*118*		µg/L	200		58.9		15-110				
Surrogate: Phenol-d6	*85.4*		µg/L	200		42.7		15-110				
Surrogate: Nitrobenzene-d5	*92.0*		µg/L	100		92.0		30-130				
Surrogate: 2-Fluorobiphenyl	*92.3*		µg/L	100		92.3		30-130				
Surrogate: 2,4,6-Tribromophenol	*248*		µg/L	200		**124**	*	15-110			S-07	
Surrogate: p-Terphenyl-d14	*98.3*		µg/L	100		98.3		30-130				

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146521 - SW-846 3510C										
Blank (B146521-BLK1)				Prepared: 04/13/16 Analyzed: 04/14/16						
Aroclor-1016	ND	0.040	µg/L							
Aroclor-1016	ND	0.040	µg/L							
Aroclor-1016 [2C]	ND	0.040	µg/L							
Aroclor-1016 [2C]	ND	0.040	µg/L							
Aroclor-1221	ND	0.040	µg/L							
Aroclor-1221	ND	0.040	µg/L							
Aroclor-1221 [2C]	ND	0.040	µg/L							
Aroclor-1221 [2C]	ND	0.040	µg/L							
Aroclor-1232	ND	0.040	µg/L							
Aroclor-1232	ND	0.040	µg/L							
Aroclor-1232 [2C]	ND	0.040	µg/L							
Aroclor-1232 [2C]	ND	0.040	µg/L							
Aroclor-1242	ND	0.040	µg/L							
Aroclor-1242	ND	0.040	µg/L							
Aroclor-1242 [2C]	ND	0.040	µg/L							
Aroclor-1242 [2C]	ND	0.040	µg/L							
Aroclor-1248	ND	0.040	µg/L							
Aroclor-1248	ND	0.040	µg/L							
Aroclor-1248 [2C]	ND	0.040	µg/L							
Aroclor-1248 [2C]	ND	0.040	µg/L							
Aroclor-1254	ND	0.040	µg/L							
Aroclor-1254	ND	0.040	µg/L							
Aroclor-1254 [2C]	ND	0.040	µg/L							
Aroclor-1254 [2C]	ND	0.040	µg/L							
Aroclor-1260	ND	0.040	µg/L							
Aroclor-1260	ND	0.040	µg/L							
Aroclor-1260 [2C]	ND	0.040	µg/L							
Aroclor-1260 [2C]	ND	0.040	µg/L							
Aroclor-1262	ND	0.040	µg/L							
Aroclor-1262 [2C]	ND	0.040	µg/L							
Aroclor-1268	ND	0.040	µg/L							
Aroclor-1268 [2C]	ND	0.040	µg/L							
Surrogate: Decachlorobiphenyl	*1.84*		µg/L	2.00		92.2	30-150			
Surrogate: Decachlorobiphenyl	*1.84*		µg/L	2.00		92.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.77*		µg/L	2.00		88.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.77*		µg/L	2.00		88.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.50*		µg/L	2.00		74.8	30-150			
Surrogate: Tetrachloro-m-xylene	*1.50*		µg/L	2.00		74.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.47*		µg/L	2.00		73.5	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.47*		µg/L	2.00		73.5	30-150			
LCS (B146521-BS1)				Prepared: 04/13/16 Analyzed: 04/14/16						
Aroclor-1016	0.49	0.20	µg/L	0.500		97.9	50-114			
Aroclor-1016	0.49	0.20	µg/L	0.500		97.9	40-140			
Aroclor-1016 [2C]	0.46	0.20	µg/L	0.500		92.6	50-114			
Aroclor-1016 [2C]	0.46	0.20	µg/L	0.500		92.6	40-140			
Aroclor-1260	0.46	0.20	µg/L	0.500		92.5	40-140			
Aroclor-1260	0.46	0.20	µg/L	0.500		92.5	8-127			
Aroclor-1260 [2C]	0.47	0.20	µg/L	0.500		94.7	40-140			
Aroclor-1260 [2C]	0.47	0.20	µg/L	0.500		94.7	8-127			
Surrogate: Decachlorobiphenyl	*1.93*		µg/L	2.00		96.5	30-150			
Surrogate: Decachlorobiphenyl	*1.93*		µg/L	2.00		96.5	30-150			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146521 - SW-846 3510C										
LCS (B146521-BS1)				Prepared: 04/13/16 Analyzed: 04/14/16						
Surrogate: Decachlorobiphenyl [2C]	*1.82*		µg/L	2.00		91.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.82*		µg/L	2.00		91.1	30-150			
Surrogate: Tetrachloro-m-xylene	*1.47*		µg/L	2.00		73.3	30-150			
Surrogate: Tetrachloro-m-xylene	*1.47*		µg/L	2.00		73.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.45*		µg/L	2.00		72.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.45*		µg/L	2.00		72.4	30-150			
LCS Dup (B146521-BSD1)				Prepared: 04/13/16 Analyzed: 04/14/16						
Aroclor-1016	0.50	0.20	µg/L	0.500		99.4	40-140	1.53	20	
Aroclor-1016	0.50	0.20	µg/L	0.500		99.4	50-114	1.53		
Aroclor-1016 [2C]	0.46	0.20	µg/L	0.500		91.6	40-140	1.12	20	
Aroclor-1016 [2C]	0.46	0.20	µg/L	0.500		91.6	50-114	1.12		
Aroclor-1260	0.45	0.20	µg/L	0.500		90.9	40-140	1.67	20	
Aroclor-1260	0.45	0.20	µg/L	0.500		90.9	8-127	1.67		
Aroclor-1260 [2C]	0.48	0.20	µg/L	0.500		95.7	40-140	1.11	20	
Aroclor-1260 [2C]	0.48	0.20	µg/L	0.500		95.7	8-127	1.11		
Surrogate: Decachlorobiphenyl	*1.90*		µg/L	2.00		95.1	30-150			
Surrogate: Decachlorobiphenyl	*1.90*		µg/L	2.00		95.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.80*		µg/L	2.00		89.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.80*		µg/L	2.00		89.9	30-150			
Surrogate: Tetrachloro-m-xylene	*1.51*		µg/L	2.00		75.3	30-150			
Surrogate: Tetrachloro-m-xylene	*1.51*		µg/L	2.00		75.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.50*		µg/L	2.00		75.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.50*		µg/L	2.00		75.0	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146424 - SW-846 3005A										
Blank (B146424-BLK1)				Prepared: 04/12/16 Analyzed: 04/13/16						
Antimony	ND	0.050	mg/L							
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.050	mg/L							
Copper	ND	0.010	mg/L							
Lead	ND	0.010	mg/L							
Manganese	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.0050	mg/L							
Thallium	ND	0.050	mg/L							
Vanadium	ND	0.010	mg/L							
Zinc	ND	0.020	mg/L							
LCS (B146424-BS1)				Prepared: 04/12/16 Analyzed: 04/13/16						
Antimony	0.490	0.050	mg/L	0.500		97.9	80-120			
Arsenic	0.499	0.010	mg/L	0.500		99.8	80-120			
Barium	0.512	0.050	mg/L	0.500		102	80-120			
Beryllium	0.487	0.0040	mg/L	0.500		97.4	80-120			
Cadmium	0.511	0.0040	mg/L	0.500		102	80-120			
Chromium	0.504	0.010	mg/L	0.500		101	80-120			
Cobalt	0.498	0.050	mg/L	0.500		99.5	80-120			
Copper	0.492	0.010	mg/L	0.500		98.3	80-120			
Lead	0.503	0.010	mg/L	0.500		101	80-120			
Manganese	0.496	0.010	mg/L	0.500		99.3	80-120			
Nickel	0.502	0.010	mg/L	0.500		100	80-120			
Selenium	0.503	0.050	mg/L	0.500		101	80-120			
Silver	0.484	0.0050	mg/L	0.500		96.8	80-120			
Thallium	0.493	0.050	mg/L	0.500		98.5	80-120			
Vanadium	0.506	0.010	mg/L	0.500		101	80-120			
Zinc	0.502	0.020	mg/L	0.500		100	80-120			
LCS Dup (B146424-BSD1)				Prepared: 04/12/16 Analyzed: 04/13/16						
Antimony	0.478	0.050	mg/L	0.500		95.7	80-120	2.31	20	
Arsenic	0.486	0.010	mg/L	0.500		97.2	80-120	2.59	20	
Barium	0.498	0.050	mg/L	0.500		99.7	80-120	2.65	20	
Beryllium	0.477	0.0040	mg/L	0.500		95.3	80-120	2.18	20	
Cadmium	0.499	0.0040	mg/L	0.500		99.7	80-120	2.47	20	
Chromium	0.491	0.010	mg/L	0.500		98.2	80-120	2.55	20	
Cobalt	0.485	0.050	mg/L	0.500		97.1	80-120	2.50	20	
Copper	0.478	0.010	mg/L	0.500		95.7	80-120	2.71	20	
Lead	0.490	0.010	mg/L	0.500		98.0	80-120	2.58	20	
Manganese	0.486	0.010	mg/L	0.500		97.1	80-120	2.23	20	
Nickel	0.490	0.010	mg/L	0.500		97.9	80-120	2.53	20	
Selenium	0.489	0.050	mg/L	0.500		97.8	80-120	2.81	20	
Silver	0.471	0.0050	mg/L	0.500		94.1	80-120	2.77	20	
Thallium	0.481	0.050	mg/L	0.500		96.2	80-120	2.40	20	
Vanadium	0.492	0.010	mg/L	0.500		98.4	80-120	2.85	20	
Zinc	0.492	0.020	mg/L	0.500		98.4	80-120	2.01	20	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146771 - SW-846 7470A Prep										
Blank (B146771-BLK1)				Prepared: 04/15/16 Analyzed: 04/19/16						
Mercury	ND	0.00010	mg/L							
LCS (B146771-BS1)				Prepared: 04/15/16 Analyzed: 04/19/16						
Mercury	0.00179	0.00010	mg/L	0.00200		89.7	80-120			
LCS Dup (B146771-BSD1)				Prepared: 04/15/16 Analyzed: 04/19/16						
Mercury	0.00182	0.00010	mg/L	0.00200		91.1	80-120	1.59	20	

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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146909 - SW-846 3005A Dissolved										
Blank (B146909-BLK1)				Prepared: 04/18/16 Analyzed: 04/20/16						
Antimony	ND	0.050	mg/L							
Arsenic	ND	0.010	mg/L							
Barium	ND	0.050	mg/L							
Beryllium	ND	0.0040	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Cobalt	ND	0.050	mg/L							
Copper	ND	0.010	mg/L							
Lead	ND	0.010	mg/L							
Manganese	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.0050	mg/L							
Thallium	ND	0.050	mg/L							
Vanadium	ND	0.010	mg/L							
Zinc	0.011	0.020	mg/L							J
LCS (B146909-BS1)				Prepared: 04/18/16 Analyzed: 04/20/16						
Antimony	0.522	0.050	mg/L	0.500		104	80-120			
Arsenic	0.524	0.010	mg/L	0.500		105	80-120			
Barium	0.540	0.050	mg/L	0.500		108	80-120			
Beryllium	0.542	0.0040	mg/L	0.500		108	80-120			
Cadmium	0.541	0.0040	mg/L	0.500		108	80-120			
Chromium	0.538	0.010	mg/L	0.500		108	80-120			
Cobalt	0.531	0.050	mg/L	0.500		106	80-120			
Copper	0.518	0.010	mg/L	0.500		104	80-120			
Lead	0.525	0.010	mg/L	0.500		105	80-120			
Manganese	0.541	0.010	mg/L	0.500		108	80-120			
Nickel	0.533	0.010	mg/L	0.500		107	80-120			
Selenium	0.522	0.050	mg/L	0.500		104	80-120			
Silver	0.517	0.0050	mg/L	0.500		103	80-120			
Thallium	0.528	0.050	mg/L	0.500		106	80-120			
Vanadium	0.534	0.010	mg/L	0.500		107	80-120			
Zinc	0.556	0.020	mg/L	0.500		111	80-120			
LCS Dup (B146909-BSD1)				Prepared: 04/18/16 Analyzed: 04/20/16						
Antimony	0.516	0.050	mg/L	0.500		103	80-120	1.20	20	
Arsenic	0.523	0.010	mg/L	0.500		105	80-120	0.138	20	
Barium	0.537	0.050	mg/L	0.500		107	80-120	0.665	20	
Beryllium	0.539	0.0040	mg/L	0.500		108	80-120	0.500	20	
Cadmium	0.537	0.0040	mg/L	0.500		107	80-120	0.625	20	
Chromium	0.534	0.010	mg/L	0.500		107	80-120	0.663	20	
Cobalt	0.528	0.050	mg/L	0.500		106	80-120	0.580	20	
Copper	0.516	0.010	mg/L	0.500		103	80-120	0.524	20	
Lead	0.523	0.010	mg/L	0.500		105	80-120	0.460	20	
Manganese	0.528	0.010	mg/L	0.500		106	80-120	2.40	20	
Nickel	0.530	0.010	mg/L	0.500		106	80-120	0.706	20	
Selenium	0.519	0.050	mg/L	0.500		104	80-120	0.633	20	
Silver	0.510	0.0050	mg/L	0.500		102	80-120	1.48	20	
Thallium	0.518	0.050	mg/L	0.500		104	80-120	1.92	20	
Vanadium	0.530	0.010	mg/L	0.500		106	80-120	0.645	20	
Zinc	0.553	0.020	mg/L	0.500		111	80-120	0.481	20	

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QUALITY CONTROL

Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146946 - SW-846 7470A Prep										
Blank (B146946-BLK1)				Prepared & Analyzed: 04/18/16						
Mercury	ND	0.00010	mg/L							
LCS (B146946-BS1)				Prepared & Analyzed: 04/18/16						
Mercury	0.00160	0.00010	mg/L	0.00200		80.1	80-120			
LCS Dup (B146946-BSD1)				Prepared & Analyzed: 04/18/16						
Mercury	0.00160	0.00010	mg/L	0.00200		80.1	80-120	0.0107	20	
Duplicate (B146946-DUP1)		**Source: 16D0455-02**		Prepared & Analyzed: 04/18/16						
Mercury	ND	0.00010	mg/L		ND			NC	20	
Matrix Spike (B146946-MS1)		**Source: 16D0455-02**		Prepared & Analyzed: 04/18/16						
Mercury	0.00161	0.00010	mg/L	0.00200	ND	80.5	75-125			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146387 - SM21-22 5210B										
Blank (B146387-BLK1)				Prepared & Analyzed: 04/11/16						
Carbonaceous BOD	1.2	2.0	mg/L							J
LCS (B146387-BS1)				Prepared & Analyzed: 04/11/16						
Carbonaceous BOD	220	2.0	mg/L	198		111	85-115			
Batch B146389 - SW-846 7196A										
Blank (B146389-BLK1)				Prepared & Analyzed: 04/11/16						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B146389-BS1)				Prepared & Analyzed: 04/11/16						
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		100	80-120			
LCS Dup (B146389-BSD1)				Prepared & Analyzed: 04/11/16						
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		102	80-120	1.22	20	
Duplicate (B146389-DUP1)		**Source: 16D0455-02**		Prepared & Analyzed: 04/11/16						
Hexavalent Chromium	ND	0.0040	mg/L		ND			NC	20	
Matrix Spike (B146389-MS1)		**Source: 16D0455-02**		Prepared & Analyzed: 04/11/16						
Hexavalent Chromium	0.098	0.0040	mg/L	0.100	ND	98.0	75-125			
Matrix Spike Dup (B146389-MSD1)		**Source: 16D0455-02**		Prepared & Analyzed: 04/11/16						
Hexavalent Chromium	0.099	0.0040	mg/L	0.100	ND	99.2	75-125	1.25	20	
Batch B146406 - EPA 1664B										
Blank (B146406-BLK1)				Prepared & Analyzed: 04/12/16						
Oil & Grease (HEM)	ND	1.4	mg/L							
LCS (B146406-BS1)				Prepared & Analyzed: 04/12/16						
Oil & Grease (HEM)	20		mg/L	20.0		102	78-114			
Batch B146409 - EPA 420.1										
Blank (B146409-BLK1)				Prepared: 04/12/16 Analyzed: 04/13/16						
Phenol	ND	0.050	mg/L							
LCS (B146409-BS1)				Prepared: 04/12/16 Analyzed: 04/13/16						
Phenol	0.49	0.050	mg/L	0.500		98.8	76.6-128			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD		RPD Limit	Notes
Batch B146409 - EPA 420.1												
LCS Dup (B146409-BSD1)				Prepared: 04/12/16 Analyzed: 04/13/16								
Phenol	0.45	0.050	mg/L	0.500		90.5		76.6-128	8.70		9.7	
Batch B146449 - SM21-22 4500 H B												
LCS (B146449-BS1)				Prepared & Analyzed: 04/12/16								
pH	6.03		pH Units	6.00		100		98.7-102				
Batch B146479 - SM 21-22 4500 NO3 F												
Blank (B146479-BLK1)				Prepared & Analyzed: 04/12/16								
Nitrate/Nitrite as N	ND	0.050	mg/L									
LCS (B146479-BS1)				Prepared & Analyzed: 04/12/16								
Nitrate/Nitrite as N	1.7		mg/L	2.50		**68.0**	*	88.9-111				L-07A
LCS Dup (B146479-BSD1)				Prepared & Analyzed: 04/12/16								
Nitrate/Nitrite as N	2.6		mg/L	2.50		103		88.9-111	**40.7**	*	5.66	L-07A
Batch B146488 - SM21-22 4500 CL B												
Blank (B146488-BLK1)				Prepared & Analyzed: 04/12/16								
Chloride	ND	1.0	mg/L									
LCS (B146488-BS1)				Prepared & Analyzed: 04/12/16								
Chloride	10	1.0	mg/L	10.2		98.0		87.1-113				
LCS Dup (B146488-BSD1)				Prepared & Analyzed: 04/12/16								
Chloride	10	1.0	mg/L	10.2		103		87.1-113	4.88		9.72	
Batch B146511 - SM21-22 2540B												
Blank (B146511-BLK1)				Prepared & Analyzed: 04/13/16								
Total Solids	ND	10	mg/L									
LCS (B146511-BS1)				Prepared & Analyzed: 04/13/16								
Total Solids	164	10	mg/L	200		82.0		66.4-127				
Duplicate (B146511-DUP1)		**Source: 16D0455-02**		Prepared & Analyzed: 04/13/16								
Total Solids	710	10	mg/L		680				4.30		5	

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B146512 - SM21-22 2540D										
Blank (B146512-BLK1)				Prepared & Analyzed: 04/13/16						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B146512-BS1)				Prepared & Analyzed: 04/13/16						
Total Suspended Solids	168	10	mg/L	200		84.0	70.4-114			
Batch B146533 - SM19-22 4500-N Org B,C-NH3 C										
Blank (B146533-BLK1)				Prepared: 04/13/16 Analyzed: 04/14/16						
Total Kjeldahl Nitrogen	ND	1.0	mg/L							
LCS (B146533-BS1)				Prepared: 04/13/16 Analyzed: 04/14/16						
Total Kjeldahl Nitrogen	18	1.0	mg/L	20.0		90.4	81.5-111			
Batch B146542 - SW-846 1010A										
Blank (B146542-BLK1)				Prepared & Analyzed: 04/13/16						
Flashpoint	> 212 °F		°F							
LCS (B146542-BS1)				Prepared & Analyzed: 04/13/16						
Flashpoint	81		°F	81.0		100	98.8-101			
LCS Dup (B146542-BSD1)				Prepared & Analyzed: 04/13/16						
Flashpoint	81		°F	81.0		100	98.8-101	0.00	5	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B146521-BS1 Date(s) Analyzed 04/14/2016 04/14/2016

Instrument ID (1): ECD10 Instrument ID (2): ECD10

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.49	
	1	0.00	0.00	0.00	0.49	
	2	0.00	0.00	0.00	0.46	6
	2	0.00	0.00	0.00	0.46	6
Aroclor-1260	1	0.00	0.00	0.00	0.46	
	1	0.00	0.00	0.00	0.46	
	2	0.00	0.00	0.00	0.47	2
	2	0.00	0.00	0.00	0.47	2

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

EPA 608

LCS Dup

Lab Sample ID: B146521-BSD1 Date(s) Analyzed 04/14/2016 04/14/2016

Instrument ID (1): ECD10 Instrument ID (2): ECD10

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%D
			FROM	TO		
Aroclor-1016	1	0.00	0.00	0.00	0.50	
	1	0.00	0.00	0.00	0.50	
	2	0.00	0.00	0.00	0.46	8
	2	0.00	0.00	0.00	0.46	8
Aroclor-1260	1	0.00	0.00	0.00	0.45	
	1	0.00	0.00	0.00	0.45	
	2	0.00	0.00	0.00	0.48	5
	2	0.00	0.00	0.00	0.48	5

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
H-03	Sample received after recommended holding time was exceeded.
H-05	Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
S-07	One associated surrogate standard recovery is outside of control limits but the other(s) is/are within limits. All recoveries are > 10%.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Increased uncertainty is associated with the reported value which is likely to be biased on the low side.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 1664B in Water	
Oil & Grease (HEM)	CT,MA,NH,NY,RI,NC,ME,VA
EPA 420.1 in Water	
Phenol	CT,MA,NH,NY,RI,NC,ME,VA
EPA 608 in Water	
Aroclor-1016	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1016 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
EPA 624 in Water	
Acrylonitrile	CT,MA,NH,NY,RI,NC,ME,VA
Benzene	CT,MA,NH,NY,RI,NC,ME,VA
Bromodichloromethane	CT,MA,NH,NY,RI,NC,ME,VA
Bromoform	CT,MA,NH,NY,RI,NC,ME,VA
Bromomethane	CT,MA,NH,NY,RI,NC,ME,VA
Carbon Tetrachloride	CT,MA,NH,NY,RI,NC,ME,VA
Chlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
Chlorodibromomethane	CT,MA,NH,NY,RI,NC,ME,VA
Chloroethane	CT,MA,NH,NY,RI,NC,ME,VA
2-Chloroethyl Vinyl Ether	CT,MA,NH,NY,RI,NC,ME,VA
Chloroform	CT,MA,NH,NY,RI,NC,ME,VA
Chloromethane	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,3-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,4-Dichlorobenzene	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1-Dichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1-Dichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
trans-1,2-Dichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
1,2-Dichloropropane	CT,MA,NH,NY,RI,NC,ME,VA
cis-1,3-Dichloropropene	CT,MA,NH,NY,RI,NC,ME,VA
trans-1,3-Dichloropropene	CT,MA,NH,NY,RI,NC,ME,VA
Ethylbenzene	CT,MA,NH,NY,RI,NC,ME,VA
Methyl tert-Butyl Ether (MTBE)	NC
Methylene Chloride	CT,MA,NH,NY,RI,NC,ME,VA
Naphthalene	NC
1,1,2,2-Tetrachloroethane	CT,MA,NH,NY,RI,NC,ME,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 624 in Water	
Tetrachloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
Toluene	CT,MA,NH,NY,RI,NC,ME,VA
1,2,4-Trichlorobenzene	NC
1,1,1-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
1,1,2-Trichloroethane	CT,MA,NH,NY,RI,NC,ME,VA
Trichloroethylene	CT,MA,NH,NY,RI,NC,ME,VA
Trichlorofluoromethane (Freon 11)	CT,MA,NH,NY,RI,NC,ME,VA
Vinyl Chloride	CT,MA,NH,NY,RI,NC,ME,VA
m+p Xylene	CT,MA,NH,NY,RI,NC,VA
o-Xylene	CT,MA,NH,NY,RI,NC,VA
SM 21-22 4500 NO3 F in Water	
Nitrate/Nitrite as N	CT,MA,NH,NY,RI,NC,ME,VA
SM19-22 4500-N Org B,C-NH3 C in Water	
Total Kjeldahl Nitrogen	CT,MA,NH,NY,RI,NC,ME,VA,NJ
SM21-22 2540B in Water	
Total Solids	NY,CT,RI,NH,NC,ME,VA
SM21-22 2540D in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
SM21-22 4500 CL B in Water	
Chloride	NH,CT,MA,NY,RI,NC,ME,VA
SM21-22 4500 H B in Water	
pH	CT,MA,RI
SM21-22 5210B in Water	
Carbonaceous BOD	NY,CT,RI,NH,ME,VA,NC
SW-846 6010C-D in Water	
Antimony	CT,NH,NY,ME,VA,NC
Antimony	CT,NH,NY,ME,VA,NC
Arsenic	CT,NH,NY,ME,VA,RI,NC
Arsenic	CT,NH,NY,ME,NC,VA
Barium	MA,NY,CT,NH,NC,ME,VA
Barium	CT,NH,NY,ME,VA,NC
Beryllium	CT,NH,NY,NC,ME,VA
Beryllium	CT,NH,NY,ME,VA,NC
Cadmium	CT,NH,NY,ME,NC,VA
Cadmium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,VA,NC
Chromium	CT,NH,NY,ME,NC,VA
Cobalt	CT,NH,NY,ME,VA,NC
Cobalt	CT,NH,NY,NC,ME,VA
Copper	CT,NH,NY,ME,VA,NC
Copper	CT,NH,NY,ME,NC,VA
Lead	CT,NH,NY,ME,VA,NC
Lead	CT,NH,NY,NC,ME,VA
Manganese	CT,NH,NY,ME,NC,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 6010C-D in Water	
Manganese	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,VA,NC
Nickel	CT,NH,NY,ME,NC,VA
Selenium	CT,NH,NY,ME,NC,VA
Selenium	CT,NH,NY,ME,VA,NC
Silver	CT,NH,NY,ME,NC,VA
Silver	CT,NH,NY,ME,VA,NC
Thallium	CT,NH,NY,VA,NC
Thallium	CT,NH,NY,RI,NC,VA
Vanadium	CT,NH,NY,ME,NC,VA
Vanadium	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,VA,NC
Zinc	CT,NH,NY,ME,NC,VA
SW-846 7196A in Water	
Hexavalent Chromium	CT,NH,NY,NC,ME,VA
SW-846 7470A in Water	
Mercury	CT,NH,NY,NC,ME,VA
Mercury	CT,NH,NY,NC,ME,VA
SW-846 7471B in Soil	
Mercury	CT,NH,NY,NC,ME,VA
SW-846 8082A in Water	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
SW-846 8260C in Water	
Acetone	CT,NY,ME,NH,VA
Acrylonitrile	CT,NY,ME,NH,VA
tert-Amyl Methyl Ether (TAME)	NY,ME,NH,VA
Benzene	CT,NY,ME,NH,VA
Bromochloromethane	NY,ME,NH,VA

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
Bromodichloromethane	CT,NY,ME,NH,VA
Bromoform	CT,NY,ME,NH,VA
Bromomethane	CT,NY,ME,NH,VA
2-Butanone (MEK)	CT,NY,ME,NH,VA
tert-Butyl Alcohol (TBA)	NY,ME,NH,VA
n-Butylbenzene	NY,ME,VA
sec-Butylbenzene	NY,ME,VA
tert-Butylbenzene	NY,ME,VA
tert-Butyl Ethyl Ether (TBEE)	NY,ME,NH,VA
Carbon Disulfide	CT,NY,ME,NH,VA
Carbon Tetrachloride	CT,NY,ME,NH,VA
Chlorobenzene	CT,NY,ME,NH,VA
Chlorodibromomethane	CT,NY,ME,NH,VA
Chloroethane	CT,NY,ME,NH,VA
Chloroform	CT,NY,ME,NH,VA
Chloromethane	CT,NY,ME,NH,VA
2-Chlorotoluene	NY,ME,NH,VA
4-Chlorotoluene	NY,ME,NH,VA
Dibromomethane	NY,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,ME,NH,VA
1,4-Dichlorobenzene	CT,NY,ME,NH,VA
trans-1,4-Dichloro-2-butene	NY,ME,NH,VA
Dichlorodifluoromethane (Freon 12)	NY,ME,NH,VA
1,1-Dichloroethane	CT,NY,ME,NH,VA
1,2-Dichloroethane	CT,NY,ME,NH,VA
1,1-Dichloroethylene	CT,NY,ME,NH,VA
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NY,ME,NH,VA
1,2-Dichloropropane	CT,NY,ME,NH,VA
1,3-Dichloropropane	NY,ME,VA
2,2-Dichloropropane	NY,ME,NH,VA
1,1-Dichloropropene	NY,ME,NH,VA
cis-1,3-Dichloropropene	CT,NY,ME,NH,VA
trans-1,3-Dichloropropene	CT,NY,ME,NH,VA
Diisopropyl Ether (DIPE)	NY,ME,NH,VA
Ethylbenzene	CT,NY,ME,NH,VA
Hexachlorobutadiene	CT,NY,ME,NH,VA
2-Hexanone (MBK)	CT,NY,ME,NH,VA
Isopropylbenzene (Cumene)	NY,ME,VA
p-Isopropyltoluene (p-Cymene)	CT,NY,ME,NH,VA
Methyl tert-Butyl Ether (MTBE)	CT,NY,ME,NH,VA
Methylene Chloride	CT,NY,ME,NH,VA
4-Methyl-2-pentanone (MIBK)	CT,NY,ME,NH,VA
Naphthalene	NY,ME,NH,VA
n-Propylbenzene	CT,NY,ME,NH,VA
Styrene	CT,NY,ME,NH,VA

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8260C in Water	
1,1,1,2-Tetrachloroethane	CT,NY,ME,NH,VA
1,1,2,2-Tetrachloroethane	CT,NY,ME,NH,VA
Tetrachloroethylene	CT,NY,ME,NH,VA
Toluene	CT,NY,ME,NH,VA
1,2,3-Trichlorobenzene	NY,ME,NH,VA
1,2,4-Trichlorobenzene	CT,NY,ME,NH,VA
1,3,5-Trichlorobenzene	ME
1,1,1-Trichloroethane	CT,NY,ME,NH,VA
1,1,2-Trichloroethane	CT,NY,ME,NH,VA
Trichloroethylene	CT,NY,ME,NH,VA
Trichlorofluoromethane (Freon 11)	CT,NY,ME,NH,VA
1,2,3-Trichloropropane	NY,ME,NH,VA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	NY,VA
1,2,4-Trimethylbenzene	NY,ME,VA
1,3,5-Trimethylbenzene	NY,ME,VA
Vinyl Chloride	CT,NY,ME,NH,VA
m+p Xylene	CT,NY,ME,NH,VA
o-Xylene	CT,NY,ME,NH,VA
SW-846 8270D in Water	
Acenaphthene	CT,NY,NC,ME,NH,VA
Acenaphthylene	CT,NY,NC,ME,NH,VA
Acetophenone	NC
Aniline	CT,NY,NC,ME,VA
Anthracene	CT,NY,NC,ME,NH,VA
Benzidine	CT,NY,NC,ME,NH,VA
Benzo(a)anthracene	CT,NY,NC,ME,NH,VA
Benzo(a)pyrene	CT,NY,NC,ME,NH,VA
Benzo(b)fluoranthene	CT,NY,NC,ME,NH,VA
Benzo(g,h,i)perylene	CT,NY,NC,ME,NH,VA
Benzo(k)fluoranthene	CT,NY,NC,ME,NH,VA
Benzoic Acid	NY,NC,ME,NH,VA
Bis(2-chloroethoxy)methane	CT,NY,NC,ME,NH,VA
Bis(2-chloroethyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-chloroisopropyl)ether	CT,NY,NC,ME,NH,VA
Bis(2-Ethylhexyl)phthalate	CT,NY,NC,ME,NH,VA
4-Bromophenylphenylether	CT,NY,NC,ME,NH,VA
Butylbenzylphthalate	CT,NY,NC,ME,NH,VA
Carbazole	NC
4-Chloroaniline	CT,NY,NC,ME,NH,VA
4-Chloro-3-methylphenol	CT,NY,NC,ME,NH,VA
2-Chloronaphthalene	CT,NY,NC,ME,NH,VA
2-Chlorophenol	CT,NY,NC,ME,NH,VA
4-Chlorophenylphenylether	CT,NY,NC,ME,NH,VA
Chrysene	CT,NY,NC,ME,NH,VA
Dibenz(a,h)anthracene	CT,NY,NC,ME,NH,VA
Dibenzofuran	CT,NY,NC,ME,NH,VA

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Water	
Di-n-butylphthalate	CT,NY,NC,ME,NH,VA
1,2-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,3-Dichlorobenzene	CT,NY,NC,ME,NH,VA
1,4-Dichlorobenzene	CT,NY,NC,ME,NH,VA
3,3-Dichlorobenzidine	CT,NY,NC,ME,NH,VA
2,4-Dichlorophenol	CT,NY,NC,ME,NH,VA
Diethylphthalate	CT,NY,NC,ME,NH,VA
2,4-Dimethylphenol	CT,NY,NC,ME,NH,VA
Dimethylphthalate	CT,NY,NC,ME,NH,VA
4,6-Dinitro-2-methylphenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrophenol	CT,NY,NC,ME,NH,VA
2,4-Dinitrotoluene	CT,NY,NC,ME,NH,VA
2,6-Dinitrotoluene	CT,NY,NC,ME,NH,VA
Di-n-octylphthalate	CT,NY,NC,ME,NH,VA
1,2-Diphenylhydrazine (as Azobenzene)	NC
Fluoranthene	CT,NY,NC,ME,NH,VA
Fluorene	NY,NC,ME,NH,VA
Hexachlorobenzene	CT,NY,NC,ME,NH,VA
Hexachlorobutadiene	CT,NY,NC,ME,NH,VA
Hexachlorocyclopentadiene	CT,NY,NC,ME,NH,VA
Hexachloroethane	CT,NY,NC,ME,NH,VA
Indeno(1,2,3-cd)pyrene	CT,NY,NC,ME,NH,VA
Isophorone	CT,NY,NC,ME,NH,VA
1-Methylnaphthalene	NC
2-Methylnaphthalene	CT,NY,NC,ME,NH,VA
2-Methylphenol	CT,NY,NC,NH,VA
3/4-Methylphenol	CT,NY,NC,NH,VA
Naphthalene	CT,NY,NC,ME,NH,VA
2-Nitroaniline	CT,NY,NC,ME,NH,VA
3-Nitroaniline	CT,NY,NC,ME,NH,VA
4-Nitroaniline	CT,NY,NC,ME,NH,VA
Nitrobenzene	CT,NY,NC,ME,NH,VA
2-Nitrophenol	CT,NY,NC,ME,NH,VA
4-Nitrophenol	CT,NY,NC,ME,NH,VA
N-Nitrosodimethylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodiphenylamine	CT,NY,NC,ME,NH,VA
N-Nitrosodi-n-propylamine	CT,NY,NC,ME,NH,VA
Pentachloronitrobenzene	NC
Pentachlorophenol	CT,NY,NC,ME,NH,VA
Phenanthrene	CT,NY,NC,ME,NH,VA
Phenol	CT,NY,NC,ME,NH,VA
Pyrene	CT,NY,NC,ME,NH,VA
Pyridine	CT,NY,NC,ME,NH,VA
1,2,4,5-Tetrachlorobenzene	NC
1,2,4-Trichlorobenzene	CT,NY,NC,ME,NH,VA
2,4,5-Trichlorophenol	CT,NY,NC,ME,NH,VA
2,4,6-Trichlorophenol	CT,NY,NC,ME,NH,VA

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SW-846 8270D in Water	
2-Fluorophenol	NC

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2016
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2016
NJ	New Jersey DEP	MA007 NELAP	06/30/2016
FL	Florida Department of Health	E871027 NELAP	06/30/2016
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2016
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2016
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2016

CHAIN OF CUSTODY RECORD

1GD0455

Rev 04.05.12

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

Page 1 of 1

Company Name: Durkee + Bell Lucci (P+B) Engineers + Architects
Address: 330 Crossways Park Drive, Woodbury NY 11797
Attention: Mike Hofgren
Project Location: SCA 135R
Sampled By: Keith Robins
Telephone: 516364-9890
Project #: 3415-AL2
Client PO#:

Project Proposal Provided? (for billing purposes) ○ yes _____ proposal date

DATA DELIVERY (check all that apply)
○ FAX ☒ EMAIL ○ WEBSITE
Fax #:
Email: mHofgren@dbengineers
Format: ○ PDF ○ EXCEL ○ GIS ○ OTHER _____ ○ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Conc Code	TAL and CP-51 VOCs	TCL and CP-51 SVOCs	PCBs	TAL metals (less Al, Ca, Fe, K, Mg, Na) (Hg, Al, Ca, Fe, K, Mg, Na)	TAL metals (less Al, Ca, Fe, K, Mg, Na) Dissolved	NYCDEP Sewer Discharge Parameters (Los Alg Ca Fe K Mg Na)	# of Containers	** Preservation	***Container Code
								3	2	2	1	1	1			
								Hc	I	I	I	I	HNO3			
								G	G	G	P	P	P/G			
01	Trip Blank	4/9/16	—	—	—	DW	C	✓	✓	✓	✓	✓	—			
4/9/16 KSR	GW-2	4/9/16	4/9/16	—	✓	GW	U	✓	✓	✓	✓	✓	✓			
02	GW-3	4/9/16 9am	4/9/16 10:30 am	—	✓	GW	U	✓	✓	✓	✓	✓	✓			

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Comments: For lab Please filter TAL metals (less Al, Ca, Fe, K, Mg, Na) for dissolved analysis.

	Date/Time
Relinquished by: (signature) Keith Robins	4/11/16 9:30 am
Received by: (signature) for ECLS	4/11/16 10
Relinquished by: (signature) for ECLS	4/11/16 4:45
Received by: (signature) S.Z.	4/11/16 1645

Turnaround ††
☐ 7-Day
☐ 10-Day
☐ Other Sdy
RUSH
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts: _____
Connecticut: _____
Other: _____

Is your project MCP or RCP ?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

Dissolved Metals
○ Field Filtered
● Lab to Filter

***Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V=vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other _____

*Matrix Code:
GW = groundwater
WW = wastewater
DW = drinking water
A = air
S = soil/solid
SL = sludge
O = other _____

†† TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR
*** TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.
PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: D&B **RECEIVED BY**: RLF **DATE**: 4/11/2016

1) Was the chain(s) of custody relinquished and signed? **Yes** X **No** ____ **No COC Incl.**

2) Does the chain agree with the samples? **Yes** X **No** ____

If not, explain:

3) Are all the samples in good condition? **Yes** X **No** ____

If not, explain:

4) How were the samples received:

On Ice X Direct from Sampling ____ Ambient ____ In Cooler(s) X

Were the samples received in Temperature Compliance of (2-6℃)? **Yes** X **No** ____ **N/A** ____

Temperature ℃ by Temp blank ____ Temperature ℃ by Temp gun 5.3

5) Are there Dissolved samples for the lab to filter? **Yes** X **No** ____

Who was notified ___ N/A Date ____ Time ____

6) Are there any RUSH or SHORT HOLDING TIME samples? **Yes** X **No** ____

Who was notified ___ David Date ____ Time ____

7) Location where samples are stored:

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

8) Do all samples have the proper Acid pH: **Yes** X **No** ____ **N/A** ____

9) Do all samples have the proper Base pH: **Yes** ____ **No** ____ **N/A** X

10) Was the PC notified of any discrepancies with the CoC vs the samples: **Yes** ____ **N/A** X

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	8	16 oz amber	
500 mL Amber	1	8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	
1 Liter Plastic	2	2 oz amber/clear jar	
500 mL Plastic	1	Plastic Bag / Ziploc	
250 mL plastic	4	SOC Kit	
40 mL Vial - type listed below	8	Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	1
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials:	# HCl	8	# Methanol	**Time and Date Frozen:**
Doc# 277	# Bisulfate		# DI Water	
Rev. 4 August 2013	# Thiosulfate		Unpreserved	

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	T	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	F	CBOD, Hex Cr, pH received past hold
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	N/A	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	T	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	T	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** RLF **Date/Time: 4/11/16 16:45**

APPENDIX F

SUPPORTING DOCUMENTS

Louis Berger
48 Wall Street 16th Floor New York, NY 10005
Tel 212 612 7900 Fax 212 363 4341 Website www.louisberger.com

April 5, 2016

Mr. Raymond Chase
Industrial & Environmental Hygiene Division
NYC School Construction Authority
30-30 Thomson Avenue, 2nd Floor
Long Island City, NY 11101-3045

RE: Pre-Probe Inspection Letter for Borings
Public School 131Q (Q131)
170-45 84th Avenue, Queens NY 11432
LLW #: 104515
Service ID #: 64312
WA#: 787721
Berger Job #: 300124.1030

Dear Mr. Chase,

Louis Berger (Berger), performed an asbestos investigation for affected exterior areas at the above referenced location. All accessible suspect materials were examined by NYC-certified asbestos investigator James Wang (116984) on April 5, 2016 the Boring Request and attached Sketches for the proposed project, dated March 17, 2016, and provided by the New York City School Construction Authority.

The following table summarizes Berger's inspection results:

Public School 131Q(Q131), 170-45 84th Avenue Queens NY 11432 LLW #104515, Service ID #64312					
Bore #:	**Location**	**Material Description**	**No. of Samples**	**Results**	**Comments**
B-1, B-2, B-3	Exterior of Buildings, Main Playground	Below Grade Transite Drain Lines / Cast Iron Drain Line Mastic / Tar	---	Assumed ACM	Should not be impacted by the planned scope of work.
B-1, B-2, B-3	Exterior of Buildings, Main Playground	Black Asphalt Pavement	---	Non-ACM	EMS 2015
B-1, B-2, B-3	Exterior of Buildings, Main Playground	Rubberize Flooring Material	---	Non-Suspect	
B-1, B-2, B-3	Exterior of Buildings, Main Playground	Concrete Pavement	---	Non-Suspect	

Any suspect materials not listed in the above table must be Assumed ACM. All caulking/sealant materials affected by the scope of work must be assumed to contain PCBs until sampling and analysis proves otherwise, during design stage of the project.

Louis Berger 48 Wall Street 16th Floor New York, NY 10005
Tel 212 612 7900 Fax 212 363 4341 Website www.louisberger.com

The General Contractor may perform the proposed Boring work.

If you have any questions regarding this project or require further information, please do not hesitate to contact us. We can be reached at 212-612-7933.

Sincerely,
Louis Berger

Letter Completed by:

James Wang
NYC Investigator

Michael Gelfand
Project Manager

Letter Reviewed by:

Prakash Saha
QA/QC Manager

CC: P. Saha; M. Gelfand
Public School 131Q (Q131)
170-45 84th Avenue, Queens NY 11432
LLW #: 104515
Service ID #: 64312
WA#: 787721
Berger Job #: 300124.1030

To	**:** Nina Kubota – Vice President, Capital Planning
Through	**:** Stan Dahir, RA - Director, Quality Control & Construction Support Studio - A&E
From	**:** Peter J. Percudani, RA - Director of Operations, Cost Control - Executive Office
Requested Facility	**: New Construction**
Subject	**: Test Fit / Sketch Study ("New Building" or "Alteration")**
Site / Address	**: PS131 – Queens** 170-45 84th Avenue Queens, N.Y. 11432 [Block: 9875 / Lot(s): 1
District	**:** 29 *("Hollis Sub-district")*
Adjusted Capacity	**:** 352 *(without D75)* **LLW#:** **104515**
Date	**:** March 15, 2016 **Estimated Cost[1]:** **$32,000,000**

As requested, a *"Test Fit / Sketch Study"* was initiated in lieu of a Feasibility Study to determine whether or not the subject School property which is +/-74,000 square feet in area with existing physical improvements (school buildings, play yards, etc.) could accommodate an addition, which would provide an additional Adjusted Capacity of 352.

This *"Test Fit / Sketch Study"* is not as informative as a typical Feasibility Study, which typically provides an overview of an Educational Program of Requirements (POR), describe existing positive and negative site characteristics, topography and geology, zoning, utilities, transportation, traffic and sustainable site development density information as well as a design approach for the school; nor does it include either a "Phase I or II Environmental Site Assessment", a "Geotechnical Report", or a "State Environmental Quality Review (SEQRA) Assessment".

Although various codes, rules and regulations may be noted herein, the principal objective of this *Study* is to assess what may physically be provided at the subject Site and identify issues and concerns that should be given due consideration so that an informed decision may be made by the Feasibility Committee as to whether or not a project should move forward, or if additional research and development is warranted prior to such a decision.

Overview of Issues and Concerns:

- Non-compliance with NYC Zoning Regulations for "bulk" ***[zoning]***
- Outdoor play area for the rest and recreation of the children would be significantly less (+/-47% less) than what is typically targeted for the given program/capacity ***[por]***
- SHPO Eligible ***[scope]***
- High groundwater ***[regulatory / scope]***
- Piles may be necessary ***[scope]***
- New Electrical Service and utilities (e.g.: gas, sprinkler…) within the existing building ***[scope]***
- Remedy existing DOB and ECB Violations ***[scope]***
- Protection of adjacent properties ***[construction]***
- Handicapped accessibility to the existing Auditorium ***[scope]***
- Repurposing of spaces within the existing building ***[scope]***
- Work that is "Ready to Forward" in PTS includes the exterior building envelope, and water infiltration ***[scope]***

cc:								
	L. Grillo	M. La Rocca	B. Barrett	J. O'Connell	A. Lempert	L. Guterman	G. Tung	K. King-Yara	Project File (1)
	K. Ou	G. Roussey	E. Abneri	C. Liu	M. Gomez	M. Zhang	M. Mirisola	F. Maley	A. Mantello

[1] ***"Estimated Cost"*** is based on the conceptual design scheme(s) provided herein for new construction **(+/-37,000sf)** and work within the existing building. It does not include costs associated swing space, work in the existing building for *"ADA Program Compliance"*, "*ADA Full Compliance"*, or costs associated with the removal of hazardous materials such as, but not limited to, *"Asbestos"*.

1. Volume and Type of Local Vehicular Traffic, and Traffic Patterns

The proposed Site is bounded by three (3) street fronts. The following is a general description of these streets, the type of vehicular traffic and observed traffic patterns:

- **83rd Avenue:** This is a narrow[2] two-way street that appears to be lightly trafficked by private vehicles. Although the direction of vehicular traffic on this street would be conducive to student drop-off and pick-up during arrival and dismissal times as children would be discharging/boarding busses to/from a sidewalk, it would be challenging due to the following:
  - Additional vehicular traffic brought to this location by the proposed school addition may stress existing traffic conditions.
- **172nd Street:** This is a narrow two-way street that appears to be lightly trafficked by private vehicles. Although the direction of vehicular traffic on this street would be conducive to student drop-off and pick-up during arrival and dismissal times as children would be discharging/boarding busses to/from a sidewalk, it would be challenging due to the following:
  - Additional vehicular traffic brought to this location by the proposed school addition may stress existing traffic conditions.
- **84th Avenue:** This is a narrow two-way street that appears to be moderately trafficked by private, public (B16 MTA Bus Line) and commercial vehicles. Although the direction of vehicular traffic on this street would be conducive to student drop-off and pick-up during arrival and dismissal times as children would be discharging/boarding busses to/from a sidewalk, it would be challenging due to the following:
  - Additional vehicular traffic brought to this location by the proposed school addition may stress existing traffic conditions.

The aforementioned existing traffic and additional traffic brought-on by school buses[3] as well as cars and vans used by parents to drop-off and pick-up their children may present an undesirable and possibly hazardous condition to young school age children who typically lack the experience and sophistication to deal with complex traffic patterns. Hence, a *"Traffic Study"* is recommended.[4]

---

2 Streets whose width are 75-feet or greater are wide streets; and streets whose width is less than 75-feet are narrow streets. (Street widths are measured from property/street line to property/street line. The actual roadbed (curb to curb) is the remaining street width after sidewalk depths are deducted from the "street width".)

3 ~~Although, as indicated above, the adjacent streets are conducive to the drop-off and pick-up of children, the D75 component of the given POR may bring additional school busses to the local streets that would take a significant amount of time to pick-up and discharge the children and further hamper existing traffic patterns.~~

4 **NYC Health Code - §45.11 Physical Facilities:** (a) School or children's institution shall not be conducted in a factory, mercantile or business building, unless the premises are approved by the Department. Such approval shall **not** be granted unless the premises and the area surrounding the premises are free from fire, **traffic** or other safety hazards.

2. Site and Site Adjacencies (Local Environs)

The subject property is an existing school that occupies a portion of an existing tax *"block"*[5] in the neighborhood known as *""Jamaica ",* Queens.

The Site, which is improved by an existing 2-story school and an outdoor play yards, has a gross lot area of +/-74,000 square feet that is bounded by 83rd avenue, 172nd Street, 84th Avenue and residential properties.

The surrounding neighborhood is Residential.

SITE LOCATION MAP

- **83rd Avenue - North Property/Street Line:** This property/street line provides +/-**360-feet** of street frontage with deep sidewalks.
  - There are two empty tree pits along this street front and overhead utility lines do not run the length of the property along this street front. The opposite side of this street consists of 2-story residential buildings.
- **172nd Street - East Property/Street Line:** This property/street line provides +/-**200-feet** of street frontage with deep sidewalks.
  - There are no street trees along this street and overhead utility lines do not run the length of the property. The opposite side of this street consists of 2-story residential buildings.
- **84th Avenue - South Property/Street Line:** This property/street line provides +/-**380-feet** of street frontage with deep sidewalks.
  - There are five (5) street trees along this street and overhead utility lines do not run the length of the property. The opposite side of this street consists of 2-story residential buildings
- **Residential Properties - West Property Line:** This property line is +/-**200-feet** long and abuts four (4) residential Properties.

  Property Facing 170th Street:
  - The rear yards of two (2) residential properties abut the shared property line. Each property has a 1-story wood frame garage that appears to be set-back +/- 3-feet from the property line.

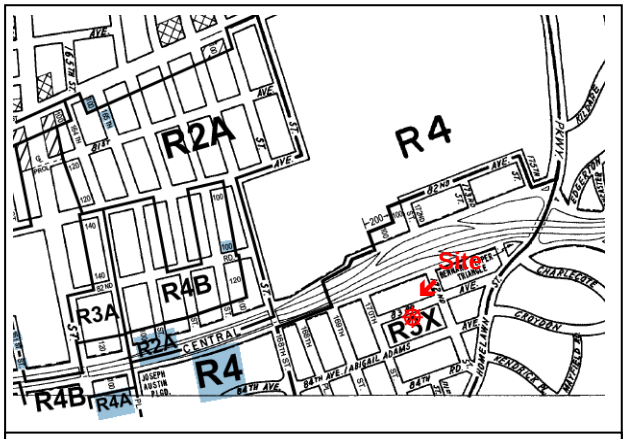
  Property Facing 83rd Avenue:
  - The adjacent property is separated from the existing school's property by a reinforced concrete retaining wall and chain link fence.
  - The rear yard of this residential property abuts the shared property line. A 1-story wood frame garage appears to be set-back +/- 3-feet from the property line.

  Property Facing 84th Avenue:
  - The adjacent property is separated from the existing school's property by a reinforced concrete retaining wall and chain link fence.
  - Although the residential wood frame structure is set-back +/- 9-feet from the property line the 1-story wood frame garage appears to be set-back +/- 3-feet from the property line.

[5] **ZR12-10 Definitions**: A *"block"* is a tract of land bounded by: (a) streets; (b) public parks;(c) railroad rights-of-way, when located at or above ground level but not including sidings or spurs in the same ownership as the zoning lot; (d) airport boundaries; (e) pierhead lines (or shore lines where no pierhead lines have been established); or (f) corporate boundary lines of New York City.

3. NYC Zoning Regulations[6]

The subject Site is located within a **(R3X)** Residential Zoning District where schools are permitted as-of-right.



NYC Zoning Map – 14b

NYC Tax Map

Table – 1 / Article II – Chapter 4: Residential Zoning Districts[7] [R3X]

Zoning Regulations	Requirement	Waiver
Appendix A	Permitted Use	No
ZR24-11 Maximum Floor Area Ratio (FAR)	*1.0*	**Yes**
ZR24-11 Maximum Lot Coverage	*60% (Corner Lot) / 55% (Interior &Through Lots)*	**Yes / Yes**
ZR24-34 Minimum Front Yard	*15-feet*	No
ZR24-35 Minimum Required Side Yards	*10% of aggregate width of street walls*[8]	**Yes**
ZR24-36 Minimum Required Rear Yard	*30-feet*[9]	**Yes**
ZR24-382 Required Rear Yard Equivalents	[10]	**Yes**
ZR24-521	Maximum Front Wall Height (25-Feet)	**Yes**
ZR24-521	Front Setbacks / Sky Exposure[11]	**Yes / Yes**
ZR24-551 Required Side Setbacks for Tall Buildings in Low Bulk Districts	*See Footnote*[12]	**Yes**

6 The following preliminary analysis is not an analysis of compliance with all relevant NYC Zoning Regulations. The actual type and need for ***"Zoning Waivers"*** would be determined by the proposed project's final design.

7 **R3-2, R4, R4B, R5, R6, R7, R8, R9 and R10 - General Residence Districts [R3X]:** These districts are designed to provide for all types of residential buildings, in order to permit a broad range of housing types, with appropriate standards for each district on density, open space, and spacing of buildings. However, R4B Districts are limited to single- or two-family dwellings, and zero lot line buildings are not permitted in R3-2, R4 (except R4-1 and R4B), and R5 (except R5B) Districts. The various districts are mapped in relation to a desirable future residential density pattern, with emphasis on accessibility to transportation facilities and to various community facilities, and upon the character of existing development. These districts also include community facilities and open uses which serve the residents of these districts or benefit from a residential environment.

8 **ZR24-35:** Aggregate width of street walls equal to 80 feet or less or, for abutting buildings, if the combined aggregate width of street walls of all such abutting buildings on a zoning lot is equal to 80 feet or less, then two side yards shall be provided, each with a minimum required width of eight feet. If such building or buildings have an aggregate width of street walls equal to more than 80 feet, two side yards shall be provided, each equal to not less than 10 percent of the aggregate width of street walls.

9 **ZR24-38:** …. In the case of a zoning lot occupying an entire block, no rear yard or rear yard equivalent shall be required

10 Ibid

11 On a *"Narrow Street":* required front yard, 1 to 1 slope; and on a *"Wide Street"*: required front yard, 1 to 1 slope.

12 **ZR24-551:** No community facility portion of any building that is more than 35-feet or more than three stories above the level of a side yard, whichever is lower, shall be nearer to a side lot line bounding such yard than a distance equal to one-half the height above yard level.

Table – 2 / Other Land and Use Regulations or Property Encumbrances[13]

Tax Lot Subdivision and/or Merger ..... *(The Site is (1) tax lot that needs to be subdivided, or more than one (1) tax lot that would need to be merged)*		No
NYS Liquor Authority [See Exhibit - 1]..... *(The proposed school entrance is within 200-feet of an establishment that sells or serves alcohol)*	[14]	No
Adult Establishments [See Exhibit - 2] ..... *(The Site is within 500-feet of an adult establishment)*	[15]	No
Industrial Business Zone ..... *(The Site is within a designated "Industrial Business Zone")*	[16]	No
Flood Zone (FEMA)... ..... *(The Site is within a designated "Flood Zone" – Special Flood Hazard)*	[17]	No

Not Applicable

Industrial Business Zone

FEMA Flood Zone

[13] See *"Section 4 – Design / Functionality /Other Issues and Concerns"* and/or footnotes for information that pertains to all items indicated as **Yes**.

[14] **NYS Liquor Authority / 200-foot Rule:** The statute refers to schools on the same street as the licensed premises. The buildings do not have to be on the same block. With respect to an establishment or school/ place of worship on a corner lot, the building is considered to be on both streets, whether or not there is an entrance to the building on both streets. *[Existing establishments are grandfathered]*

While the law *("NYS Liquor Authority / 200-foot Rule")* uses the phrase *"building used exclusively"* as a school, the courts have adopted a test that looks to whether the building is used primarily as a school. The court determined that a building will still be considered a school as long as any use is incidental to, and is not inconsistent with or detracting from the predominant character of the building as a school. Hence, since the proposed *"Mixed-use"* building would not be exclusively used as a school, establishments that serve and/or sell alcohol, within 200-feet of the school, would not be prohibited. [Note: The *"NYSLA"* presumes establishments are permitted within a *"mixed-use"* building. [See Exhibit - 1]

[15] **Rules of the City of New York:** Under 1 RCNY § 9000-1, the Department clarifies criteria for determining the dates of establishment and discontinuance for adult establishments, houses of worship and schools. New adult establishments are **not** permitted within a 500 foot radius of established adult establishments, houses of worship and schools.

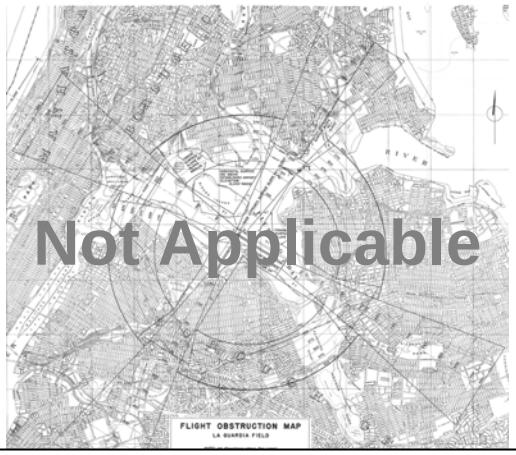
Adult establishments that obtained a new building or alteration permit between 08/08/2001 and 07/09/2010 that has not obtained a Temporary Certificate of Occupancy (TCO), or if applicable a Department sign-off, by July 10, 2011 or started operating within six months of TCO or sign-off, will lose the priority to operate as an adult establishment if a new adult establishment, house of worship or school obtains a permit to be located within a 500 foot radius of the adult establishment. ***Note**: Houses of worship, schools and adult establishments in existence and operating prior to Aug. 8,2001 that have not discontinued operation for a continuous period of one year or longer are considered established.*

[16] ***"NYC Economic Development Corporation" (EDC):*** In early 2006, the City created 16 Industrial Business Zones across the City where expanded business services are available for industrial and manufacturing businesses. This designation fosters high-performing business districts by creating competitive advantages over locating in areas outside of NYC. The IBZs are supported by tax credits for relocating within them, zone-specific planning efforts, and direct business assistance from Industrial Providers of NYC Business Solutions Industrial and Transportation. In light of the purpose of IBZs to foster industrial sector growth by creating real estate certainty, the previous administration stated that it would not support the rezoning of these areas for residential use.
[http://www.nycedc.com/industry/industrial/nyc-industrial-business-zones]

[17] **FEMA Flood Zones**: (Zone AE) - The area subject to inundation from the 1% annual chance flood. These areas are not subject to high velocity wave action but are still considered high risk flooding areas. AE zones have BFEs established. (Zone X) - Areas of moderate coastal flood risk outside the 1% annual chance flood up to the 0.2% annual chance flood level. X-Zones are not deemed areas of special flood hazard.

Table – 2 / Other Land and Use Regulations or Property Encumbrances (continued)

MTA Structures (subway, elevated rail line, open rail cut, etc.) ..... *(The Site is within 200-feet of an "MTA Structure")*	No
Wetlands ..... *(The Site is within a designated "Wetland")*	No
NYC Parks Department (Parks) ..... *(The Site is a "NYC Public Park" or a "Jointly Operated Playground")*	No
NYC Parks Department (Landmarks)..... *(The Building or Site has landmark status)*	No
NYC Parks Department (SHPO) ..... *(The Building or Site has landmark status)*	**Yes**
Environmental Restrictive Declarations (CEQR) .....[18] *(The Site is encumbered by environmental conditions – "e" designation)*	No
Environmental Restrictive Declarations (ULURP) .....[19] *(The Site is subject to an environmental review)*	No
State Pollutant Discharge Elimination System (SPDES).....[20] *(Storm water\wastewater discharges into surface waters or ground waters of the state - not connected to NYC Sewer System)*	No
Easements (right-of-ways, utilities, etc.)..... *(The Site is encumbered by easements for access by other private or public entities)*	No
NYC Department of Transportation..... *(The Site is encumbered by a future NYC/DOT street widening)*	No
Adverse Possession.....[21] *(A portion(s) of the Site is openly used by others for their benefit)*	No
NYC Zoning - Article VI, Chapter I[22] .....Special Regulations Applying Around Major Airports *(The Site is within a designated "Flight Approach Path")*	No



Flight Obstruction Path Map - LGA

Flight Obstruction Map - JFK

[18] **ZR11-15**: Environmental Restrictions pertain to hazardous materials, air quality and/or noise. See Appendix "C" of the NYC Zoning Regulations.

[19] See Appendix "D" of the NYC Zoning Regulations.

[20] **50 CFR 122.26(b)(15)(i)**: Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than 1- acre and less than 5-acres. Small construction activity also includes the disturbance of less than 1-acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than 1 and less than 5-acres.

[21] Under current law, as articulated by the Court of Appeals (June 2006) in the case of *Walling v. Przybylo*, a claim of adverse possession can be made if an individual "openly, notoriously and exclusively" uses someone else's property continuously for 10 years, believing he has the right to do so.

[22] NYC Building Department Bulletin 2009-008, issued on April 7, 2009.

4. NYC Building Department (DOB)

There are presently four (4) open DOB Violations; and there are seven (7) open ECB Violations listed under the "NYCDOB Property Profile" for the existing school building:

- Open DOB Violations:

  1. DOB Violation #082313E9027/484670: Elevator
  2. DOB Violation #053014ACC110644: Elevator
  3. DOB Violation # 110514E9027/527856: Elevator
  4. DOB Violation # 120315E9027/560102: Elevator

  All of the above elevator violations pertain to the sidewalk elevator that serves the kitchen in the existing school's basement

- Open ECB Violations:

  1. ECB Violation #35094313Z: Re-Issue #35023736M
  2. ECB Violation #35094314K: Re-Issue #35023735K
  3. ECB Violation #35094315M: Defective floor in room 111 hole in classroom floor approx. 1"inch by 4"inch at front of classroom.
  4. ECB Violation #34891569H: Exterior foundation wall has become porous & allowing rain water into the boiler room causing interior damages adjacent to 84 avenue at cellar level.
  5. ECB Violation #34958543N: Reissue #34891569H
  6. ECB Violation #35023735K: Reissue 34958543N and 34891569H
  7. ECB Violation #35023736M: Water penetration into rooms 211, 212, along east wall.

5. Design / Functionality / Other Issues and Concerns

In addition to the aforementioned issues and/or concerns, the following pertain to design and functionality:

- The available area for outdoor play[23], for rest and recreation by the children, would be as follows:

Target as per the Draft POR	=	24,930sf	= (30sf / pupil) x (831)
Conceptual Outdoor Play Area	=	13,300sf	
Difference	=	11,630sf	/ 24,930sf = **+/-47% Less than targeted**

Note: Existing legislation [See Exhibit - 3], which continues to address required open-air playgrounds for NYC Schools was amended to address the loss of existing outdoor area at existing school facilities. Hence, it is important that suitable and adequate outdoor area always be provided to accommodate the physical and recreational needs of the children for existing and new schools.

Except for Parks that are jointly operated (JOP) between the NYC Parks Department and the Board of Education, existing Public Parks do not typically lend themselves to school use[24].

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[23] **Outdoor Space:** "*NYC Health Department and NYS Law*" requires a school to have outdoor area for rest and recreation - New York City Rules & Regulations - Title 24 - Health Code, Sections §45:11(h) and §49.13; and NY CLS Educ. 2556(5).

- When available, open space at grade, is typically utilized for the gathering of children during arrival times and for the organized dismissal of the children at the end of each school day.
- *"Research confirms the importance of physical education for health, learning, and social development. In New York City, physical education and sports have also played an integral part in the fabric of civic life and public schools. For countless children, immigrants and native-born, schoolyards and playing fields have provided the forum for friendships made and opportunity forged, the level playing field on which children from disparate backgrounds have met and tested themselves without advantage or benefit accorded privilege." ~ "Hit or Miss-Fitness & Sports Opportunities in the New York City Public Schools (New York, Educational Frameworks Inc., 2000)".*

- As per the conceptual plans provided herein, the proposed new construction is located along the west property line, of the subject property for several reasons:
  - To provide a new accessible common entrance for both the existing building and new construction.
  - Connect to the existing building with minimal interruption to existing spaces.
  - Maximize the remaining outdoor area for the rest and recreation of the children.
  - No overhead utility lines are located along this street front.
  - Services and utilities are present in the adjacent street.
- In order to avoid underpinning and shoring of adjacent structures neither a basement nor cellar was pursued for the new construction.
- In order to avoid groundwater neither a basement nor cellar was pursued for the new construction.
- In order to minimize the height of new construction the 1st Floor was set at grade with a small basement area that provides a connection to the existing kitchen and cafeteria.
- Although the Gymnasium was located at grade so to take advantage of the available height from grade to the existing 2nd Floor (+/- 20-feet),avoid an acoustical slab between the Gymnasium and floors below, if located on a higher floor, and centralize it within the proposed larger school facility, it may <u>not</u> be the most economical solution because it forces the balance of the 1st floor to be 20-feet high rather than 14-feet and a significant amount of exterior wall is added to the new construction.
- Contrary to the request to provide a "Test Fit / Sketch Study" the request to enlarge the existing kitchen by 1,000 square feet was not possible. Therefore, in order to keep the existing kitchen and cafeteria in operation during new construction the Conceptual Plans provided herein provide a new kitchen with new construction to the north side of the existing cafeteria.

  Once the new kitchen is completed the existing kitchen can be removed and the existing cafeteria could be enlarged accordingly.
- Although the windows for the Pre-kindergartens as per the Conceptual Plans provided herein face the west property line and are setback only 10-feet from the property line 45% of the wall surface area may be windows because the new construction would be fully sprinklered (Table 705.8 – NYC 2014 Building Code).
- ~~District 75 Citywide Education[25] often requests to have the flexibility of a secondary school entrance to facilitate their unique needs of the D75 children as they arrive and depart a school.~~
- ~~Noise Pollution: "Aircraft noise disturbs the normal activities of airport neighbors--their conversation, sleep, and relaxation--and degrades their quality of life. Depending on the use of land contiguous to an airport, <u>noise may also affect education</u>, health services, and other public activities.[26]~~

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[24] **Rules and Regulations of the NYC Parks Department, §1-05 Regulated Uses, paragraph s.:** Areas within the parks designated by the Commissioner for exclusive use shall include: 1.Exclusive Children Playgrounds: Adults allowed in playground areas only when accompanied by a child under the age of twelve (12).

When children are brought off a school property there are liability risks regarding the children permission is required from parents/legal guardians.

[25] District 75 provides citywide educational, vocational, and behavior support programs for students who are on the autism spectrum, have significant cognitive delays, are severely emotionally challenged, sensory impaired and/or multiply disabled.
[*Source: http://schools.nyc.gov/Academics/SpecialEducation/D75/Feeds/slider/AppropriateLearningEnvironments.htm*]

[26] *"LaGuardia Airport: Can the Airport and Community Coexist, By Congressman Joseph Crowley, page 14" [http://www.areco.org/LaGuardia.pdf]*

6. Existing Building and Site Conditions

The following information pertains to Architectural, Mechanical, Plumbing and Electrical disciplines, and is **not** meant to represent a detailed Scope of Work. The sole purpose of this information is to identify existing conditions and identify issues that may pertain and/or relate to the proposed new construction:

◻ Architectural

Whether or not the proposed new construction is performed as a *"New Building"* or an *"Alteration"* the following issues and concerns should be noted:

- Groundwater is approximately 10-feet below grade (See page 32 – Borings)
- Although the original building and subsequent addition are on spread footings piles may be necessary.
- Existing Cellar Floor slab to slab height is +/- 11.5-feet ; the existing 1st Floor slab to slab height is +/- 15-feet; and the existing 2nd Floor slab to slab height is +/- 14-feet
- Existing open DOB and ECB Violations would need to be remedied.
- Handicapped accessibility to the existing Auditorium.
- Fire drills for the existing and new construction would need to be coordinated.[27]

◻ HVAC

The recommended HVAC systems for new addition shall be independent HVAC systems as per latest SCA design standards for new school. The new addition HVAC systems shall include but not limited to followings:

- For the proposed new construction, provide new condensing boilers plant at new addition on roof top penthouse MER and chiller plant as per latest SCA design standards.
- For the proposed new construction, provide roof top DOAS units (Dedicated Outside Air Systems Units) with hot and chilled water coils as per latest SCA design standards. The DOAS units shall provide primary air (ventilation air) to all classrooms, offices and non-assembly areas.
- For the proposed new construction, provide roof top air handling units with hot and chilled water coils for public assembly spaces as per latest SCA design standards. The PA space AHU shall cool the space & provide tempered ventilation air during winter. Finned tube radiation or convectors will heat the PA space.
- For the proposed new construction, provide cooling & heating floor mounted active displacement induction units (DIU's) for each classroom, and cooling only chilled beam units for offices and small spaces.
- For the proposed new construction, provide hot water finned tube radiation/convectors for all perimeter spaces including PA spaces, office spaces and all other spaces with no DIU's.
- For the proposed new construction, provide miscellaneous HVAC systems (exhaust fans, split A/C systems etc.) for special spaces as per latest SCA design standards.
- Alterations of existing HVAC equipment at the connection of new addition to the existing building.
- The existing vacuum pump (VP-1) in existing Fan Room is causing water damage in the Fan Room and should be replaced.

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[27] **New York State Education Law \ Section §807 - Fire drills**: It shall be the duty of the principal or other person in charge of every public or private school or educational institution within the state, other than colleges or universities, to instruct and train the pupils by means of drills, so that they may in a sudden emergency be able to leave the school building in the shortest possible time and without confusion or panic. Such drills or rapid dismissals shall be held at least twelve (12) times in each school year, eight of which required drills shall be held between September first and December first of each such year.

Electrical

- **Lighting**: The lighting in the existing school was T-8 which is original to the building. The exits lights in the existing school are LL26 compliant.
- **Electric Service**: Existing electric service, at 800A, peak demand is 400A, is not adequate to accommodate future load and shall be upgraded to 3000A, 120/208V, 3 phase 4 wire service to accommodate the proposed new construction.

  The existing electric service room does not have enough space to house new equipment. A new service room with two doors would be required.
- **Emergency Generator**: A new emergency generator is required for the proposed new construction. Hence, the existing building should also be supported from the new emergency generator

  There is no existing emergency generator in the building.
- **Fire Alarm System**: Although legal and operational the existing fire alarm system is obsolete and shall be replaced[28] in its entirety to include the existing building and the new construction, including smoke purge, fan shutdowns etc. In the addition, provide pull stations, horns, strobes, smoke detectors, carbon monoxide detectors, water flow switches, elevator recall and other devices required by code.
- **Intrusion Alarm**: While the existing intrusion alarm system was installed in 2003, replacement is recommended so to cover both the existing building and proposed new construction.
- **Video Surveillance System**: Provide a new video surveillance system to cover the existing building and the new addition.
- **Telephone System**: Expand the existing telephone system, to cover the proposed new construction.
- **LAN System**: Expand the existing telephone system, to cover the new addition, the existing MDF will be an IDF, the new MDF will be located in the new addition.
- **Public Address/Clock Systems**: Existing public address/clock systems were installed in the 1997's and should be replaced, to cover the new addition and the existing building.
- **Auxiliary Signal System**: Extend the existing auxiliary signal system to cover both the existing building and new addition.
- **Elevator Intercom System**: Provide an elevator intercom system for the proposed new construction's elevators.
- **Rescue Rooms Intercom System**: Provide rescue rooms intercom system to permit two way communications between rescue rooms and custodian/principal's offices.

28 Replacement is only necessary for new construction filed as an "Alteration" (addition). New construction filed as a "New Building" (separate building) can have an independent system provided the alarm in either structure annunciates in the other.

- **Plumbing and Drainage**

  - **Water Services**: There are two (2) water services; one (1) 3" combined sprinkler/domestic service from 84th. Avenue with partial sprinkler in the basement storage rooms only and one (1) 3" domestic service from 172nd Street water main into the main building cellar. All services are metered and one service which Is the combined service is equipped with Backflow Preventer Device.
  - **Gas Service:** There is a 6" low pressure gas service from 172nd. Street gas main into the gas meter room at cellar. This service has one booster and two (2) meters setting. One for the boilers and one for the domestic use, with two Maxon Valves 6" & 3". The required gas load letter shall be sent to Gas Company for the gas usage of the proposed addition.
  - **HOT WATER :** Hot water system consists of a A.O.Smith gas fired water heater 75,000 BTU with 100 gallon storage Mixing valve and circulating pumps, one for the kitchen and one for the building general use.
  - **Sanitary & Storm Sewers:** The main building has one 6" sanitary house sewer to 84th Avenue sewer Main and according to the Custodian Mr. Robert Cannon, for sanitary storm, there are three (3) Dry Wells On the school property serving as drainage for storm sewer.

    The new construction would alter the existing site drainage and a new storm water detention system would be required.

7. Status of Ready to Forward or Active Projects (PTS)

LLW#	Description	DOE Author Const. $	Scope	Design	Turnover Bid / Award	Construction	Close-Out
025704	Correct Emergency Lighting	$0	*✘				
043579	Carbon Monoxide Detectors	$0	**✘				
096393	Flood Elimination	$654,183		*✘			
102072	Roofs	$1,008,053		*✘			
102073	Exterior Masonry	$637,149		*✘			
102074	Parapets	$232,974		*✘			
Total		**$2,532,359**	* - Ready to Forward			** - Active	

8. NYC Building Code

The design scheme *("Test-Fit / Sketch-Study")*, provided herein for the proposed new construction, can be approached as an ***"Alteration"*** *(Addition)* to the existing building, or as a ***"New Building"*** *(Separate Building).* The difference between the scope of work and costs associated with either of these two different approaches can be directly attributed to compliance with NYC 2014 Construction Codes. The following analysis, for the proposed new construction, is based on compliance with the NYC 2014 Construction Codes for an ***"Alteration"*** *(Addition)* to the existing building, and/or a ***"New Building"*** *(Separate Building).*

- **§28-101.4.5** Work that increases existing floor surface area of a prior code building more than 110 percent[29] shall require the existing building to comply with the NYC 2014 Construction Codes:

TABLE-1 / GROSS FLOOR SURFACE AREA				
Building / Structure	**Gross Floor Surface Area[30]**	**Removed Floor Surface Area**	**Proposed Gross Floor Surface Area**	**Notes:**
Existing Building	+/-83,000	-0-	+/-83,000	This Table is not applicable if the new construction is filed as a "New Building".
Proposed *"Alteration"*	---	---	+/-52,000	
			52,000 / 83,000 = **+/- 63%** < 110%	

At this time, the proposed additional floor surface area, for the proposed new construction *("Alteration")*, is anticipated to be **less than** 110% of the existing building's floor surface area. Hence, compliance with the Section §28-101.4.5 within the existing building **is not anticipated**.

- **§28-101.4.3** *Optional use of the 1968 Building Code for work on prior code buildings*[31]: All work within the addition would comply with the NYC 2014 Construction Codes while, unless otherwise required by the NYC 2014 Construction Codes, work within the existing building may be performed as per prior Codes unless otherwise required. Compliance requirements are predicated on "Replacement Cost of the Existing Building":

TABLE-2 / ALTERATION COSTS OR NEW BUILDING COSTS[32]			
Approximate Alteration Costs	**Cost**	**Approximate Replacement Cost of Existing Building**	**Cost**
Alteration (Addition): (+/- 37,000sf)	$30,000,000	**Existing Building:** (+/- 56,000sf) =	**$44,000,000**
Alteration Costs related to the Existing Building	$3,000,000		
Total Alteration Costs: ($33,000,000 / $44,000,000 = **+/- 75%**)	**$33,000,000**		
New Building: (+/- 37,000sf)	$30,000,000		
Alteration Costs related to the Existing Building	$3,000,000		
Total Alteration Costs: ($3,000,000 / $44,000,000) = **+/- 7%**)			
Total New Building and Alteration Costs	**$33,000,000**		

29 **§28-101.4.5: Work that increases existing floor surface area of a prior code building by more than 110 percent**. Notwithstanding sections 28-101.4.3 and 28-102.4.3 or any other provision of this code that would authorize alterations of prior code buildings in accordance with the 1968 building code or prior codes, where the proposed work at the completion of construction will increase the amount of floor surface area of a prior code building by more than 110%, over the amount of existing floor surface area, such entire building shall be made to comply with the provisions of this code as if it were a new building hereafter erected. See Section 28-105.2 for permits for such work. **Exceptions:** When determining the amount of existing floor surface area the following the square footage of floors removed during the course of the work when such floors are removed together with the supporting beams, joists, decking and slabs on grade shall be excluded from the measured square footage of floor surface area.

30 ***§28-101.4.5.2:*** *"Floor surface area is the gross square foot area of all horizontal surfaces, including roofs of bulkheads and superstructures, of a building or structure at any level, including cellar, attic and roof.*

31 At the option of the owner, and subject to applicable provisions of this code, work on prior code buildings may be performed in accordance with the requirements and standards set forth in the 1968 building code, or where the 1968 code so authorizes, the code in effect prior to 12/06/68.

32 Work related to "Ready to Forward" and "Active" Projects in "PTS" are **not included**.

CHAPTER 11 - ACCESSIBILITY

- ***§28.2-1101.3.2*** *Requirements based on value of alterations:* Accessible features and construction governed by this chapter shall be provided to the entire building undergoing alterations, as if the building were hereafter erected, where the value of alterations **exceeds 50%** of the value of the existing building.

  - **"Alteration"** (Addition): At this time, the estimated construction cost of the potential new construction and work within the existing building is expected to be ***greater than 50%*** of the replacement cost of the existing building ***(See Table-2 / 75%)***. Hence, full compliance with Chapter 11 (Accessibility) of the NYC 2014 Construction Codes within the existing building ***is anticipated***[33].

  - **"New Building"** (Separate Building): At this time, the estimated construction cost of the potential work within the existing building only is expected to be ***less than 50%*** of the replacement cost of the existing building ***(See Table-2 / 7%)***. Hence, full compliance with Chapter 11 (Accessibility) of the NYC 2014 Construction Codes within the existing building ***is not anticipated***[34].

CHAPTER 9 – FIRE PROTECTION SYSTEMS

- ***§28.2-901.9.4.1 Alterations requiring Fire Protection Systems Throughout a Building:***

  If the value of alterations to the building **equals or exceeds 60%** of the value of the existing building the entire existing building shall be made to comply with the fire protection requirements of this chapter.

  Automatic Sprinkler Systems: Chapter 9, Section §28.2-903.2.3 (Group E): An automatic sprinkler system in "fire areas" greater than 20,000 square feet and all areas below the level of discharge is required as well as places of assembly (Cafeterias, Gymnasiums and Auditoriums), with 300 or more occupants, require sprinklers *(§28.2-903.2.1.3 and §28.2-903.2.1.4)]*.

  "Fire Areas" are defined by the NYC 2014 Construction Codes as the aggregate floor area enclosed and bounded by firewalls, fire barriers, exterior walls or fire-resistance-rated horizontal assemblies of a building. Hence, being that this school is a *"single occupancy"*[35] (Occupancy Group E), *"fire areas"* that are less than 20,000 square feet in floor area may be created both vertically and/or horizontally with *"fire barriers"* as per Section §28.2-707.3.9 as long as the *"fire barrier"* has a minimum rating of 2-hours.

  Note: If this project were to move forward, a determination would need to be made during the pre-design phase as to whether or not it is feasible and/or more economical to create *"fire areas"* [36] within the existing building or to sprinkler the entire existing building.

  - **"Alteration"** (Addition): At this time, the estimated construction cost of the potential new construction and work within the existing building is expected to be ***greater than 60%*** of the replacement cost of the existing building ***(See Table-2 / 75%)***. Hence, unless "*fire areas"* are created (see Note above), compliance with the aforementioned Section of the NYC 2014 Building Code for the entire existing building ***is anticipated***.

---

33 When "full compliance" is not required, accessibility shall be provided as directed by the SCA.

34 Ditto

35 **§28-101.5 (Definitions):** Main Use or Dominant Occupancy (of a Building) - Refers to a single occupancy classification assigned to a structure by the department according to such structure's main use or dominant occupancy.

36 At a minimum, even if the building is separated into *"Fire Areas"* no greater than 20,000sf, all areas below the level of discharge and places of assembly with 300 or more occupants require sprinklers. [The existing Auditorium has 396-occupants]

- **"New Building"** (Separate Building): At this time, the estimated construction cost of the potential new construction within the existing building only is expected to be ***less than 60%*** of the replacement cost of the existing building ***(See Table-2 / 7%)***. Hence, compliance with the aforementioned Section of the NYC 2014 Building Code for the entire existing building **is not anticipated**.

Standpipe Systems: Chapter 9, Section §28.2-905.3.1 (Required Installations): NYC 2014 Construction Codes require a Class III standpipe system, in every required stairway, in the following types of buildings:

(1) In buildings 2 stories or more in height with floor area of 10,000sf or greater on any story;

(2) In buildings 3 stories or more in height with floor area of 7,500sf or greater on any story;

(3) In buildings of any area with a floor level having an occupant load of 30 or more that is located 55 feet or more above the lowest level of fire department vehicle access; or

(4) In buildings of any area, constructed in accordance with Section §28.2-403, with occupied floors located 75 feet or more above the lowest level of fire department vehicle access.

At a minimum, the existing building is ***more than 2-stories*** with floor area of ***10,000sf*** or greater on any story.

- **"Alteration"** (Addition):

  At this time, the estimated construction cost of the potential new construction and work within the existing building is expected to be ***greater than 60%*** of the replacement cost of the existing building ***(See Table-2 / 75%)***. Hence, compliance with the aforementioned Section of the NYC 2014 Building Code for the entire existing building ***is anticipated***.

- **"New Building"** (Separate Building):

  At this time, the estimated construction cost of the potential new construction within the existing building only is expected to be ***less than 60%*** of the replacement cost of the existing building ***(See Table-2 / 7%)***. Hence, compliance with the aforementioned Section of the NYC 2014 Building Code for the entire existing building ***is not anticipated***.

In addition to the above, ***"stages"*** greater than 1,000 square feet in floor area shall be equipped with a Class III wet standpipe system with a hose connection on each side of the *"stage" [§28.2-905.3.4].*

- **"Alteration"** (Addition): At this time, the estimated construction cost of the potential new construction and work within the existing building is expected to be ***greater than 60%*** of the replacement cost of the existing building ***(See Table-2 / 75%)*** and the *"stage"* ***is less than*** 1,000 square feet in floor area. Hence, compliance with the aforementioned Section of the NYC 2014 Building Code for the *"stage"* ***is not anticipated***.

- **"New Building"** (Separate Building): At this time, the estimated construction cost of the potential new construction within the existing building is expected to be ***less than 60%*** of the replacement cost of the existing building ***(See Table-2 / 7%)*** and the *"stage"* ***is less than*** 1,000 square feet in floor area. Hence, compliance with the aforementioned Section of the NYC 2014 Building Code for the *"stage"* ***is not anticipated***.

- ***§28.2-901.9.4.2 Alterations requiring Fire Protection Systems in the Space being Altered:***

If the value of alterations of a space is **between 30% and 60%** of the value of the existing building the portions of the building being altered shall be made to comply with the fire protection requirements of this chapter.

Automatic Sprinkler Systems: Chapter 9, Section §28.2-903.2.3 (Group E): An automatic sprinkler system in *"fire areas"* greater than 20,000 square feet and all areas below the level of discharge is required as well as places of assembly (Cafeterias, Gymnasiums and Auditoriums), with 300 or more occupants, require sprinklers *(§28.2-903.2.1.3 and §28.2-903.2.1.4)]*.

"Fire Areas" are defined by Section §28.2-702.1 (Definitions) of the NYC 2014 Construction Codes as the aggregate floor area enclosed and bounded by firewalls, fire barriers, exterior walls or fire-resistance-rated horizontal assemblies of a building. Hence, being that this school is a *"single occupancy"* (Occupancy Group E), *"fire areas"* that are less than 20,000 square feet in floor area may be created both vertically and/or horizontally with *"fire barriers"* as per Section §28.2-707.3.9 as long as the *"fire barrier"* has a minimum rating of 2-hours.

Note: If this project were to move forward, a determination would need to be made during the pre-design phase as to whether or not it is feasible and/or more economical to create *"fire areas"* within the existing building or to sprinkler the entire existing building.

- **"Alteration"** (Addition): At this time, the estimated construction cost of the potential new construction within the existing building that affects a space or portion of the existing building is expected to be ***greater than 30%*** of the replacement cost of the existing building ***(See Table-2 / 75%)***. Hence, compliance with the aforementioned Section of the NYC 2014 Building Code for a space or portion of the existing building ***is anticipated***.

- **"New Building"** (Separate Building): At this time, the estimated construction cost of the potential new construction within the existing building that affects a space or portion of the existing building is expected to be ***less than 30%*** of the replacement cost of the existing building ***(See Table-2 / 7%)***. Hence, compliance with the aforementioned Section of the NYC 2014 Building Code for a space or portion of the existing building ***is not anticipated***.

Standpipe Systems: Chapter 9, Section §28.2-905.3.1 (Required Installations): NYC 2014 Construction Codes require a Class III standpipe system, in every required stairway, in the following types of buildings:

(1) In buildings 2 stories or more in height with floor area of 10,000sf or greater on any story;

(2) In buildings 3 stories or more in height with floor area of 7,500sf or greater on any story;

(3) In buildings of any area with a floor level having an occupant load of 30 or more that is located 55 feet or more above the lowest level of fire department vehicle access; or

(4) In buildings of any area, constructed in accordance with Section §28.2-403, with occupied floors located 75 feet or more above the lowest level of fire department vehicle access.

At a minimum, the existing building is ***more than 2-stories*** with floor area of ***10,000sf*** or greater on any story.

- **"Alteration"** (Addition): At this time, the estimated construction cost of the potential new construction within the existing building is expected to be ***more than 30%*** of the replacement cost of the existing building ***(See Table-2 / 75%)***. Hence, compliance with the aforementioned Section of the NYC 2014 Building Code for the entire existing building ***is anticipated***.

- **"New Building"** (Separate Building): At this time, the estimated construction cost of the potential new construction within the existing building only is expected to be ***less than 30%*** of the replacement cost of the existing building ***(See Table-2 / 7%)***. Hence, compliance with the aforementioned Section of the NYC 2014 Building Code for the entire existing building ***is not anticipated***.

In addition to the above, ***"stages"*** greater than 1,000 square feet in floor area shall be equipped with a Class III wet standpipe system with a hose connection on each side of the *"stage" [§28.2-905.3.4].*

- **"Alteration"** (Addition): At this time, the estimated construction cost of the potential new construction within the existing building is expected to be ***greater than 30%*** of the replacement cost of the existing building ***(See Table-2 / 7%)*** and the *"stage"* ***is greater than*** 1,000 square feet in floor area. Hence, compliance with the aforementioned Section of the NYC 2014 Building Code for the *"stage"* ***is not anticipated***.

- **"New Building"** (Separate Building): At this time, the estimated construction cost of the potential new construction within the existing building is expected to be ***less than 30%*** of the replacement cost of the existing building ***(See Table-2 / 7%)*** and the *"stage"* ***is less than*** 1,000 square feet in floor area. Hence, compliance with the aforementioned Section of the NYC 2014 Building Code for the *"stage"* ***is not anticipated***.

TABLE-3 / SUMMARY OF ITEMS OF RELATED TO FILING APPROACH		
Items that are Dependent on the Filing Approach for the Proposed New Construction[37] *[$ - Scope item has an impact on the proposed projects total construction cost.]*	**Filing Approach** **"New Building"** (Separate Building) New Code - 2014	**"Alteration"** (Addition) Prior Code - 1968
	Required for Existing Building	
1. Upgrade the existing building to fully comply with the 2014 Building Code because the *"new construction"* exceeds 110% of the existing building's gross floor surface area *[§28-101.4.5]*	No	**$-Yes**[38]
2. Removal of Asbestos Containing Materials (ACM)[39]	**$-Yes**	**$-Yes**
3. Compliance with Chapter 9 (Fire Protection Systems) of the NYC 2014 Code within existing structures when alteration costs exceed 60% of the existing building's replacement cost ***(Sprinklers)***	No	**$-Yes** [40]
4. Compliance with Chapter 9 (Fire Protection Systems) of the 2014 Code within existing structures when alteration costs of a space or portion of building is between 30% & 60% of the existing building's replacement cost ***(Sprinklers)***	No	*See #3, above*
5. Compliance with Chapter 9 (Fire Protection Systems) of the 2014 Code within existing structures when alteration costs exceed 60% of the existing building's replacement cost ***(Standpipes)***	No	*See #3, above* [41]
6. Compliance with Chapter 9 (Fire Protection Systems) of the 2014 Code within existing structures when alteration costs of a space or portion of building is between 30% & 60% of the existing building's replacement cost ***(Standpipes)***	No	*See #3, above*
7. Compliance with Chapter 11 (Accessibility) of the 2014 Code	No [42]	**$-Yes**
8. New Fire Alarm System within existing structures	**$-Yes** [43]	**$-Yes**
9. Emergency Generator	**$-Yes**	**$-Yes**
10. Remedy existing open DOB and ECB Violation[44]	**$-Yes**	**$-Yes**
11. New 3-hour *"Fire Wall"* between structures (separate structures) [45]	**$-Yes**	No
12. New 2-hour *"Fire Barrier"* between structures (fire areas – one structure)	---	**$-Yes**

37 Whether or not the indicated work is required is predicated on the design scheme provided herein.

38 The proposed new construct exceeds 110% of the existing building's gross floor surface area. Hence, the entire existing building would be required to be brought into full compliance with the NYC 2014 Building Code.

39 ACM that is disturbed to perform work within existing structures must be removed. **For an *"Alteration"***, the quantity and costs associated with the removal of ACM are significantly increased due to the scope of work required by items 2 thru 9.

40 At a minimum, even if the building is separated into *"Fire Areas"* no greater than 20,000sf, all areas below the level of discharge are required to be sprinklered, and places of assembly with 300 or more occupants require sprinklers. [The existing Auditorium has 396-occupants]

41 In addition to standpipes in all required stairways, stages greater than 1,000 square feet in area require a standpipe.

42 When "full compliance" is not required, accessibility shall be provided as directed by the SCA.

43 *"New Building"* (separate building) can have an independent fire alarm system provided the alarm in either structure annunciates in the other. Note: The existing fire alarm system is obsolete and should be replaced, see page 10.

44 Due to work required within the existing building filing as a "New Building", for new construction, the violations cannot be avoided.

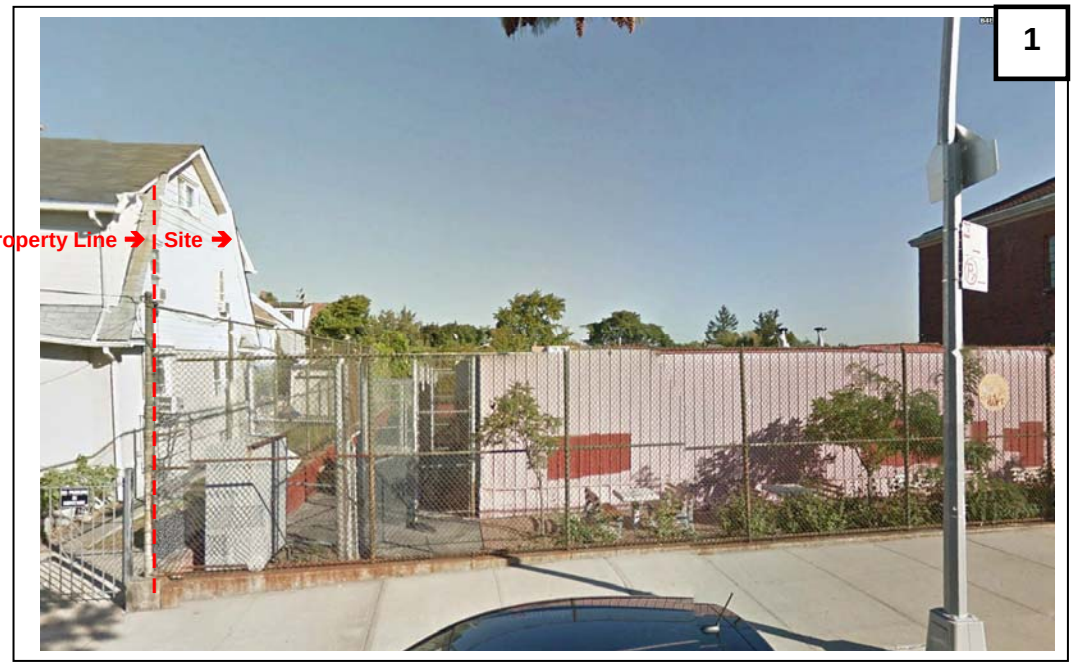
45 **NYC ZR12-10 Definitions Fire wall (2/2/11:(a)** A *"fire wall"* is a fire-resistance-rated smoke-tight wall having protected openings which restricts the spread of fire and extends vertically without offset, continuously from the foundation to or through the roof, and is in accordance with the specifications of the New York City Building Code for fire walls or fire wall separations, as applicable. **(b)** Where a wall constructed prior to February 2, 2011, does not meet the requirements of paragraph (a), but does meet the fire wall specifications of the New York City Building Code pursuant to which it was constructed, such wall shall be considered a fire wall. In the event that such wall either fails to meet such specifications, or no specifications for fire walls existed at the time of its construction, the Commissioner of the Department of Buildings shall determine whether such wall shall be considered a fire wall for the purpose of determining the boundary of a building.

TABLE-3 / SUMMARY OF ITEMS OF RELATED TO FILING APPROACH		
Items that are Dependent on the Filing Approach for the Proposed New Construction[46] *[$ - Scope item has an impact on the proposed projects total construction cost.]*	**Filing Approach**	
	"New Building" (Separate Building) New Code - 2014	**"Alteration"** (Addition) Prior Code - 1968
	Required for Existing Building	
13. Separate Temporary Certificates of Occupancy [TCO]	**Yes**	**Yes**
14. Separate Final Certificates of Occupancy [CO]	**Yes**	**Yes**
15. New Building ID, Address and DOB/BIN#	**Yes**	No

46 Whether or not the indicated work is required is predicated on the design scheme provided herein.

9. Photographs, Plans and Other Attachments

The Photographs, Plans and other attachments that follow are provided to illustrate the above noted issues and concerns, to provide a basis for open discussion, and direction for the possible development of a project. Please note that neither the Program of Requirements nor the Design Scheme provided herein is final.

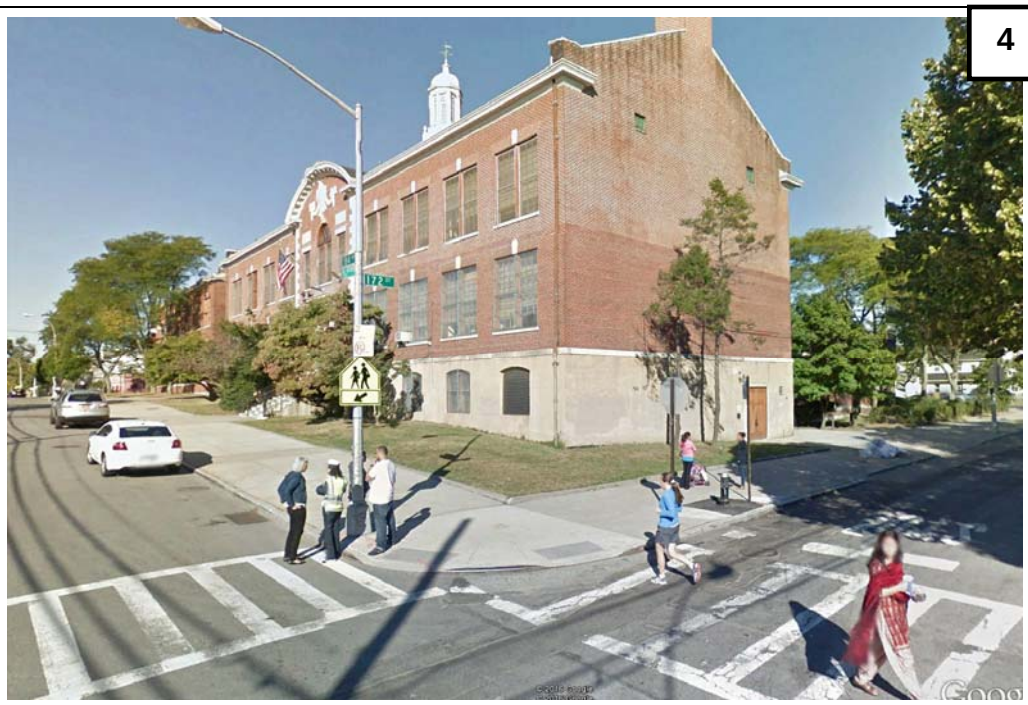


View of West Property Line from 84th Avenue

View looking East on 84th Avenue

STREET VIEWS

View of Main Entrance on 84th Avenue



View looking West on 84th Avenue

STREET VIEWS

View looking West on 83rd Avenue

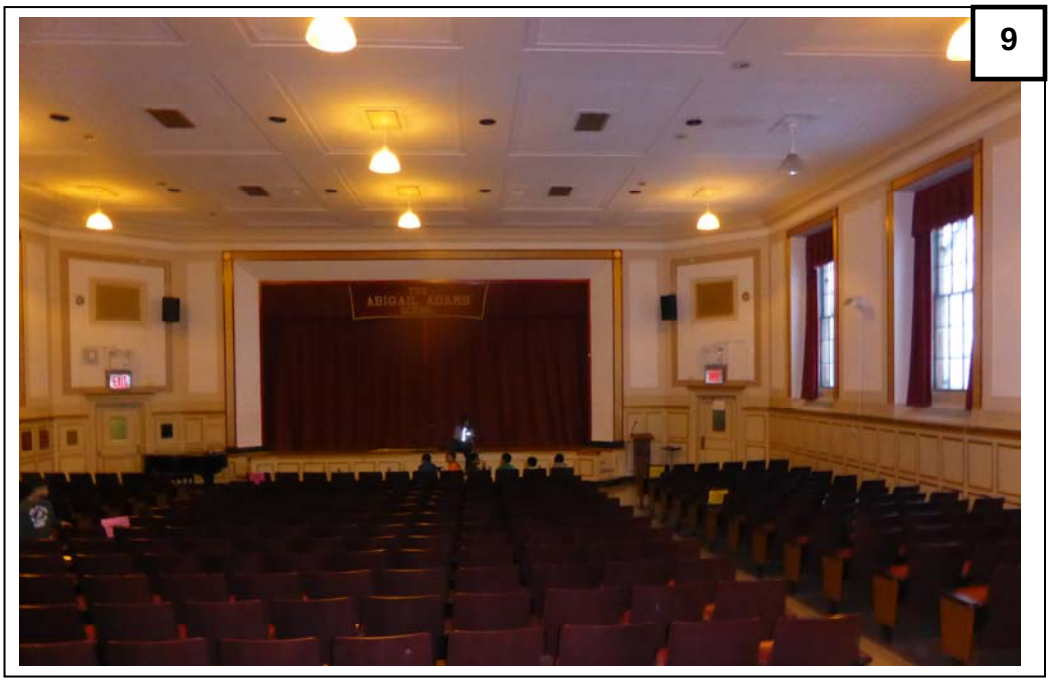
View looking South from 83rd Avenue

STREET VIEWS

View looking East on 83rd Avenue

View of West Property Line from 83rd Avenue

STREET VIEWS

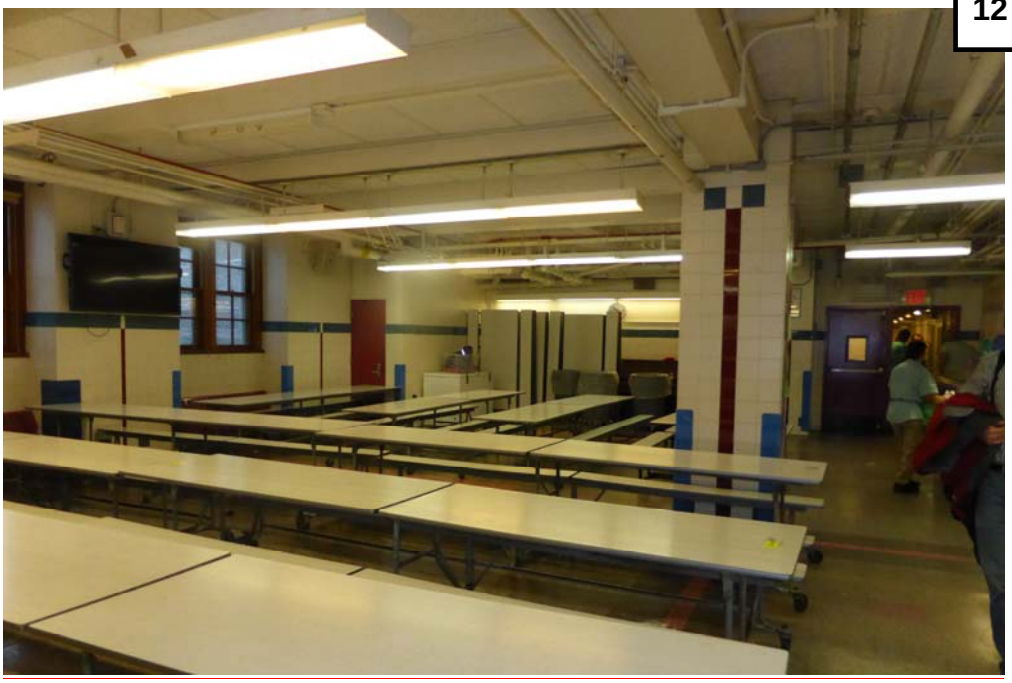


View of Existing Auditorium & Stage

View of Artwork in the Existing Auditorium

INTERIOR VIEWS

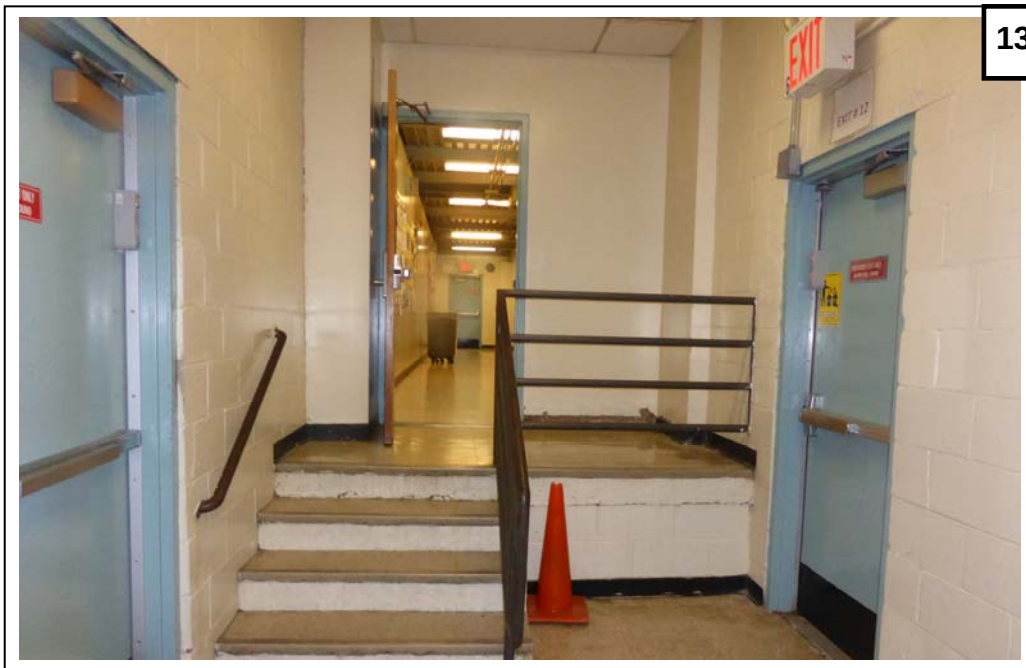
View of Existing Kitchen & Cafeteria



View of Existing Kitchen & Cafeteria

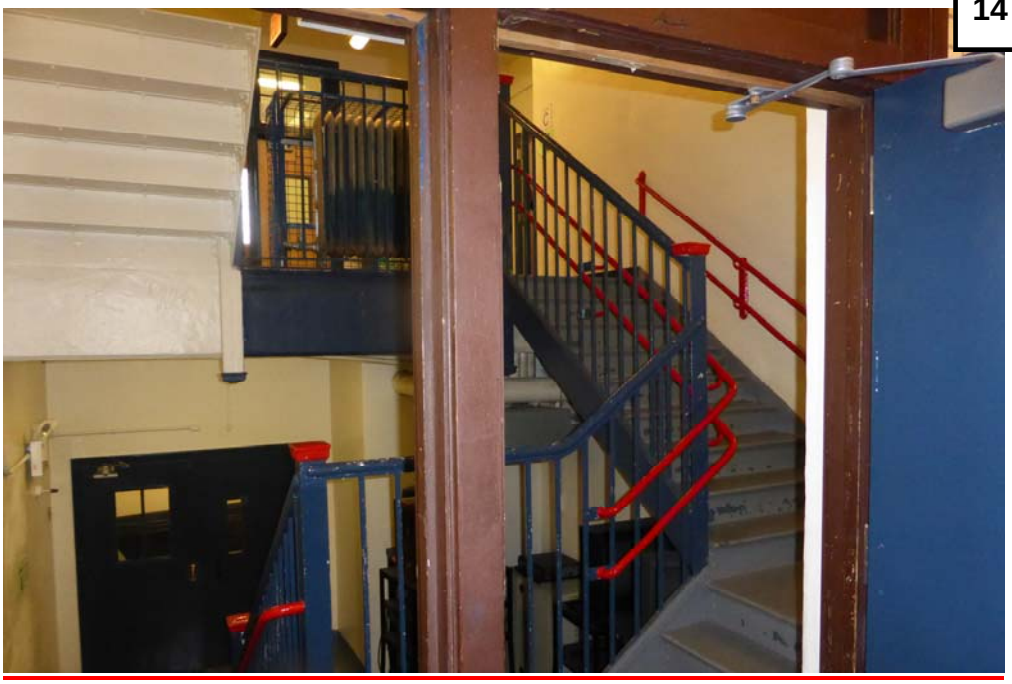
INTERIOR VIEWS

13



View of Connecting Stairs to the 1-Story Addition

14



View of Connecting Stairs to the 1-Story Addition

INTERIOR VIEWS

9. Existing Site Data / Information:

NYC Department of Education

P.S. 131 ABIGAIL ADAMS

VERONICA DEPAOLO, I.A. PRINCIPAL
170-45 84 AVENUE, QUEENS, NY 11432
PHONE: 718-480-2840

DOE Home Page > SchoolPortals > Q131

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Q131

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- **Parents**
  - Parent Support
- **Students**
  - Student Support
- **Educational Support**
  - Admissions and Graduation Requirements
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  - Transportation

School Search

School Name, Number, or Address

GO

Advanced Search

Q131

Please visit our main site:

https://ps131q.wordpress.com/

Map of School Area and Directions

DOE School Calendar

School Details

P.S. 131 Abigail Adams

School Number:
Q131

Address:
170-45 84 AVENUE
QUEENS, NY 11432

Phone:
718-480-2840

Fax:
718-658-5690

School Hours

Student Enrollment:
844

Grades Served:
01, 02, 03, 04, 05, 0K, SE

I.A. PRINCIPAL
VERONICA DEPAOLO

Parent Coordinator:
Pauline Isaacs

Police Precinct:
107

Geographic District:
29

Community School Office

Superintendent:
LENON MURRAY

Address:
191-02 90 AVENUE
QUEENS, NY 11423

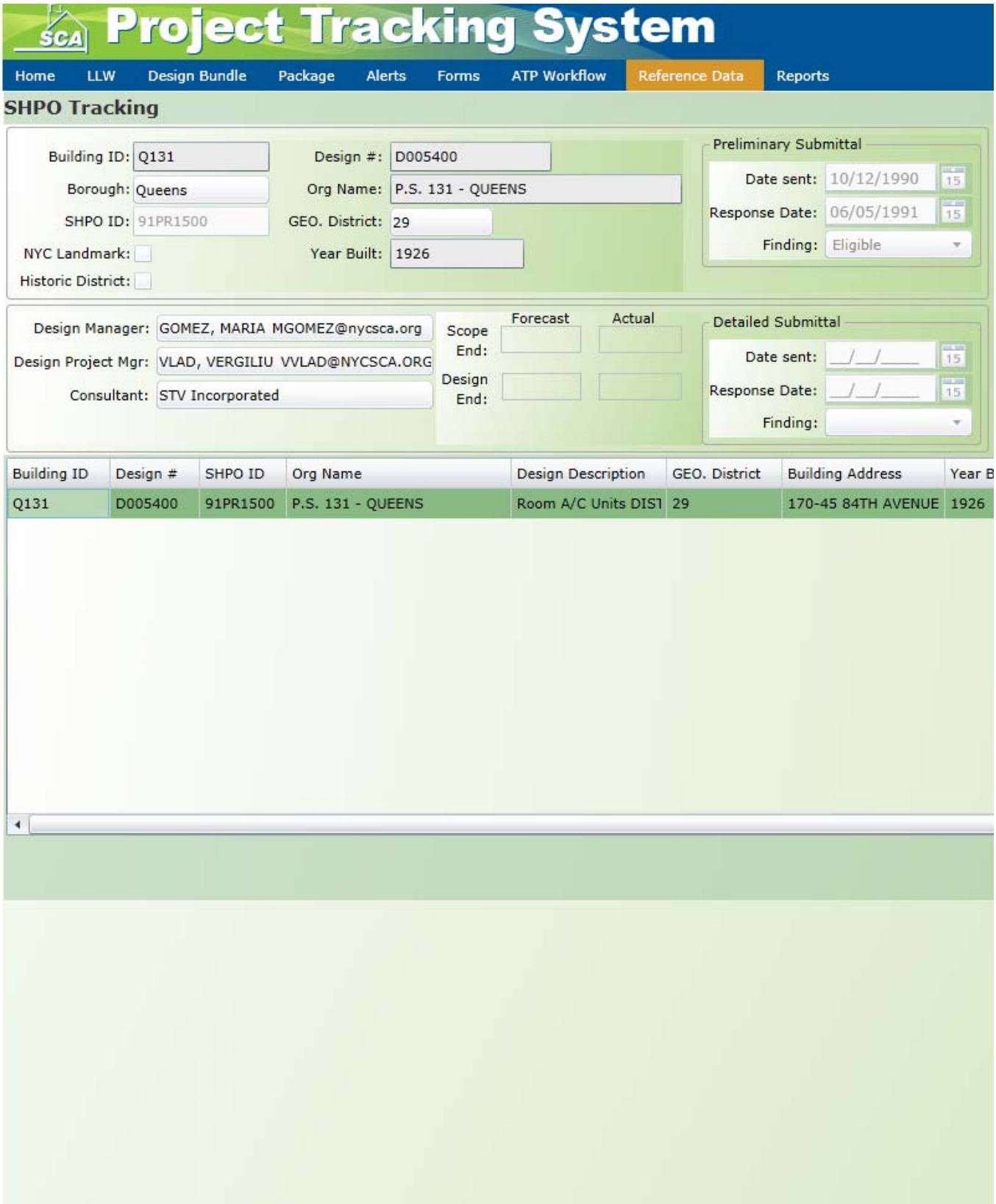
Phone:
718-217-7740

Family Leadership Coordinator:
Rachel Robinson
Email:
RRobinson9@schools.nyc.gov

Family Support Coordinator:
Keturah Hardy
Email:
KHardy3@schools.nyc.gov

Education Council President:
Nicole Hammond

NYC DOE PROFILE



SCA/SHPO TRACKING / ELIGIBLE

NYC Buildings

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NYC Department of Buildings

Property Profile Overview

170-09 84 AVENUE		QUEENS 11432		BIN# 4211112	
83 AVENUE	170-08 - 170-46	Health Area	: 2810	Tax Block	: 9875
84 AVENUE	170-07 - 170-45	Census Tract	: 456	Tax Lot	: 1
172 STREET	83-02 - 83-20	Community Board	: 408	Condo	: NO
		Buildings on Lot	: 4	Vacant	: NO

View DCP Addresses... Browse Block

View Zoning Documents | View Challenge Results | Pre - BIS PA | View Certificates of Occupancy

Cross Street(s):	170 STREET, 172 STREET		
DOB Special Place Name:	PS131		
DOB Building Remarks:			
Landmark Status:		Special Status:	N/A
Local Law:	YES	Loft Law:	NO
SRO Restricted:	NO	TA Restricted:	NO
UB Restricted:	NO		
Environmental Restrictions:	N/A	Grandfathered Sign:	NO
Legal Adult Use:	NO	City Owned:	YES
Additional BINs for Building:	NONE		

Special District: UNKNOWN

This property is not located in an area that may be affected by Tidal Wetlands, Freshwater Wetlands, Coastal Erosion Hazard Area, or Special Flood Hazard Area. Click here for more information

Department of Finance Building Classification: W1-EDUCATIONAL STRUC

Please Note: The Department of Finance's building classification information shows a building's tax status, which may not be the same as the legal use of the structure. To determine the legal use of a structure, research the records of the Department of Buildings.

	Total	Open
Complaints	8	0
Violations-DOB	37	4
Violations-ECB (DOB)	53	7
Jobs/Filings	43	
ARA / LAA Jobs	0	
Total Jobs	43	
Actions	23	

OR Enter Action Type:
OR Select from List:
Select...
AND Show Actions

Elevator Records
Electrical Applications
Permits In-Process / Issued
Illuminated Signs Annual Permits
Plumbing Inspections
Open Plumbing Jobs / Work Types
Facades
Marquee Annual Permits
Boiler Records
DEP Boiler Information
Crane Information
After Hours Variance Permits

If you have any questions please review these Frequently Asked Questions, the Glossary, or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

NYC/DOB PROPERTY PROFILE

NYC BUILDINGS

Certificate of Occupancy

CO Number: 400294597T031

This certifies that the premises described herein conforms substantially to the approved plans and specifications and to the requirements of all applicable laws, rules and regulations for the uses and occupancies specified. No change of use or occupancy shall be made unless a new Certificate of Occupancy is issued. *This document or a copy shall be available for inspection at the building at all reasonable times.*

A.

Borough: Queens	**Block Number:** 09875	**Certificate Type:** Temporary
Address: 170-07 84 AVENUE	**Lot Number(s):** 1	**Effective Date:** 06/26/2007
Building Identification Number (BIN): 4211112	**Building Type:** Altered	**Expiration Date:** 09/24/2007

For zoning lot metes & bounds, please see BISWeb.

B.

Construction classification:	1-E	**Number of stories:**	2
Building Occupancy Group classification:	G	**Height in feet:**	32
Multiple Dwelling Law Classification:	None	**Number of dwelling units:**	0

C. **Fire Protection Equipment:**
Fire alarm system

D. **Type and number of open spaces:**
None associated with this filing.

E. **This Certificate is issued with the following legal limitations:**
None

Outstanding requirements for obtaining Final Certificate of Occupancy:
There are 3 outstanding requirements. Please refer to BISWeb for further detail.

Borough Comments: None

Borough Commissioner

Commissioner

B Form 54 (Revised 03/05)

DOCUMENT CONTINUES ON NEXT PAGE

EXISTING TEMPORARY CERTIFICATE OF OCCUPANCY

NYC BUILDINGS

Certificate of Occupancy

CO Number: 400294597T031

Permissible Use and Occupancy

Floor From To	Maximum persons permitted	Live load lbs per sq. ft.	Building Code habitable rooms	Building Code occupancy group	Zoning dwelling or rooming units	Zoning use group	Description of use
CEL		75		D-2		3A	FAN RM & PIPE SPACE
CEL	3	75		D-2		3A	BOILER ROOM
CEL	256	100		F-4		3A	CAFETERIA
CEL	9	100		F-4		3A	KITCHEN
CEL	3	60		G		3A	CUSTODIAN WORK SHOP
CEL	142	40		G		3A	CLASSROOMS
CEL	9	50		E		3A	OFFICES
CEL		100		B-2		3A	STORAGE
CEL	396	60		F-1B		3A	AUDITORIUM
001	348	40		G		3A	CLASSROOMS
001	10	50		E		3A	OFFICES
001							NONE
002	40	60		G		3A	LIBRARY/COMPUTER

Borough Commissioner

Commissioner

B Form 54 (Revised 03/05)

DOCUMENT CONTINUES ON NEXT PAGE

EXISTING TEMPORARY CERTIFICATE OF OCCUPANCY

NYC BUILDINGS

Certificate of Occupancy

CO Number: 400294597T031

Permissible Use and Occupancy

Floor From To	Maximum persons permitted	Live load lbs per sq. ft.	Building Code habitable rooms	Building Code occupancy group	Zoning dwelling or rooming units	Zoning use group	Description of use
002	23	40		G		3A	TEACHER'S LOUNGE
002	442	40		G		3A	CLASSROOMS
ATT		75		D-2		3A	FAN ROOM

END OF SECTION

Borough Commissioner

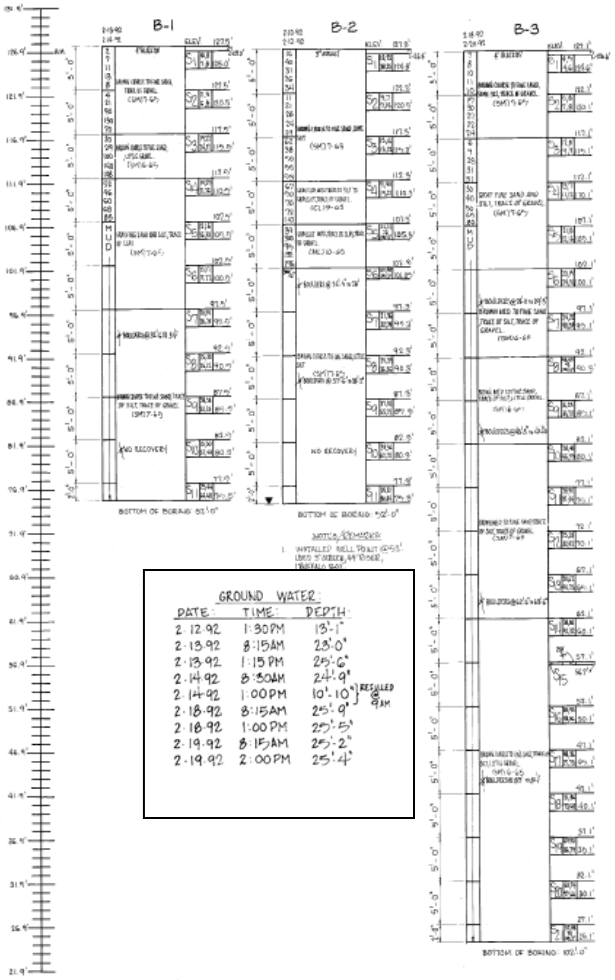
Commissioner

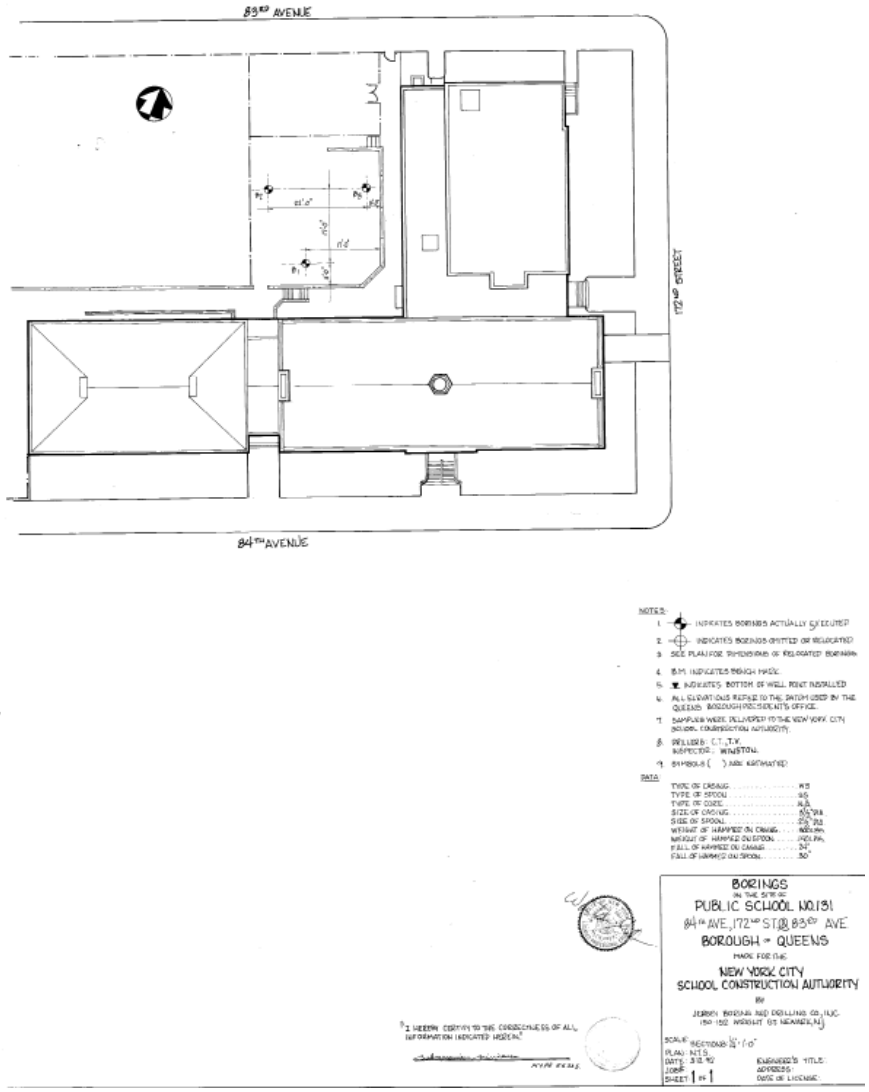
B Form 54 (Revised 03/05)

END OF DOCUMENT

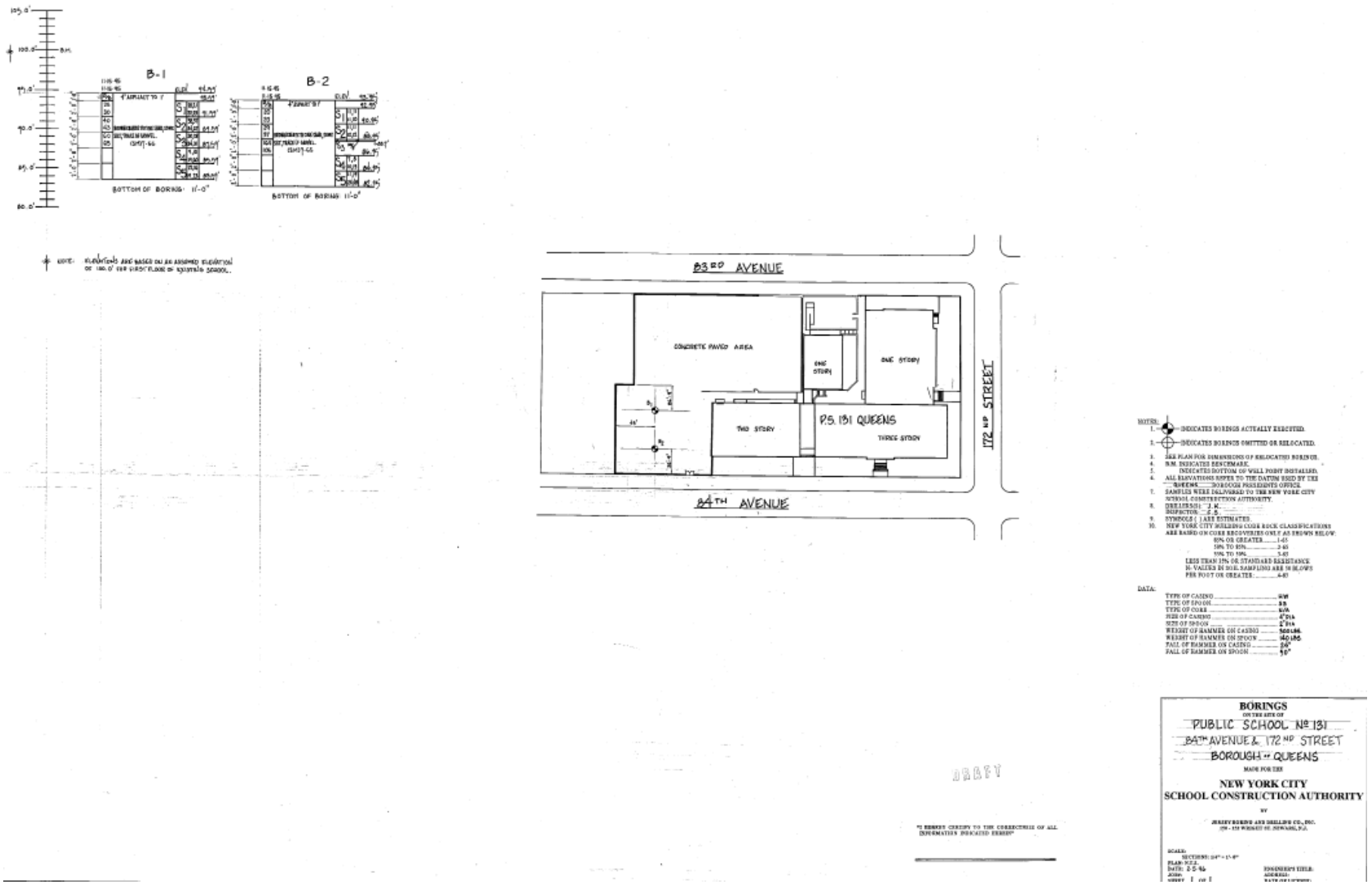
400294597/031 6/28/2007 10:28:40 AM

EXISTING TEMPORARY CERTIFICATE OF OCCUPANCY



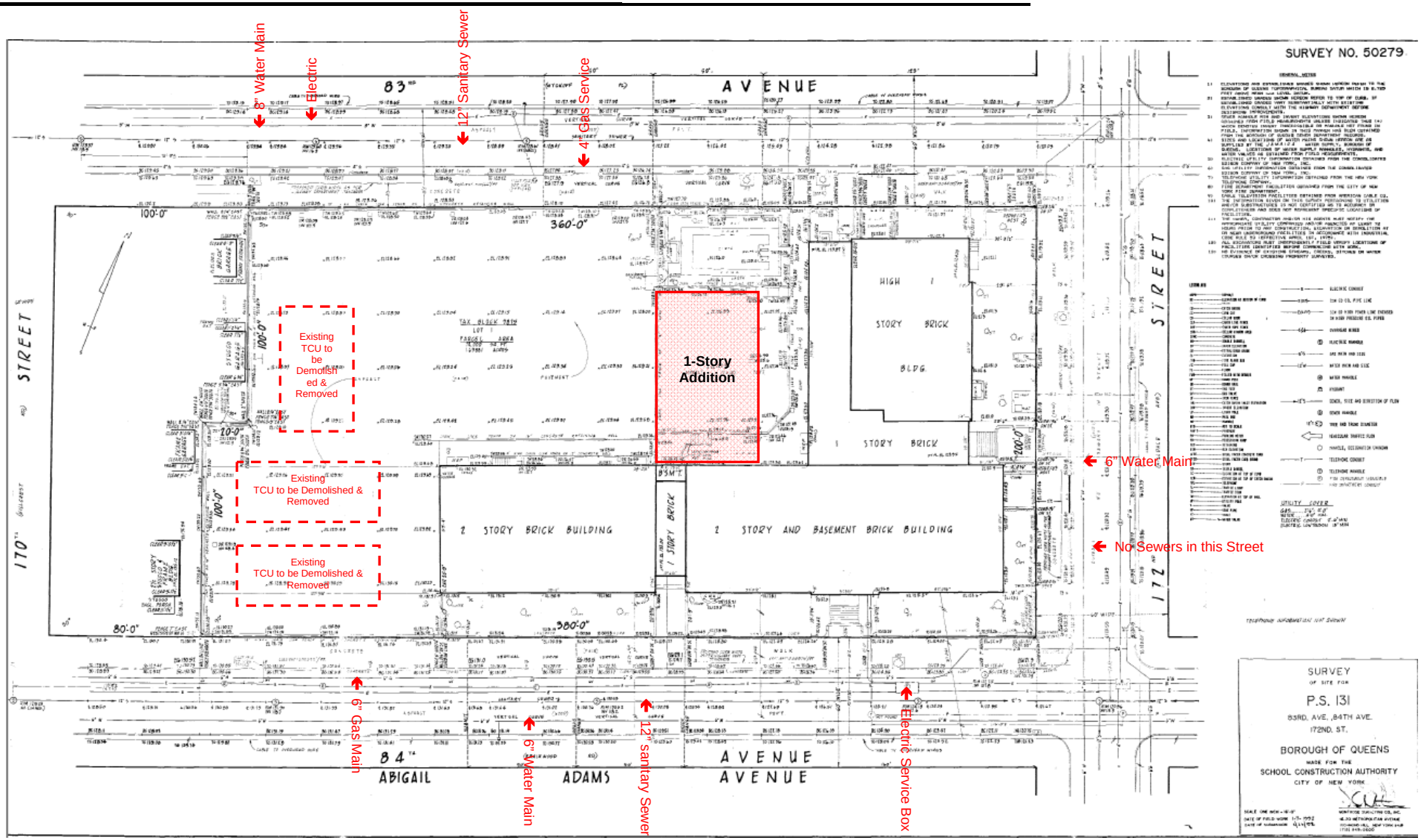


EXISTING BORINGS (March - 1992)



EXISTING BORINGS FOR TCU'S (February - 1996)

PS131Q – New Construction
Adjusted Capacity – 352
170-45 84th Avenue, Queens, N.Y. 11432



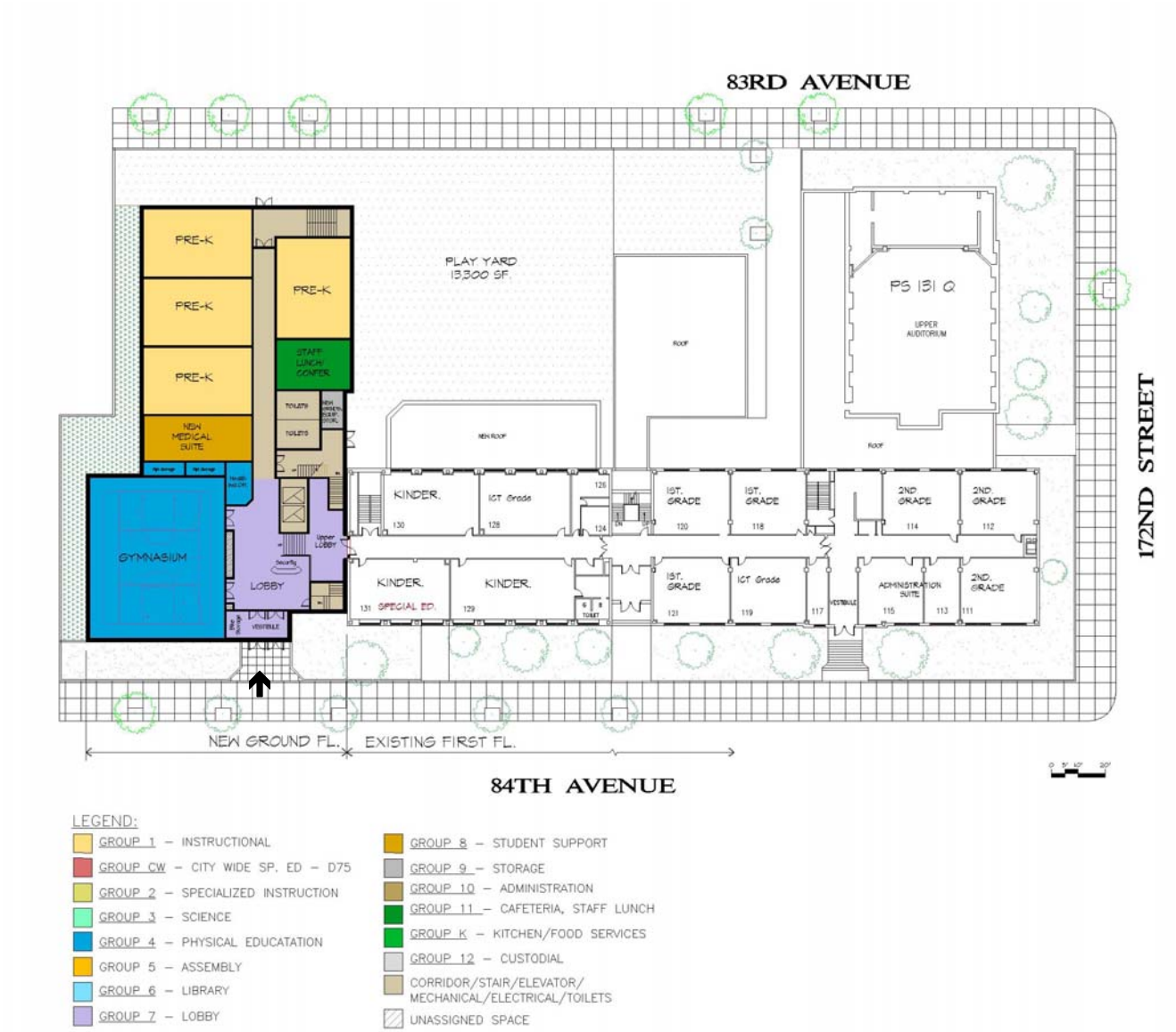
SURVEY (January - 1992)

10. Conceptual Plans:

Through an expedited singular design approach the following conceptual plans *["Test Fit / Sketch Study"]* attempt to accommodate a given POR in the most straight forward viable approach possible while keeping in mind, amongst other things, functionality, layout, circulation, impact to local environs, impact to existing site conditions, impact to existing buildings, costs, codes, zoning, phasing and constructability issues.

The goal of the following conceptual plans is to successfully address all issues and concerns that can be resolved through design, and if not successfully address all issue and concerns that can be resolved through design, at a minimum, expose those issues and concerns that may present significant challenges for both the design and construction of a proposed project.

In the end, it is hoped that if a project is assigned to a Design Team that the following conceptual plans *["Test Fit / Sketch Study"]* assists that Design Team in their efforts to develop and provide a design that best addresses the multiple complex and sometimes competing and/or contradictory needs of a project.



Notes:

The entrance to the proposed new construction is at grade. (See additional notes on next page.)

SITE / FIRST FLOOR PLAN

LEGEND:

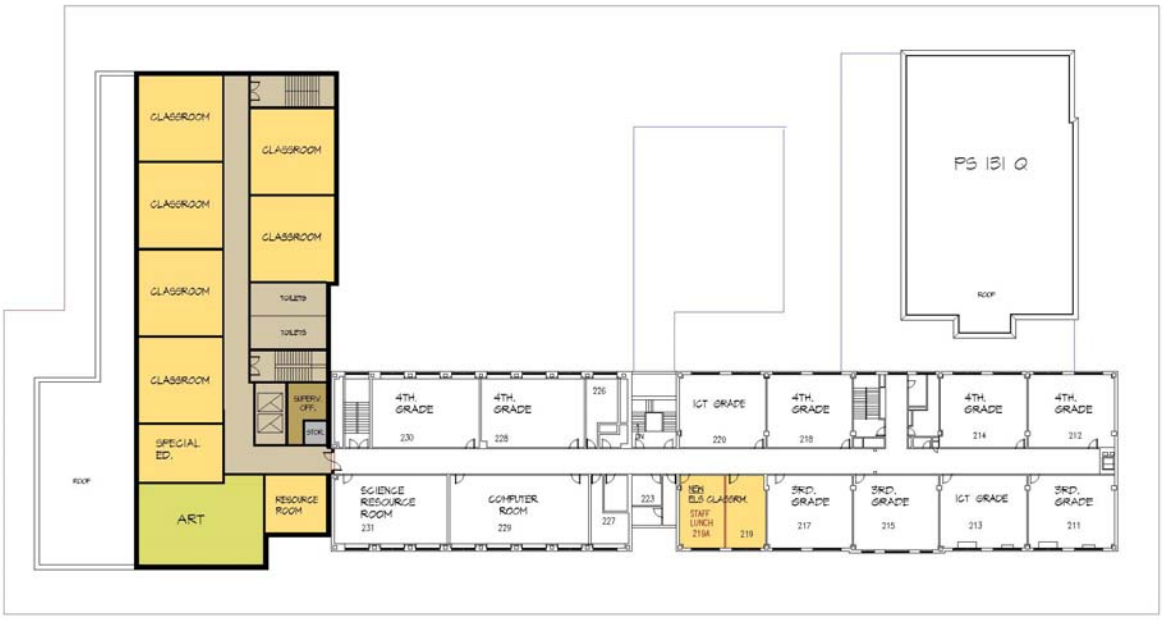
- GROUP 1 – INSTRUCTIONAL
- GROUP CW – CITY WIDE SP. ED – D75
- GROUP 2 – SPECIALIZED INSTRUCTION
- GROUP 3 – SCIENCE
- GROUP 4 – PHYSICAL EDUCATATION
- GROUP 5 – ASSEMBLY
- GROUP 6 – LIBRARY
- GROUP 7 – LOBBY
- GROUP 8 – STUDENT SUPPORT
- GROUP 9 – STORAGE
- GROUP 10 – ADMINISTRATION
- GROUP 11 – CAFETERIA, STAFF LUNCH
- GROUP K – KITCHEN/FOOD SERVICES
- GROUP 12 – CUSTODIAL
- CORRIDOR/STAIR/ELEVATOR/ MECHANICAL/ELECTRICAL/TOILETS
- UNASSIGNED SPACE

Notes:

The plans provided herein are based on the ability to use or expand existing utility and service rooms in the existing school building so the proposed new construction can be constructed at grade and/or at the same elevation as the existing school's basement so not to place new construction at or below the existing level of groundwater and limit the height of the proposed new construction. (See "Existing Borings" page 31.)

If the existing utility and service rooms in the existing school building cannot be utilized for the needed additional utilities and services the proposed new construction would need to be expanded (larger footprint) or elevated to match existing floor levels.

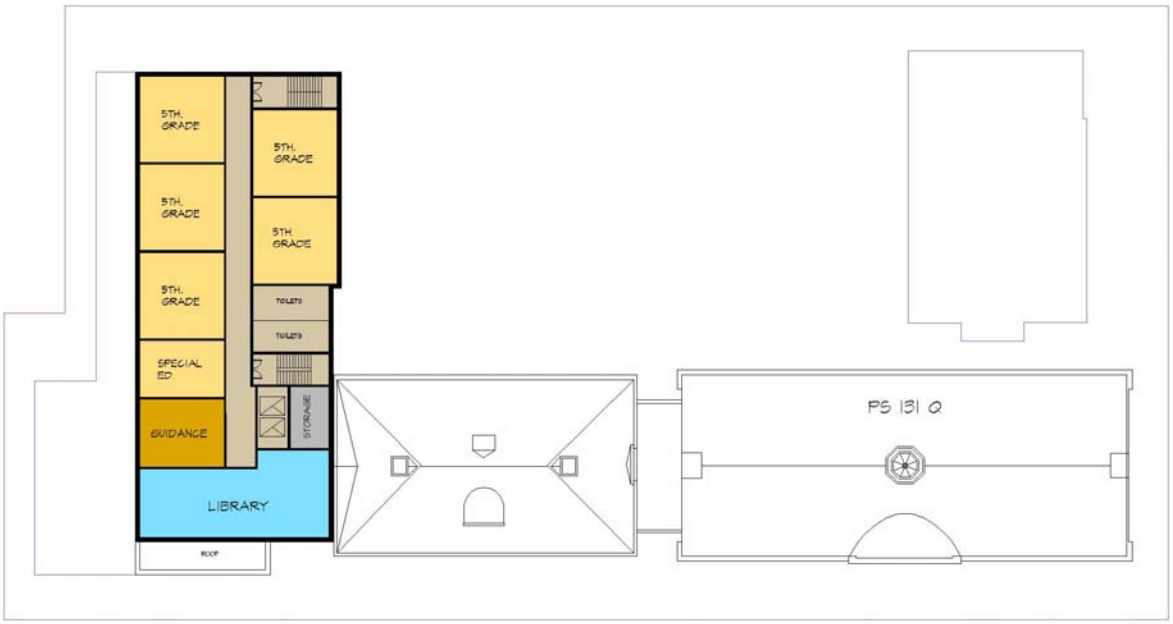
CELLAR FLOOR PLAN



LEGEND:

- GROUP 1 – INSTRUCTIONAL
- GROUP CW – CITY WIDE SP. ED – D75
- GROUP 2 – SPECIALIZED INSTRUCTION
- GROUP 3 – SCIENCE
- GROUP 4 – PHYSICAL EDUCATATION
- GROUP 5 – ASSEMBLY
- GROUP 6 – LIBRARY
- GROUP 7 – LOBBY
- GROUP 8 – STUDENT SUPPORT
- GROUP 9 – STORAGE
- GROUP 10 – ADMINISTRATION
- GROUP 11 – CAFETERIA, STAFF LUNCH
- GROUP K – KITCHEN/FOOD SERVICES
- GROUP 12 – CUSTODIAL
- CORRIDOR/STAIR/ELEVATOR/ MECHANICAL/ELECTRICAL/TOILETS
- UNASSIGNED SPACE

SECOND FLOOR PLAN



LEGEND:

- GROUP 1 – INSTRUCTIONAL
- GROUP CW – CITY WIDE SP. ED – D75
- GROUP 2 – SPECIALIZED INSTRUCTION
- GROUP 3 – SCIENCE
- GROUP 4 – PHYSICAL EDUCATATION
- GROUP 5 – ASSEMBLY
- GROUP 6 – LIBRARY
- GROUP 7 – LOBBY
- GROUP 8 – STUDENT SUPPORT
- GROUP 9 – STORAGE
- GROUP 10 – ADMINISTRATION
- GROUP 11 – CAFETERIA, STAFF LUNCH
- GROUP K – KITCHEN/FOOD SERVICES
- GROUP 12 – CUSTODIAL
- CORRIDOR/STAIR/ELEVATOR/ MECHANICAL/ELECTRICAL/TOILETS
- UNASSIGNED SPACE

THIRD FLOOR PLAN

LEGEND:

- GROUP 1 – INSTRUCTIONAL
- GROUP CW – CITY WIDE SP. ED – D75
- GROUP 2 – SPECIALIZED INSTRUCTION
- GROUP 3 – SCIENCE
- GROUP 4 – PHYSICAL EDUCATATION
- GROUP 5 – ASSEMBLY
- GROUP 6 – LIBRARY
- GROUP 7 – LOBBY
- GROUP 8 – STUDENT SUPPORT
- GROUP 9 – STORAGE
- GROUP 10 – ADMINISTRATION
- GROUP 11 – CAFETERIA, STAFF LUNCH
- GROUP K – KITCHEN/FOOD SERVICES
- GROUP 12 – CUSTODIAL
- CORRIDOR/STAIR/ELEVATOR/ MECHANICAL/ELECTRICAL/TOILETS
- UNASSIGNED SPACE

ROOF PLAN

07-02-15

Q131 Addition
Program of Requirements for addition to a School Building
Capital Budget Line E-2364

PS 352

DETAILED PROGRAM OF REQUIREMENTS

ROOM LAYOUT	ROOM TYPE	No of existing units	No of Total units	NO. OF New Addition	CAPACITY PER UNIT	CAPACITY TOTAL	UNIT AREA [sf]	TOTAL NET AREA	existing area to be reused
	GROUP 1- INSTRUCTION								
1-10	Pre-Kindergarten (w/ toilets)	0	4	4	18	72	1,000	4,000	
1-11	Kindergarten (w/ toilets) (@ first fl. if possible)	4	5	1	20	20	1,000	1,000	
1-35	Typical Classrooms - Grade 1	3	5	2	20	40	750	1,500	
1-35	Typical Classrooms - Grade 2	3	5	2	20	40	750	1,500	
1-14	Typical Classrooms - Grade 3 (excl. 1 CR @ TCU)	3	5	2	20	40	750	1,500	
1-15	Typical Classrooms - Grade 4	5	5	0	28	0	750	0	
1-15	Typical Classrooms - Grade 5 (excl. 5 CR @ TCU)	0	5	5	28	140	750	3,750	
	ICT Classrooms	4	4	0					
1-30	CSD Special Education Classrooms - 500 SF Minimum	1	2	1	12	0	500	500	
1-31/32	Reading/Speech Resource Room	1	2	1	---	---	375	375	
	GROUP 2- SPECIALIZED INSTRUCTION								
2-10m	Art Classroom w/ 125 sf storage in class	0	1	1	28	28	750	750	
2-30m	Music Classroom (existing)	1	1	0	28	0	750	0	400
	Computer Lab (existing)	1	1	0					
	GROUP 3- SCIENCE								
3-13	Science Resource room (existing)	1	1	0	28	0	875	0	
	GROUP 4/GROUP 5 - PHYSICAL EDUCATION/ASSEMBLY								
	PLAYGROUND: 3,000 sf ECC Playground separate from larger yard; Hard-surface General Playground @ 30 sf/student if possible (exclude Pre-K & K count)								
	Gym	0	1	1	---	---	3,000	3,000	
	Auditorium--existing	1	1	0	---	---	---	---	
	GROUP 6 - LIBRARY								
6-11	Library	0	1	1	---	---	1,500	1,500	
	GROUP 7 - LOBBY								
7-10	Lobby	-1	1	1	---	---	750	750	
	GROUP 8 - STUDENT SUPPORT								
8-10	Guidance/SBST Suite			1	---	---	---	500	
8-10.1	Guidance Office			1	---	---	100	---	
8-30.1	SBST Office			1	---	---	100	---	
8-30.2	Interview/Conference Room			1	---	---	150	---	
8-10.3	Store Room			1	---	---	50	---	
8-10.4	Waiting Room			1	---	---	100	---	
8-51	Medical Suite- existing to be used towards new progran	-1	1	1	---	---	---	665	
	Medical Suite Toilet (for students)			1	---	---	50	---	
	Nurse's Office			1	---	---	125	---	
	resting area			2			45	---	
	Examination Room			2	---	---	125	---	
	Waiting area			1	---	---	75	---	

DRAFT PROGRAM OF REQUIREMENTS

07-02-15

Q131 Addition
Program of Requirements for addition to a School Building
Capital Budget Line E-2364

PS 352

DETAILED PROGRAM OF REQUIREMENTS

ROOM LAYOUT	ROOM TYPE	No of existing units	No of Total units	NO. OF New Addition	CAPACITY PER UNIT	CAPACITY TOTAL	UNIT AREA /sf	TOTAL NET AREA	existing area to be reused
	GROUP 9 - STORAGE								
	Educational Supply Closet	various	various	3			50	150	
9-19	Grounds Equipment Storeroom			1	---	---	125	125	
9-24	Refuse and Recycling room (w/ floor drain and hose bib) (on 1st floor if possible)			1		---	250	250	
9-25, 9-21	Computer/AV Storeroom (1 ea. Instr. floor)	0	3	3	---	---	80	240	
	Bicycle storage	0	1	1			110	110	
9-21	Audio-Visual /Secure Storeroom	0	1	1	---	---	150	150	
	GROUP 10 - ADMINISTRATION								
	Administration Suite - existing	1	1	0	---	---	---	---	
	Supervisory office (floor where no staff supervisory)	Various	Various	1	---	---	150	150	
10-25	Parents / Community Room - existing area to be reusec	0	1	1	---	---	375	375	
	CBO office	0	1	1			250	250	
	GROUP 11 - CAFETERIA/STAFF LUNCH								
11-10	Students' Dining Area existing cafeteria to be expanded	-1	1	1	277	---	4,155	4,155	2,520
11-11	Staff Lunch / Conference Room	1	1	0	---	---	---	---	
	GROUP 12 - CUSTODIAL								
	Custodial Locker-existing		2	0	---	---	---	---	
12-11	Custodian's Office-existing area to be reused	1	1	0	---	---	---	---	
12-14,16	Custodian's Storage/workshop -existing	1	1	0	---	---	375	0	
12-17	Janitor's Sink Closet	Various	Various			(1 per floor)-in addition			
12-22	Shared unsex toilet w/ shower and lockers	0	1	1			135	135	
12-25	Telecommunications Room		1	1	---	---	300	300	
12-26	Telecommunications Switch Closet (@ floors w/o tel. room)			2	---	---	100	200	
	GROUP K - KITCHEN								
K1	Kitchen Complex (refer to K1 for gross area)	-1	1	1	---	---	2,700	2,700	1,738
	Existing kitchen to be expanded								
K2	Kitchen								
K6	Dietitian's Office								
K7	Help Locker Room - M/F (w/ toilet)								
	Food Storage (75% may be remote from kitchen)								
	TOTAL PROGRAMMED AREA (60% Gross)							**30,580**	
	TOTAL CORE AREA (40% Gross)							**20,387**	
	TOTAL GROSS AREA (100%)							**50,967**	
	Area of existing building (that can be used towards new program area								4,658
	GROSS AREA FOR ADDITION							**46,309**	
	TOTAL ADJUSTED CAPACITY:			**352**					
	Unadjusted Capacity:			*360*					
	TOTAL SF PER PUPIL:			**145**					

File name: Q131 Addition 2 Printed on: 7:36 AM3/9/2016

DRAFT PROGRAM OF REQUIREMENTS

"Measuring the Distance" The 200 and 500 Foot Rules

NEW YORK STATE LIQUOR AUTHORITY

DIVISION OF ALCOHOLIC BEVERAGE CONTROL

The 200 Foot Rule

The Alcoholic Beverage Control Law prohibits certain licenses from being issued if the location of the establishment is on the same street and within 200 feet of a building that is used exclusively as a school, church, synagogue or other place of worship. This restriction is commonly called the 200 foot rule and applies to any retail establishment where liquor will be sold for on premises consumption and any retail establishment where liquor or wine will be sold for consumption off the premises.

Measurement of distance

The law provides that the measurement be taken in a straight line from the center of the nearest entrance of the school/place of worship to the center of the nearest entrance of the establishment. The distance is determined using only entrances that are regularly used to give ingress to (a) the students of the school, (b) the general public into the place of worship; and (c) patrons into the establishment. Emergency/fire exits, maintenance access, and doors to gain access to non-public areas are not used in the measurement. If the entrance is set back from the sidewalk by a walkway or doorway, the measurement is taken from the center of the line where the walkway/doorway meets the sidewalk. For an establishment in a multi-story building, the building entrance at street level is used.

NYS LIQUOR AUTHORITY – 200-FOOT RULE

Exhibit - 1

From: abc.sm.albany.counsel <legal@sla.ny.gov>
Sent: Friday, September 11, 2015 3:03 PM
To: PERCUDANI, PETER
Subject: RE: Mixed-Use Building / School / Alcohol 200-foot Rule

Since the building would not be exclusively used as a school, new establishments within 200 feet would not be prohibited by the 200' law. Presumably, this would be true of a school located within the same mixed use building as well.

From: PERCUDANI, PETER [mailto:PPERCUDANI@NYCSCA.ORG]
Sent: Friday, September 11, 2015 12:17 PM
To: abc.sm.albany.counsel
Subject: Mixed-Use Building / School / Alcohol 200-foot Rule

To Whom it may concern,

We are currently evaluating a new project in NYC where a mixed-use building would be part commercial, office, and school (6th to 8th grades).

Would an establishment that sold or served alcohol be permitted within the building itself?

In addition, would any new establishments that sold/served alcohol be permitted within 200-feet of the school's entrance since the building would not be exclusively used as a school?

Thank you for your time and attention to this matter.

Peter Percudani, RA
NYC School Construction Authority
Managing Architect - Design Development
Quality Control & Construction Services Studio / 718-472-8756

RESPONSE FROM NYS LIQUOR AUTHORITY

Exhibit - 1

1 RCNY §9000-01

CHAPTER 9000

Zoning

§9000-01 Adult establishments.

Dates of establishment and discontinuance of adult establishments, houses of worship, and schools for the purposes of sections 32-01 and 42-01 of the zoning resolution. In determining whether an adult establishment may lawfully be established at a a location pursuant to sections 32-01 and 42-01 of the zoning resolution, the department will use the following criteria to determine the dates of establishment and discontinuance for adult establishments, houses of worship and schools located or proposed to be located within 500 feet of each other.

(a) The date of establishment of an adult establishment, house of worship, or school in existence and operating prior to August 8, 2001 shall be the date of issuance of an appropriate department permit or, if no permit was required, the date that it commenced operation, as determined by the department.

(b) Except as otherwise provided in subdivision a of this section, the date of establishment of an adult establishment, house of worship, or school shall be the date of issuance of an appropriate department permit, subject to the following qualifications:

(1) With respect to a new building permit or alteration permit:

(i) significant progress must be shown toward completion of the work under the permit. For the purposes of this paragraph, the term "significant progress" means the issuance of a temporary certificate of occupancy or, if applicable, department signoff of the work within one year of issuance of the permit, except that upon application, the commissioner or his or her designee, may extend the one year period in accordance with subdivision c of this section for a period of time not exceeding one year, and

(ii) the use or operation for which the building is constructed or altered must commence within six months after the issuance of a temporary certificate of occupancy or, if applicable, within six months after a department signoff that the work has been completed, except that upon application, the commissioner or his or her designee, may extend the six month period in accordance with subdivision c of this section for a period of time not exceeding six months.

(2) With respect to applications for permits filed solely to establish priority, where no work requiring a building permit is proposed, the use or operation for which the permit is issued must commence within two months of the issuance of such permit, except that upon application, the commissioner or his or her designee may extend such two month period in accordance with subdivision c of this section for a period of time not exceeding two months.

(c) An extension of time pursuant to subdivision b of this section may be granted where the permittee submits an application no later than 30 days prior to the expiration of the applicable time period together with satisfactory evidence that significant progress or the commencement of use or operations within the applicable time period is impracticable. The commissioner or his or her designee shall make a determination and notify the applicant in writing of his or her determination not later than 30 days after receipt of the application by the department. If the application is denied, the commissioner or his or her designee shall state the reason(s) therefor. If the commissioner or his or her designee fails to act upon the application within such 30-day period, the application shall be deemed to be granted.

(d) An adult establishment, otherwise in compliance with the zoning resolution, may be established within 500 feet of a discontinued adult establishment, house of worship or school. For the purposes of this subdivision, once established, an adult establishment, house of worship, or school shall not be deemed to be discontinued until it has ceased operation for a continuous period of one year or longer.

(e) The time periods set forth in this section for significant progress of work, or for commencement of operations shall commence to run as of the effective date of this section or issuance of the permit, whichever is later.

1 RCNY § 9000-1 / Adult Establishments, Houses of Worship & Schools

Exhibit - 2

S T A T E O F N E W Y O R K

151--A

2013-2014 Regular Sessions

I N A S S E M B L Y

(PREFILED)

January 9, 2013

Introduced by M. of A. NOLAN, BRENNAN, TITONE -- read once and referred to the Committee on Education -- committee discharged, bill amended, ordered reprinted as amended and recommitted to said committee

AN ACT to amend the education law, in relation to restricting the sale, lease, transfer or authorization of open-air schoolhouse playgrounds for certain uses

THE PEOPLE OF THE STATE OF NEW YORK, REPRESENTED IN SENATE AND ASSEMBLY, DO ENACT AS FOLLOWS:

Section 1. Subdivision 5 of section 2556 of the education law, such section as renumbered by chapter 762 of the laws of 1950, is amended to read as follows:

5. It shall be unlawful for a schoolhouse to be constructed in the city of New York without an open-air playground attached to or used in connection with the same. EXISTING PLAYGROUNDS SHALL NOT BE SOLD, LEASED OR TRANSFERRED, OR PERMANENTLY AUTHORIZED FOR OTHER USES SUCH AS SCHOOL BUILDING CONSTRUCTION, RENOVATION, PLACEMENT OR STORAGE OF BUILDING MATERIALS FOR SUCH WORK THAT WOULD ELIMINATE THE USE OF SUCH PLAYGROUND SPACE FOR OUTDOOR RECREATIONAL ACTIVITIES UNLESS A PLAN IS ESTABLISHED AND IMPLEMENTED TO PROVIDE SUITABLE AND ADEQUATE PHYSICAL ACTIVITIES OR SPACE TO ACCOMMODATE THE PHYSICAL AND RECREATIONAL NEEDS OF THE PUPILS OF SUCH BUILDING. THE PROVISIONS OF THIS SUBDIVISION SHALL NOT APPLY TO SCHOOL CONSTRUCTION OR RENOVATION ACTIVITIES THAT OCCUR ON OR REQUIRE THE USE OF SUCH PLAYGROUNDS FOR A DURATION OF NO MORE THAN ONE YEAR.

§ 2. This act shall take effect on the one hundred eightieth day after it shall have become a law; provided however, that the commissioner of education is authorized and directed to promulgate any rules or regulations necessary for the timely implementation of this act on or before such date.

EXPLANATION--Matter in ITALICS (underscored) is new; matter in brackets [ ] is old law to be omitted.

LBD00128-03-3

NYS LEGISLATION / PLAYGROUNDS

Exhibit - 3

From: OU, KENRICK
Sent: Monday, January 25, 2016 5:35 PM
To: BARRETT, E BRUCE; KUBOTA, NINA; LEMPERT, ALEX
Cc: ABNERI, ELAN; DEL PRADO, AILEEN; DAHIR, STANLEY; PERCUDANI, PETER; GUTERMAN, DEBORAH LEE; BROWN, TRENTON A.; CIECIERSKA, ANNA; LIU, CORA; TUNG, GORDON; FONTANET, JENNIFER; BRENNAN, FRANK; ZHANG, MI; LA ROCCA, MELANIE; GARCIA, MARGUERITA
Subject: Due Diligence Request: Addition at P.S. 131, Queens (D29)

Categories: Blue Category

The recently released January 2016 Proposed Amendment to the Department of Education's Five-Year Capital Plan for Fiscal Years 2015-2019 identifies Class Size Reduction projects which are part of the proposed Capacity program. This is to request that the appropriate due diligence proceed for development of a Class Size Reduction project at the below-mentioned school.

Property Information:

CSD: 29 (Hollis Subdistrict)

Address: 170-45 84th Avenue

Block/Lots: 9875/1

Description: The subject property contains the existing P.S. 131 (Q131) building, thee (3) TCUs, and the schoolyard. The entire property contains a total of approximately 80,000 square feet of lot area, is owned by the City of New York and under the control of the New York City Department of Education. Please note that the Q131 building which was originally constructed c. 1926 and then subsequently expanded has been determined by the State Historic Preservation Office to be Eligible for inclusion on the State and National Registers of Historic Places.

Access: Please contact the principal and/or custodian should access to the property be required.

Request:

- Capital Plan Management is requested to create an LLW# for this study and provide A&E with a draft Program of Requirements for the study.
- A&E is requested to assess the cost and feasibility of constructing an addition to the Q131 building based on a POR to be provided by Capital Plan Management.
- I&EH is requested to complete the appropriate environmental due diligence investigations for this property. Marguerita will create EnFo request when the LLW# has been issued.

Thank you.

1

REQUEST FOR "TEST FIT – SKETCH STUDY"

APPENDIX G

RECOMMENDED REMEDIATION AND COST ESTIMATES

For the Site to be suitable for the construction of an addition to the existing public school building, D&B recommends the following:

- Due to VOCs detected in soil vapor above comparison criteria, an active SSDS and a soil vapor barrier are recommended for inclusion as part of the new building design.

- All material excavated during construction activities should be properly characterized and disposed, including collection and analysis of additional samples if required by the contractor-selected solid waste management facilities.

- If shallow soils at the Site are excavated during construction activities, D&B recommends that the soils be characterized to identify material handling requirements and for material reuse, handling and/or waste disposal requirements and be managed in accordance with federal, state and local regulations.

- After the proposed new building addition and grounds are constructed, if exposed soils (landscaped areas) are incorporated into the development of the Site, a minimum of two feet of environmentally clean fill should be placed over existing soil in these areas.

- Any dewatering necessary during school addition construction activities must be performed in accordance with applicable local, state and federal regulations. Dewatering required during construction should be minimized to mitigate potential influx of contaminated water from off-site sources toward the Site.

- Suspect ACM, LBP, and/or PCB-containing materials should be properly managed during construction or demolition activities.

First Engineering Control - Soil Vapor Barrier

The cost estimate for the vapor barrier uses the following assumptions:

1. Based on a review of the Test Fit/Sketch Study dated March 15, 2016, the proposed three-story school building addition will be constructed at grade or at the elevation of the existing school building's basement. As a result, it is assumed that a full height underground basement will be constructed.

2. The area of the vapor barrier includes an assumed building footprint of approximately 16,000 square feet. The total area to be covered by the vapor barrier is approximately 21,500 square feet (assuming 10-foot high basement walls surrounding the perimeter).

Vapor Barrier Cost Estimate

Activity	Units	Rate	Cost
Mobilization/Demobilization	1	$2,500/each	$2,500
Install Vapor Barrier (building footprint)	21,500 sf	$10/sf	$215,000

Activity	Units	Rate	Cost
Activity Total Cost			$217,500
Engineering Design, Specifications, Drawings, Data Evaluation, and Reporting Labor Expenses (10%)			$21,750
Subtotal Project Costs			**$239,250**
15% Contingency on all Costs			$35,888
Total Cost (rounded)			**$275,500**

Second Engineering Control - Active Sub-Slab Depressurization System (SSDS) Cost Estimate

Based on a review of the Test Fit/Sketch Study dated March 15, 2015 for the proposed school building addition, this cost estimate was developed using the following assumptions:

1. The school building will be a three-story structure with a basement.
2. The SSDS would underlie the entire 16,000-square-foot footprint of the proposed school building addition.
3. The major components of the system will consist of sub-slab pits embedded in a twelve-inch thick layer of permeable aggregate, roof-mounted suction fans, and steel pipe risers.
4. One (1) sub-slab pit will be required for every 5,000 square feet of building footprint. Therefore, four sub-slab pits will be required. The sub-slab pits will be constructed of masonry block and ¾-inch concrete planks.
5. The estimate is limited to capital costs and it does not include operation, monitoring and maintenance costs.

Sub-Slab Depressurization System Cost Estimate

Activity	Units	Rate	Total Cost
Mobilization/Demobilization	1	$2,500/each	$2,500
Non-Woven Drainage Geotextile	1,800 sy	$3/sy	$5,400
12 Inches of Gas Permeable Aggregate Backfill and Compaction	600 cy	$40/cy	$24,000
Suction Pits	4 each	$1,200/ea	$4,800
Sub-Slab Piping (cast iron)	200 linear ft.	$60/linear ft.	$12,000
Schedule 40 Steel Pipe Risers (one)	65 linear ft.	$125/linear ft.	$8,125
Roof-Mounted Suction Fans and Accessories	1 each	$20,000/each	$20,000
Monitoring Points	5 each	$750/each	$3,750

Activity	Units	Rate	Total Cost
Testing	1 each	$5,000/each	$5,000
Activity Total Cost			**$85,575**
Engineering Design, Specifications, Drawings, Data Evaluation, and Reporting Labor Expenses (10%)			$8,558
Subtotal Project Costs			**$94,133**
15% Contingency on all Costs			**$14,120**
Total Cost (rounded)			**$108,500**

Total Engineering Controls Cost Estimate

Line Item Description	Cost
First Engineering Control Cost Estimate	**$275,500**
Second Engineering Control Cost Estimate	**$108,500**
Approximate Total Cost (rounded)	**$384,000**