HOYT BROOK SEEP
PILOT STUDY
FINAL CONSTRUCTION REPORT

WINTHROP LANDFILL
WINTHROP, MAINE

Prepared for:

United Technologies Corporation

Farmington, Connecticut

Prepared by:

Amec Foster Wheeler Environment & Infrastructure, Inc.
511 Congress Street, Suite 200
Portland, Maine 04101

December 21, 2015

Project Number: 3617157362

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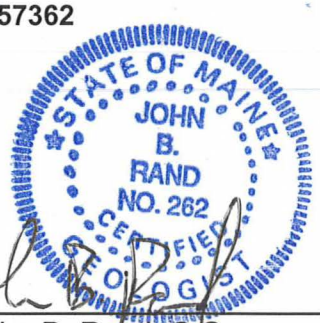

Nathan Hagelin, C.G.
Senior Principal Scientist

John B. Rand, C.G.
Project Manager

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LIST OF ACRONYMS AND ABBREVIATIONS

Agencies	USEPA and MEDEP
Amec Foster Wheeler	Amec Foster Wheeler Environment & Infrastructure, Inc.
CY	cubic yards
EPI	Environmental Projects, Inc.
µg/liter	micrograms per liter
MEDEP	Maine Department of Environmental Protection
mg/kg	milligram(s) per kilogram
NOEC	No Observed Effect Concentration
NRWQC	National Recommended Water Quality Criteria
PCL	Protective Concentration Limit
SED	sediment sample location
Site	Hoyt Brook Seep, Winthrop Landfill in Winthrop, Maine
SW	surface water sample location
USEPA	United States Environmental Protection Agency
UTC	United Technologies Corporation

1.0 BACKGROUND

During August and September 2015, Amec Foster Wheeler Environment and Infrastructure, Inc. (Amec Foster Wheeler) completed construction of a pilot study on Hoyt Brook in Winthrop, Maine (the Site). The work was completed on behalf of United Technologies Corporation (UTC) to address conditions at the Hoyt Brook seep located north of the Winthrop Landfill in Winthrop. UTC and Amec Foster Wheeler developed the approach with the United States Environmental Protection Agency (USEPA) and Maine Department of Environmental Protection (MEDEP) (collectively the Agencies) to address the Agencies' concerns about human contact with arsenic impacted sediment in the seep area. Results from the pilot study will provide information to determine whether direct human contact with the seep area can be eliminated without causing new contamination or seepage conditions, unacceptable erosion, or impacts to surface water. The work was completed in accordance with the Final Hoyt Brook Seep Pilot Study Work Plan dated August 18, 2015 (the Work Plan), which was approved by USEPA and MEDEP and presented to the community on August 20, 2015.

2.0 SUMMARY OF CONSTRUCTION ACTIVITY

The seep cover was constructed during a two week period of fair weather between August 26 and September 10, with substantially all of the items completed as proposed in the Work Plan. A plan view of the work area is shown on Figure 1. A surveyed as-built plan of the final cover is shown in Figure 2 with a constructed profile shown in Figure 3.

Environmental Projects Inc. of Auburn, Maine (EPI) mobilized to the Site on August 26 with the necessary equipment and initial Site erosion control materials. Amec Foster Wheeler had previously marked the limits of excavation (purple outline shown in Figure 2) with survey grade GPS equipment. Following preparation of the staging area in the existing clearing and placement of erosion controls, a temporary cofferdam was constructed on the east side of Hoyt Brook to allow work to proceed without causing a sediment impact to the brook. Excavation of impacted sediment and placement of the new cover materials began at the south end of the cover area and proceeded north. Materials excavated from the southern portion of the cover area were placed in 10 cubic yard roll off containers (#1 and #2); material from the immediate seep area was placed in roll off container #3 and sediment from north of the seep area was placed in roll off containers #4 and #5. The staging area for the roll off containers is shown on Figure 1.

As each excavation section was completed, geotextile fabric and geogrid was placed on the native soils in accordance with the Work Plan. A six inch layer of 4 inch stone was placed over the geotextile/geogrid (4 inch stone was used in place of the 2 to 3 inch material identified in the Work Plan which was not available). Larger diameter 14 inch rip rap was then placed on the stone to an elevation of approximately 173.0 feet Site datum (see Figure 1 Notes for datum).

To accommodate the potential for modest settling of the rip rap into the underlying soft clay, the final elevation of the rip rap was increased to elevation 173.5 feet by placing an additional 6 inches of 4 inch stone on top of the 14 inch rip rap. Geotextile was placed on top of the final rip rap grade which was covered by approximately 18 inches of common borrow and 6 inches of topsoil (loam) mixed with erosion control mix. New England wetland seed mix was planted before covering with erosion control matting.

As construction proceeded from south to north, dewatering on the land side of the cofferdam was necessary to accommodate excavation and placement of cover materials. Rather than discharging this water through filter bags and to the brook, it was determined in the field in consultation with MEDEP that this water could be discharged to the upland in an area upgradient of the seep area where it would infiltrate. Following completion of the dewatering discharge to this area, surficial soils were removed from the area and placed in a roll off container. Once the surficial soils were removed in the discharge area, one soil sample (Discharge02 Middle) was collected from the discharge area and two soil samples were collected immediately adjacent to the discharge area (Discharge01 South and Discharge03 North) to determine if the discharge activities had resulted in an increase in arsenic concentration in the discharge area soil. The soil sample locations are shown in Figure 2 and the laboratory analytical results are summarized in Table 1. The laboratory results identified 61.9 milligrams per kilogram (mg/kg) arsenic in Discharge01 South, collected immediately south of the discharge area; 84.3 mg/kg arsenic in Discharge02 Middle, collected from within the discharge area; and 92.3 mg/kg arsenic in

Discharge03 North, collected immediately north of the discharge area. Because the arsenic concentration from the discharge area is within the range of concentrations from the adjacent samples, the data indicates that arsenic concentrations in the discharge area soil did not increase as a result of the discharge activities.

The area of the completed cover is 3,077 square feet which includes 2,076 square feet of erosion control mat, 819 square feet of exposed rip rap and approximately 182 square feet of rip rap which was below water on the date of survey (September 24, 2015). In total, pilot test construction activities used 108 cubic yards (CY) of 4 inch stone, 216 CY of 14 inch rip rap, 90 CY of common borrow, 54 CY of loam, 144 CY of erosion control mix and 36 CY of ¾ inch crushed stone (access road and staging area reinforcement).

The excavated material (e.g., sediment, surface soil, etc.) was sampled and analyzed to meet the profile requirements of the Crossroads landfill in Norridgewock, Maine owned by Waste Management. Results of profile testing indicated all material met the disposal requirements. A total of 71.4 tons (approximately 80 CY) of material was excavated with all of it shipped to the Crossroads landfill on October 5 and 6, 2015. The material profile and test results are provided in Appendix A with shipping manifest information provided in Appendix B.

Photographs were taken to document the construction activities which are included Appendix C. Inspection of Henry Lane prior to and following the construction activities indicated there was no observed or landowner reported damage to Henry Lane.

3.0 MONITORING RESULTS

The pilot study monitoring program was established in the Work Plan and designed to monitor the conditions relative to each of the four pilot study objectives. The first of three monitoring events for year one was completed on October 7, 2015. In summary, in the two months following completion of construction there has been no staining of rip rap or sediment along the shore of the seep, no new seepage has been observed and the cover has not eroded. Laboratory results of the first monitoring event are presented in Table 2 which indicate arsenic was well below the evaluation criteria for surface water and sediment at respective monitoring locations (monitoring locations and results are shown in Figure 4).

The specific components of the monitoring program as provided in the Work Plan are repeated below. Each of the four pilot study objectives is followed by the associated monitoring activities and the results from the first monitoring event.

Pilot Study Objective #1 – Determine if cover material becomes contaminated with arsenic over time.

Monitoring Activities:

1. Visual monitoring will be completed three times per year to determine if brook water levels reach cover material and result in staining.
2. If staining is observed, a sample will be collected from the cover soils for laboratory analysis and comparison to the shallow (less than 6 inches of water) sediment Evaluation Criteria (31 mg/kg arsenic).

Monitoring Results:

The results of the October 7, 2015 monitoring and follow up visits on October 23 and November 4 indicate no staining of cover materials. Brook water levels in October and November (approximately 170 feet site datum) were approximately one foot higher than at the completion of construction on September 10, and did not approach the upper cover materials even following a two inch rain event in late October.

Pilot Study Objective #2 – Determine if new seeps emerge outside of the remediation area.

Monitoring Activities:

1. Visual monitoring will be completed three times per year for iron staining in the area of undisturbed bank proximal to the pilot study area.
2. If present, sample surface water and/or sediment for laboratory analysis and comparison to Evaluation Criteria (appropriate criteria is dependent on sample location).

Monitoring Results:

No new seeps were observed proximal to the cover during the October and November Site visits.

Pilot Study Objective #3 – Determine if the cover system is stable from erosion and flooding.

Monitoring Activities:

Visual monitoring for significant erosion or unstable soils will be conducted three times per year with additional inspections during the first year following large storm events (greater than 3.5 inches of rain in 24 hours - approximately the 5-year return period storm). One of the three annual monitoring events will be timed to coincide with ice-out. If erosion is observed, the areas will be noted and discussed with the Agencies. Based on the results of the first year of erosion monitoring, a recommendation for any adjustment to the frequency for monitoring other than the three events per year will be made in the 1st year monitoring report.

Monitoring Results:

No significant erosion or unstable soils were observed during the October and November visits. At three small areas (approximately 3 inches long and 4 inches wide each) along the crest of the cover, loam beneath the erosion mat had settled several inches between the rip rap, EPI filled these locations with loam to grade.

Pilot Study Objective #4 – Determine if the remediation results in exceedances of Evaluation Criteria (identified below) in surface water and/or sediment.

Monitoring Activities:

Surface water and sediment samples will be collected from the brook three times per year for laboratory analysis at the following locations for analysis of total arsenic (and dissolved arsenic at SW locations - see Figure 4):

- Upstream (background) = SW/SED-117
- proximal = SW-122
- downstream = SW/SED-11
- lake = SW-15

The following Evaluation Criteria will be used to assess results by location:

- upstream = surface water and sediment data collected to understand the range of local background concentrations
- proximal (SW-122) = National Recommended Water Quality Criteria (NRWQC) - Acute = 340 micrograms per liter (µg/liter)
- downstream (SW-11) = NRWQC - Chronic = 150 µg/liter

- downstream (SED-11) = No Observed Effect Concentration (NOEC) Sediment = 108 mg/kg (more than 6" water)
- downstream (SED-11) = PCL Sediment = 31 mg/kg (less than 6" water)
- lake (SW-15) = PCL = 5 µg/liter

Monitoring Results:

Results of the October 7, 2015 monitoring indicated arsenic was below detection limit at all four performance monitoring locations for surface water and at background levels at sediment monitoring locations. These results were well below the evaluation criteria for both media. Results are summarized in Table 2 and shown on Figure 4.

Wetland seed mix planted on the cover had begun to sprout after about two weeks of completion of the construction.

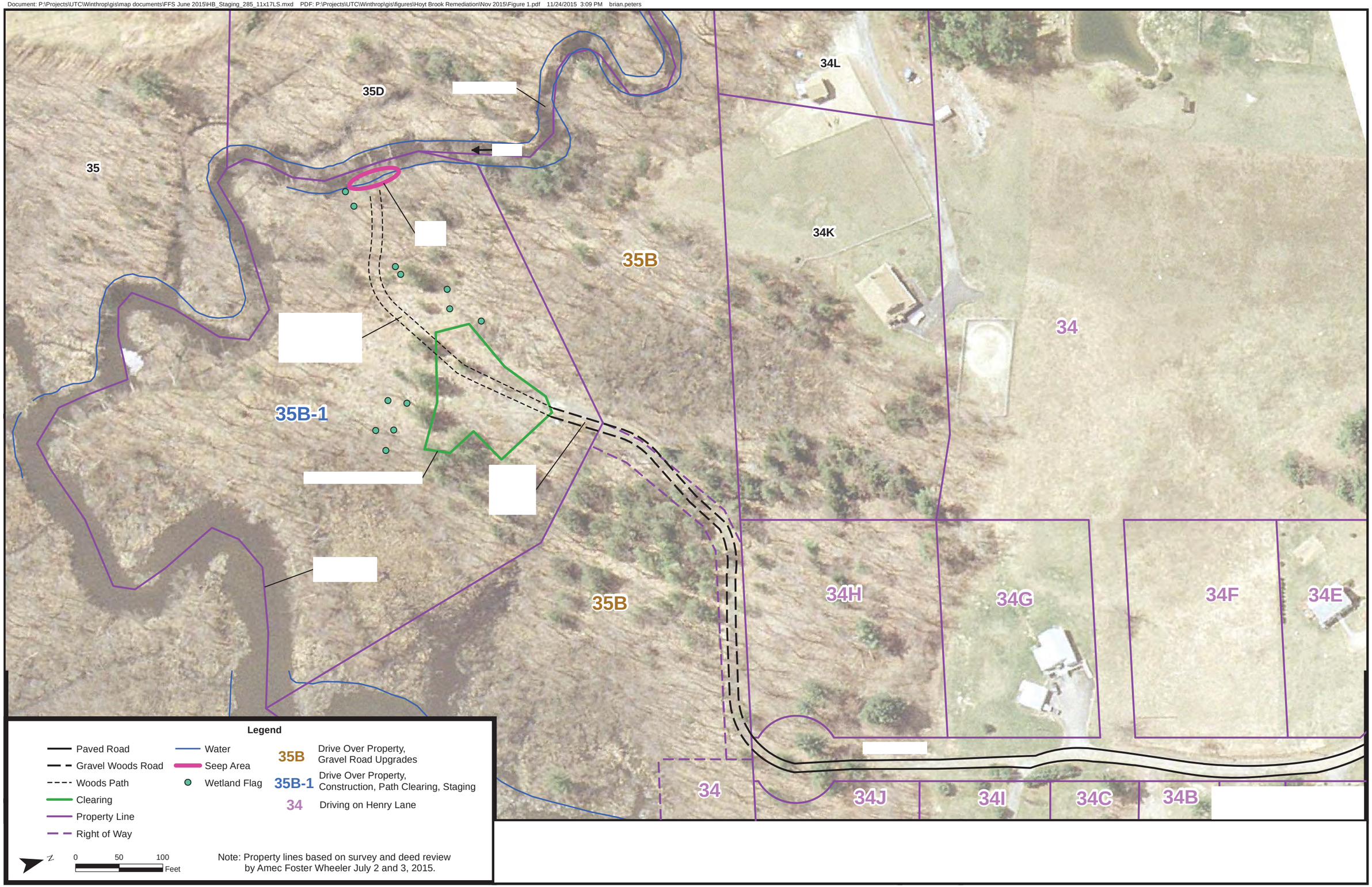
An electronic data deliverable will be provided separately to the Agencies.

4.0 NEXT STEPS

Next steps include the final restoration of the clearing/staging area (scheduled for December 2015) and planting of wildflower and/or shade tolerant grass mixes (Spring 2016).

The next monitoring events for the first year will be in April and July 2016. Each event will include visual inspections of the seep area with additional inspections made for large storm events (greater than 3.5 inches in 24 hours). In the spring of 2016, areas of the cover will be re-seeded as needed to ensure good vegetation is established. Reporting will include an electronic data deliverable to USEPA and MEDEP following each event, an annual report after the year 1 monitoring (October 2015, April 2016, July 2016) and year 2 monitoring (October 2016, April 2017, July 2017), and a final report at the end of year 3 monitoring (October 2017, April 2018, July 2018) in accordance with the Work Plan.

FIGURES



Legend

- Paved Road
- Gravel Woods Road
- Woods Path
- Clearing
- Property Line
- Right of Way
- Water
- Seep Area
- Wetland Flag

35B Drive Over Property, Gravel Road Upgrades

35B-1 Drive Over Property, Construction, Path Clearing, Staging

34 Driving on Henry Lane

N 0 50 100 Feet

Note: Property lines based on survey and deed review by Amec Foster Wheeler July 2 and 3, 2015.

Hoyt Brook Flow
to Annabessacook Lake

A'

169
172.5
171.1
170
169
171.7
171
172.6
175
172
173
172.1
174.9
174.9
175.5
176.9
176
176.5
TBM-1
Northing 527870.3028
Easting 3000442.6604
Elev. = 177.39
176.7
177.0
174.08
174.7
176.4
See Figure 2
for Profile
A
174.2
175.8
Woods Path
to Clearing
175
Discharge03 North
Discharge02 Middle
Discharge01 South
Location of Dewatering
Discharge Area
174.1

Legend

- Dicharge Sample Location
- Temporary Benchmark
- Planned and Actual Limits of Excavation
- Profile Orientation
- 174.2 Spot Elevations
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour
- Path to Clearing
- Edge of Brook (Water Elevation)
- Approximate Extent of Rip Rap Below Water Elevation on September 24, 2015
- Surveyed Extent of Exposed Rip Rap on September 24, 2015
- Limits of Erosion Control Mat
- Approximate Covered Seep Area

N 0 5 10 Feet

Notes:
1. Horizontal Datum is Based on Maine State Coordinate System, West Zone (NAD 83)
2. Vertical Datum is Based on Bench Mark Location on the South Side of Former Winthrop Landfill Groundwater Treatment Building, West End of Overhead Door, White Paint Mark on Concrete Floor (Finished Floor), Elevation 209.75'

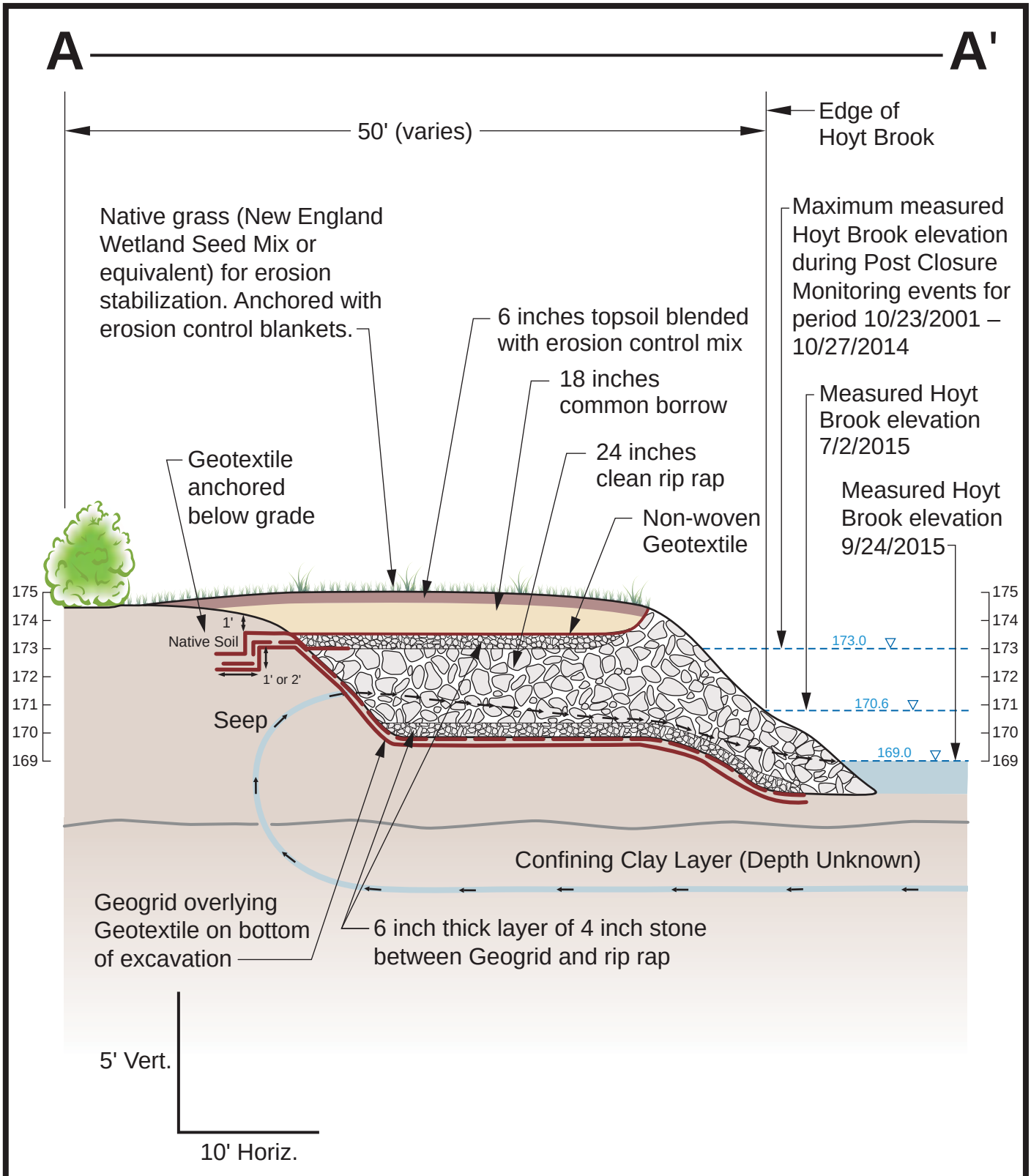
Prepared/Date: BRP 12/16/15
Checked/Date: JBR 12/16/15

STATE OF MAINE
JEROME B. WATTS
No. 1245
PROFESSIONAL LAND SURVEYOR
DEC. 16, 2015

United Technologies Corporation
Winthrop Landfill
Winthrop, Maine

amec foster wheeler

As-Built Plan of Seep and Soil Cover September 24, 2015
Hoyt Brook Seep Pilot Study
Project 3617157362 Figure 2



Prepared/Date: JPH 12/4/15
Checked/Date: JBR 12/4/15

United Technologies Corporation Hoyt Brook Pilot Study Winthrop Landfill Winthrop, Maine	amec foster wheeler	Constructed Profile of Seep and Soil Cover Hoyt Brook Seep Pilot Study Project 3617157362 Figure 3

PORT2015030c.ai

	SW-122
	mg/liter
Evaluation	
Criteria -->	0.34
Sample Date	
10/07/15	U 0.0027

Proximal Monitoring Location

Mixing Zone

100'

SW-122

SW/SED-11

Downstream Monitoring Location

	SW-11	SED-11
	mg/liter	mg/kg
Evaluation		
Criteria -->	0.15	108
Sample Date		
10/07/15	U 0.0027	6.04

SW/SED-117

Background Monitoring Location

	SW-117	SED-117
	mg/liter	mg/kg
Evaluation		
Criteria -->	Background	Background
Sample Date		
10/07/15	U 0.0027	4.56

MW-210A,B,C

MW-15A,B

MW-304A,B

Hoyt Brook

Monitoring Components

- Background surface water and sediment upstream
- Surface water at SW-122 not to exceed acute National Recommended Water Quality Criteria (NRWQC) of 0.340 mg/liter
- Mixing zone length assumed 100 feet
- Sediment at downgradient edge of mixing zone (SED-11) not to exceed:
  - Sediment PCL (31 mg/kg) for sediment in < 6 inches of water
  - Sediment NOEC (108 mg/kg) for sediment in > 6 inches of water
- Surface water at downstream edge of mixing zone (SW-11) not to exceed Chronic NRWQC of 0.15 mg/liter
  - Swimming in seep area not considered an exposure pathway
- Surface water near Annabessacook Lake (SW-15) not to exceed of 0.005 mg/liter (PCL)
  - Assumes that the lake is a source of drinking water
- Evaluate performance of Pilot Study after 3 years of monitoring

	SW-15
	mg/liter
Evaluation	
Criteria -->	0.005
Sample Date	
10/07/15	U 0.0027

SW-15

Lake Monitoring Location

LEGEND

- Pilot Study Monitoring Location
- Monitoring Well / Piezometer Location
- Seep Cover Area
- Topographic Contours (10 ft)
- Topographic Contours (2 ft)
- Bog Marsh
- Water Boundary
- "U" = Analyte not detected at or above Method Detection Limit

Results are for total arsenic in surface water (mg/liter) and sediment (mg/kg)

Annabessacook Lake

N

North

0 50 100

Feet

Prepared/Date: JPH 12/02/15
Checked/Date: JBR 12/02/15

United Technologies Corporation
Winthrop Landfill
Winthrop, Maine

amec foster wheeler

Pilot Study Performance Monitoring Locations and Results
Hoyt Brook Seep Pilot Study

3617157362

Figure 4

PORT2015031c.ai

TABLES

Table 1
Arsenic Soil Sample Results - Dewater Discharge Area

Sample Date	Discharge01 South	Discharge02 Middle	Discharge03 North
	mg/kg	mg/kg	mg/kg
09/10/15	61.9	84.3	92.3

Table 2
Arsenic Results - First Monitoring Event

Sample Date	**SW-117 mg/liter**		**SED-117 mg/kg**	**SW-122 mg/liter**		**SW-11 mg/liter**		**SED-11 mg/kg**	**SW-15 mg/liter**	
Evaluation Criteria -->	Background	Background	Background	0.34	0.34	0.15	0.15	108	0.005	0.005
	Total	Dissolved		Total	Dissolved	Total	Dissolved		Total	Dissolved
10/07/15	U 0.0027	U 0.0027	4.56	U 0.0027	U 0.0027	U 0.0027	U 0.0027	6.04	U 0.0027	U 0.0027

Notes: 1 "U" = Analyte not detected at or above the Method Detection Limit

APPENDIX A

MATERIAL PROFILE AND TEST RESULTS

WASTE MANAGEMENT

EZ Profile™

Requested Facility: Crossroads Landfill ☐ Unsure Profile Number: 522838ME

☐ Multiple Generator Locations (Attach Locations) ☐ Request Certificate of Disposal ☐ Renewal? Original Profile Number: _____

A. GENERATOR INFORMATION (MATERIAL ORIGIN)

1. Generator Name: United Technologies
2. Site Address: Annabessacook Road
   (City, State, ZIP) Winthrop ME 04364
3. County: Kennebec
4. Contact Name: Don Johnson
5. Email: Don.johnson@usecology.com
6. Phone: (508) 245-1318 7. Fax: _____
8. Generator EPA ID: _____ ☑ N/A
9. State ID: _____ ☑ N/A

B. BILLING INFORMATION ☐ SAME AS GENERATOR

1. Billing Name: EQ Northeast, Inc.
2. Billing Address: 185 Industrial Road
   (City, State, ZIP) Wrentham MA 02093
3. Contact Name: Don Johnson
4. Email: don.johnson@usecology.com
5. Phone: (508) 245-1318 6. Fax: _____
7. WM Hauled? ☐ Yes ☑ No
8. P.O. Number: _____
9. Payment Method: ☑ Credit Account ☐ Cash ☐ Credit Card

C. MATERIAL INFORMATION

1. Common Name: stream sediment
   Describe Process Generating Material: ☐ See Attached

   Excavation of sediment adjacent to Hoyt Brook in Winthrop for removal of elevated arsenic in seep area. Please refer to Winthrop Landfill Hoyt Brook Seep Pilot Study Work Plan attached.

2. Material Composition and Contaminants: ☐ See Attached

1. Sediment	100 %
2.	
3.	
4.	
Total comp. must be equal to or greater than 100%	≥100%

3. State Waste Codes: _____ ☑ N/A
4. Color: grey
5. Physical State at 70°F: ☑ Solid ☐ Liquid ☐ Other: _____
6. Free Liquid Range Percentage: _____ to _____ ☑ N/A
7. pH: _____ to _____ ☑ N/A
8. Strong Odor: ☐ Yes ☑ No Describe: _____
9. Flash Point: ☐ <140°F ☐ 140°–199°F ☐ ≥200° ☑ N/A

D. REGULATORY INFORMATION

1. EPA Hazardous Waste? ☐ Yes* ☑ No
   Code: _____
2. State Hazardous Waste? ☐ Yes ☑ No
   Code: _____
3. Is this material non-hazardous due to Treatment, Delisting, or an Exclusion? ☐ Yes* ☑ No
4. Contains Underlying Hazardous Constituents? ☐ Yes* ☑ No
5. From an industry regulated under Benzene NESHAP? ☐ Yes* ☑ No
6. Facility remediation subject to 40 CFR 63 GGGGG? ☐ Yes* ☑ No
7. CERCLA or State-mandated clean-up? ☑ Yes* ☐ No
8. NRC or State-regulated radioactive or NORM waste? ☐ Yes* ☑ No

***If Yes, see Addendum (page 2) for additional questions and space.**

9. Contains PCBs? → If Yes, answer a, b and c. ☐ Yes ☑ No
   a. Regulated by 40 CFR 761? ☐ Yes ☐ No
   b. Remediation under 40 CFR 761.61 (a)? ☐ Yes ☐ No
   c. Were PCB imported into the US? ☐ Yes ☐ No
10. Regulated and/or Untreated Medical/Infectious Waste? ☐ Yes ☑ No
11. Contains Asbestos? ☐ Yes ☑ No
    → If Yes: ☐ Non-Friable ☐ Non-Friable – Regulated ☐ Friable

E. ANALYTICAL AND OTHER REPRESENTATIVE INFORMATION

1. Analytical attached ☑ Yes
   Please identify applicable samples and/or lab reports:

   Sample IDs = Roll Off 1 and 2, Roll Off 3 and 4, Roll Off 5. Only Roll Off 3 and 4 met the Total Arsenic limit of 100 mg/kg; TCLP for Arsenic on that sample was less than 5 mg/liter.

2. Other information attached (such as MSDS)? ☑ Yes

F. SHIPPING AND DOT INFORMATION

1. ☑ One-Time Event ☐ Repeat Event/Ongoing Business
2. Estimated Quantity/Unit of Measure: 110
   ☑ Tons ☐ Yards ☐ Drums ☐ Gallons ☐ Other: _____
3. Container Type and Size: 3-20 yard and 2-10 yard roll offs
4. USDOT Proper Shipping Name: ☑ N/A

G. GENERATOR CERTIFICATION (PLEASE READ AND CERTIFY BY SIGNATURE)

By signing this EZ Profile™ form, I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this material, and that all relevant information necessary for proper material characterization and to identify known and suspected hazards has been provided. Any analytical data attached was derived from a sample that is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. All changes occurring in the character of the material (i.e., changes in the process or new analytical) will be identified by the Generator and be disclosed to Waste Management prior to providing the material to Waste Management.

If I am an agent signing on behalf of the Generator, I have confirmed with the Generator that information contained in this Profile is accurate and complete.

Name (Print): William Elwell Date: 9/24/2015

Title: Remediation Project Manager

Company: United Technologies

Certification Signature

THINK GREEN.®

QUESTIONS? CALL 800 963 4776 FOR ASSISTANCE

Revised June 30, 2015

EZ Profile™ Addendum

Only complete this Addendum if prompted by responses on EZ Profile™ (page 1) or to provide additional information. Sections and question numbers correspond to EZ Profile™.

Profile Number: 522838ME

C. MATERIAL INFORMATION

Describe Process Generating Material (Continued from page 1): If more space is needed, please attach additional pages.

Material Composition and Contaminants (Continued from page 1): If more space is needed, please attach additional pages.

5.	
6.	
7.	
8.	
9.	
Total composition must be equal to or greater than 100%	≥100%

D. REGULATORY INFORMATION

Only questions with a "Yes" response in Section D on the EZ Profile™ form (page 1) need to be answered here.

1. EPA Hazardous Waste
   a. Please list all USEPA listed and characteristic waste code numbers:

   b. Is the material subject to the Alternative Debris standards (40 CFR 268.45)? ☐ Yes ☐ No
   c. Is the material subject to the Alternative Soil standards (40 CFR 268.49)? → If Yes, complete question 4. ☐ Yes ☐ No
   d. Is the material exempt from Subpart CC Controls (40 CFR 264.1083)? ☐ Yes ☐ No
      → If Yes, please check **one** of the following:
      ☐ Waste meets LDR or treatment exemptions for organics (40 CFR 264.1082(c)(2) or (c)(4))
      ☐ Waste contains VOCs that average <500 ppmw (CFR 264.1082(c)(1)) – will require annual update.
2. State Hazardous Waste → Please list all state waste codes: _____
3. For material that is Treated, Delisted, or Excluded → Please indicate the category, below:
   ☐ Delisted Hazardous Waste ☐ Excluded Waste under 40 CFR 261.4 → Specify Exclusion: _____
   ☐ Treated Hazardous Waste Debris ☐ Treated Characteristic Hazardous Waste → If checked, complete question 4.
4. Underlying Hazardous Constituents → Please list all Underlying Hazardous Constituents:

5. Industries regulated under Benzene NESHAP include petroleum refineries, chemical manufacturing plants, coke by-product recovery plants, and TSDFs.
   a. Are you a TSDF? → If yes, please complete Benzene NESHAP questionnaire. If not, continue. ☐ Yes ☐ No
   b. Does this material contain benzene? ☐ Yes ☐ No
      1. If yes, what is the flow weighted average concentration? _____ ppmw
   c. What is your facility's current total annual benzene quantity in Megagrams? ☐ <1 Mg ☐ 1–9.99 Mg ☐ ≥10 Mg
   d. Is this waste soil from a remediation? ☐ Yes ☐ No
      1. If yes, what is the benzene concentration in remediation waste? _____ ppmw
   e. Does the waste contain >10% water/moisture? ☐ Yes ☐ No
   f. Has material been treated to remove 99% of the benzene or to achieve <10 ppmw? ☐ Yes ☐ No
   g. Is material exempt from controls in accordance with 40 CFR 61.342? ☐ Yes ☐ No
      → If yes, specify exemption: _____
   h. Based on your knowledge of your waste and the BWON regulations, do you believe that this waste stream is subject to treatment and control requirements at an off-site TSDF? ☐ Yes ☐ No
6. 40 CFR 63 GGGGG → Does the material contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☐ No
7. CERCLA or State-Mandated clean up → Please submit the Record of Decision or other documentation with process information to assist others in the evaluation for proper disposal. A "Determination of Acceptability" may be needed for CERCLA wastes not going to a CERCLA approved facility.
8. NRC or state regulated radioactive or NORM Waste → Please identify Isotopes and pCi/g: _____

eurofins | Spectrum Analytical

☐ Final Report
☐ Re-Issued Report
☑ Revised Report

Report Date:
25-Sep-15 16:52

Laboratory Report

AMEC Env. & Infrastructure, Inc.
511 Congress Street
Portland, ME 04112
Attn: Bradley LaForest

Project: Winthrop Landfill Post-Closure Monitoring
Project #: [none]

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC12076-01	Roll Off 1 and 2	Soil	04-Sep-15 11:23	05-Sep-15 10:45
SC12076-02	Roll Off 3 and 4	Soil	04-Sep-15 11:31	05-Sep-15 10:45
SC12076-03	Roll Off 5	Soil	04-Sep-15 13:03	05-Sep-15 10:45

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00098
USDA # S-51435

Authorized by:

Nicole Leja
Laboratory Director

Eurofins Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 53 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our 'Quality' web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

CASE NARRATIVE:

Data has been reported to the RDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 11.5 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

All VOC soils samples submitted and analyzed in methanol will have a minimum dilution factor of 50. This is the minimum amount of solvent allowed on the instrumentation without causing interference. Soils are run on a manual load instrument. 100ug of sample (MEOH) is spiked into 5ml DI water along with the surrogate and added directly onto the instrument. Additional dilution factors may be required to keep analyte concentration within instrument calibration range.

Method SW846 5035A is designed to use on samples containing low levels of VOCs, ranging from 0.5 to 200 ug/Kg. Target analytes that are less responsive to purge and trap may be present at concentrations over 200ug/Kg but may not be reportable in the methanol preserved vial (SW846 5030). This is the result of the inherent dilution factor required for the methanol preservation.

Analyses for Total Hardness, pH, and Total Residual Chlorine fall under the state of Pennsylvania code Chapter 252.6 accreditation by rule.

Reactivity (40 CFR 261.23) Case Narrative:

These samples do not exhibit the characteristics of reactivity as defined in 40 CFR 261.23, sections (1), (2) and (4); however, Spectrum Analytical, Inc. does not test for detonation, explosive reaction or potential, or forbidden explosives as defined in 40 CFR 261.23, sections (3), (6), (7) and (8).

Reactive sulfide and cyanide are tested at a pH of 2 and not tested at all conditions between pH 2 and12.5 as stated in 40 CFR 261.23, section (5); thus reactive cyanide and sulfide results as reported in this document can not be used to support the nonreactive properties of these samples.

The responsibility falls on the generator to use knowledge of the waste to determine if the waste meets or does not meet the descriptive, prose definition of reactivity.

September 21, 2015 Report Revision Case Narrative:

This report has been revised to include analyses added as listed in the appendix at the end of this report.

September 25, 2015 Report Revision Case Narrative:

This report has been revised to include additional analytes per client request.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 1030

Samples:

SC12076-01 *Roll Off 1 and 2*

A hold time of 24 hours has been set to expedite the analyses through the laboratory. However, the hold time for Ignitability is not specified within the method other than to state that the samples should be analyzed as soon as possible.

Ignitability by Definition

SC12076-02 *Roll Off 3 and 4*

SW846 1030

Samples:

SC12076-02 *Roll Off 3 and 4*

A hold time of 24 hours has been set to expedite the analyses through the laboratory. However, the hold time for Ignitability is not specified within the method other than to state that the samples should be analyzed as soon as possible.

Ignitability by Definition

SC12076-03 *Roll Off 5*

A hold time of 24 hours has been set to expedite the analyses through the laboratory. However, the hold time for Ignitability is not specified within the method other than to state that the samples should be analyzed as soon as possible.

Ignitability by Definition

SW846 6010C

Spikes:

1517112-MS1 *Source: SC12076-02*

The spike recovery exceeded the QC control limits for the MS and/or MSD. The batch was accepted based upon acceptable PS and /or LCS recovery.

Silver

1517112-MSD1 *Source: SC12076-02*

The spike recovery exceeded the QC control limits for the MS and/or MSD. The batch was accepted based upon acceptable PS and /or LCS recovery.

Silver

Duplicates:

1517112-DUP1 *Source: SC12076-02*

Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.

Cadmium

The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.

Arsenic

SW846 8260C

Calibration:

1509004

Analyte quantified by quadratic equation type calibration.

1,1,1-Trichloroethane
2-Butanone (MEK)
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Bromoform
Carbon tetrachloride
cis-1,3-Dichloropropene
Dibromochloromethane
trans-1,3-Dichloropropene

SW846 8260C

Calibration:

1509004

This affected the following samples:

1517242-BLK1
1517242-BS1
1517242-BSD1
Roll Off 1 and 2
Roll Off 3 and 4
Roll Off 5
S508070-ICV1
S508229-CCV1

S507365-ICV1

Analyte percent recovery is outside individual acceptance criteria (80-120).

Dichlorodifluoromethane (Freon12) (68%)

This affected the following samples:

1517052-BLK1
1517052-BS1
1517052-BSD1
S508163-CCV1

Samples:

S508163-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

1,1-Dichloroethene (-23.4%)
Bromodichloromethane (21.7%)

This affected the following samples:

1517052-BLK1
1517052-BS1
1517052-BSD1

S508229-CCV1

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

Carbon tetrachloride (21.4%)

This affected the following samples:

1517242-BLK1
1517242-BS1
1517242-BSD1
Roll Off 1 and 2
Roll Off 3 and 4
Roll Off 5

SW846 8270D

Calibration:

1505031

SW846 8270D

Calibration:

1505031

Analyte quantified by quadratic equation type calibration.

2,4-Dinitrophenol
4,6-Dinitro-2-methylphenol
4-Nitrophenol

This affected the following samples:

S504308-ICV1

Laboratory Control Samples:

1517271 BS

Benzidine percent recovery 23 (40-140) is outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

Roll Off 1 and 2
Roll Off 3 and 4
Roll Off 5

Spikes:

1517271-MS1 *Source: SC12076-01*

Analyte out of acceptance range in QC spike but no reportable concentration present in sample.

Benzidine

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

Hexachlorocyclopentadiene

1517271-MSD1 *Source: SC12076-01*

Analyte out of acceptance range in QC spike but no reportable concentration present in sample.

Benzidine

RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.

Hexachlorocyclopentadiene

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

3,3′-Dichlorobenzidine
Hexachlorocyclopentadiene

Duplicates:

1517271-DUP1 *Source: SC12076-01*

Visual evaluation of the sample indicates the RPD is above the control limit due to a non-homogeneous sample matrix.

Benzo (k) fluoranthene
Phenanthrene

Samples:

S508326-CCV1

SW846 8270D

Samples:

S508326-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

Benzidine (-53.6%)
Bis(2-chloroethoxy)methane (-20.5%)
Hexachlorocyclopentadiene (21.3%)
Pentachlorophenol (-36.3%)

This affected the following samples:

1517271-BLK1
1517271-BS1
1517271-DUP1
1517271-MS1
1517271-MSD1
Roll Off 1 and 2
Roll Off 3 and 4
Roll Off 5

Sample Acceptance Check Form

Client:	AMEC Env. & Infrastructure, Inc.- Portland ME
Project:	Winthrop Landfill Post-Closure Monitoring / [none]
Work Order:	SC12076
Sample(s) received on:	9/5/2015

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of 6°C?	☐	☑	☐
Were samples cooled on ice upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☐	☑	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☐	☑	☐

Summary of Hits

Lab ID: SC12076-01 **Client ID:** Roll Off 1 and 2

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	73.6		2.61	mg/kg	SW846 6010C
Barium	62.1		1.74	mg/kg	SW846 6010C
Chromium	26.3		1.74	mg/kg	SW846 6010C
Lead	12.3		2.61	mg/kg	SW846 6010C
Selenium	1.09	J	2.61	mg/kg	SW846 6010C
Mercury	0.0401	J	0.0516	mg/kg	SW846 7471B
Benzo (a) anthracene	33.4	J	121	µg/kg	SW846 8270D
Benzo (a) pyrene	35.8	J	121	µg/kg	SW846 8270D
Benzo (b) fluoranthene	32.8	J	121	µg/kg	SW846 8270D
Benzo (k) fluoranthene	32.1	J	121	µg/kg	SW846 8270D
Chrysene	39.4	J	121	µg/kg	SW846 8270D
Fluoranthene	75.2	J	121	µg/kg	SW846 8270D
Phenanthrene	39.4	J	121	µg/kg	SW846 8270D
Pyrene	67.3	J	121	µg/kg	SW846 8270D
Reactive Sulfide	58.3		49.7	mg/kg	SW846 Ch. 7.3

Lab ID: SC12076-01RE1 **Client ID:** Roll Off 1 and 2

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
2-Butanone (MEK)	63.5	J	112	µg/kg	SW846 8260C
Acetone	229		112	µg/kg	SW846 8260C

Lab ID: SC12076-02 **Client ID:** Roll Off 3 and 4

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	0.232		0.0080	mg/l	SW846 1311/6010C
Arsenic	100		2.62	mg/kg	SW846 6010C
Barium	58.3		1.75	mg/kg	SW846 6010C
Cadmium	0.0402	J	0.873	mg/kg	SW846 6010C
Chromium	22.5		1.75	mg/kg	SW846 6010C
Lead	10.6		2.62	mg/kg	SW846 6010C
Selenium	1.13	J	2.62	mg/kg	SW846 6010C
Mercury	0.0366	J	0.0534	mg/kg	SW846 7471B
Benzo (a) anthracene	47.4	J	119	µg/kg	SW846 8270D
Benzo (a) pyrene	54.6	J	119	µg/kg	SW846 8270D
Benzo (b) fluoranthene	51.0	J	119	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	32.0	J	119	µg/kg	SW846 8270D
Benzo (k) fluoranthene	36.2	J	119	µg/kg	SW846 8270D
Chrysene	59.3	J	119	µg/kg	SW846 8270D
Fluoranthene	99.6	J	119	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	33.8	J	119	µg/kg	SW846 8270D
Phenanthrene	55.7	J	119	µg/kg	SW846 8270D
Pyrene	93.7	J	119	µg/kg	SW846 8270D
Reactive Sulfide	78.7		50.0	mg/kg	SW846 Ch. 7.3

Lab ID: SC12076-02RE1 **Client ID:** Roll Off 3 and 4

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
2-Butanone (MEK)	53.0	J	110	µg/kg	SW846 8260C
Acetone	189		110	µg/kg	SW846 8260C

Lab ID: SC12076-03 **Client ID:** Roll Off 5

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Arsenic	17.8		2.29	mg/kg	SW846 6010C
Barium	48.6		1.53	mg/kg	SW846 6010C
Chromium	23.9		1.53	mg/kg	SW846 6010C
Lead	12.7		2.29	mg/kg	SW846 6010C
Selenium	0.978	J	2.29	mg/kg	SW846 6010C
Mercury	0.0480		0.0475	mg/kg	SW846 7471B
Benzo (a) anthracene	55.8	J	108	µg/kg	SW846 8270D
Benzo (a) pyrene	66.6	J	108	µg/kg	SW846 8270D
Benzo (b) fluoranthene	65.0	J	108	µg/kg	SW846 8270D
Benzo (g,h,i) perylene	33.0	J	108	µg/kg	SW846 8270D
Benzo (k) fluoranthene	49.8	J	108	µg/kg	SW846 8270D
Chrysene	72.6	J	108	µg/kg	SW846 8270D
Fluoranthene	118		108	µg/kg	SW846 8270D
Indeno (1,2,3-cd) pyrene	42.2	J	108	µg/kg	SW846 8270D
Phenanthrene	63.9	J	108	µg/kg	SW846 8270D
Pyrene	119		108	µg/kg	SW846 8270D

Lab ID: SC12076-03RE1 **Client ID:** Roll Off 5

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
2-Butanone (MEK)	41.3	J	98.5	µg/kg	SW846 8260C
Acetone	126		98.5	µg/kg	SW846 8260C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Roll Off 1 and 2 SC12076-01	[none]	Soil	04-Sep-15 11:23	05-Sep-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
	VOC Extraction	**Field extracted**		N/A			1	VOC Soil Extraction			DT	1517097	
Re-analysis of Volatile Organic Compounds by SW846 8260 Prepared by method SW846 5035A Soil (low level)						Initial weight: 6.44 g							
67-64-1	Acetone	**229**		µg/kg dry	112	12.4	1	SW846 8260C	10-Sep-15	10-Sep-15	SJB	1517242	X
107-13-1	Acrylonitrile	< 11.2	U	µg/kg dry	11.2	4.2	1	"	"	"	"	"	X
71-43-2	Benzene	< 11.2	U	µg/kg dry	11.2	2.0	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 11.2	U	µg/kg dry	11.2	2.9	1	"	"	"	"	"	X
75-25-2	Bromoform	< 11.2	U	µg/kg dry	11.2	3.1	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	**63.5**	J	µg/kg dry	112	6.5	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 11.2	U	µg/kg dry	11.2	2.5	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 11.2	U	µg/kg dry	11.2	1.8	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 22.5	U	µg/kg dry	22.5	3.9	1	"	"	"	"	"	X
67-66-3	Chloroform	< 11.2	U	µg/kg dry	11.2	3.7	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 22.5	U	µg/kg dry	22.5	3.8	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 11.2	U	µg/kg dry	11.2	2.5	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 22.5	U	µg/kg dry	22.5	3.7	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 11.2	U	µg/kg dry	11.2	3.6	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 11.2	U	µg/kg dry	11.2	2.7	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 11.2	U	µg/kg dry	11.2	5.4	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 11.2	U	µg/kg dry	11.2	4.1	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 11.2	U	µg/kg dry	11.2	4.8	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 11.2	U	µg/kg dry	11.2	4.4	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 11.2	U	µg/kg dry	11.2	3.0	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 11.2	U	µg/kg dry	11.2	3.8	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 11.2	U	µg/kg dry	11.2	2.0	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 112	U	µg/kg dry	112	7.6	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 112	U	µg/kg dry	112	6.1	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 22.5	U	µg/kg dry	22.5	3.3	1	"	"	"	"	"	X
100-42-5	Styrene	< 11.2	U	µg/kg dry	11.2	1.9	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 11.2	U	µg/kg dry	11.2	6.1	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 11.2	U	µg/kg dry	11.2	4.3	1	"	"	"	"	"	X
108-88-3	Toluene	< 11.2	U	µg/kg dry	11.2	2.6	1	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 11.2	U	µg/kg dry	11.2	2.9	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 11.2	U	µg/kg dry	11.2	3.0	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 11.2	U	µg/kg dry	11.2	1.9	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 11.2	U	µg/kg dry	11.2	4.1	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 11.2	U	µg/kg dry	11.2	4.1	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 22.5	U	µg/kg dry	22.5	2.2	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 11.2	U	µg/kg dry	11.2	2.4	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 22.5	U	µg/kg dry	22.5	12.1	1	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*91*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*103*			*70-130 %*			"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Roll Off 1 and 2 SC12076-01	[none]	Soil	04-Sep-15 11:23	05-Sep-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Re-analysis of Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (low level)							Initial weight: 6.44 g						
17060-07-0	*1,2-Dichloroethane-d4*	*126*			*70-130 %*			SW846 8260C	10-Sep-15	10-Sep-15	SJB	1517242	
1868-53-7	*Dibromofluoromethane*	*106*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3545A													
83-32-9	Acenaphthene	< 121	U	µg/kg dry	121	28.3	1	SW846 8270D	10-Sep-15	14-Sep-15	MSL	1517271	X
208-96-8	Acenaphthylene	< 121	U	µg/kg dry	121	25.7	1	"	"	"	"	"	X
120-12-7	Anthracene	< 121	U	µg/kg dry	121	27.8	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 600	U	µg/kg dry	600	145	1	"	"	"	"	"	
92-87-5	Benzidine	< 600	U	µg/kg dry	600	147	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**33.4**	J	µg/kg dry	121	25.1	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**35.8**	J	µg/kg dry	121	25.3	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**32.8**	J	µg/kg dry	121	27.7	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	< 121	U	µg/kg dry	121	26.3	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**32.1**	J	µg/kg dry	121	27.7	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 600	U	µg/kg dry	600	110	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 304	U	µg/kg dry	304	109	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 304	U	µg/kg dry	304	109	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 304	U	µg/kg dry	304	150	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 600	U	µg/kg dry	600	121	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 600	U	µg/kg dry	600	133	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 600	U	µg/kg dry	600	125	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 600	U	µg/kg dry	600	106	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 304	U	µg/kg dry	304	107	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 600	U	µg/kg dry	600	113	1	"	"	"	"	"	X
218-01-9	Chrysene	**39.4**	J	µg/kg dry	121	29.7	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 121	U	µg/kg dry	121	22.3	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 600	U	µg/kg dry	600	101	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 600	U	µg/kg dry	600	107	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 600	U	µg/kg dry	600	99.4	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 600	U	µg/kg dry	600	122	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 304	U	µg/kg dry	304	103	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 600	U	µg/kg dry	600	125	1	"	"	"	"	"	X
131-11-3	Dimethyl phthalate	< 600	U	µg/kg dry	600	118	1	"	"	"	"	"	X
105-67-9	2,4-Dimethylphenol	< 600	U	µg/kg dry	600	103	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 600	U	µg/kg dry	600	135	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 600	U	µg/kg dry	600	160	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 600	U	µg/kg dry	600	158	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 304	U	µg/kg dry	304	125	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 304	U	µg/kg dry	304	118	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 600	U	µg/kg dry	600	130	1	"	"	"	"	"	X

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3545A													
206-44-0	Fluoranthene	**75.2**	J	µg/kg dry	121	30.5	1	SW846 8270D	10-Sep-15	14-Sep-15	MSL	1517271	X
86-73-7	Fluorene	< 121	U	µg/kg dry	121	29.1	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 304	U	µg/kg dry	304	133	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 304	U	µg/kg dry	304	96.6	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 304	U	µg/kg dry	304	111	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 304	U	µg/kg dry	304	117	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	< 121	U	µg/kg dry	121	24.8	1	"	"	"	"	"	X
78-59-1	Isophorone	< 304	U	µg/kg dry	304	106	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 600	U	µg/kg dry	600	108	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 600	U	µg/kg dry	600	135	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 121	U	µg/kg dry	121	24.7	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 304	U	µg/kg dry	304	118	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 304	U	µg/kg dry	304	101	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 2400	U	µg/kg dry	2400	162	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 304	U	µg/kg dry	304	119	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 304	U	µg/kg dry	304	129	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 600	U	µg/kg dry	600	141	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 600	U	µg/kg dry	600	143	1	"	"	"	"	"	X
85-01-8	Phenanthrene	**39.4**	J	µg/kg dry	121	29.6	1	"	"	"	"	"	X
108-95-2	Phenol	< 600	U	µg/kg dry	600	109	1	"	"	"	"	"	X
129-00-0	Pyrene	**67.3**	J	µg/kg dry	121	25.9	1	"	"	"	"	"	X
110-86-1	Pyridine	< 600	U	µg/kg dry	600	130	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 121	U	µg/kg dry	121	30.7	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 600	U	µg/kg dry	600	124	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 304	U	µg/kg dry	304	115	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*64*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*63*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*73*			*30-130 %*			"	"	"	"	"	
4165-62-2	*Phenol-d5*	*72*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*68*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*77*			*30-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GC													
Organochlorine Pesticides Prepared by method SW846 3545A													
319-84-6	alpha-BHC	< 8.90	U	µg/kg dry	8.90	0.867	1	SW846 8081B	08-Sep-15	14-Sep-15	TG	1517051	X
319-85-7	beta-BHC	< 8.90	U	µg/kg dry	8.90	1.15	1	"	"	"	"	"	X
319-86-8	delta-BHC	< 8.90	U	µg/kg dry	8.90	0.698	1	"	"	"	"	"	X
58-89-9	gamma-BHC (Lindane)	< 5.34	U	µg/kg dry	5.34	0.958	1	"	"	"	"	"	X
76-44-8	Heptachlor	< 8.90	U	µg/kg dry	8.90	1.04	1	"	"	"	"	"	X
309-00-2	Aldrin	< 8.90	U	µg/kg dry	8.90	0.990	1	"	"	"	"	"	X
1024-57-3	Heptachlor epoxide	< 8.90	U	µg/kg dry	8.90	0.942	1	"	"	"	"	"	X
959-98-8	Endosulfan I	< 8.90	U	µg/kg dry	8.90	1.00	1	"	"	"	"	"	X

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GC													
Organochlorine Pesticides Prepared by method SW846 3545A													
60-57-1	Dieldrin	< 8.90	U	µg/kg dry	8.90	1.02	1	SW846 8081B	08-Sep-15	14-Sep-15	TG	1517051	X
72-55-9	4,4'-DDE (p,p')	< 8.90	U	µg/kg dry	8.90	1.06	1	"	"	"	"	"	X
72-20-8	Endrin	< 14.2	U	µg/kg dry	14.2	1.30	1	"	"	"	"	"	X
33213-65-9	Endosulfan II	< 14.2	U	µg/kg dry	14.2	1.00	1	"	"	"	"	"	X
72-54-8	4,4'-DDD (p,p')	< 14.2	U	µg/kg dry	14.2	0.945	1	"	"	"	"	"	X
1031-07-8	Endosulfan sulfate	< 14.2	U	µg/kg dry	14.2	1.02	1	"	"	"	"	"	X
50-29-3	4,4'-DDT (p,p')	< 14.2	U	µg/kg dry	14.2	0.952	1	"	"	"	"	"	X
72-43-5	Methoxychlor	< 14.2	U	µg/kg dry	14.2	2.15	1	"	"	"	"	"	X
7421-93-4	Endrin aldehyde	< 14.2	U	µg/kg dry	14.2	1.16	1	"	"	"	"	"	X
8001-35-2	Toxaphene	< 178	U	µg/kg dry	178	57.7	1	"	"	"	"	"	X
57-74-9	Chlordane	< 35.6	U	µg/kg dry	35.6	21.5	1	"	"	"	"	"	X
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*63*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*94*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*89*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*57*			*30-150 %*			"	"	"	"	"	
Polychlorinated Biphenyls Prepared by method SW846 3545A													
12674-11-2	Aroclor-1016	< 35.6	U	µg/kg dry	35.6	32.1	1	SW846 8082A	08-Sep-15	09-Sep-15	IMR	1517043	X
11104-28-2	Aroclor-1221	< 35.6	U	µg/kg dry	35.6	27.3	1	"	"	"	"	"	X
11141-16-5	Aroclor-1232	< 35.6	U	µg/kg dry	35.6	32.0	1	"	"	"	"	"	X
53469-21-9	Aroclor-1242	< 35.6	U	µg/kg dry	35.6	22.1	1	"	"	"	"	"	X
12672-29-6	Aroclor-1248	< 35.6	U	µg/kg dry	35.6	22.3	1	"	"	"	"	"	X
11097-69-1	Aroclor-1254	< 35.6	U	µg/kg dry	35.6	24.5	1	"	"	"	"	"	X
11096-82-5	Aroclor-1260	< 35.6	U	µg/kg dry	35.6	25.0	1	"	"	"	"	"	X
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*45*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*55*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*55*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*65*			*30-150 %*			"	"	"	"	"	
Chlorinated Herbicides Prepared by method SW846 3550C									Methylation date: 09-Sep-15				
93-76-5	2,4,5-T	< 12.1	U	µg/kg dry	12.1	4.69	1	SW846 8151A	09-Sep-15	10-Sep-15	TG	1517128	X
93-72-1	2,4,5-TP (Silvex)	< 12.1	U	µg/kg dry	12.1	3.02	1	"	"	"	"	"	X
94-75-7	2,4-D	< 12.1	U	µg/kg dry	12.1	7.03	1	"	"	"	"	"	X
94-82-6	2,4-DB	< 12.1	U	µg/kg dry	12.1	4.67	1	"	"	"	"	"	X
75-99-0	Dalapon	< 12.1	U	µg/kg dry	12.1	2.53	1	"	"	"	"	"	X
1918-00-9	Dicamba	< 12.1	U	µg/kg dry	12.1	4.69	1	"	"	"	"	"	X
120-36-5	Dichlorprop	< 12.1	U	µg/kg dry	12.1	5.86	1	"	"	"	"	"	X
88-85-7	Dinoseb	< 12.1	U	µg/kg dry	12.1	4.20	1	"	"	"	"	"	X
94-74-6	MCPA	< 4050	U	µg/kg dry	4050	1820	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Roll Off 1 and 2 SC12076-01	[none]	Soil	04-Sep-15 11:23	05-Sep-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GC													
Chlorinated Herbicides Prepared by method SW846 3550C									Methylation date: 09-Sep-15				
94-81-5	MCPB	< 4050	U	µg/kg dry	4050	1410	1	SW846 8151A	09-Sep-15	10-Sep-15	TG	1517128	
93-65-2	MCPP	< 4050	U	µg/kg dry	4050	1410	1	"	"	"	"	"	X
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*60*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*50*			*30-150 %*			"	"	"	"	"	
2552-89-8	*DCAA (Sr)*	*65*			*30-150 %*			"	"	"	"	"	
2552-89-8	*DCAA (Sr) [2C]*	*40*			*30-150 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 2.61	U	mg/kg dry	2.61	0.191	1	SW846 6010C	10-Sep-15	14-Sep-15	bjw	1517112	X
7440-38-2	Arsenic	**73.6**		mg/kg dry	2.61	0.421	1	"	"	"	"	"	X
7440-39-3	Barium	**62.1**		mg/kg dry	1.74	0.103	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.870	U	mg/kg dry	0.870	0.0278	1	"	"	"	"	"	X
7440-47-3	Chromium	**26.3**		mg/kg dry	1.74	0.166	1	"	"	"	"	"	X
7439-97-6	Mercury	**0.0401**	J	mg/kg dry	0.0516	0.0034	1	SW846 7471B	"	11-Sep-15	YR	1517113	X
7439-92-1	Lead	**12.3**		mg/kg dry	2.61	0.480	1	SW846 6010C	"	14-Sep-15	bjw	1517112	X
7782-49-2	Selenium	**1.09**	J	mg/kg dry	2.61	0.653	1	"	"	"	"	"	X
General Chemistry Parameters													
	% Solids	**54.7**		%			1	SM2540 G Mod.	08-Sep-15	08-Sep-15	DT	1517091	
Toxicity Characteristics													
	Flashpoint	**>200**		°F			1	SW846 1010A	09-Sep-15	09-Sep-15	BD	1517195	X
	Ignitability by Definition	**Negative**	IgHT	N/A			1	SW846 1030	11-Sep-15 10:40	11-Sep-15 14:59	BD	1517362	X
	pH	**6.49**	pH	pH Units			1	SW846 9045D	09-Sep-15 10:41	09-Sep-15 16:20	BD	1517180	X
Reactivity Cyanide/Sulfide Prepared by method General Preparation													
	Reactivity	**See Narrative**		mg/kg dry			1	SW846 Ch. 7.3	09-Sep-15	10-Sep-15	EEM	1517168	
57-12-5	Reactive Cyanide	< 24.8	U	mg/kg dry	24.8	24.8	1	"	"	"	"	"	
18496-25-8	Reactive Sulfide	**58.3**		mg/kg dry	49.7	49.7	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Roll Off 3 and 4	[none]	Soil	04-Sep-15 11:31	05-Sep-15
SC12076-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
	VOC Extraction	**Field extracted**		N/A			1	VOC Soil Extraction			DT	1517097	
Re-analysis of Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (low level)							Initial weight: 6.34 g						
67-64-1	Acetone	**189**		µg/kg dry	110	12.1	1	SW846 8260C	10-Sep-15	10-Sep-15	SJB	1517242	X
107-13-1	Acrylonitrile	< 11.0	U	µg/kg dry	11.0	4.1	1	"	"	"	"	"	X
71-43-2	Benzene	< 11.0	U	µg/kg dry	11.0	2.0	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 11.0	U	µg/kg dry	11.0	2.9	1	"	"	"	"	"	X
75-25-2	Bromoform	< 11.0	U	µg/kg dry	11.0	3.0	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	**53.0**	J	µg/kg dry	110	6.4	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 11.0	U	µg/kg dry	11.0	2.4	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 11.0	U	µg/kg dry	11.0	1.8	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 21.9	U	µg/kg dry	21.9	3.8	1	"	"	"	"	"	X
67-66-3	Chloroform	< 11.0	U	µg/kg dry	11.0	3.6	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 21.9	U	µg/kg dry	21.9	3.7	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 11.0	U	µg/kg dry	11.0	2.5	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 21.9	U	µg/kg dry	21.9	3.6	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 11.0	U	µg/kg dry	11.0	3.5	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 11.0	U	µg/kg dry	11.0	2.7	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 11.0	U	µg/kg dry	11.0	5.3	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 11.0	U	µg/kg dry	11.0	4.0	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 11.0	U	µg/kg dry	11.0	4.7	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 11.0	U	µg/kg dry	11.0	4.3	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 11.0	U	µg/kg dry	11.0	2.9	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 11.0	U	µg/kg dry	11.0	3.7	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 11.0	U	µg/kg dry	11.0	1.9	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 110	U	µg/kg dry	110	7.4	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 110	U	µg/kg dry	110	5.9	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 21.9	U	µg/kg dry	21.9	3.2	1	"	"	"	"	"	X
100-42-5	Styrene	< 11.0	U	µg/kg dry	11.0	1.9	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 11.0	U	µg/kg dry	11.0	6.0	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 11.0	U	µg/kg dry	11.0	4.2	1	"	"	"	"	"	X
108-88-3	Toluene	< 11.0	U	µg/kg dry	11.0	2.5	1	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 11.0	U	µg/kg dry	11.0	2.8	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 11.0	U	µg/kg dry	11.0	2.9	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 11.0	U	µg/kg dry	11.0	1.9	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 11.0	U	µg/kg dry	11.0	4.0	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 11.0	U	µg/kg dry	11.0	4.0	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 21.9	U	µg/kg dry	21.9	2.2	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 11.0	U	µg/kg dry	11.0	2.3	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 21.9	U	µg/kg dry	21.9	11.8	1	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*92*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*104*			*70-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Roll Off 3 and 4 SC12076-02	[none]	Soil	04-Sep-15 11:31	05-Sep-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Re-analysis of Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (low level)							Initial weight: 6.34 g						
17060-07-0	*1,2-Dichloroethane-d4*	*122*			*70-130 %*			SW846 8260C	10-Sep-15	10-Sep-15	SJB	1517242	
1868-53-7	*Dibromofluoromethane*	*105*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3545A													
83-32-9	Acenaphthene	< 119	U	µg/kg dry	119	27.7	1	SW846 8270D	10-Sep-15	14-Sep-15	MSL	1517271	X
208-96-8	Acenaphthylene	< 119	U	µg/kg dry	119	25.2	1	"	"	"	"	"	X
120-12-7	Anthracene	< 119	U	µg/kg dry	119	27.1	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 587	U	µg/kg dry	587	142	1	"	"	"	"	"	
92-87-5	Benzidine	< 587	U	µg/kg dry	587	144	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**47.4**	J	µg/kg dry	119	24.6	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**54.6**	J	µg/kg dry	119	24.7	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**51.0**	J	µg/kg dry	119	27.0	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**32.0**	J	µg/kg dry	119	25.7	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**36.2**	J	µg/kg dry	119	27.0	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 587	U	µg/kg dry	587	107	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 297	U	µg/kg dry	297	107	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 297	U	µg/kg dry	297	107	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 297	U	µg/kg dry	297	147	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 587	U	µg/kg dry	587	119	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 587	U	µg/kg dry	587	130	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 587	U	µg/kg dry	587	122	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 587	U	µg/kg dry	587	103	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 297	U	µg/kg dry	297	105	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 587	U	µg/kg dry	587	110	1	"	"	"	"	"	X
218-01-9	Chrysene	**59.3**	J	µg/kg dry	119	29.0	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 119	U	µg/kg dry	119	21.8	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 587	U	µg/kg dry	587	98.7	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 587	U	µg/kg dry	587	104	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 587	U	µg/kg dry	587	97.2	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 587	U	µg/kg dry	587	119	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 297	U	µg/kg dry	297	101	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 587	U	µg/kg dry	587	123	1	"	"	"	"	"	X
131-11-3	Dimethyl phthalate	< 587	U	µg/kg dry	587	116	1	"	"	"	"	"	X
105-67-9	2,4-Dimethylphenol	< 587	U	µg/kg dry	587	101	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 587	U	µg/kg dry	587	132	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 587	U	µg/kg dry	587	156	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 587	U	µg/kg dry	587	155	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 297	U	µg/kg dry	297	122	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 297	U	µg/kg dry	297	115	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 587	U	µg/kg dry	587	127	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Roll Off 3 and 4	[none]	Soil	04-Sep-15 11:31	05-Sep-15
SC12076-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3545A													
206-44-0	Fluoranthene	**99.6**	J	µg/kg dry	119	29.8	1	SW846 8270D	10-Sep-15	14-Sep-15	MSL	1517271	X
86-73-7	Fluorene	< 119	U	µg/kg dry	119	28.4	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 297	U	µg/kg dry	297	130	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 297	U	µg/kg dry	297	94.5	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 297	U	µg/kg dry	297	108	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 297	U	µg/kg dry	297	114	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	**33.8**	J	µg/kg dry	119	24.3	1	"	"	"	"	"	X
78-59-1	Isophorone	< 297	U	µg/kg dry	297	104	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 587	U	µg/kg dry	587	105	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 587	U	µg/kg dry	587	132	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 119	U	µg/kg dry	119	24.2	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 297	U	µg/kg dry	297	115	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 297	U	µg/kg dry	297	98.4	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 2350	U	µg/kg dry	2350	159	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 297	U	µg/kg dry	297	116	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 297	U	µg/kg dry	297	126	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 587	U	µg/kg dry	587	138	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 587	U	µg/kg dry	587	140	1	"	"	"	"	"	X
85-01-8	Phenanthrene	**55.7**	J	µg/kg dry	119	29.0	1	"	"	"	"	"	X
108-95-2	Phenol	< 587	U	µg/kg dry	587	107	1	"	"	"	"	"	X
129-00-0	Pyrene	**93.7**	J	µg/kg dry	119	25.3	1	"	"	"	"	"	X
110-86-1	Pyridine	< 587	U	µg/kg dry	587	127	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 119	U	µg/kg dry	119	30.0	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 587	U	µg/kg dry	587	121	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 297	U	µg/kg dry	297	112	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*49*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*52*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*58*			*30-130 %*			"	"	"	"	"	
4165-62-2	*Phenol-d5*	*54*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*53*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*55*			*30-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GC													
Organochlorine Pesticides Prepared by method SW846 3545A													
319-84-6	alpha-BHC	< 8.80	U	µg/kg dry	8.80	0.857	1	SW846 8081B	08-Sep-15	14-Sep-15	TG	1517051	X
319-85-7	beta-BHC	< 8.80	U	µg/kg dry	8.80	1.13	1	"	"	"	"	"	X
319-86-8	delta-BHC	< 8.80	U	µg/kg dry	8.80	0.690	1	"	"	"	"	"	X
58-89-9	gamma-BHC (Lindane)	< 5.28	U	µg/kg dry	5.28	0.946	1	"	"	"	"	"	X
76-44-8	Heptachlor	< 8.80	U	µg/kg dry	8.80	1.03	1	"	"	"	"	"	X
309-00-2	Aldrin	< 8.80	U	µg/kg dry	8.80	0.978	1	"	"	"	"	"	X
1024-57-3	Heptachlor epoxide	< 8.80	U	µg/kg dry	8.80	0.931	1	"	"	"	"	"	X
959-98-8	Endosulfan I	< 8.80	U	µg/kg dry	8.80	0.990	1	"	"	"	"	"	X

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GC													
Organochlorine Pesticides Prepared by method SW846 3545A													
60-57-1	Dieldrin	< 8.80	U	µg/kg dry	8.80	1.01	1	SW846 8081B	08-Sep-15	14-Sep-15	TG	1517051	X
72-55-9	4,4'-DDE (p,p')	< 8.80	U	µg/kg dry	8.80	1.04	1	"	"	"	"	"	X
72-20-8	Endrin	< 14.1	U	µg/kg dry	14.1	1.28	1	"	"	"	"	"	X
33213-65-9	Endosulfan II	< 14.1	U	µg/kg dry	14.1	0.990	1	"	"	"	"	"	X
72-54-8	4,4'-DDD (p,p')	< 14.1	U	µg/kg dry	14.1	0.934	1	"	"	"	"	"	X
1031-07-8	Endosulfan sulfate	< 14.1	U	µg/kg dry	14.1	1.01	1	"	"	"	"	"	X
50-29-3	4,4'-DDT (p,p')	< 14.1	U	µg/kg dry	14.1	0.941	1	"	"	"	"	"	X
72-43-5	Methoxychlor	< 14.1	U	µg/kg dry	14.1	2.13	1	"	"	"	"	"	X
7421-93-4	Endrin aldehyde	< 14.1	U	µg/kg dry	14.1	1.15	1	"	"	"	"	"	X
8001-35-2	Toxaphene	< 176	U	µg/kg dry	176	57.1	1	"	"	"	"	"	X
57-74-9	Chlordane	< 35.2	U	µg/kg dry	35.2	21.2	1	"	"	"	"	"	X
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*73*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*144*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*83*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*59*			*30-150 %*			"	"	"	"	"	
Polychlorinated Biphenyls Prepared by method SW846 3545A													
12674-11-2	Aroclor-1016	< 35.2	U	µg/kg dry	35.2	31.7	1	SW846 8082A	08-Sep-15	09-Sep-15	IMR	1517043	X
11104-28-2	Aroclor-1221	< 35.2	U	µg/kg dry	35.2	27.0	1	"	"	"	"	"	X
11141-16-5	Aroclor-1232	< 35.2	U	µg/kg dry	35.2	31.6	1	"	"	"	"	"	X
53469-21-9	Aroclor-1242	< 35.2	U	µg/kg dry	35.2	21.8	1	"	"	"	"	"	X
12672-29-6	Aroclor-1248	< 35.2	U	µg/kg dry	35.2	22.0	1	"	"	"	"	"	X
11097-69-1	Aroclor-1254	< 35.2	U	µg/kg dry	35.2	24.2	1	"	"	"	"	"	X
11096-82-5	Aroclor-1260	< 35.2	U	µg/kg dry	35.2	24.7	1	"	"	"	"	"	X
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*55*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*55*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*65*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*75*			*30-150 %*			"	"	"	"	"	
Chlorinated Herbicides Prepared by method SW846 3550C									Methylation date: 09-Sep-15				
93-76-5	2,4,5-T	< 11.8	U	µg/kg dry	11.8	4.59	1	SW846 8151A	09-Sep-15	10-Sep-15	TG	1517128	X
93-72-1	2,4,5-TP (Silvex)	< 11.8	U	µg/kg dry	11.8	2.95	1	"	"	"	"	"	X
94-75-7	2,4-D	< 11.8	U	µg/kg dry	11.8	6.88	1	"	"	"	"	"	X
94-82-6	2,4-DB	< 11.8	U	µg/kg dry	11.8	4.57	1	"	"	"	"	"	X
75-99-0	Dalapon	< 11.8	U	µg/kg dry	11.8	2.47	1	"	"	"	"	"	X
1918-00-9	Dicamba	< 11.8	U	µg/kg dry	11.8	4.59	1	"	"	"	"	"	X
120-36-5	Dichlorprop	< 11.8	U	µg/kg dry	11.8	5.73	1	"	"	"	"	"	X
88-85-7	Dinoseb	< 11.8	U	µg/kg dry	11.8	4.10	1	"	"	"	"	"	X
94-74-6	MCPA	< 3970	U	µg/kg dry	3970	1780	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Roll Off 3 and 4 SC12076-02	[none]	Soil	04-Sep-15 11:31	05-Sep-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GC													
Chlorinated Herbicides Prepared by method SW846 3550C									Methylation date: 09-Sep-15				
94-81-5	MCPB	< 3970	U	µg/kg dry	3970	1380	1	SW846 8151A	09-Sep-15	10-Sep-15	TG	1517128	
93-65-2	MCPP	< 3970	U	µg/kg dry	3970	1380	1	"	"	"	"	"	X
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*45*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*40*			*30-150 %*			"	"	"	"	"	
2552-89-8	*DCAA (Sr)*	*80*			*30-150 %*			"	"	"	"	"	
2552-89-8	*DCAA (Sr) [2C]*	*45*			*30-150 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 2.62	U	mg/kg dry	2.62	0.192	1	SW846 6010C	10-Sep-15	14-Sep-15	bjw	1517112	X
7440-38-2	Arsenic	**100**		mg/kg dry	2.62	0.423	1	"	"	"	"	"	X
7440-39-3	Barium	**58.3**		mg/kg dry	1.75	0.104	1	"	"	"	"	"	X
7440-43-9	Cadmium	**0.0402**	J	mg/kg dry	0.873	0.0279	1	"	"	"	"	"	X
7440-47-3	Chromium	**22.5**		mg/kg dry	1.75	0.167	1	"	"	"	"	"	X
7439-97-6	Mercury	**0.0366**	J	mg/kg dry	0.0534	0.0035	1	SW846 7471B	"	11-Sep-15	YR	1517113	X
7439-92-1	Lead	**10.6**		mg/kg dry	2.62	0.482	1	SW846 6010C	"	14-Sep-15	bjw	1517112	X
7782-49-2	Selenium	**1.13**	J	mg/kg dry	2.62	0.656	1	"	"	"	"	"	X
TCLP Metals by EPA 1311 & 6000/7000 Series Methods													
TCLP Extraction for Metals Prepared by method SW846 1311													
	TCLP Extraction	**Completed**		N/A			1	SW846 1311	17-Sep-15	18-Sep-15	CMB	1517749	X
	Final pH of leachate	**5.06**		N/A			1	"	"	"	"	"	
7440-38-2	Arsenic	**0.232**		mg/l	0.0080	0.0051	1	SW846 1311/6010C	18-Sep-15	21-Sep-15	tbc	1517758	X
General Chemistry Parameters													
	% Solids	**56.0**		%			1	SM2540 G Mod.	08-Sep-15	08-Sep-15	DT	1517091	
Toxicity Characteristics													
	Flashpoint	**>200**		°F			1	SW846 1010A	09-Sep-15	09-Sep-15	BD	1517195	X
	Ignitability by Definition	**Negative**	IgHT	N/A			1	SW846 1030	11-Sep-15 10:40	11-Sep-15 14:59	BD	1517362	X
	pH	**6.77**	pH	pH Units			1	SW846 9045D	09-Sep-15 10:41	09-Sep-15 16:30	BD	1517180	X
Reactivity Cyanide/Sulfide Prepared by method General Preparation													
	Reactivity	**See Narrative**		mg/kg dry			1	SW846 Ch. 7.3	09-Sep-15	10-Sep-15	EEM	1517168	
57-12-5	Reactive Cyanide	< 25.0	U	mg/kg dry	25.0	25.0	1	"	"	"	"	"	
18496-25-8	Reactive Sulfide	**78.7**		mg/kg dry	50.0	50.0	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Roll Off 5	[none]	Soil	04-Sep-15 13:03	05-Sep-15
SC12076-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
	VOC Extraction	**Field extracted**		N/A			1	VOC Soil Extraction			DT	1517097	
Re-analysis of Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (low level)							Initial weight: 6.29 g						
67-64-1	Acetone	**126**		µg/kg dry	98.5	10.9	1	SW846 8260C	10-Sep-15	10-Sep-15	SJB	1517242	X
107-13-1	Acrylonitrile	< 9.8	U	µg/kg dry	9.8	3.7	1	"	"	"	"	"	X
71-43-2	Benzene	< 9.8	U	µg/kg dry	9.8	1.8	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 9.8	U	µg/kg dry	9.8	2.6	1	"	"	"	"	"	X
75-25-2	Bromoform	< 9.8	U	µg/kg dry	9.8	2.7	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	**41.3**	J	µg/kg dry	98.5	5.7	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 9.8	U	µg/kg dry	9.8	2.1	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 9.8	U	µg/kg dry	9.8	1.6	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 19.7	U	µg/kg dry	19.7	3.4	1	"	"	"	"	"	X
67-66-3	Chloroform	< 9.8	U	µg/kg dry	9.8	3.3	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 19.7	U	µg/kg dry	19.7	3.3	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 9.8	U	µg/kg dry	9.8	2.2	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 19.7	U	µg/kg dry	19.7	3.2	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 9.8	U	µg/kg dry	9.8	3.1	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 9.8	U	µg/kg dry	9.8	2.4	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 9.8	U	µg/kg dry	9.8	4.7	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 9.8	U	µg/kg dry	9.8	3.6	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 9.8	U	µg/kg dry	9.8	4.2	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 9.8	U	µg/kg dry	9.8	3.8	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 9.8	U	µg/kg dry	9.8	2.6	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 9.8	U	µg/kg dry	9.8	3.3	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 9.8	U	µg/kg dry	9.8	1.7	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 98.5	U	µg/kg dry	98.5	6.6	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 98.5	U	µg/kg dry	98.5	5.3	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 19.7	U	µg/kg dry	19.7	2.9	1	"	"	"	"	"	X
100-42-5	Styrene	< 9.8	U	µg/kg dry	9.8	1.7	1	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 9.8	U	µg/kg dry	9.8	5.4	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 9.8	U	µg/kg dry	9.8	3.8	1	"	"	"	"	"	X
108-88-3	Toluene	< 9.8	U	µg/kg dry	9.8	2.3	1	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 9.8	U	µg/kg dry	9.8	2.6	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 9.8	U	µg/kg dry	9.8	2.6	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 9.8	U	µg/kg dry	9.8	1.7	1	"	"	"	"	"	X
75-69-4	Trichlorofluoromethane (Freon 11)	< 9.8	U	µg/kg dry	9.8	3.6	1	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 9.8	U	µg/kg dry	9.8	3.6	1	"	"	"	"	"	X
179601-23-1	m,p-Xylene	< 19.7	U	µg/kg dry	19.7	1.9	1	"	"	"	"	"	X
95-47-6	o-Xylene	< 9.8	U	µg/kg dry	9.8	2.1	1	"	"	"	"	"	X
109-99-9	Tetrahydrofuran	< 19.7	U	µg/kg dry	19.7	10.6	1	"	"	"	"	"	
Surrogate recoveries:													
460-00-4	*4-Bromofluorobenzene*	*96*			*70-130 %*			"	"	"	"	"	
2037-26-5	*Toluene-d8*	*104*			*70-130 %*			"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Roll Off 5	[none]	Soil	04-Sep-15 13:03	05-Sep-15
SC12076-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Re-analysis of Volatile Organic Compounds by SW846 8260													
Prepared by method SW846 5035A Soil (low level)							Initial weight: 6.29 g						
17060-07-0	*1,2-Dichloroethane-d4*	*124*			*70-130 %*			SW846 8260C	10-Sep-15	10-Sep-15	SJB	1517242	
1868-53-7	*Dibromofluoromethane*	*105*			*70-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3545A													
83-32-9	Acenaphthene	< 108	U	µg/kg dry	108	25.3	1	SW846 8270D	10-Sep-15	14-Sep-15	MSL	1517271	X
208-96-8	Acenaphthylene	< 108	U	µg/kg dry	108	23.0	1	"	"	"	"	"	X
120-12-7	Anthracene	< 108	U	µg/kg dry	108	24.8	1	"	"	"	"	"	X
103-33-3	Azobenzene/Diphenyldiazene	< 536	U	µg/kg dry	536	129	1	"	"	"	"	"	
92-87-5	Benzidine	< 536	U	µg/kg dry	536	131	1	"	"	"	"	"	X
56-55-3	Benzo (a) anthracene	**55.8**	J	µg/kg dry	108	22.4	1	"	"	"	"	"	X
50-32-8	Benzo (a) pyrene	**66.6**	J	µg/kg dry	108	22.6	1	"	"	"	"	"	X
205-99-2	Benzo (b) fluoranthene	**65.0**	J	µg/kg dry	108	24.7	1	"	"	"	"	"	X
191-24-2	Benzo (g,h,i) perylene	**33.0**	J	µg/kg dry	108	23.5	1	"	"	"	"	"	X
207-08-9	Benzo (k) fluoranthene	**49.8**	J	µg/kg dry	108	24.7	1	"	"	"	"	"	X
111-91-1	Bis(2-chloroethoxy)methane	< 536	U	µg/kg dry	536	97.9	1	"	"	"	"	"	X
111-44-4	Bis(2-chloroethyl)ether	< 271	U	µg/kg dry	271	97.5	1	"	"	"	"	"	X
108-60-1	Bis(2-chloroisopropyl)ether	< 271	U	µg/kg dry	271	97.4	1	"	"	"	"	"	X
117-81-7	Bis(2-ethylhexyl)phthalate	< 271	U	µg/kg dry	271	134	1	"	"	"	"	"	X
101-55-3	4-Bromophenyl phenyl ether	< 536	U	µg/kg dry	536	108	1	"	"	"	"	"	X
85-68-7	Butyl benzyl phthalate	< 536	U	µg/kg dry	536	119	1	"	"	"	"	"	X
59-50-7	4-Chloro-3-methylphenol	< 536	U	µg/kg dry	536	111	1	"	"	"	"	"	X
91-58-7	2-Chloronaphthalene	< 536	U	µg/kg dry	536	94.3	1	"	"	"	"	"	X
95-57-8	2-Chlorophenol	< 271	U	µg/kg dry	271	95.9	1	"	"	"	"	"	X
7005-72-3	4-Chlorophenyl phenyl ether	< 536	U	µg/kg dry	536	101	1	"	"	"	"	"	X
218-01-9	Chrysene	**72.6**	J	µg/kg dry	108	26.5	1	"	"	"	"	"	X
53-70-3	Dibenzo (a,h) anthracene	< 108	U	µg/kg dry	108	19.9	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 536	U	µg/kg dry	536	90.1	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 536	U	µg/kg dry	536	95.2	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 536	U	µg/kg dry	536	88.7	1	"	"	"	"	"	X
91-94-1	3,3´-Dichlorobenzidine	< 536	U	µg/kg dry	536	109	1	"	"	"	"	"	X
120-83-2	2,4-Dichlorophenol	< 271	U	µg/kg dry	271	92.3	1	"	"	"	"	"	X
84-66-2	Diethyl phthalate	< 536	U	µg/kg dry	536	112	1	"	"	"	"	"	X
131-11-3	Dimethyl phthalate	< 536	U	µg/kg dry	536	106	1	"	"	"	"	"	X
105-67-9	2,4-Dimethylphenol	< 536	U	µg/kg dry	536	91.9	1	"	"	"	"	"	X
84-74-2	Di-n-butyl phthalate	< 536	U	µg/kg dry	536	120	1	"	"	"	"	"	X
534-52-1	4,6-Dinitro-2-methylphenol	< 536	U	µg/kg dry	536	143	1	"	"	"	"	"	X
51-28-5	2,4-Dinitrophenol	< 536	U	µg/kg dry	536	141	1	"	"	"	"	"	X
121-14-2	2,4-Dinitrotoluene	< 271	U	µg/kg dry	271	112	1	"	"	"	"	"	X
606-20-2	2,6-Dinitrotoluene	< 271	U	µg/kg dry	271	105	1	"	"	"	"	"	X
117-84-0	Di-n-octyl phthalate	< 536	U	µg/kg dry	536	116	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Roll Off 5	[none]	Soil	04-Sep-15 13:03	05-Sep-15
SC12076-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3545A													
206-44-0	Fluoranthene	118		µg/kg dry	108	27.2	1	SW846 8270D	10-Sep-15	14-Sep-15	MSL	1517271	X
86-73-7	Fluorene	< 108	U	µg/kg dry	108	26.0	1	"	"	"	"	"	X
118-74-1	Hexachlorobenzene	< 271	U	µg/kg dry	271	119	1	"	"	"	"	"	X
87-68-3	Hexachlorobutadiene	< 271	U	µg/kg dry	271	86.3	1	"	"	"	"	"	X
77-47-4	Hexachlorocyclopentadiene	< 271	U	µg/kg dry	271	98.9	1	"	"	"	"	"	X
67-72-1	Hexachloroethane	< 271	U	µg/kg dry	271	104	1	"	"	"	"	"	X
193-39-5	Indeno (1,2,3-cd) pyrene	42.2	J	µg/kg dry	108	22.2	1	"	"	"	"	"	X
78-59-1	Isophorone	< 271	U	µg/kg dry	271	94.7	1	"	"	"	"	"	X
95-48-7	2-Methylphenol	< 536	U	µg/kg dry	536	96.2	1	"	"	"	"	"	X
108-39-4, 106-44-5	3 & 4-Methylphenol	< 536	U	µg/kg dry	536	121	1	"	"	"	"	"	X
91-20-3	Naphthalene	< 108	U	µg/kg dry	108	22.1	1	"	"	"	"	"	X
98-95-3	Nitrobenzene	< 271	U	µg/kg dry	271	105	1	"	"	"	"	"	X
88-75-5	2-Nitrophenol	< 271	U	µg/kg dry	271	89.8	1	"	"	"	"	"	X
100-02-7	4-Nitrophenol	< 2140	U	µg/kg dry	2140	145	1	"	"	"	"	"	X
62-75-9	N-Nitrosodimethylamine	< 271	U	µg/kg dry	271	106	1	"	"	"	"	"	X
621-64-7	N-Nitrosodi-n-propylamine	< 271	U	µg/kg dry	271	115	1	"	"	"	"	"	X
86-30-6	N-Nitrosodiphenylamine	< 536	U	µg/kg dry	536	126	1	"	"	"	"	"	X
87-86-5	Pentachlorophenol	< 536	U	µg/kg dry	536	128	1	"	"	"	"	"	X
85-01-8	Phenanthrene	63.9	J	µg/kg dry	108	26.5	1	"	"	"	"	"	X
108-95-2	Phenol	< 536	U	µg/kg dry	536	97.6	1	"	"	"	"	"	X
129-00-0	Pyrene	119		µg/kg dry	108	23.1	1	"	"	"	"	"	X
110-86-1	Pyridine	< 536	U	µg/kg dry	536	116	1	"	"	"	"	"	X
90-12-0	1-Methylnaphthalene	< 108	U	µg/kg dry	108	27.4	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 536	U	µg/kg dry	536	111	1	"	"	"	"	"	X
88-06-2	2,4,6-Trichlorophenol	< 271	U	µg/kg dry	271	103	1	"	"	"	"	"	X
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*65*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*66*			*30-130 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*76*			*30-130 %*			"	"	"	"	"	
4165-62-2	*Phenol-d5*	*70*			*30-130 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*76*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*68*			*30-130 %*			"	"	"	"	"	
Semivolatile Organic Compounds by GC													
Organochlorine Pesticides Prepared by method SW846 3545A													
319-84-6	alpha-BHC	< 8.06	U	µg/kg dry	8.06	0.785	1	SW846 8081B	08-Sep-15	14-Sep-15	TG	1517051	X
319-85-7	beta-BHC	< 8.06	U	µg/kg dry	8.06	1.04	1	"	"	"	"	"	X
319-86-8	delta-BHC	< 8.06	U	µg/kg dry	8.06	0.632	1	"	"	"	"	"	X
58-89-9	gamma-BHC (Lindane)	< 4.84	U	µg/kg dry	4.84	0.867	1	"	"	"	"	"	X
76-44-8	Heptachlor	< 8.06	U	µg/kg dry	8.06	0.941	1	"	"	"	"	"	X
309-00-2	Aldrin	< 8.06	U	µg/kg dry	8.06	0.896	1	"	"	"	"	"	X
1024-57-3	Heptachlor epoxide	< 8.06	U	µg/kg dry	8.06	0.853	1	"	"	"	"	"	X
959-98-8	Endosulfan I	< 8.06	U	µg/kg dry	8.06	0.907	1	"	"	"	"	"	X

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GC													
Organochlorine Pesticides Prepared by method SW846 3545A													
60-57-1	Dieldrin	< 8.06	U	µg/kg dry	8.06	0.924	1	SW846 8081B	08-Sep-15	14-Sep-15	TG	1517051	X
72-55-9	4,4'-DDE (p,p')	< 8.06	U	µg/kg dry	8.06	0.956	1	"	"	"	"	"	X
72-20-8	Endrin	< 12.9	U	µg/kg dry	12.9	1.18	1	"	"	"	"	"	X
33213-65-9	Endosulfan II	< 12.9	U	µg/kg dry	12.9	0.907	1	"	"	"	"	"	X
72-54-8	4,4'-DDD (p,p')	< 12.9	U	µg/kg dry	12.9	0.856	1	"	"	"	"	"	X
1031-07-8	Endosulfan sulfate	< 12.9	U	µg/kg dry	12.9	0.922	1	"	"	"	"	"	X
50-29-3	4,4'-DDT (p,p')	< 12.9	U	µg/kg dry	12.9	0.862	1	"	"	"	"	"	X
72-43-5	Methoxychlor	< 12.9	U	µg/kg dry	12.9	1.95	1	"	"	"	"	"	X
7421-93-4	Endrin aldehyde	< 12.9	U	µg/kg dry	12.9	1.05	1	"	"	"	"	"	X
8001-35-2	Toxaphene	< 161	U	µg/kg dry	161	52.3	1	"	"	"	"	"	X
57-74-9	Chlordane	< 32.2	U	µg/kg dry	32.2	19.4	1	"	"	"	"	"	X
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*75*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*79*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*95*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*71*			*30-150 %*			"	"	"	"	"	
Polychlorinated Biphenyls Prepared by method SW846 3545A													
12674-11-2	Aroclor-1016	< 32.2	U	µg/kg dry	32.2	29.1	1	SW846 8082A	08-Sep-15	09-Sep-15	IMR	1517043	X
11104-28-2	Aroclor-1221	< 32.2	U	µg/kg dry	32.2	24.7	1	"	"	"	"	"	X
11141-16-5	Aroclor-1232	< 32.2	U	µg/kg dry	32.2	29.0	1	"	"	"	"	"	X
53469-21-9	Aroclor-1242	< 32.2	U	µg/kg dry	32.2	20.0	1	"	"	"	"	"	X
12672-29-6	Aroclor-1248	< 32.2	U	µg/kg dry	32.2	20.2	1	"	"	"	"	"	X
11097-69-1	Aroclor-1254	< 32.2	U	µg/kg dry	32.2	22.2	1	"	"	"	"	"	X
11096-82-5	Aroclor-1260	< 32.2	U	µg/kg dry	32.2	22.6	1	"	"	"	"	"	X
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*50*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*55*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr)*	*60*			*30-150 %*			"	"	"	"	"	
2051-24-3	*Decachlorobiphenyl (Sr) [2C]*	*70*			*30-150 %*			"	"	"	"	"	
Chlorinated Herbicides Prepared by method SW846 3550C									Methylation date: 09-Sep-15				
93-76-5	2,4,5-T	< 11.1	U	µg/kg dry	11.1	4.30	1	SW846 8151A	09-Sep-15	10-Sep-15	TG	1517128	X
93-72-1	2,4,5-TP (Silvex)	< 11.1	U	µg/kg dry	11.1	2.77	1	"	"	"	"	"	X
94-75-7	2,4-D	< 11.1	U	µg/kg dry	11.1	6.45	1	"	"	"	"	"	X
94-82-6	2,4-DB	< 11.1	U	µg/kg dry	11.1	4.29	1	"	"	"	"	"	X
75-99-0	Dalapon	< 11.1	U	µg/kg dry	11.1	2.32	1	"	"	"	"	"	X
1918-00-9	Dicamba	< 11.1	U	µg/kg dry	11.1	4.31	1	"	"	"	"	"	X
120-36-5	Dichlorprop	< 11.1	U	µg/kg dry	11.1	5.38	1	"	"	"	"	"	X
88-85-7	Dinoseb	< 11.1	U	µg/kg dry	11.1	3.85	1	"	"	"	"	"	X
94-74-6	MCPA	< 3720	U	µg/kg dry	3720	1670	1	"	"	"	"	"	X

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
Roll Off 5 SC12076-03	[none]	Soil	04-Sep-15 13:03	05-Sep-15

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GC													
Chlorinated Herbicides													
Prepared by method SW846 3550C										Methylation date: 09-Sep-15			
94-81-5	MCPB	< 3720	U	µg/kg dry	3720	1290	1	SW846 8151A	09-Sep-15	10-Sep-15	TG	1517128	
93-65-2	MCPP	< 3720	U	µg/kg dry	3720	1290	1	"	"	"	"	"	X
Surrogate recoveries:													
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr)*	*40*			*30-150 %*			"	"	"	"	"	
10386-84-2	*4,4-DB-Octafluorobiphenyl (Sr) [2C]*	*35*			*30-150 %*			"	"	"	"	"	
2552-89-8	*DCAA (Sr)*	*65*			*30-150 %*			"	"	"	"	"	
2552-89-8	*DCAA (Sr) [2C]*	*60*			*30-150 %*			"	"	"	"	"	
Total Metals by EPA 6000/7000 Series Methods													
7440-22-4	Silver	< 2.29	U	mg/kg dry	2.29	0.168	1	SW846 6010C	10-Sep-15	14-Sep-15	bjw	1517112	X
7440-38-2	Arsenic	**17.8**		mg/kg dry	2.29	0.370	1	"	"	"	"	"	X
7440-39-3	Barium	**48.6**		mg/kg dry	1.53	0.0907	1	"	"	"	"	"	X
7440-43-9	Cadmium	< 0.764	U	mg/kg dry	0.764	0.0244	1	"	"	"	"	"	X
7440-47-3	Chromium	**23.9**		mg/kg dry	1.53	0.146	1	"	"	"	"	"	X
7439-97-6	Mercury	**0.0480**		mg/kg dry	0.0475	0.0031	1	SW846 7471B	"	11-Sep-15	YR	1517113	X
7439-92-1	Lead	**12.7**		mg/kg dry	2.29	0.422	1	SW846 6010C	"	14-Sep-15	bjw	1517112	X
7782-49-2	Selenium	**0.978**	J	mg/kg dry	2.29	0.574	1	"	"	"	"	"	X
General Chemistry Parameters													
	% Solids	**60.4**		%			1	SM2540 G Mod.	08-Sep-15	08-Sep-15	DT	1517091	
Toxicity Characteristics													
	Flashpoint	**>200**		°F			1	SW846 1010A	09-Sep-15	09-Sep-15	BD	1517195	X
	Ignitability by Definition	**Negative**	IgHT	N/A			1	SW846 1030	11-Sep-15 10:40	11-Sep-15 14:59	BD	1517362	X
	pH	**7.18**	pH	pH Units			1	SW846 9045D	09-Sep-15 10:41	09-Sep-15 16:30	BD	1517180	X
Reactivity Cyanide/Sulfide													
Prepared by method General Preparation													
	Reactivity	**See Narrative**		mg/kg dry			1	SW846 Ch. 7.3	09-Sep-15	10-Sep-15	EEM	1517168	
57-12-5	Reactive Cyanide	< 24.5	U	mg/kg dry	24.5	24.5	1	"	"	"	"	"	
18496-25-8	Reactive Sulfide	< 49.0	U	mg/kg dry	49.0	49.0	1	"	"	"	"	"	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517052 - SW846 5035A Soil (high level)										
Blank (1517052-BLK1)					Prepared & Analyzed: 08-Sep-15					
Acetone	< 500	U, D	µg/kg wet	500						
Acrylonitrile	< 50.0	U, D	µg/kg wet	50.0						
Benzene	< 50.0	U, D	µg/kg wet	50.0						
Bromodichloromethane	< 50.0	U, D	µg/kg wet	50.0						
Bromoform	< 50.0	U, D	µg/kg wet	50.0						
2-Butanone (MEK)	< 500	U, D	µg/kg wet	500						
Carbon tetrachloride	< 50.0	U, D	µg/kg wet	50.0						
Chlorobenzene	< 50.0	U, D	µg/kg wet	50.0						
Chloroethane	< 100	U, D	µg/kg wet	100						
Chloroform	< 50.0	U, D	µg/kg wet	50.0						
Chloromethane	< 100	U, D	µg/kg wet	100						
Dibromochloromethane	< 50.0	U, D	µg/kg wet	50.0						
Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/kg wet	100						
1,1-Dichloroethane	< 50.0	U, D	µg/kg wet	50.0						
1,2-Dichloroethane	< 50.0	U, D	µg/kg wet	50.0						
1,1-Dichloroethene	< 50.0	U, D	µg/kg wet	50.0						
cis-1,2-Dichloroethene	< 50.0	U, D	µg/kg wet	50.0						
trans-1,2-Dichloroethene	< 50.0	U, D	µg/kg wet	50.0						
1,2-Dichloropropane	< 50.0	U, D	µg/kg wet	50.0						
cis-1,3-Dichloropropene	< 50.0	U, D	µg/kg wet	50.0						
trans-1,3-Dichloropropene	< 50.0	U, D	µg/kg wet	50.0						
Ethylbenzene	< 50.0	U, D	µg/kg wet	50.0						
2-Hexanone (MBK)	< 500	U, D	µg/kg wet	500						
4-Methyl-2-pentanone (MIBK)	< 500	U, D	µg/kg wet	500						
Methylene chloride	< 100	U, D	µg/kg wet	100						
Styrene	< 50.0	U, D	µg/kg wet	50.0						
1,1,2,2-Tetrachloroethane	< 50.0	U, D	µg/kg wet	50.0						
Tetrachloroethene	< 50.0	U, D	µg/kg wet	50.0						
Toluene	< 50.0	U, D	µg/kg wet	50.0						
1,1,1-Trichloroethane	< 50.0	U, D	µg/kg wet	50.0						
1,1,2-Trichloroethane	< 50.0	U, D	µg/kg wet	50.0						
Trichloroethene	< 50.0	U, D	µg/kg wet	50.0						
Trichlorofluoromethane (Freon 11)	< 50.0	U, D	µg/kg wet	50.0						
Vinyl chloride	< 50.0	U, D	µg/kg wet	50.0						
m,p-Xylene	< 100	U, D	µg/kg wet	100						
o-Xylene	< 50.0	U, D	µg/kg wet	50.0						
Tetrahydrofuran	< 100	U, D	µg/kg wet	100						
Surrogate: 4-Bromofluorobenzene	*29.6*		µg/kg		*30.0*		*99*	*70-130*		
Surrogate: Toluene-d8	*29.7*		µg/kg		*30.0*		*99*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*32.2*		µg/kg		*30.0*		*107*	*70-130*		
Surrogate: Dibromofluoromethane	*30.6*		µg/kg		*30.0*		*102*	*70-130*		
LCS (1517052-BS1)					Prepared & Analyzed: 08-Sep-15					
Acetone	**22.6**	D	µg/kg		20.0		113	70-130		
Acrylonitrile	**21.6**	D	µg/kg		20.0		108	70-130		
Benzene	**20.4**	D	µg/kg		20.0		102	70-130		
Bromodichloromethane	**24.3**	D	µg/kg		20.0		122	70-130		
Bromoform	**23.6**	D	µg/kg		20.0		118	70-130		
2-Butanone (MEK)	**20.8**	D	µg/kg		20.0		104	70-130		
Carbon tetrachloride	**23.6**	D	µg/kg		20.0		118	70-130		
Chlorobenzene	**20.7**	D	µg/kg		20.0		103	70-130		
Chloroethane	**19.0**	D	µg/kg		20.0		95	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517052 - SW846 5035A Soil (high level)										
LCS (1517052-BS1)					Prepared & Analyzed: 08-Sep-15					
Chloroform	**20.7**	D	µg/kg		20.0		103	70-130		
Chloromethane	**19.0**	D	µg/kg		20.0		95	70-130		
Dibromochloromethane	**24.0**	D	µg/kg		20.0		120	70-130		
Dichlorodifluoromethane (Freon12)	**18.4**	D	µg/kg		20.0		92	70-130		
1,1-Dichloroethane	**20.5**	D	µg/kg		20.0		103	70-130		
1,2-Dichloroethane	**22.7**	D	µg/kg		20.0		114	70-130		
1,1-Dichloroethene	**15.3**	D	µg/kg		20.0		77	70-130		
cis-1,2-Dichloroethene	**20.8**	D	µg/kg		20.0		104	70-130		
trans-1,2-Dichloroethene	**21.6**	D	µg/kg		20.0		108	70-130		
1,2-Dichloropropane	**21.0**	D	µg/kg		20.0		105	70-130		
cis-1,3-Dichloropropene	**20.9**	D	µg/kg		20.0		105	70-130		
trans-1,3-Dichloropropene	**21.6**	D	µg/kg		20.0		108	70-130		
Ethylbenzene	**21.3**	D	µg/kg		20.0		106	70-130		
2-Hexanone (MBK)	**19.3**	D	µg/kg		20.0		96	70-130		
4-Methyl-2-pentanone (MIBK)	**21.8**	D	µg/kg		20.0		109	70-130		
Methylene chloride	**18.8**	D	µg/kg		20.0		94	70-130		
Styrene	**20.5**	D	µg/kg		20.0		103	70-130		
1,1,2,2-Tetrachloroethane	**19.6**	D	µg/kg		20.0		98	70-130		
Tetrachloroethene	**19.9**	D	µg/kg		20.0		99	70-130		
Toluene	**20.1**	D	µg/kg		20.0		100	70-130		
1,1,1-Trichloroethane	**23.1**	D	µg/kg		20.0		116	70-130		
1,1,2-Trichloroethane	**21.8**	D	µg/kg		20.0		109	70-130		
Trichloroethene	**23.0**	D	µg/kg		20.0		115	70-130		
Trichlorofluoromethane (Freon 11)	**22.0**	D	µg/kg		20.0		110	70-130		
Vinyl chloride	**21.9**	D	µg/kg		20.0		110	70-130		
m,p-Xylene	**21.8**	D	µg/kg		20.0		109	70-130		
o-Xylene	**20.4**	D	µg/kg		20.0		102	70-130		
Tetrahydrofuran	**21.6**	D	µg/kg		20.0		108	70-130		
Surrogate: 4-Bromofluorobenzene	*29.1*		µg/kg		*30.0*		*97*	*70-130*		
Surrogate: Toluene-d8	*29.4*		µg/kg		*30.0*		*98*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*31.3*		µg/kg		*30.0*		*104*	*70-130*		
Surrogate: Dibromofluoromethane	*30.6*		µg/kg		*30.0*		*102*	*70-130*		
LCS Dup (1517052-BSD1)					Prepared & Analyzed: 08-Sep-15					
Acetone	**22.1**	D	µg/kg		20.0		110	70-130	2	30
Acrylonitrile	**21.0**	D	µg/kg		20.0		105	70-130	3	30
Benzene	**19.6**	D	µg/kg		20.0		98	70-130	4	30
Bromodichloromethane	**23.0**	D	µg/kg		20.0		115	70-130	6	30
Bromoform	**23.0**	D	µg/kg		20.0		115	70-130	3	30
2-Butanone (MEK)	**16.4**	D	µg/kg		20.0		82	70-130	24	30
Carbon tetrachloride	**21.9**	D	µg/kg		20.0		110	70-130	7	30
Chlorobenzene	**19.7**	D	µg/kg		20.0		98	70-130	5	30
Chloroethane	**17.1**	D	µg/kg		20.0		86	70-130	10	30
Chloroform	**19.2**	D	µg/kg		20.0		96	70-130	7	30
Chloromethane	**18.1**	D	µg/kg		20.0		90	70-130	5	30
Dibromochloromethane	**22.9**	D	µg/kg		20.0		115	70-130	4	30
Dichlorodifluoromethane (Freon12)	**17.5**	D	µg/kg		20.0		88	70-130	5	30
1,1-Dichloroethane	**20.4**	D	µg/kg		20.0		102	70-130	0.8	30
1,2-Dichloroethane	**21.8**	D	µg/kg		20.0		109	70-130	4	30
1,1-Dichloroethene	**16.1**	D	µg/kg		20.0		80	70-130	5	30
cis-1,2-Dichloroethene	**19.1**	D	µg/kg		20.0		95	70-130	9	30
trans-1,2-Dichloroethene	**19.6**	D	µg/kg		20.0		98	70-130	10	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517052 - SW846 5035A Soil (high level)										
LCS Dup (1517052-BSD1)					Prepared & Analyzed: 08-Sep-15					
1,2-Dichloropropane	**20.9**	D	µg/kg		20.0		104	70-130	0.8	30
cis-1,3-Dichloropropene	**20.2**	D	µg/kg		20.0		101	70-130	3	30
trans-1,3-Dichloropropene	**20.5**	D	µg/kg		20.0		103	70-130	5	30
Ethylbenzene	**20.5**	D	µg/kg		20.0		103	70-130	4	30
2-Hexanone (MBK)	**18.7**	D	µg/kg		20.0		93	70-130	3	30
4-Methyl-2-pentanone (MIBK)	**21.7**	D	µg/kg		20.0		109	70-130	0.4	30
Methylene chloride	**17.8**	D	µg/kg		20.0		89	70-130	6	30
Styrene	**20.0**	D	µg/kg		20.0		100	70-130	3	30
1,1,2,2-Tetrachloroethane	**18.2**	D	µg/kg		20.0		91	70-130	8	30
Tetrachloroethene	**18.9**	D	µg/kg		20.0		95	70-130	5	30
Toluene	**18.9**	D	µg/kg		20.0		94	70-130	6	30
1,1,1-Trichloroethane	**22.3**	D	µg/kg		20.0		111	70-130	4	30
1,1,2-Trichloroethane	**20.3**	D	µg/kg		20.0		102	70-130	7	30
Trichloroethene	**20.2**	D	µg/kg		20.0		101	70-130	13	30
Trichlorofluoromethane (Freon 11)	**20.8**	D	µg/kg		20.0		104	70-130	6	30
Vinyl chloride	**20.5**	D	µg/kg		20.0		103	70-130	7	30
m,p-Xylene	**20.5**	D	µg/kg		20.0		102	70-130	6	30
o-Xylene	**19.5**	D	µg/kg		20.0		97	70-130	5	30
Tetrahydrofuran	**22.3**	D	µg/kg		20.0		111	70-130	3	30
Surrogate: 4-Bromofluorobenzene	*28.6*		µg/kg		*30.0*		*95*	*70-130*		
Surrogate: Toluene-d8	*29.0*		µg/kg		*30.0*		*96*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*31.8*		µg/kg		*30.0*		*106*	*70-130*		
Surrogate: Dibromofluoromethane	*30.6*		µg/kg		*30.0*		*102*	*70-130*		
Batch 1517242 - SW846 5035A Soil (low level)										
Blank (1517242-BLK1)					Prepared & Analyzed: 10-Sep-15					
Acetone	< 50.0	U	µg/kg wet	50.0						
Acrylonitrile	< 5.0	U	µg/kg wet	5.0						
Benzene	< 5.0	U	µg/kg wet	5.0						
Bromodichloromethane	< 5.0	U	µg/kg wet	5.0						
Bromoform	< 5.0	U	µg/kg wet	5.0						
2-Butanone (MEK)	< 50.0	U	µg/kg wet	50.0						
Carbon tetrachloride	< 5.0	U	µg/kg wet	5.0						
Chlorobenzene	< 5.0	U	µg/kg wet	5.0						
Chloroethane	< 10.0	U	µg/kg wet	10.0						
Chloroform	< 5.0	U	µg/kg wet	5.0						
Chloromethane	< 10.0	U	µg/kg wet	10.0						
Dibromochloromethane	< 5.0	U	µg/kg wet	5.0						
Dichlorodifluoromethane (Freon12)	< 10.0	U	µg/kg wet	10.0						
1,1-Dichloroethane	< 5.0	U	µg/kg wet	5.0						
1,2-Dichloroethane	< 5.0	U	µg/kg wet	5.0						
1,1-Dichloroethene	< 5.0	U	µg/kg wet	5.0						
cis-1,2-Dichloroethene	< 5.0	U	µg/kg wet	5.0						
trans-1,2-Dichloroethene	< 5.0	U	µg/kg wet	5.0						
1,2-Dichloropropane	< 5.0	U	µg/kg wet	5.0						
cis-1,3-Dichloropropene	< 5.0	U	µg/kg wet	5.0						
trans-1,3-Dichloropropene	< 5.0	U	µg/kg wet	5.0						
Ethylbenzene	< 5.0	U	µg/kg wet	5.0						
2-Hexanone (MBK)	< 50.0	U	µg/kg wet	50.0						
4-Methyl-2-pentanone (MIBK)	< 50.0	U	µg/kg wet	50.0						
Methylene chloride	< 10.0	U	µg/kg wet	10.0						
Styrene	< 5.0	U	µg/kg wet	5.0						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517242 - SW846 5035A Soil (low level)										
Blank (1517242-BLK1)					Prepared & Analyzed: 10-Sep-15					
1,1,2,2-Tetrachloroethane	< 5.0	U	µg/kg wet	5.0						
Tetrachloroethene	< 5.0	U	µg/kg wet	5.0						
Toluene	< 5.0	U	µg/kg wet	5.0						
1,1,1-Trichloroethane	< 5.0	U	µg/kg wet	5.0						
1,1,2-Trichloroethane	< 5.0	U	µg/kg wet	5.0						
Trichloroethene	< 5.0	U	µg/kg wet	5.0						
Trichlorofluoromethane (Freon 11)	< 5.0	U	µg/kg wet	5.0						
Vinyl chloride	< 5.0	U	µg/kg wet	5.0						
m,p-Xylene	< 10.0	U	µg/kg wet	10.0						
o-Xylene	< 5.0	U	µg/kg wet	5.0						
Tetrahydrofuran	< 10.0	U	µg/kg wet	10.0						
Surrogate: 4-Bromofluorobenzene	*48.1*		µg/kg		*50.0*		*96*	*70-130*		
Surrogate: Toluene-d8	*52.0*		µg/kg		*50.0*		*104*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*59.8*		µg/kg		*50.0*		*120*	*70-130*		
Surrogate: Dibromofluoromethane	*52.3*		µg/kg		*50.0*		*105*	*70-130*		
LCS (1517242-BS1)					Prepared & Analyzed: 10-Sep-15					
Acetone	**19.7**		µg/kg		20.0		98	70-130		
Acrylonitrile	**22.2**		µg/kg		20.0		111	70-130		
Benzene	**22.2**		µg/kg		20.0		111	70-130		
Bromodichloromethane	**20.0**		µg/kg		20.0		100	70-130		
Bromoform	**22.1**		µg/kg		20.0		110	70-130		
2-Butanone (MEK)	**20.2**		µg/kg		20.0		101	70-130		
Carbon tetrachloride	**23.3**		µg/kg		20.0		117	70-130		
Chlorobenzene	**22.2**		µg/kg		20.0		111	70-130		
Chloroethane	**23.9**		µg/kg		20.0		120	70-130		
Chloroform	**19.4**		µg/kg		20.0		97	70-130		
Chloromethane	**23.0**		µg/kg		20.0		115	70-130		
Dibromochloromethane	**22.9**		µg/kg		20.0		115	70-130		
Dichlorodifluoromethane (Freon12)	**23.6**		µg/kg		20.0		118	70-130		
1,1-Dichloroethane	**22.2**		µg/kg		20.0		111	70-130		
1,2-Dichloroethane	**21.4**		µg/kg		20.0		107	70-130		
1,1-Dichloroethene	**22.0**		µg/kg		20.0		110	70-130		
cis-1,2-Dichloroethene	**22.1**		µg/kg		20.0		111	70-130		
trans-1,2-Dichloroethene	**21.7**		µg/kg		20.0		109	70-130		
1,2-Dichloropropane	**22.4**		µg/kg		20.0		112	70-130		
cis-1,3-Dichloropropene	**22.3**		µg/kg		20.0		111	70-130		
trans-1,3-Dichloropropene	**22.6**		µg/kg		20.0		113	70-130		
Ethylbenzene	**21.2**		µg/kg		20.0		106	70-130		
2-Hexanone (MBK)	**20.6**		µg/kg		20.0		103	70-130		
4-Methyl-2-pentanone (MIBK)	**21.0**		µg/kg		20.0		105	70-130		
Methylene chloride	**22.9**		µg/kg		20.0		114	70-130		
Styrene	**20.4**		µg/kg		20.0		102	70-130		
1,1,2,2-Tetrachloroethane	**21.4**		µg/kg		20.0		107	70-130		
Tetrachloroethene	**22.8**		µg/kg		20.0		114	70-130		
Toluene	**22.3**		µg/kg		20.0		111	70-130		
1,1,1-Trichloroethane	**23.1**		µg/kg		20.0		116	70-130		
1,1,2-Trichloroethane	**22.0**		µg/kg		20.0		110	70-130		
Trichloroethene	**22.3**		µg/kg		20.0		112	70-130		
Trichlorofluoromethane (Freon 11)	**23.0**		µg/kg		20.0		115	70-130		
Vinyl chloride	**23.4**		µg/kg		20.0		117	70-130		
m,p-Xylene	**21.0**		µg/kg		20.0		105	70-130		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517242 - SW846 5035A Soil (low level)										
LCS (1517242-BS1)					Prepared & Analyzed: 10-Sep-15					
o-Xylene	**21.1**		µg/kg		20.0		105	70-130		
Tetrahydrofuran	**19.1**		µg/kg		20.0		95	70-130		
Surrogate: 4-Bromofluorobenzene	*52.7*		µg/kg		*50.0*		*105*	*70-130*		
Surrogate: Toluene-d8	*51.0*		µg/kg		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*50.8*		µg/kg		*50.0*		*102*	*70-130*		
Surrogate: Dibromofluoromethane	*51.6*		µg/kg		*50.0*		*103*	*70-130*		
LCS Dup (1517242-BSD1)					Prepared & Analyzed: 10-Sep-15					
Acetone	**19.5**		µg/kg		20.0		97	70-130	1	30
Acrylonitrile	**21.2**		µg/kg		20.0		106	70-130	5	30
Benzene	**22.4**		µg/kg		20.0		112	70-130	0.7	30
Bromodichloromethane	**20.0**		µg/kg		20.0		100	70-130	0.2	30
Bromoform	**21.0**		µg/kg		20.0		105	70-130	5	30
2-Butanone (MEK)	**18.1**		µg/kg		20.0		91	70-130	11	30
Carbon tetrachloride	**23.6**		µg/kg		20.0		118	70-130	1	30
Chlorobenzene	**22.2**		µg/kg		20.0		111	70-130	0.3	30
Chloroethane	**23.7**		µg/kg		20.0		118	70-130	1	30
Chloroform	**19.4**		µg/kg		20.0		97	70-130	0.1	30
Chloromethane	**23.5**		µg/kg		20.0		117	70-130	2	30
Dibromochloromethane	**22.6**		µg/kg		20.0		113	70-130	1	30
Dichlorodifluoromethane (Freon12)	**22.8**		µg/kg		20.0		114	70-130	4	30
1,1-Dichloroethane	**22.4**		µg/kg		20.0		112	70-130	1	30
1,2-Dichloroethane	**21.4**		µg/kg		20.0		107	70-130	0.09	30
1,1-Dichloroethene	**22.3**		µg/kg		20.0		111	70-130	1	30
cis-1,2-Dichloroethene	**22.1**		µg/kg		20.0		111	70-130	0.05	30
trans-1,2-Dichloroethene	**22.5**		µg/kg		20.0		112	70-130	3	30
1,2-Dichloropropane	**22.2**		µg/kg		20.0		111	70-130	0.5	30
cis-1,3-Dichloropropene	**22.4**		µg/kg		20.0		112	70-130	0.3	30
trans-1,3-Dichloropropene	**22.0**		µg/kg		20.0		110	70-130	3	30
Ethylbenzene	**21.0**		µg/kg		20.0		105	70-130	0.6	30
2-Hexanone (MBK)	**19.6**		µg/kg		20.0		98	70-130	5	30
4-Methyl-2-pentanone (MIBK)	**20.2**		µg/kg		20.0		101	70-130	4	30
Methylene chloride	**22.6**		µg/kg		20.0		113	70-130	1	30
Styrene	**20.2**		µg/kg		20.0		101	70-130	0.9	30
1,1,2,2-Tetrachloroethane	**20.7**		µg/kg		20.0		104	70-130	3	30
Tetrachloroethene	**22.9**		µg/kg		20.0		115	70-130	0.7	30
Toluene	**22.5**		µg/kg		20.0		113	70-130	1	30
1,1,1-Trichloroethane	**23.4**		µg/kg		20.0		117	70-130	1	30
1,1,2-Trichloroethane	**21.9**		µg/kg		20.0		109	70-130	0.7	30
Trichloroethene	**22.8**		µg/kg		20.0		114	70-130	2	30
Trichlorofluoromethane (Freon 11)	**23.2**		µg/kg		20.0		116	70-130	1	30
Vinyl chloride	**20.9**		µg/kg		20.0		105	70-130	11	30
m,p-Xylene	**21.0**		µg/kg		20.0		105	70-130	0.2	30
o-Xylene	**21.3**		µg/kg		20.0		107	70-130	1	30
Tetrahydrofuran	**17.6**		µg/kg		20.0		88	70-130	8	30
Surrogate: 4-Bromofluorobenzene	*52.0*		µg/kg		*50.0*		*104*	*70-130*		
Surrogate: Toluene-d8	*51.0*		µg/kg		*50.0*		*102*	*70-130*		
Surrogate: 1,2-Dichloroethane-d4	*49.9*		µg/kg		*50.0*		*100*	*70-130*		
Surrogate: Dibromofluoromethane	*51.5*		µg/kg		*50.0*		*103*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517271 - SW846 3545A										
Blank (1517271-BLK1)						Prepared: 10-Sep-15 Analyzed: 14-Sep-15				
Acenaphthene	< 66.2	U	µg/kg wet	66.2						
Acenaphthylene	< 66.2	U	µg/kg wet	66.2						
Anthracene	< 66.2	U	µg/kg wet	66.2						
Azobenzene/Diphenyldiazene	< 328	U	µg/kg wet	328						
Benzidine	< 328	U	µg/kg wet	328						
Benzo (a) anthracene	< 66.2	U	µg/kg wet	66.2						
Benzo (a) pyrene	< 66.2	U	µg/kg wet	66.2						
Benzo (b) fluoranthene	< 66.2	U	µg/kg wet	66.2						
Benzo (g,h,i) perylene	< 66.2	U	µg/kg wet	66.2						
Benzo (k) fluoranthene	< 66.2	U	µg/kg wet	66.2						
Bis(2-chloroethoxy)methane	< 328	U	µg/kg wet	328						
Bis(2-chloroethyl)ether	< 166	U	µg/kg wet	166						
Bis(2-chloroisopropyl)ether	< 166	U	µg/kg wet	166						
Bis(2-ethylhexyl)phthalate	< 166	U	µg/kg wet	166						
4-Bromophenyl phenyl ether	< 328	U	µg/kg wet	328						
Butyl benzyl phthalate	< 328	U	µg/kg wet	328						
4-Chloro-3-methylphenol	< 328	U	µg/kg wet	328						
2-Chloronaphthalene	< 328	U	µg/kg wet	328						
2-Chlorophenol	< 166	U	µg/kg wet	166						
4-Chlorophenyl phenyl ether	< 328	U	µg/kg wet	328						
Chrysene	< 66.2	U	µg/kg wet	66.2						
Dibenzo (a,h) anthracene	< 66.2	U	µg/kg wet	66.2						
1,2-Dichlorobenzene	< 328	U	µg/kg wet	328						
1,3-Dichlorobenzene	< 328	U	µg/kg wet	328						
1,4-Dichlorobenzene	< 328	U	µg/kg wet	328						
3,3´-Dichlorobenzidine	< 328	U	µg/kg wet	328						
2,4-Dichlorophenol	< 166	U	µg/kg wet	166						
Diethyl phthalate	< 328	U	µg/kg wet	328						
Dimethyl phthalate	< 328	U	µg/kg wet	328						
2,4-Dimethylphenol	< 328	U	µg/kg wet	328						
Di-n-butyl phthalate	**210**	J	µg/kg wet	328						
4,6-Dinitro-2-methylphenol	< 328	U	µg/kg wet	328						
2,4-Dinitrophenol	< 328	U	µg/kg wet	328						
2,4-Dinitrotoluene	< 166	U	µg/kg wet	166						
2,6-Dinitrotoluene	< 166	U	µg/kg wet	166						
Di-n-octyl phthalate	< 328	U	µg/kg wet	328						
Fluoranthene	< 66.2	U	µg/kg wet	66.2						
Fluorene	< 66.2	U	µg/kg wet	66.2						
Hexachlorobenzene	< 166	U	µg/kg wet	166						
Hexachlorobutadiene	< 166	U	µg/kg wet	166						
Hexachlorocyclopentadiene	< 166	U	µg/kg wet	166						
Hexachloroethane	< 166	U	µg/kg wet	166						
Indeno (1,2,3-cd) pyrene	< 66.2	U	µg/kg wet	66.2						
Isophorone	< 166	U	µg/kg wet	166						
Naphthalene	< 66.2	U	µg/kg wet	66.2						
Nitrobenzene	< 166	U	µg/kg wet	166						
2-Nitrophenol	< 166	U	µg/kg wet	166						
4-Nitrophenol	< 1310	U	µg/kg wet	1310						
N-Nitrosodimethylamine	< 166	U	µg/kg wet	166						
N-Nitrosodi-n-propylamine	< 166	U	µg/kg wet	166						
N-Nitrosodiphenylamine	< 328	U	µg/kg wet	328						
Pentachlorophenol	< 328	U	µg/kg wet	328						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517271 - SW846 3545A										
Blank (1517271-BLK1)						Prepared: 10-Sep-15 Analyzed: 14-Sep-15				
Phenanthrene	< 66.2	U	µg/kg wet	66.2						
Phenol	< 328	U	µg/kg wet	328						
Pyrene	< 66.2	U	µg/kg wet	66.2						
1-Methylnaphthalene	< 66.2	U	µg/kg wet	66.2						
2,4,6-Trichlorophenol	< 166	U	µg/kg wet	166						
Surrogate: 2-Fluorobiphenyl	*1380*		µg/kg wet		*1660*		*84*	*30-130*		
Surrogate: 2-Fluorophenol	*1360*		µg/kg wet		*1660*		*82*	*30-130*		
Surrogate: Nitrobenzene-d5	*1470*		µg/kg wet		*1660*		*89*	*30-130*		
Surrogate: Phenol-d5	*1400*		µg/kg wet		*1660*		*85*	*30-130*		
Surrogate: Terphenyl-dl4	*1690*		µg/kg wet		*1660*		*102*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1530*		µg/kg wet		*1660*		*92*	*30-130*		
LCS (1517271-BS1)						Prepared: 10-Sep-15 Analyzed: 14-Sep-15				
Acenaphthene	**1390**		µg/kg wet	66.2	1650		84	40-140		
Acenaphthylene	**1350**		µg/kg wet	66.2	1650		82	40-140		
Anthracene	**1650**		µg/kg wet	66.2	1650		100	40-140		
Azobenzene/Diphenyldiazene	**1630**		µg/kg wet	327	1650		99	40-140		
Benzidine	**378**	QC2	µg/kg wet	327	1650		23	40-140		
Benzo (a) anthracene	**1390**		µg/kg wet	66.2	1650		84	40-140		
Benzo (a) pyrene	**1590**		µg/kg wet	66.2	1650		96	40-140		
Benzo (b) fluoranthene	**1620**		µg/kg wet	66.2	1650		98	40-140		
Benzo (g,h,i) perylene	**1480**		µg/kg wet	66.2	1650		90	40-140		
Benzo (k) fluoranthene	**1560**		µg/kg wet	66.2	1650		94	40-140		
Bis(2-chloroethoxy)methane	**962**		µg/kg wet	327	1650		58	40-140		
Bis(2-chloroethyl)ether	**1060**		µg/kg wet	166	1650		64	40-140		
Bis(2-chloroisopropyl)ether	**941**		µg/kg wet	166	1650		57	40-140		
Bis(2-ethylhexyl)phthalate	**1500**		µg/kg wet	166	1650		91	40-140		
4-Bromophenyl phenyl ether	**1350**		µg/kg wet	327	1650		82	40-140		
Butyl benzyl phthalate	**1400**		µg/kg wet	327	1650		85	40-140		
4-Chloro-3-methylphenol	**1390**		µg/kg wet	327	1650		84	30-130		
2-Chloronaphthalene	**1310**		µg/kg wet	327	1650		79	40-140		
2-Chlorophenol	**1130**		µg/kg wet	166	1650		68	30-130		
4-Chlorophenyl phenyl ether	**1450**		µg/kg wet	327	1650		88	40-140		
Chrysene	**1740**		µg/kg wet	66.2	1650		105	40-140		
Dibenzo (a,h) anthracene	**1490**		µg/kg wet	66.2	1650		90	40-140		
1,2-Dichlorobenzene	**1010**		µg/kg wet	327	1650		61	40-140		
1,3-Dichlorobenzene	**961**		µg/kg wet	327	1650		58	40-140		
1,4-Dichlorobenzene	**1080**		µg/kg wet	327	1650		66	40-140		
3,3´-Dichlorobenzidine	**1950**		µg/kg wet	327	1650		118	40-140		
2,4-Dichlorophenol	**1320**		µg/kg wet	166	1650		80	30-130		
Diethyl phthalate	**1590**		µg/kg wet	327	1650		96	40-140		
Dimethyl phthalate	**1550**		µg/kg wet	327	1650		94	40-140		
2,4-Dimethylphenol	**1150**		µg/kg wet	327	1650		70	30-130		
Di-n-butyl phthalate	**1790**		µg/kg wet	327	1650		108	40-140		
4,6-Dinitro-2-methylphenol	**1500**		µg/kg wet	327	1650		91	30-130		
2,4-Dinitrophenol	**1090**		µg/kg wet	327	1650		66	30-130		
2,4-Dinitrotoluene	**1400**		µg/kg wet	166	1650		84	40-140		
2,6-Dinitrotoluene	**1330**		µg/kg wet	166	1650		80	40-140		
Di-n-octyl phthalate	**1720**		µg/kg wet	327	1650		104	40-140		
Fluoranthene	**1450**		µg/kg wet	66.2	1650		87	40-140		
Fluorene	**1350**		µg/kg wet	66.2	1650		82	40-140		
Hexachlorobenzene	**1370**		µg/kg wet	166	1650		83	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517271 - SW846 3545A										
LCS (1517271-BS1)					Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Hexachlorobutadiene	**1110**		µg/kg wet	166	1650		67	40-140		
Hexachlorocyclopentadiene	**993**		µg/kg wet	166	1650		60	40-140		
Hexachloroethane	**1140**		µg/kg wet	166	1650		69	40-140		
Indeno (1,2,3-cd) pyrene	**1570**		µg/kg wet	66.2	1650		95	40-140		
Isophorone	**1070**		µg/kg wet	166	1650		65	40-140		
Naphthalene	**1200**		µg/kg wet	66.2	1650		73	40-140		
Nitrobenzene	**1220**		µg/kg wet	166	1650		74	40-140		
2-Nitrophenol	**1140**		µg/kg wet	166	1650		69	30-130		
4-Nitrophenol	**1750**		µg/kg wet	1310	1650		106	30-130		
N-Nitrosodimethylamine	**1490**		µg/kg wet	166	1650		90	40-140		
N-Nitrosodi-n-propylamine	**1160**		µg/kg wet	166	1650		70	40-140		
N-Nitrosodiphenylamine	**1800**		µg/kg wet	327	1650		109	40-140		
Pentachlorophenol	**884**		µg/kg wet	327	1650		53	30-130		
Phenanthrene	**1410**		µg/kg wet	66.2	1650		86	40-140		
Phenol	**1220**		µg/kg wet	327	1650		74	30-130		
Pyrene	**1370**		µg/kg wet	66.2	1650		83	40-140		
1-Methylnaphthalene	**1240**		µg/kg wet	66.2	1650		75	40-140		
2,4,6-Trichlorophenol	**1290**		µg/kg wet	166	1650		78	30-130		
Surrogate: 2-Fluorobiphenyl	*1600*		µg/kg wet		*1650*		*97*	*30-130*		
Surrogate: 2-Fluorophenol	*1040*		µg/kg wet		*1650*		*63*	*30-130*		
Surrogate: Nitrobenzene-d5	*1330*		µg/kg wet		*1650*		*80*	*30-130*		
Surrogate: Phenol-d5	*1420*		µg/kg wet		*1650*		*86*	*30-130*		
Surrogate: Terphenyl-dl4	*1560*		µg/kg wet		*1650*		*94*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1550*		µg/kg wet		*1650*		*94*	*30-130*		
Duplicate (1517271-DUP1)			**Source: SC12076-01**		Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Acenaphthene	< 121	U	µg/kg dry	121		BRL				30
Acenaphthylene	< 121	U	µg/kg dry	121		BRL				30
Anthracene	< 121	U	µg/kg dry	121		BRL				30
Azobenzene/Diphenyldiazene	< 600	U	µg/kg dry	600		BRL				30
Benzidine	< 600	U	µg/kg dry	600		BRL				30
Benzo (a) anthracene	**36.4**	J	µg/kg dry	121		33.4			9	30
Benzo (a) pyrene	**44.8**	J	µg/kg dry	121		35.8			22	30
Benzo (b) fluoranthene	**34.5**	J	µg/kg dry	121		32.8			5	30
Benzo (g,h,i) perylene	< 121	U	µg/kg dry	121		BRL				30
Benzo (k) fluoranthene	**46.1**	QM4, J	µg/kg dry	121		32.1			36	30
Bis(2-chloroethoxy)methane	< 600	U	µg/kg dry	600		BRL				30
Bis(2-chloroethyl)ether	< 304	U	µg/kg dry	304		BRL				30
Bis(2-chloroisopropyl)ether	< 304	U	µg/kg dry	304		BRL				30
Bis(2-ethylhexyl)phthalate	< 304	U	µg/kg dry	304		BRL				30
4-Bromophenyl phenyl ether	< 600	U	µg/kg dry	600		BRL				30
Butyl benzyl phthalate	< 600	U	µg/kg dry	600		BRL				30
4-Chloro-3-methylphenol	< 600	U	µg/kg dry	600		BRL				30
2-Chloronaphthalene	< 600	U	µg/kg dry	600		BRL				30
2-Chlorophenol	< 304	U	µg/kg dry	304		BRL				30
4-Chlorophenyl phenyl ether	< 600	U	µg/kg dry	600		BRL				30
Chrysene	**45.4**	J	µg/kg dry	121		39.4			14	30
Dibenzo (a,h) anthracene	< 121	U	µg/kg dry	121		BRL				30
1,2-Dichlorobenzene	< 600	U	µg/kg dry	600		BRL				30
1,3-Dichlorobenzene	< 600	U	µg/kg dry	600		BRL				30
1,4-Dichlorobenzene	< 600	U	µg/kg dry	600		BRL				30
3,3´-Dichlorobenzidine	< 600	U	µg/kg dry	600		BRL				30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517271 - SW846 3545A										
Duplicate (1517271-DUP1)			**Source: SC12076-01**		Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
2,4-Dichlorophenol	< 304	U	µg/kg dry	304		BRL				30
Diethyl phthalate	< 600	U	µg/kg dry	600		BRL				30
Dimethyl phthalate	< 600	U	µg/kg dry	600		BRL				30
2,4-Dimethylphenol	< 600	U	µg/kg dry	600		BRL				30
Di-n-butyl phthalate	< 600	U	µg/kg dry	600		BRL				30
4,6-Dinitro-2-methylphenol	< 600	U	µg/kg dry	600		BRL				30
2,4-Dinitrophenol	< 600	U	µg/kg dry	600		BRL				30
2,4-Dinitrotoluene	< 304	U	µg/kg dry	304		BRL				30
2,6-Dinitrotoluene	< 304	U	µg/kg dry	304		BRL				30
Di-n-octyl phthalate	< 600	U	µg/kg dry	600		BRL				30
Fluoranthene	**87.9**	J	µg/kg dry	121		75.2			16	30
Fluorene	< 121	U	µg/kg dry	121		BRL				30
Hexachlorobenzene	< 304	U	µg/kg dry	304		BRL				30
Hexachlorobutadiene	< 304	U	µg/kg dry	304		BRL				30
Hexachlorocyclopentadiene	< 304	U	µg/kg dry	304		BRL				30
Hexachloroethane	< 304	U	µg/kg dry	304		BRL				30
Indeno (1,2,3-cd) pyrene	< 121	U	µg/kg dry	121		BRL				30
Isophorone	< 304	U	µg/kg dry	304		BRL				30
Naphthalene	< 121	U	µg/kg dry	121		BRL				30
Nitrobenzene	< 304	U	µg/kg dry	304		BRL				30
2-Nitrophenol	< 304	U	µg/kg dry	304		BRL				30
4-Nitrophenol	< 2400	U	µg/kg dry	2400		BRL				30
N-Nitrosodimethylamine	< 304	U	µg/kg dry	304		BRL				30
N-Nitrosodi-n-propylamine	< 304	U	µg/kg dry	304		BRL				30
N-Nitrosodiphenylamine	< 600	U	µg/kg dry	600		BRL				30
Pentachlorophenol	< 600	U	µg/kg dry	600		BRL				30
Phenanthrene	**58.8**	QM4, J	µg/kg dry	121		39.4			39	30
Phenol	< 600	U	µg/kg dry	600		BRL				30
Pyrene	**86.7**	J	µg/kg dry	121		67.3			25	30
1-Methylnaphthalene	< 121	U	µg/kg dry	121		BRL				30
2,4,6-Trichlorophenol	< 304	U	µg/kg dry	304		BRL				30
Surrogate: 2-Fluorobiphenyl	*1630*		µg/kg dry		*3030*		*54*	*30-130*		
Surrogate: 2-Fluorophenol	*1900*		µg/kg dry		*3030*		*63*	*30-130*		
Surrogate: Nitrobenzene-d5	*2170*		µg/kg dry		*3030*		*72*	*30-130*		
Surrogate: Phenol-d5	*2090*		µg/kg dry		*3030*		*69*	*30-130*		
Surrogate: Terphenyl-dl4	*1890*		µg/kg dry		*3030*		*62*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1990*		µg/kg dry		*3030*		*66*	*30-130*		
Matrix Spike (1517271-MS1)			**Source: SC12076-01**		Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Acenaphthene	**1660**		µg/kg dry	121	3030	BRL	55	40-140		
Acenaphthylene	**1740**		µg/kg dry	121	3030	BRL	57	40-140		
Anthracene	**1850**		µg/kg dry	121	3030	BRL	61	40-140		
Azobenzene/Diphenyldiazene	**1790**		µg/kg dry	600	3030	BRL	59	40-140		
Benzidine	< 600	QC2, U	µg/kg dry	600	3030	BRL		40-140		
Benzo (a) anthracene	**1590**		µg/kg dry	121	3030	33.4	52	40-140		
Benzo (a) pyrene	**1750**		µg/kg dry	121	3030	35.8	56	40-140		
Benzo (b) fluoranthene	**1800**		µg/kg dry	121	3030	32.8	58	40-140		
Benzo (g,h,i) perylene	**1210**		µg/kg dry	121	3030	BRL	40	40-140		
Benzo (k) fluoranthene	**1800**		µg/kg dry	121	3030	32.1	58	40-140		
Bis(2-chloroethoxy)methane	**1410**		µg/kg dry	600	3030	BRL	47	40-140		
Bis(2-chloroethyl)ether	**1730**		µg/kg dry	304	3030	BRL	57	40-140		
Bis(2-chloroisopropyl)ether	**1510**		µg/kg dry	304	3030	BRL	50	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517271 - SW846 3545A										
Matrix Spike (1517271-MS1)			**Source: SC12076-01**		Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Bis(2-ethylhexyl)phthalate	**1660**		µg/kg dry	304	3030	BRL	55	40-140		
4-Bromophenyl phenyl ether	**1550**		µg/kg dry	600	3030	BRL	51	40-140		
Butyl benzyl phthalate	**1590**		µg/kg dry	600	3030	BRL	52	40-140		
4-Chloro-3-methylphenol	**1840**		µg/kg dry	600	3030	BRL	61	30-130		
2-Chloronaphthalene	**1730**		µg/kg dry	600	3030	BRL	57	40-140		
2-Chlorophenol	**1850**		µg/kg dry	304	3030	BRL	61	30-130		
4-Chlorophenyl phenyl ether	**1740**		µg/kg dry	600	3030	BRL	57	40-140		
Chrysene	**1800**		µg/kg dry	121	3030	39.4	58	40-140		
Dibenzo (a,h) anthracene	**1380**		µg/kg dry	121	3030	BRL	45	40-140		
1,2-Dichlorobenzene	**1570**		µg/kg dry	600	3030	BRL	52	40-140		
1,3-Dichlorobenzene	**1520**		µg/kg dry	600	3030	BRL	50	40-140		
1,4-Dichlorobenzene	**1680**		µg/kg dry	600	3030	BRL	56	40-140		
3,3´-Dichlorobenzidine	**1380**		µg/kg dry	600	3030	BRL	46	40-140		
2,4-Dichlorophenol	**1790**		µg/kg dry	304	3030	BRL	59	30-130		
Diethyl phthalate	**2040**		µg/kg dry	600	3030	BRL	67	40-140		
Dimethyl phthalate	**2030**		µg/kg dry	600	3030	BRL	67	40-140		
2,4-Dimethylphenol	**1710**		µg/kg dry	600	3030	BRL	57	30-130		
Di-n-butyl phthalate	**1570**		µg/kg dry	600	3030	BRL	52	40-140		
4,6-Dinitro-2-methylphenol	**1670**		µg/kg dry	600	3030	BRL	55	30-130		
2,4-Dinitrophenol	**1450**		µg/kg dry	600	3030	BRL	48	30-130		
2,4-Dinitrotoluene	**1920**		µg/kg dry	304	3030	BRL	63	40-140		
2,6-Dinitrotoluene	**1770**		µg/kg dry	304	3030	BRL	58	40-140		
Di-n-octyl phthalate	**2040**		µg/kg dry	600	3030	BRL	67	40-140		
Fluoranthene	**1630**		µg/kg dry	121	3030	75.2	51	40-140		
Fluorene	**1620**		µg/kg dry	121	3030	BRL	53	40-140		
Hexachlorobenzene	**1600**		µg/kg dry	304	3030	BRL	53	40-140		
Hexachlorobutadiene	**1500**		µg/kg dry	304	3030	BRL	49	40-140		
Hexachlorocyclopentadiene	**605**	QM7	µg/kg dry	304	3030	BRL	20	40-140		
Hexachloroethane	**1530**		µg/kg dry	304	3030	BRL	51	40-140		
Indeno (1,2,3-cd) pyrene	**1420**		µg/kg dry	121	3030	BRL	47	40-140		
Isophorone	**1610**		µg/kg dry	304	3030	BRL	53	30-130		
Naphthalene	**1680**		µg/kg dry	121	3030	BRL	55	40-140		
Nitrobenzene	**1890**		µg/kg dry	304	3030	BRL	62	40-140		
2-Nitrophenol	**1770**		µg/kg dry	304	3030	BRL	58	30-130		
4-Nitrophenol	**2580**		µg/kg dry	2400	3030	BRL	85	30-130		
N-Nitrosodimethylamine	**2730**		µg/kg dry	304	3030	BRL	90	40-140		
N-Nitrosodi-n-propylamine	**1850**		µg/kg dry	304	3030	BRL	61	40-140		
N-Nitrosodiphenylamine	**1930**		µg/kg dry	600	3030	BRL	64	40-140		
Pentachlorophenol	**1110**		µg/kg dry	600	3030	BRL	37	30-130		
Phenanthrene	**1670**		µg/kg dry	121	3030	39.4	54	40-140		
Phenol	**1860**		µg/kg dry	600	3030	BRL	61	30-130		
Pyrene	**1650**		µg/kg dry	121	3030	67.3	52	40-140		
1-Methylnaphthalene	**1610**		µg/kg dry	121	3030	BRL	53	40-140		
2,4,6-Trichlorophenol	**1760**		µg/kg dry	304	3030	BRL	58	30-130		
Surrogate: 2-Fluorobiphenyl	*2030*		µg/kg dry		*3030*		*67*	*30-130*		
Surrogate: 2-Fluorophenol	*1650*		µg/kg dry		*3030*		*54*	*30-130*		
Surrogate: Nitrobenzene-d5	*2120*		µg/kg dry		*3030*		*70*	*30-130*		
Surrogate: Phenol-d5	*2110*		µg/kg dry		*3030*		*70*	*30-130*		
Surrogate: Terphenyl-dl4	*1840*		µg/kg dry		*3030*		*61*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*1930*		µg/kg dry		*3030*		*64*	*30-130*		
Matrix Spike Dup (1517271-MSD1)			**Source: SC12076-01**		Prepared: 10-Sep-15 Analyzed: 14-Sep-15					

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517271 - SW846 3545A										
Matrix Spike Dup (1517271-MSD1)			**Source: SC12076-01**		Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Acenaphthene	**1650**		µg/kg dry	121	3030	BRL	54	40-140	0.7	30
Acenaphthylene	**1820**		µg/kg dry	121	3030	BRL	60	40-140	5	30
Anthracene	**2000**		µg/kg dry	121	3030	BRL	66	40-140	8	30
Azobenzene/Diphenyldiazene	**1990**		µg/kg dry	600	3030	BRL	66	40-140	10	30
Benzidine	< 600	QC2, U	µg/kg dry	600	3030	BRL		40-140		30
Benzo (a) anthracene	**1660**		µg/kg dry	121	3030	33.4	54	40-140	4	30
Benzo (a) pyrene	**2010**		µg/kg dry	121	3030	35.8	65	40-140	14	30
Benzo (b) fluoranthene	**2220**		µg/kg dry	121	3030	32.8	72	40-140	21	30
Benzo (g,h,i) perylene	**1360**		µg/kg dry	121	3030	BRL	45	40-140	12	30
Benzo (k) fluoranthene	**1760**		µg/kg dry	121	3030	32.1	57	40-140	2	30
Bis(2-chloroethoxy)methane	**1550**		µg/kg dry	600	3030	BRL	51	40-140	9	30
Bis(2-chloroethyl)ether	**1760**		µg/kg dry	304	3030	BRL	58	40-140	2	30
Bis(2-chloroisopropyl)ether	**1570**		µg/kg dry	304	3030	BRL	52	40-140	4	30
Bis(2-ethylhexyl)phthalate	**1690**		µg/kg dry	304	3030	BRL	56	40-140	2	30
4-Bromophenyl phenyl ether	**1610**		µg/kg dry	600	3030	BRL	53	40-140	4	30
Butyl benzyl phthalate	**1630**		µg/kg dry	600	3030	BRL	54	40-140	2	30
4-Chloro-3-methylphenol	**2050**		µg/kg dry	600	3030	BRL	68	30-130	11	30
2-Chloronaphthalene	**1770**		µg/kg dry	600	3030	BRL	58	40-140	2	30
2-Chlorophenol	**1930**		µg/kg dry	304	3030	BRL	64	30-130	4	30
4-Chlorophenyl phenyl ether	**1870**		µg/kg dry	600	3030	BRL	62	40-140	7	30
Chrysene	**1840**		µg/kg dry	121	3030	39.4	59	40-140	2	30
Dibenzo (a,h) anthracene	**1530**		µg/kg dry	121	3030	BRL	50	40-140	10	30
1,2-Dichlorobenzene	**1600**		µg/kg dry	600	3030	BRL	53	40-140	2	30
1,3-Dichlorobenzene	**1520**		µg/kg dry	600	3030	BRL	50	40-140	0.5	30
1,4-Dichlorobenzene	**1730**		µg/kg dry	600	3030	BRL	57	40-140	3	30
3,3´-Dichlorobenzidine	**1050**	QM7	µg/kg dry	600	3030	BRL	35	40-140	27	30
2,4-Dichlorophenol	**1930**		µg/kg dry	304	3030	BRL	64	30-130	8	30
Diethyl phthalate	**2220**		µg/kg dry	600	3030	BRL	73	40-140	8	30
Dimethyl phthalate	**2250**		µg/kg dry	600	3030	BRL	74	40-140	10	30
2,4-Dimethylphenol	**1820**		µg/kg dry	600	3030	BRL	60	30-130	6	30
Di-n-butyl phthalate	**1650**		µg/kg dry	600	3030	BRL	54	40-140	5	30
4,6-Dinitro-2-methylphenol	**1780**		µg/kg dry	600	3030	BRL	59	30-130	7	30
2,4-Dinitrophenol	**1450**		µg/kg dry	600	3030	BRL	48	30-130	0.1	30
2,4-Dinitrotoluene	**1970**		µg/kg dry	304	3030	BRL	65	40-140	3	30
2,6-Dinitrotoluene	**1900**		µg/kg dry	304	3030	BRL	63	40-140	7	30
Di-n-octyl phthalate	**2230**		µg/kg dry	600	3030	BRL	74	40-140	9	30
Fluoranthene	**1700**		µg/kg dry	121	3030	75.2	54	40-140	4	30
Fluorene	**1780**		µg/kg dry	121	3030	BRL	59	40-140	10	30
Hexachlorobenzene	**1640**		µg/kg dry	304	3030	BRL	54	40-140	2	30
Hexachlorobutadiene	**1550**		µg/kg dry	304	3030	BRL	51	40-140	3	30
Hexachlorocyclopentadiene	**332**	QM7, QR9	µg/kg dry	304	3030	BRL	11	40-140	58	30
Hexachloroethane	**1410**		µg/kg dry	304	3030	BRL	47	40-140	8	30
Indeno (1,2,3-cd) pyrene	**1570**		µg/kg dry	121	3030	BRL	52	40-140	10	30
Isophorone	**1700**		µg/kg dry	304	3030	BRL	56	30-130	5	30
Naphthalene	**1810**		µg/kg dry	121	3030	BRL	60	40-140	8	30
Nitrobenzene	**2000**		µg/kg dry	304	3030	BRL	66	40-140	6	30
2-Nitrophenol	**1960**		µg/kg dry	304	3030	BRL	65	30-130	10	30
4-Nitrophenol	**2650**		µg/kg dry	2400	3030	BRL	87	30-130	2	30
N-Nitrosodimethylamine	**2780**		µg/kg dry	304	3030	BRL	92	40-140	2	30
N-Nitrosodi-n-propylamine	**1860**		µg/kg dry	304	3030	BRL	61	40-140	0.3	30
N-Nitrosodiphenylamine	**2170**		µg/kg dry	600	3030	BRL	72	40-140	12	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517271 - SW846 3545A										
Matrix Spike Dup (1517271-MSD1)			**Source: SC12076-01**		Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Pentachlorophenol	**1240**		µg/kg dry	600	3030	BRL	41	30-130	11	30
Phenanthrene	**1760**		µg/kg dry	121	3030	39.4	57	40-140	6	30
Phenol	**2000**		µg/kg dry	600	3030	BRL	66	30-130	7	30
Pyrene	**1650**		µg/kg dry	121	3030	67.3	52	40-140	0.4	30
1-Methylnaphthalene	**1710**		µg/kg dry	121	3030	BRL	57	40-140	6	30
2,4,6-Trichlorophenol	**1900**		µg/kg dry	304	3030	BRL	63	30-130	8	30
Surrogate: 2-Fluorobiphenyl	*2150*		µg/kg dry		*3030*		*71*	*30-130*		
Surrogate: 2-Fluorophenol	*1750*		µg/kg dry		*3030*		*58*	*30-130*		
Surrogate: Nitrobenzene-d5	*2260*		µg/kg dry		*3030*		*75*	*30-130*		
Surrogate: Phenol-d5	*2250*		µg/kg dry		*3030*		*74*	*30-130*		
Surrogate: Terphenyl-dl4	*1960*		µg/kg dry		*3030*		*65*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*2280*		µg/kg dry		*3030*		*75*	*30-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517043 - SW846 3545A										
Blank (1517043-BLK1)					Prepared & Analyzed: 08-Sep-15					
Aroclor-1016	< 19.4	U	µg/kg wet	19.4						
Aroclor-1016 [2C]	< 19.4	U	µg/kg wet	19.4						
Aroclor-1221	< 19.4	U	µg/kg wet	19.4						
Aroclor-1221 [2C]	< 19.4	U	µg/kg wet	19.4						
Aroclor-1232	< 19.4	U	µg/kg wet	19.4						
Aroclor-1232 [2C]	< 19.4	U	µg/kg wet	19.4						
Aroclor-1242	< 19.4	U	µg/kg wet	19.4						
Aroclor-1242 [2C]	< 19.4	U	µg/kg wet	19.4						
Aroclor-1248	< 19.4	U	µg/kg wet	19.4						
Aroclor-1248 [2C]	< 19.4	U	µg/kg wet	19.4						
Aroclor-1254	< 19.4	U	µg/kg wet	19.4						
Aroclor-1254 [2C]	< 19.4	U	µg/kg wet	19.4						
Aroclor-1260	< 19.4	U	µg/kg wet	19.4						
Aroclor-1260 [2C]	< 19.4	U	µg/kg wet	19.4						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*16.5*		µg/kg wet		*19.4*		*85*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*14.5*		µg/kg wet		*19.4*		*75*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*16.5*		µg/kg wet		*19.4*		*85*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*19.4*		µg/kg wet		*19.4*		*100*	*30-150*		
LCS (1517043-BS1)					Prepared & Analyzed: 08-Sep-15					
Aroclor-1016	**192**		µg/kg wet	19.7	247		78	40-140		
Aroclor-1016 [2C]	**214**		µg/kg wet	19.7	247		87	40-140		
Aroclor-1260	**186**		µg/kg wet	19.7	247		75	40-140		
Aroclor-1260 [2C]	**197**		µg/kg wet	19.7	247		80	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*15.8*		µg/kg wet		*19.7*		*80*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*14.8*		µg/kg wet		*19.7*		*75*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*16.8*		µg/kg wet		*19.7*		*85*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*20.7*		µg/kg wet		*19.7*		*105*	*30-150*		
LCS Dup (1517043-BSD1)					Prepared & Analyzed: 08-Sep-15					
Aroclor-1016	**191**		µg/kg wet	19.4	242		79	40-140	2	30
Aroclor-1016 [2C]	**202**		µg/kg wet	19.4	242		83	40-140	4	30
Aroclor-1260	**190**		µg/kg wet	19.4	242		78	40-140	4	30
Aroclor-1260 [2C]	**188**		µg/kg wet	19.4	242		78	40-140	3	30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*14.5*		µg/kg wet		*19.4*		*75*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*13.6*		µg/kg wet		*19.4*		*70*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*19.4*		µg/kg wet		*19.4*		*100*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*19.4*		µg/kg wet		*19.4*		*100*	*30-150*		
Duplicate (1517043-DUP1)			**Source: SC12076-01**		Prepared: 08-Sep-15 Analyzed: 09-Sep-15					
Aroclor-1016	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1016 [2C]	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1221	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1221 [2C]	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1232	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1232 [2C]	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1242	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1242 [2C]	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1248	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1248 [2C]	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1254	< 35.6	U	µg/kg dry	35.6		BRL				30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517043 - SW846 3545A										
Duplicate (1517043-DUP1)			**Source: SC12076-01**		Prepared: 08-Sep-15 Analyzed: 09-Sep-15					
Aroclor-1254 [2C]	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1260	< 35.6	U	µg/kg dry	35.6		BRL				30
Aroclor-1260 [2C]	< 35.6	U	µg/kg dry	35.6		BRL				30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*9.78*		µg/kg dry		*17.8*		*55*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*12.5*		µg/kg dry		*17.8*		*70*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*9.78*		µg/kg dry		*17.8*		*55*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*10.7*		µg/kg dry		*17.8*		*60*	*30-150*		
Matrix Spike (1517043-MS1)			**Source: SC12076-03**		Prepared: 08-Sep-15 Analyzed: 09-Sep-15					
Aroclor-1016	**248**		µg/kg dry	32.2	403	BRL	62	40-140		
Aroclor-1016 [2C]	**263**		µg/kg dry	32.2	403	BRL	65	40-140		
Aroclor-1260	**218**		µg/kg dry	32.2	403	BRL	54	40-140		
Aroclor-1260 [2C]	**240**		µg/kg dry	32.2	403	BRL	60	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*21.0*		µg/kg dry		*32.2*		*65*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*17.7*		µg/kg dry		*32.2*		*55*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*21.0*		µg/kg dry		*32.2*		*65*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*24.2*		µg/kg dry		*32.2*		*75*	*30-150*		
Matrix Spike Dup (1517043-MSD1)			**Source: SC12076-03**		Prepared: 08-Sep-15 Analyzed: 09-Sep-15					
Aroclor-1016	**230**		µg/kg dry	32.4	405	BRL	57	40-140	8	30
Aroclor-1016 [2C]	**279**		µg/kg dry	32.4	405	BRL	69	40-140	5	30
Aroclor-1260	**212**		µg/kg dry	32.4	405	BRL	52	40-140	3	30
Aroclor-1260 [2C]	**212**		µg/kg dry	32.4	405	BRL	52	40-140	13	30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*17.8*		µg/kg dry		*32.4*		*55*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*17.8*		µg/kg dry		*32.4*		*55*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*24.3*		µg/kg dry		*32.4*		*75*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*24.3*		µg/kg dry		*32.4*		*75*	*30-150*		
Batch 1517051 - SW846 3545A										
Blank (1517051-BLK1)					Prepared: 08-Sep-15 Analyzed: 14-Sep-15					
alpha-BHC	< 4.91	U	µg/kg wet	4.91						
alpha-BHC [2C]	< 4.91	U	µg/kg wet	4.91						
beta-BHC	< 4.91	U	µg/kg wet	4.91						
beta-BHC [2C]	< 4.91	U	µg/kg wet	4.91						
delta-BHC	< 4.91	U	µg/kg wet	4.91						
delta-BHC [2C]	< 4.91	U	µg/kg wet	4.91						
gamma-BHC (Lindane)	< 2.94	U	µg/kg wet	2.94						
gamma-BHC (Lindane) [2C]	< 2.94	U	µg/kg wet	2.94						
Heptachlor	< 4.91	U	µg/kg wet	4.91						
Heptachlor [2C]	< 4.91	U	µg/kg wet	4.91						
Aldrin	< 4.91	U	µg/kg wet	4.91						
Aldrin [2C]	< 4.91	U	µg/kg wet	4.91						
Heptachlor epoxide	< 4.91	U	µg/kg wet	4.91						
Heptachlor epoxide [2C]	< 4.91	U	µg/kg wet	4.91						
Endosulfan I	< 4.91	U	µg/kg wet	4.91						
Endosulfan I [2C]	< 4.91	U	µg/kg wet	4.91						
Dieldrin	< 4.91	U	µg/kg wet	4.91						
Dieldrin [2C]	< 4.91	U	µg/kg wet	4.91						
4,4'-DDE (p,p')	< 4.91	U	µg/kg wet	4.91						
4,4'-DDE (p,p') [2C]	< 4.91	U	µg/kg wet	4.91						
Endrin	< 7.85	U	µg/kg wet	7.85						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517051 - SW846 3545A										
Blank (1517051-BLK1)					Prepared: 08-Sep-15 Analyzed: 14-Sep-15					
Endrin [2C]	< 7.85	U	µg/kg wet	7.85						
Endosulfan II	< 7.85	U	µg/kg wet	7.85						
Endosulfan II [2C]	< 7.85	U	µg/kg wet	7.85						
4,4'-DDD (p,p')	< 7.85	U	µg/kg wet	7.85						
4,4'-DDD (p,p') [2C]	< 7.85	U	µg/kg wet	7.85						
Endosulfan sulfate	< 7.85	U	µg/kg wet	7.85						
Endosulfan sulfate [2C]	< 7.85	U	µg/kg wet	7.85						
4,4'-DDT (p,p')	< 7.85	U	µg/kg wet	7.85						
4,4'-DDT (p,p') [2C]	< 7.85	U	µg/kg wet	7.85						
Endrin aldehyde	< 7.85	U	µg/kg wet	7.85						
Endrin aldehyde [2C]	< 7.85	U	µg/kg wet	7.85						
Toxaphene	< 98.2	U	µg/kg wet	98.2						
Toxaphene [2C]	< 98.2	U	µg/kg wet	98.2						
Chlordane	< 19.6	U	µg/kg wet	19.6						
Chlordane [2C]	< 19.6	U	µg/kg wet	19.6						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*6.49*		µg/kg wet		*9.82*		*66*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*6.62*		µg/kg wet		*9.82*		*67*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*7.14*		µg/kg wet		*9.82*		*73*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*7.46*		µg/kg wet		*9.82*		*76*	*30-150*		
LCS (1517051-BS1)					Prepared: 08-Sep-15 Analyzed: 14-Sep-15					
alpha-BHC	**15.3**		µg/kg wet	4.94	24.7		62	40-140		
alpha-BHC [2C]	**16.5**		µg/kg wet	4.94	24.7		67	40-140		
beta-BHC	**21.1**		µg/kg wet	4.94	24.7		85	40-140		
beta-BHC [2C]	**20.9**		µg/kg wet	4.94	24.7		85	40-140		
delta-BHC	**13.5**		µg/kg wet	4.94	24.7		55	40-140		
delta-BHC [2C]	**12.9**		µg/kg wet	4.94	24.7		52	40-140		
gamma-BHC (Lindane)	**17.9**		µg/kg wet	2.96	24.7		73	40-140		
gamma-BHC (Lindane) [2C]	**18.6**		µg/kg wet	2.96	24.7		75	40-140		
Heptachlor	**21.4**		µg/kg wet	4.94	24.7		86	40-140		
Heptachlor [2C]	**22.1**		µg/kg wet	4.94	24.7		89	40-140		
Aldrin	**19.0**		µg/kg wet	4.94	24.7		77	40-140		
Aldrin [2C]	**19.7**		µg/kg wet	4.94	24.7		80	40-140		
Heptachlor epoxide	**20.2**		µg/kg wet	4.94	24.7		82	40-140		
Heptachlor epoxide [2C]	**17.0**		µg/kg wet	4.94	24.7		69	40-140		
Endosulfan I	**14.6**		µg/kg wet	4.94	24.7		59	40-140		
Endosulfan I [2C]	**12.5**		µg/kg wet	4.94	24.7		51	40-140		
Dieldrin	**20.6**		µg/kg wet	4.94	24.7		84	40-140		
Dieldrin [2C]	**19.6**		µg/kg wet	4.94	24.7		79	40-140		
4,4'-DDE (p,p')	**21.2**		µg/kg wet	4.94	24.7		86	40-140		
4,4'-DDE (p,p') [2C]	**20.6**		µg/kg wet	4.94	24.7		84	40-140		
Endrin	**28.4**		µg/kg wet	7.90	24.7		115	40-140		
Endrin [2C]	**26.8**		µg/kg wet	7.90	24.7		109	40-140		
Endosulfan II	**17.7**		µg/kg wet	7.90	24.7		72	40-140		
Endosulfan II [2C]	**15.0**		µg/kg wet	7.90	24.7		61	40-140		
4,4'-DDD (p,p')	**25.6**		µg/kg wet	7.90	24.7		104	40-140		
4,4'-DDD (p,p') [2C]	**21.0**		µg/kg wet	7.90	24.7		85	40-140		
Endosulfan sulfate	**21.4**		µg/kg wet	7.90	24.7		87	40-140		
Endosulfan sulfate [2C]	**18.9**		µg/kg wet	7.90	24.7		76	40-140		
4,4'-DDT (p,p')	**22.4**		µg/kg wet	7.90	24.7		91	40-140		
4,4'-DDT (p,p') [2C]	**17.9**		µg/kg wet	7.90	24.7		72	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517051 - SW846 3545A										
LCS (1517051-BS1)					Prepared: 08-Sep-15 Analyzed: 14-Sep-15					
Endrin aldehyde	**23.3**		µg/kg wet	7.90	24.7		94	40-140		
Endrin aldehyde [2C]	**20.6**		µg/kg wet	7.90	24.7		83	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*7.94*		µg/kg wet		*9.88*		*80*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*7.34*		µg/kg wet		*9.88*		*74*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*9.09*		µg/kg wet		*9.88*		*92*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*7.44*		µg/kg wet		*9.88*		*75*	*30-150*		
LCS Dup (1517051-BSD1)					Prepared: 08-Sep-15 Analyzed: 14-Sep-15					
alpha-BHC	**15.1**		µg/kg wet	4.92	24.6		61	40-140	1	30
alpha-BHC [2C]	**16.8**		µg/kg wet	4.92	24.6		68	40-140	2	30
beta-BHC	**20.5**		µg/kg wet	4.92	24.6		83	40-140	2	30
beta-BHC [2C]	**21.1**		µg/kg wet	4.92	24.6		86	40-140	1	30
delta-BHC	**13.0**		µg/kg wet	4.92	24.6		53	40-140	3	30
delta-BHC [2C]	**12.9**		µg/kg wet	4.92	24.6		53	40-140	1	30
gamma-BHC (Lindane)	**17.5**		µg/kg wet	2.95	24.6		71	40-140	2	30
gamma-BHC (Lindane) [2C]	**18.7**		µg/kg wet	2.95	24.6		76	40-140	1	30
Heptachlor	**20.7**		µg/kg wet	4.92	24.6		84	40-140	3	30
Heptachlor [2C]	**22.2**		µg/kg wet	4.92	24.6		90	40-140	1	30
Aldrin	**18.4**		µg/kg wet	4.92	24.6		75	40-140	3	30
Aldrin [2C]	**19.7**		µg/kg wet	4.92	24.6		80	40-140	0.8	30
Heptachlor epoxide	**19.8**		µg/kg wet	4.92	24.6		81	40-140	1	30
Heptachlor epoxide [2C]	**17.1**		µg/kg wet	4.92	24.6		70	40-140	1	30
Endosulfan I	**14.2**		µg/kg wet	4.92	24.6		58	40-140	2	30
Endosulfan I [2C]	**13.1**		µg/kg wet	4.92	24.6		53	40-140	5	30
Dieldrin	**20.1**		µg/kg wet	4.92	24.6		82	40-140	2	30
Dieldrin [2C]	**20.3**		µg/kg wet	4.92	24.6		83	40-140	4	30
4,4'-DDE (p,p')	**20.6**		µg/kg wet	4.92	24.6		84	40-140	3	30
4,4'-DDE (p,p') [2C]	**21.5**		µg/kg wet	4.92	24.6		88	40-140	5	30
Endrin	**27.7**		µg/kg wet	7.86	24.6		113	40-140	2	30
Endrin [2C]	**27.8**		µg/kg wet	7.86	24.6		113	40-140	4	30
Endosulfan II	**17.6**		µg/kg wet	7.86	24.6		72	40-140	0.06	30
Endosulfan II [2C]	**15.6**		µg/kg wet	7.86	24.6		63	40-140	4	30
4,4'-DDD (p,p')	**23.1**		µg/kg wet	7.86	24.6		94	40-140	10	30
4,4'-DDD (p,p') [2C]	**22.0**		µg/kg wet	7.86	24.6		89	40-140	5	30
Endosulfan sulfate	**21.3**		µg/kg wet	7.86	24.6		87	40-140	0.3	30
Endosulfan sulfate [2C]	**19.4**		µg/kg wet	7.86	24.6		79	40-140	3	30
4,4'-DDT (p,p')	**22.4**		µg/kg wet	7.86	24.6		91	40-140	0.3	30
4,4'-DDT (p,p') [2C]	**19.5**		µg/kg wet	7.86	24.6		79	40-140	9	30
Endrin aldehyde	**23.6**		µg/kg wet	7.86	24.6		96	40-140	2	30
Endrin aldehyde [2C]	**21.6**		µg/kg wet	7.86	24.6		88	40-140	5	30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*8.07*		µg/kg wet		*9.83*		*82*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*7.57*		µg/kg wet		*9.83*		*77*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*8.72*		µg/kg wet		*9.83*		*89*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*7.62*		µg/kg wet		*9.83*		*77*	*30-150*		
Duplicate (1517051-DUP1)			**Source: SC12076-01**		Prepared: 08-Sep-15 Analyzed: 14-Sep-15					
alpha-BHC	< 8.89	U	µg/kg dry	8.89		BRL				30
alpha-BHC [2C]	< 8.89	U	µg/kg dry	8.89		BRL				30
beta-BHC	< 8.89	U	µg/kg dry	8.89		BRL				30
beta-BHC [2C]	< 8.89	U	µg/kg dry	8.89		BRL				30
delta-BHC	< 8.89	U	µg/kg dry	8.89		BRL				30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517051 - SW846 3545A										
Duplicate (1517051-DUP1)			**Source: SC12076-01**		Prepared: 08-Sep-15 Analyzed: 14-Sep-15					
delta-BHC [2C]	< 8.89	U	µg/kg dry	8.89		BRL				30
gamma-BHC (Lindane)	< 5.34	U	µg/kg dry	5.34		BRL				30
gamma-BHC (Lindane) [2C]	< 5.34	U	µg/kg dry	5.34		BRL				30
Heptachlor	< 8.89	U	µg/kg dry	8.89		BRL				30
Heptachlor [2C]	< 8.89	U	µg/kg dry	8.89		BRL				30
Aldrin	< 8.89	U	µg/kg dry	8.89		BRL				30
Aldrin [2C]	< 8.89	U	µg/kg dry	8.89		BRL				30
Heptachlor epoxide	< 8.89	U	µg/kg dry	8.89		BRL				30
Heptachlor epoxide [2C]	< 8.89	U	µg/kg dry	8.89		BRL				30
Endosulfan I	< 8.89	U	µg/kg dry	8.89		BRL				30
Endosulfan I [2C]	< 8.89	U	µg/kg dry	8.89		BRL				30
Dieldrin	< 8.89	U	µg/kg dry	8.89		BRL				30
Dieldrin [2C]	< 8.89	U	µg/kg dry	8.89		BRL				30
4,4'-DDE (p,p')	< 8.89	U	µg/kg dry	8.89		BRL				30
4,4'-DDE (p,p') [2C]	< 8.89	U	µg/kg dry	8.89		BRL				30
Endrin	< 14.2	U	µg/kg dry	14.2		BRL				30
Endrin [2C]	< 14.2	U	µg/kg dry	14.2		BRL				30
Endosulfan II	< 14.2	U	µg/kg dry	14.2		BRL				30
Endosulfan II [2C]	< 14.2	U	µg/kg dry	14.2		BRL				30
4,4'-DDD (p,p')	< 14.2	U	µg/kg dry	14.2		BRL				30
4,4'-DDD (p,p') [2C]	< 14.2	U	µg/kg dry	14.2		BRL				30
Endosulfan sulfate	< 14.2	U	µg/kg dry	14.2		BRL				30
Endosulfan sulfate [2C]	< 14.2	U	µg/kg dry	14.2		BRL				30
4,4'-DDT (p,p')	< 14.2	U	µg/kg dry	14.2		BRL				30
4,4'-DDT (p,p') [2C]	< 14.2	U	µg/kg dry	14.2		BRL				30
Endrin aldehyde	< 14.2	U	µg/kg dry	14.2		BRL				30
Endrin aldehyde [2C]	< 14.2	U	µg/kg dry	14.2		BRL				30
Toxaphene	< 178	U	µg/kg dry	178		BRL				30
Toxaphene [2C]	< 178	U	µg/kg dry	178		BRL				30
Chlordane	< 35.6	U	µg/kg dry	35.6		BRL				30
Chlordane [2C]	< 35.6	U	µg/kg dry	35.6		BRL				30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*9.42*		µg/kg dry		*17.8*		*53*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*11.7*		µg/kg dry		*17.8*		*66*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*13.4*		µg/kg dry		*17.8*		*76*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*9.54*		µg/kg dry		*17.8*		*54*	*30-150*		
Matrix Spike (1517051-MS1)			**Source: SC12076-01**		Prepared: 08-Sep-15 Analyzed: 14-Sep-15					
alpha-BHC	**33.3**		µg/kg dry	8.91	44.6	BRL	75	30-150		
alpha-BHC [2C]	**45.1**		µg/kg dry	8.91	44.6	BRL	101	30-150		
beta-BHC	**29.4**		µg/kg dry	8.91	44.6	BRL	66	30-150		
beta-BHC [2C]	**41.9**		µg/kg dry	8.91	44.6	BRL	94	30-150		
delta-BHC	**39.8**		µg/kg dry	8.91	44.6	BRL	89	30-150		
delta-BHC [2C]	**37.5**		µg/kg dry	8.91	44.6	BRL	84	30-150		
gamma-BHC (Lindane)	**37.6**		µg/kg dry	5.35	44.6	BRL	84	30-150		
gamma-BHC (Lindane) [2C]	**36.4**		µg/kg dry	5.35	44.6	BRL	82	30-150		
Heptachlor	**29.9**		µg/kg dry	8.91	44.6	BRL	67	30-150		
Heptachlor [2C]	**21.3**		µg/kg dry	8.91	44.6	BRL	48	30-150		
Aldrin	**22.4**		µg/kg dry	8.91	44.6	BRL	50	30-150		
Aldrin [2C]	**20.8**		µg/kg dry	8.91	44.6	BRL	47	30-150		
Heptachlor epoxide	**29.9**		µg/kg dry	8.91	44.6	BRL	67	30-150		
Heptachlor epoxide [2C]	**29.0**		µg/kg dry	8.91	44.6	BRL	65	30-150		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517051 - SW846 3545A										
Matrix Spike (1517051-MS1)			**Source: SC12076-01**			Prepared: 08-Sep-15 Analyzed: 14-Sep-15				
Endosulfan I	**35.3**		µg/kg dry	8.91	44.6	BRL	79	30-150		
Endosulfan I [2C]	**31.7**		µg/kg dry	8.91	44.6	BRL	71	30-150		
Dieldrin	**31.1**		µg/kg dry	8.91	44.6	BRL	70	30-150		
Dieldrin [2C]	**31.8**		µg/kg dry	8.91	44.6	BRL	71	30-150		
4,4'-DDE (p,p')	**25.0**		µg/kg dry	8.91	44.6	BRL	56	30-150		
4,4'-DDE (p,p') [2C]	**27.4**		µg/kg dry	8.91	44.6	BRL	62	30-150		
Endrin	**45.5**		µg/kg dry	14.3	44.6	BRL	102	30-150		
Endrin [2C]	**42.1**		µg/kg dry	14.3	44.6	BRL	95	30-150		
Endosulfan II	**34.9**		µg/kg dry	14.3	44.6	BRL	78	30-150		
Endosulfan II [2C]	**26.8**		µg/kg dry	14.3	44.6	BRL	60	30-150		
4,4'-DDD (p,p')	**32.8**		µg/kg dry	14.3	44.6	BRL	74	30-150		
4,4'-DDD (p,p') [2C]	**29.3**		µg/kg dry	14.3	44.6	BRL	66	30-150		
Endosulfan sulfate	**36.3**		µg/kg dry	14.3	44.6	BRL	81	30-150		
Endosulfan sulfate [2C]	**29.1**		µg/kg dry	14.3	44.6	BRL	65	30-150		
4,4'-DDT (p,p')	**33.8**		µg/kg dry	14.3	44.6	BRL	76	30-150		
4,4'-DDT (p,p') [2C]	**29.7**		µg/kg dry	14.3	44.6	BRL	67	30-150		
Endrin aldehyde	**35.7**		µg/kg dry	14.3	44.6	BRL	80	30-150		
Endrin aldehyde [2C]	**37.3**		µg/kg dry	14.3	44.6	BRL	84	30-150		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*14.6*		µg/kg dry		*17.8*		*82*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*21.2*		µg/kg dry		*17.8*		*119*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*19.0*		µg/kg dry		*17.8*		*106*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*14.1*		µg/kg dry		*17.8*		*79*	*30-150*		
Matrix Spike Dup (1517051-MSD1)			**Source: SC12076-01**			Prepared: 08-Sep-15 Analyzed: 14-Sep-15				
alpha-BHC	**29.9**		µg/kg dry	8.91	44.6	BRL	67	30-150	11	30
alpha-BHC [2C]	**41.4**		µg/kg dry	8.91	44.6	BRL	93	30-150	9	30
beta-BHC	**23.3**		µg/kg dry	8.91	44.6	BRL	52	30-150	23	30
beta-BHC [2C]	**34.3**		µg/kg dry	8.91	44.6	BRL	77	30-150	20	30
delta-BHC	**33.3**		µg/kg dry	8.91	44.6	BRL	75	30-150	18	30
delta-BHC [2C]	**33.3**		µg/kg dry	8.91	44.6	BRL	75	30-150	12	30
gamma-BHC (Lindane)	**34.2**		µg/kg dry	5.35	44.6	BRL	77	30-150	10	30
gamma-BHC (Lindane) [2C]	**34.2**		µg/kg dry	5.35	44.6	BRL	77	30-150	6	30
Heptachlor	**29.5**		µg/kg dry	8.91	44.6	BRL	66	30-150	1	30
Heptachlor [2C]	**25.2**		µg/kg dry	8.91	44.6	BRL	57	30-150	17	30
Aldrin	**23.0**		µg/kg dry	8.91	44.6	BRL	52	30-150	3	30
Aldrin [2C]	**21.8**		µg/kg dry	8.91	44.6	BRL	49	30-150	5	30
Heptachlor epoxide	**27.2**		µg/kg dry	8.91	44.6	BRL	61	30-150	9	30
Heptachlor epoxide [2C]	**27.6**		µg/kg dry	8.91	44.6	BRL	62	30-150	5	30
Endosulfan I	**28.3**		µg/kg dry	8.91	44.6	BRL	64	30-150	22	30
Endosulfan I [2C]	**29.4**		µg/kg dry	8.91	44.6	BRL	66	30-150	8	30
Dieldrin	**28.7**		µg/kg dry	8.91	44.6	BRL	64	30-150	8	30
Dieldrin [2C]	**30.1**		µg/kg dry	8.91	44.6	BRL	68	30-150	5	30
4,4'-DDE (p,p')	**24.4**		µg/kg dry	8.91	44.6	BRL	55	30-150	3	30
4,4'-DDE (p,p') [2C]	**25.8**		µg/kg dry	8.91	44.6	BRL	58	30-150	6	30
Endrin	**40.7**		µg/kg dry	14.3	44.6	BRL	91	30-150	11	30
Endrin [2C]	**39.1**		µg/kg dry	14.3	44.6	BRL	88	30-150	7	30
Endosulfan II	**33.0**		µg/kg dry	14.3	44.6	BRL	74	30-150	6	30
Endosulfan II [2C]	**27.9**		µg/kg dry	14.3	44.6	BRL	63	30-150	4	30
4,4'-DDD (p,p')	**29.1**		µg/kg dry	14.3	44.6	BRL	65	30-150	12	30
4,4'-DDD (p,p') [2C]	**28.0**		µg/kg dry	14.3	44.6	BRL	63	30-150	5	30
Endosulfan sulfate	**32.5**		µg/kg dry	14.3	44.6	BRL	73	30-150	11	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517051 - SW846 3545A										
Matrix Spike Dup (1517051-MSD1)			**Source: SC12076-01**			Prepared: 08-Sep-15 Analyzed: 14-Sep-15				
Endosulfan sulfate [2C]	**26.1**		µg/kg dry	14.3	44.6	BRL	58	30-150	11	30
4,4'-DDT (p,p')	**33.9**		µg/kg dry	14.3	44.6	BRL	76	30-150	0.4	30
4,4'-DDT (p,p') [2C]	**26.7**		µg/kg dry	14.3	44.6	BRL	60	30-150	11	30
Endrin aldehyde	**32.3**		µg/kg dry	14.3	44.6	BRL	72	30-150	10	30
Endrin aldehyde [2C]	**28.7**		µg/kg dry	14.3	44.6	BRL	64	30-150	26	30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*12.9*		µg/kg dry		*17.8*		*73*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*19.2*		µg/kg dry		*17.8*		*108*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr)	*16.7*		µg/kg dry		*17.8*		*94*	*30-150*		
Surrogate: Decachlorobiphenyl (Sr) [2C]	*16.2*		µg/kg dry		*17.8*		*91*	*30-150*		
Batch 1517128 - SW846 3550C										
Blank (1517128-BLK1)						Prepared: 09-Sep-15 Analyzed: 10-Sep-15				
2,4,5-T	< 6.68	U	µg/kg wet	6.68						
2,4,5-T [2C]	< 6.68	U	µg/kg wet	6.68						
2,4,5-TP (Silvex)	< 6.68	U	µg/kg wet	6.68						
2,4,5-TP (Silvex) [2C]	< 6.68	U	µg/kg wet	6.68						
2,4-D	< 6.68	U	µg/kg wet	6.68						
2,4-D [2C]	< 6.68	U	µg/kg wet	6.68						
2,4-DB	< 6.68	U	µg/kg wet	6.68						
2,4-DB [2C]	< 6.68	U	µg/kg wet	6.68						
Dalapon	< 6.68	U	µg/kg wet	6.68						
Dalapon [2C]	< 6.68	U	µg/kg wet	6.68						
Dicamba	< 6.68	U	µg/kg wet	6.68						
Dicamba [2C]	< 6.68	U	µg/kg wet	6.68						
Dichlorprop	< 6.68	U	µg/kg wet	6.68						
Dichlorprop [2C]	< 6.68	U	µg/kg wet	6.68						
Dinoseb	< 6.68	U	µg/kg wet	6.68						
Dinoseb [2C]	< 6.68	U	µg/kg wet	6.68						
MCPA	< 2240	U	µg/kg wet	2240						
MCPA [2C]	< 2240	U	µg/kg wet	2240						
MCPB	< 2240	U	µg/kg wet	2240						
MCPB [2C]	< 2240	U	µg/kg wet	2240						
MCPP	< 2240	U	µg/kg wet	2240						
MCPP [2C]	< 2240	U	µg/kg wet	2240						
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*6.65*		µg/kg wet		*13.3*		*50*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*5.32*		µg/kg wet		*13.3*		*40*	*30-150*		
Surrogate: DCAA (Sr)	*8.64*		µg/kg wet		*13.3*		*65*	*30-150*		
Surrogate: DCAA (Sr) [2C]	*6.65*		µg/kg wet		*13.3*		*50*	*30-150*		
LCS (1517128-BS1)						Prepared: 09-Sep-15 Analyzed: 10-Sep-15				
2,4,5-T	**21.5**		µg/kg wet	6.55	32.6		66	40-140		
2,4,5-T [2C]	**19.6**		µg/kg wet	6.55	32.6		60	40-140		
2,4,5-TP (Silvex)	**28.0**		µg/kg wet	6.55	32.6		86	40-140		
2,4,5-TP (Silvex) [2C]	**20.2**		µg/kg wet	6.55	32.6		62	40-140		
2,4-D	**16.9**		µg/kg wet	6.55	32.6		52	40-140		
2,4-D [2C]	**18.3**		µg/kg wet	6.55	32.6		56	40-140		
2,4-DB	**21.5**		µg/kg wet	6.55	32.6		66	40-140		
2,4-DB [2C]	**19.6**		µg/kg wet	6.55	32.6		60	40-140		
Dalapon	**24.8**		µg/kg wet	6.55	32.6		76	40-140		
Dalapon [2C]	**25.4**		µg/kg wet	6.55	32.6		78	40-140		
Dicamba	**22.8**		µg/kg wet	6.55	32.6		70	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517128 - SW846 3550C										
LCS (1517128-BS1)					Prepared: 09-Sep-15 Analyzed: 10-Sep-15					
Dicamba [2C]	**20.9**		µg/kg wet	6.55	32.6		64	40-140		
Dichlorprop	**22.8**		µg/kg wet	6.55	32.6		70	40-140		
Dichlorprop [2C]	**20.2**		µg/kg wet	6.55	32.6		62	40-140		
Dinoseb	**26.7**		µg/kg wet	6.55	32.6		82	40-140		
Dinoseb [2C]	**21.5**		µg/kg wet	6.55	32.6		66	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*7.82*		µg/kg wet		*13.0*		*60*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*7.17*		µg/kg wet		*13.0*		*55*	*30-150*		
Surrogate: DCAA (Sr)	*7.17*		µg/kg wet		*13.0*		*55*	*30-150*		
Surrogate: DCAA (Sr) [2C]	*7.17*		µg/kg wet		*13.0*		*55*	*30-150*		
LCS (1517128-BS2)					Prepared: 09-Sep-15 Analyzed: 10-Sep-15					
MCPA	**9140**		µg/kg wet	2200	9790		93	40-140		
MCPA [2C]	**7180**		µg/kg wet	2200	9790		73	40-140		
MCPB	**7180**		µg/kg wet	2200	9790		73	40-140		
MCPB [2C]	**7830**		µg/kg wet	2200	9790		80	40-140		
MCPP	**8490**		µg/kg wet	2200	9790		87	40-140		
MCPP [2C]	**7830**		µg/kg wet	2200	9790		80	40-140		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*11.1*		µg/kg wet		*13.1*		*85*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*11.1*		µg/kg wet		*13.1*		*85*	*30-150*		
Surrogate: DCAA (Sr)	*9.14*		µg/kg wet		*13.1*		*70*	*30-150*		
Surrogate: DCAA (Sr) [2C]	*8.49*		µg/kg wet		*13.1*		*65*	*30-150*		
LCS Dup (1517128-BSD1)					Prepared: 09-Sep-15 Analyzed: 10-Sep-15					
2,4,5-T	**29.0**		µg/kg wet	6.63	33.0		88	40-140	29	30
2,4,5-T [2C]	**17.8**		µg/kg wet	6.63	33.0		54	40-140	11	30
2,4,5-TP (Silvex)	**26.4**		µg/kg wet	6.63	33.0		80	40-140	7	30
2,4,5-TP (Silvex) [2C]	**18.5**		µg/kg wet	6.63	33.0		56	40-140	10	30
2,4-D	**17.2**		µg/kg wet	6.63	33.0		52	40-140	0	30
2,4-D [2C]	**14.5**		µg/kg wet	6.63	33.0		44	40-140	24	30
2,4-DB	**23.1**		µg/kg wet	6.63	33.0		70	40-140	6	30
2,4-DB [2C]	**23.8**		µg/kg wet	6.63	33.0		72	40-140	18	30
Dalapon	**24.4**		µg/kg wet	6.63	33.0		74	40-140	3	30
Dalapon [2C]	**21.1**		µg/kg wet	6.63	33.0		64	40-140	20	30
Dicamba	**27.1**		µg/kg wet	6.63	33.0		82	40-140	16	30
Dicamba [2C]	**17.8**		µg/kg wet	6.63	33.0		54	40-140	17	30
Dichlorprop	**21.8**		µg/kg wet	6.63	33.0		66	40-140	6	30
Dichlorprop [2C]	**18.5**		µg/kg wet	6.63	33.0		56	40-140	10	30
Dinoseb	**26.4**		µg/kg wet	6.63	33.0		80	40-140	2	30
Dinoseb [2C]	**19.8**		µg/kg wet	6.63	33.0		60	40-140	10	30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*9.24*		µg/kg wet		*13.2*		*70*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*6.60*		µg/kg wet		*13.2*		*50*	*30-150*		
Surrogate: DCAA (Sr)	*7.26*		µg/kg wet		*13.2*		*55*	*30-150*		
Surrogate: DCAA (Sr) [2C]	*6.60*		µg/kg wet		*13.2*		*50*	*30-150*		
LCS Dup (1517128-BSD2)					Prepared: 09-Sep-15 Analyzed: 10-Sep-15					
MCPA	**7810**		µg/kg wet	2200	9760		80	40-140	15	30
MCPA [2C]	**7160**		µg/kg wet	2200	9760		73	40-140	0.00002	30
MCPB	**6510**		µg/kg wet	2200	9760		67	40-140	10	30
MCPB [2C]	**7160**		µg/kg wet	2200	9760		73	40-140	9	30
MCPP	**8460**		µg/kg wet	2200	9760		87	40-140	0	30
MCPP [2C]	**7810**		µg/kg wet	2200	9760		80	40-140	0.00001	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517128 - SW846 3550C										
LCS Dup (1517128-BSD2)					Prepared: 09-Sep-15 Analyzed: 10-Sep-15					
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*9.76*		µg/kg wet		*13.0*		*75*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*9.76*		µg/kg wet		*13.0*		*75*	*30-150*		
Surrogate: DCAA (Sr)	*9.11*		µg/kg wet		*13.0*		*70*	*30-150*		
Surrogate: DCAA (Sr) [2C]	*7.16*		µg/kg wet		*13.0*		*55*	*30-150*		
Duplicate (1517128-DUP1)			**Source: SC12076-03**		Prepared: 09-Sep-15 Analyzed: 10-Sep-15					
2,4,5-T	< 11.0	U	µg/kg dry	11.0		BRL				30
2,4,5-T [2C]	< 11.0	U	µg/kg dry	11.0		BRL				30
2,4,5-TP (Silvex)	< 11.0	U	µg/kg dry	11.0		BRL				30
2,4,5-TP (Silvex) [2C]	< 11.0	U	µg/kg dry	11.0		BRL				30
2,4-D	< 11.0	U	µg/kg dry	11.0		BRL				30
2,4-D [2C]	< 11.0	U	µg/kg dry	11.0		BRL				30
2,4-DB	< 11.0	U	µg/kg dry	11.0		BRL				30
2,4-DB [2C]	< 11.0	U	µg/kg dry	11.0		BRL				30
Dalapon	< 11.0	U	µg/kg dry	11.0		BRL				30
Dalapon [2C]	< 11.0	U	µg/kg dry	11.0		BRL				30
Dicamba	< 11.0	U	µg/kg dry	11.0		BRL				30
Dicamba [2C]	< 11.0	U	µg/kg dry	11.0		BRL				30
Dichlorprop	< 11.0	U	µg/kg dry	11.0		BRL				30
Dichlorprop [2C]	< 11.0	U	µg/kg dry	11.0		BRL				30
Dinoseb	< 11.0	U	µg/kg dry	11.0		BRL				30
Dinoseb [2C]	< 11.0	U	µg/kg dry	11.0		BRL				30
MCPA	< 3700	U	µg/kg dry	3700		BRL				30
MCPA [2C]	< 3700	U	µg/kg dry	3700		BRL				30
MCPB	< 3700	U	µg/kg dry	3700		BRL				30
MCPB [2C]	< 3700	U	µg/kg dry	3700		BRL				30
MCPP	< 3700	U	µg/kg dry	3700		BRL				30
MCPP [2C]	< 3700	U	µg/kg dry	3700		BRL				30
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr)	*9.88*		µg/kg dry		*21.9*		*45*	*30-150*		
Surrogate: 4,4-DB-Octafluorobiphenyl (Sr) [2C]	*7.68*		µg/kg dry		*21.9*		*35*	*30-150*		
Surrogate: DCAA (Sr)	*14.3*		µg/kg dry		*21.9*		*65*	*30-150*		
Surrogate: DCAA (Sr) [2C]	*12.1*		µg/kg dry		*21.9*		*55*	*30-150*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517112 - SW846 3050B										
Blank (1517112-BLK1)					Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Lead	< 1.50	U	mg/kg wet	1.50						
Silver	< 1.50	U	mg/kg wet	1.50						
Selenium	< 1.50	U	mg/kg wet	1.50						
Cadmium	< 0.500	U	mg/kg wet	0.500						
Chromium	< 1.00	U	mg/kg wet	1.00						
Arsenic	< 1.50	U	mg/kg wet	1.50						
Barium	< 1.00	U	mg/kg wet	1.00						
Duplicate (1517112-DUP1)			**Source: SC12076-02**		Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Silver	< 2.30	U	mg/kg dry	2.30		BRL				20
Arsenic	**79.2**	QR6	mg/kg dry	2.30		100			24	20
Cadmium	**0.0604**	QR8, J	mg/kg dry	0.765		0.0402			40	20
Chromium	**21.0**		mg/kg dry	1.53		22.5			7	20
Lead	**9.89**		mg/kg dry	2.30		10.6			6	20
Selenium	**1.12**	J	mg/kg dry	2.30		1.13			0.8	20
Barium	**52.9**		mg/kg dry	1.53		58.3			10	20
Matrix Spike (1517112-MS1)			**Source: SC12076-02**		Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Cadmium	**177**		mg/kg dry	0.830	208	0.0402	85	75-125		
Selenium	**170**		mg/kg dry	2.49	208	1.13	81	75-125		
Chromium	**221**		mg/kg dry	1.66	208	22.5	96	75-125		
Lead	**181**		mg/kg dry	2.49	208	10.6	82	75-125		
Arsenic	**261**		mg/kg dry	2.49	208	100	78	75-125		
Silver	**113**	QM8	mg/kg dry	2.49	208	BRL	54	75-125		
Barium	**257**		mg/kg dry	1.66	208	58.3	96	75-125		
Matrix Spike Dup (1517112-MSD1)			**Source: SC12076-02**		Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Cadmium	**189**		mg/kg dry	0.887	222	0.0402	85	75-125	7	20
Selenium	**180**		mg/kg dry	2.66	222	1.13	81	75-125	6	20
Chromium	**236**		mg/kg dry	1.77	222	22.5	96	75-125	6	20
Silver	**112**	QM8	mg/kg dry	2.66	222	BRL	51	75-125	0.5	20
Arsenic	**267**		mg/kg dry	2.66	222	100	75	75-125	2	20
Lead	**194**		mg/kg dry	2.66	222	10.6	83	75-125	7	20
Barium	**271**		mg/kg dry	1.77	222	58.3	96	75-125	5	20
Post Spike (1517112-PS1)			**Source: SC12076-02**		Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Silver	**183**		mg/kg dry	2.62	218	BRL	84	80-120		
Selenium	**190**		mg/kg dry	2.62	218	1.13	86	80-120		
Lead	**201**		mg/kg dry	2.62	218	10.6	87	80-120		
Chromium	**233**		mg/kg dry	1.75	218	22.5	97	80-120		
Cadmium	**197**		mg/kg dry	0.873	218	0.0402	90	80-120		
Arsenic	**278**		mg/kg dry	2.62	218	100	82	80-120		
Barium	**248**		mg/kg dry	1.75	218	58.3	87	80-120		
Reference (1517112-SRM1)					Prepared: 10-Sep-15 Analyzed: 14-Sep-15					
Selenium	**64.5**		mg/kg wet	1.50	78.5		82	77.56-121.79		
Silver	**23.0**		mg/kg wet	1.50	26.5		87	74.9-125.09		
Arsenic	**50.0**		mg/kg wet	1.50	56.9		88	78.23-122.12		
Cadmium	**30.7**		mg/kg wet	0.500	34.0		90	82.22-117.77		
Lead	**39.9**		mg/kg wet	1.50	45.3		88	81.68-118.75		
Chromium	**81.9**		mg/kg wet	1.00	82.5		99	79.26-120.73		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517112 - SW846 3050B										
Reference (1517112-SRM1)						Prepared: 10-Sep-15		Analyzed: 14-Sep-15		
Barium	**72.4**		mg/kg wet	1.00	78.0		93	81.93-117.41		
Reference (1517112-SRM2)						Prepared: 10-Sep-15		Analyzed: 14-Sep-15		
Selenium	**67.5**		mg/kg wet	1.50	79.8		85	77.56-121.79		
Silver	**24.0**		mg/kg wet	1.50	26.9		89	74.9-125.09		
Arsenic	**51.0**		mg/kg wet	1.50	57.8		88	78.23-122.12		
Cadmium	**32.1**		mg/kg wet	0.500	34.5		93	82.22-117.77		
Chromium	**83.9**		mg/kg wet	1.00	83.9		100	79.26-120.73		
Lead	**41.0**		mg/kg wet	1.50	46.1		89	81.68-118.75		
Barium	**74.8**		mg/kg wet	1.00	79.3		94	81.93-117.41		
Batch 1517113 - EPA200/SW7000 Series										
Blank (1517113-BLK1)						Prepared: 10-Sep-15		Analyzed: 11-Sep-15		
Mercury	< 0.0258	U	mg/kg wet	0.0258						
Duplicate (1517113-DUP1)			**Source: SC12076-02**			Prepared: 10-Sep-15		Analyzed: 11-Sep-15		
Mercury	**0.0373**	J	mg/kg dry	0.0533		0.0366			2	20
Matrix Spike (1517113-MS1)			**Source: SC12076-02**			Prepared: 10-Sep-15		Analyzed: 11-Sep-15		
Mercury	**0.409**		mg/kg dry	0.0497	0.345	0.0366	108	75-125		
Matrix Spike Dup (1517113-MSD1)			**Source: SC12076-02**			Prepared: 10-Sep-15		Analyzed: 11-Sep-15		
Mercury	**0.419**		mg/kg dry	0.0508	0.353	0.0366	108	75-125	3	20
Post Spike (1517113-PS1)			**Source: SC12076-02**			Prepared: 10-Sep-15		Analyzed: 11-Sep-15		
Mercury	**0.449**		mg/kg dry	0.0534	0.371	0.0366	111	80-120		
Reference (1517113-SRM1)						Prepared: 10-Sep-15		Analyzed: 11-Sep-15		
Mercury	**3.20**	D	mg/kg wet	0.600	2.91		110	75.52-127.83		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517758 - SW846 3010A										
Blank (1517758-BLK1)					Prepared: 18-Sep-15 Analyzed: 21-Sep-15					
Arsenic	**0.0058**	J	mg/l	0.0080						
LCS (1517758-BS1)					Prepared: 18-Sep-15 Analyzed: 21-Sep-15					
Arsenic	**2.75**		mg/l	0.0080	2.50		110	85-115		
LCS Dup (1517758-BSD1)					Prepared: 18-Sep-15 Analyzed: 21-Sep-15					
Arsenic	**2.74**		mg/l	0.0080	2.50		110	85-115	0.2	20
Duplicate (1517758-DUP1)			**Source: SC12076-02**		Prepared: 18-Sep-15 Analyzed: 21-Sep-15					
Arsenic	**0.244**		mg/l	0.0080		0.232			5	20
Matrix Spike (1517758-MS1)			**Source: SC12076-02**		Prepared: 18-Sep-15 Analyzed: 21-Sep-15					
Arsenic	**2.77**		mg/l	0.0080	2.50	0.232	101	75-125		
Matrix Spike Dup (1517758-MSD1)			**Source: SC12076-02**		Prepared: 18-Sep-15 Analyzed: 21-Sep-15					
Arsenic	**2.95**		mg/l	0.0080	2.50	0.232	109	75-125	6	20
Post Spike (1517758-PS1)			**Source: SC12076-02**		Prepared: 18-Sep-15 Analyzed: 21-Sep-15					
Arsenic	**2.87**		mg/l	0.0080	2.50	0.232	106	80-120		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch 1517168 - General Preparation										
Blank (1517168-BLK1)						Prepared: 09-Sep-15 Analyzed: 10-Sep-15				
Reactivity	**See Narrative**		mg/kg wet							
Reactive Cyanide	< 25.0	U	mg/kg wet	25.0						
Reactive Sulfide	< 50.0	U	mg/kg wet	50.0						
Reference (1517168-SRM1)						Prepared: 09-Sep-15 Analyzed: 10-Sep-15				
Reactive Cyanide	< 25.0	U	mg/kg wet	25.0	100		0	0-200		
Reference (1517168-SRM2)						Prepared: 09-Sep-15 Analyzed: 10-Sep-15				
Reactive Sulfide	< 50.0	U	mg/kg wet	50.0	6700		0	0-200		
Batch 1517180 - General Preparation										
Duplicate (1517180-DUP1)			**Source: SC12076-01**			Prepared & Analyzed: 09-Sep-15				
pH	**6.49**		pH Units			6.49			0	5
Reference (1517180-SRM1)						Prepared & Analyzed: 09-Sep-15				
pH	**6.05**		pH Units		6.00		101	97.5-102.5		
Reference (1517180-SRM2)						Prepared & Analyzed: 09-Sep-15				
pH	**6.04**		pH Units		6.00		101	97.5-102.5		
Batch 1517195 - General Preparation										
Reference (1517195-SRM1)						Prepared & Analyzed: 09-Sep-15				
Flashpoint	**81**		°F		81.0		100	95-105		
Batch 1517362 - General Preparation										
Duplicate (1517362-DUP1)			**Source: SC12076-03**			Prepared & Analyzed: 11-Sep-15				
Ignitability by Definition	**Negative**		N/A			Negative				35

Analyte(s)	Column	% Breakdown	Limit
Batch S508234			
Performance Mix (S508234-PEM1)			
4,4'-DDT (p,p')	1	6.2	15.0
Endrin	1	1.3	15.0
4,4'-DDT (p,p')	2	3.3	15.0
Endrin	2	0.3	15.0
Performance Mix (S508234-PEM2)			
4,4'-DDT (p,p')	1	5.2	15.0
Endrin	1	0.9	15.0
4,4'-DDT (p,p')	2	4.3	15.0
Endrin	2	0.6	15.0

The following list indicates the date and time low-level VOC soil/sediment samples were placed in the freezer at the lab:

SC12076-01	*Roll Off 1 and 2*	9/5/2015 10:45 AM
SC12076-02	*Roll Off 3 and 4*	9/5/2015 10:45 AM
SC12076-03	*Roll Off 5*	9/5/2015 10:45 AM

Notes and Definitions

D	Data reported from a dilution
IgHT	A hold time of 24 hours has been set to expedite the analyses through the laboratory. However, the hold time for Ignitability is not specified within the method other than to state that the samples should be analyzed as soon as possible.
J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM4	Visual evaluation of the sample indicates the RPD is above the control limit due to a non-homogeneous sample matrix.
QM7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM8	The spike recovery exceeded the QC control limits for the MS and/or MSD. The batch was accepted based upon acceptable PS and /or LCS recovery.
QR6	The RPD exceeded the QC control limits; however precision is demonstrated with acceptable RPD values for MS/MSD.
QR8	Analyses are not controlled on RPD values from sample concentrations that are less than 5 times the reporting level. The batch is accepted based upon the difference between the sample and duplicate is less than or equal to the reporting limit.
QR9	RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.
U	Analyte included in the analysis, but not detected at or above the MDL.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
pH	The method for pH does not stipulate a specific holding time other than to state that the samples should be analyzed as soon as possible. For aqueous samples the 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous pH samples not analyzed in the field are considered out of hold time at the time of sample receipt. All soil samples are analyzed as soon as possible after sample receipt.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:
June O'Connor
Kimberly LaPlante

SC12076 ckl

SPECTRUM ANALYTICAL, INC.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

☐ Standard TAT - 7 to 10 business days
☒ Rush TAT - Date Needed: 9-15, tuesday
All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed.

Report To: Brad LaForest, Amec
Telephone #:
Project Mgr:

Invoice To: Same
P.O No.:
Quote/RQN:

Project No:
Site Name: Winthrop Landfill
Location:
State:
Sampler(s): John Cozens

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= 12=

List Preservative Code below:

QA/QC Reporting Notes:
* additional charges may appply

DW=Dinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= X2= X3=

G= Grab C=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials DI	# of Amber Glass	# of Clear Glass	# of Plastic	# VOA Vials MEOH	total 8 RCRA metals	total volatiles	total Semi-Volatiles	total pesticides	total Herbicides	total PCB's	Ignitability Flash	corrosivity/pH	Reactive Sulfide	Reactive Cyanide	Check if chlorinated
SC12076-01	Roll off 1 and 2	9/4/15	11:28		Soil	2	4			1	+	+	+	x	+	+	+	+	+	+	☐
																					☐
02	Roll off 3 and 4	9/4/15	11:31			2	4			1	x	+	+	+	+	x	+	+	✓	+	☐
																					☐
03	Roll off 5 ~~and 6~~	9/4/15	1:03			2	4			1	x	+	+	+	+	+	+	+	+	x	☐
																					☐
																					☐
																					☐
	5-7 day Turnaround																				☐
																					☐

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☒ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other:
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp °C
[signature]	[signature]	9/4/15	2:57	Observed 11.5
Fed Ex	[signature] 9/5/15	9/5/15	10:45	Correction Factor 0
				Corrected 11.5
				IR ID# 02

☐ EDD format: Equis ez, ME EGAD
☐ E-mail to: Brad LaForest

Condition upon receipt: Custody Seals: ☒ Present ☐ Intact ☒ Broken
☐ Ambient ☒ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

ORIGIN ID:AUGA

UNITED STATES US

SHIP DATE: 04SEP15
ACTWGT: 33.5 LB
CAD: /POS1601
DIMS: 25x14x14 IN

BILL SENDER

TO

SPECTRUM ANALYTICAL, INC.
11 ALMGREN DR

AGAWAM MA 01001
(413) 789-9018

INV:
PO:
REF:
DEPT:

FedEx
Express

RT 954 2 A
ST 10 12:00 7394
09.05

TRK# 0200 8045 4403 7394

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO EHTA

01001
MA-US BDL

SC120160

SPECTRUM ANALYTICAL, INC.

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- ☐ Standard TAT - 7 to 10 business days
- ☒ Rush TAT - Date Needed: 9-15, tuesday

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed.

Report To: Brad LaForest
AMEC

Telephone #:
Project Mgr:

Invoice To: Same

P.O No.: Quote/RQN:

Project No:
Site Name: Wilbraham Landfill
Location: State:
Sampler(s): John Cozens

F=Field Filtered 1=$Na_2S_2O_3$ 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= 12=

DW=Dinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= X2= X3=

G= Grab C=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	# VOA Vials MEOH	Total RCRA metals	Total Volatiles	Total Semi-Volatiles	Total Pesticides	Total Herbicides	Total PCB's	Ignitability Flash	Corrosivity/pH	Reactive Sulfide	Reactive Cyanide	Check if chlorinated
SC120160-01	Roll off 1 and 2	9/4/15	11:28		Soil	2	4			1	X	X	X	X	X	X	X	X	X	X	☐
02	Roll off 3 and 4	9/4/15	11:31			2	4			1	X	X	X	X	X	X	X	X	X	X	☐
03	Roll off 5 ~~and 6~~	9/4/15	1:03			2	4			1	X	X	X	X	X	X	X	X	X	X	☐
																					☐
																					☐
	5-7 day Turnaround																				☐
																					☐
																					☐

List Preservative Code below:

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No

- ☑ Standard
- ☐ No QC
- ☐ DQA*
- ☐ ASP A*
- ☐ ASP B*
- ☐ NJ Reduced*
- ☐ NJ Full*
- ☐ Tier II*
- ☐ Tier IV*
- ☐ Other:

State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:	Temp °C
John Dyer		9/4/15	2:57	Observed 11.5
ECI EX		9/5/15	10:45	Correction Factor 0
				Corrected 11.5
				IR ID# 02

☐ EDD format: Equis ez, ME EGAD
☐ E-mail to: Brad LaForest

Condition upon receipt: Custody Seals: ☒ Present ☐ Intact ☒ Broken
☐ Ambient ☒ Iced ☐ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

eurofins | Spectrum Analytical

11 Almgren Drive
Agawam, MA 01001
(413) 789-9018

This preceding chain of custody has been amended to include the client requested additional analyses as noted below:

Laboratory ID	*Client ID*	*Analysis*	*Added*
SC12076-01	Roll Off 1 and 2	Flashpoint	9/8/2015
SC12076-01	Roll Off 1 and 2	Reactivity Cyanide/Sulfide	9/8/2015
SC12076-02	Roll Off 3 and 4	Flashpoint	9/8/2015
SC12076-02	Roll Off 3 and 4	Reactivity Cyanide/Sulfide	9/8/2015
SC12076-03	Roll Off 5	Flashpoint	9/8/2015
SC12076-03	Roll Off 5	Reactivity Cyanide/Sulfide	9/8/2015
SC12076-02	Roll Off 3 and 4	TCLP Arsenic by ICP	9/17/2015
SC12076-02	Roll Off 3 and 4	TCLP Extraction for Metals	9/17/2015

APPENDIX B

CROSSROADS LANDFILL MANIFEST RECORD

Date	Profile #	Manifest #	Ticket #	Waste	Facility	Quantity	Unit
10/6/2015	522838ME	117765	841111	DREDGE SPOILS	WM Disp Services of ME - Crossroads	15.12	TON
10/6/2015	522838ME	117763	841063	DREDGE SPOILS	WM Disp Services of ME - Crossroads	14.12	TON
10/5/2015	522838ME	117767	840975	DREDGE SPOILS	WM Disp Services of ME - Crossroads	13.95	TON
10/5/2015	522838ME	117764	840968	DREDGE SPOILS	WM Disp Services of ME - Crossroads	14.42	TON
10/5/2015	522838ME	117766	840906	DREDGE SPOILS	WM Disp Services of ME - Crossroads	13.82	TON

APPENDIX C

PHOTOGRAPHS

Description: Seep Area Pre-Excavation 082515 Orientation: Looking West	
Description: Cleared and Staked Cover Limits 082615 Orientation: Looking North	

Description: Coffer Dam in Place Seep Area 082715 Orientation: Looking West	
Description: Excavation Seep Area 083015 Orientation: Looking North	

Description: Geotextile Geogrid Coffer Dam at Seep Area 083015 Orientation: Looking Northwest	
Description: Excavation and Construction North End 090215 Orientation: Looking North	

Description: Geotextile Geogrid 4 inch stone Rip Rap 090315 Orientation: Looking South	
Description: Construction North End 090715 Orientation: Looking North	

Description: Common Borrow Placed 090915 Orientation: Looking Northwest	
Description: Finishing Cover 090915 Orientation: Looking Northwest	

Description: Completed Cover 102815 Orientation: Looking South	
Description: Completed Woods Path 102815 Orientation: Looking West	

Description: Graded Access to Woods Path 102815 Orientation: Looking North	
Description: Graded Clearing Area 102815 Orientation: Looking East