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September 11, 2017

Apurva Patil, P.E.
Remedial Project Manager
Remediation & Site Response Program
Toxic Substances Division
District Department of Energy and Environment
1200 First Street, NE, 5th Floor
Washington, DC 20002

Subject: Cooling Tower Basins Remedial Action Completion Report
Benning Road Facility, 3400 Benning Road, NE, Washington, DC

Dear Ms. Patil:

On behalf of the Potomac Electric Power Company (Pepco), AECOM has prepared this Remedial Action Completion Report (RACR) to document the remediation of the two former power plant cooling tower (CT) concrete basins and adjacent soils impacted by Polychlorinated Biphenyls (PCBs) at the Benning Road Facility (the Site), located at 3400 Benning Road, NE, Washington, DC. The basin and soil removal activities were conducted from January 23 to May 19, 2017, by Pepco's remedial contractor Miller Environmental Group, Inc. (Miller), in accordance with the approved Self Implementing Remediation Plan (SIP) and Soil Removal Action Plan (RAP).

The SIP for the removal of the CT basins was prepared in accordance with the US Environmental Protection Agency (EPA) Toxic Substance and Control Act (TSCA) Regulations at 40 CFR 761.61(a), and approved by USEPA on May 2, 2014. The RAP for the excavation of PCB-impacted soils adjacent to and beneath the CT basins was approved by the District Department of Energy and Environment (DOEE) on July 29, 2015.

This document provides a description and history of the CT basins and associated sampling events and results, a description of the remedial activities and confirmatory sampling, an overview of the air monitoring program, and waste transportation and disposal.

Project Background and Historical Sampling Events

The two cooling towers (Units 15 and 16) were constructed in the northwest portion of the Site (**Figure 1**) in 1969 and 1970, respectively, and were used to cool recirculated water used by the Benning Road Power Plant until the Plant ceased operations in June 2012. The cooling tower superstructures were demolished and removed in late 2013, leaving the concrete basins in place. The CT basins were constructed of concrete and each measured approximately 307 ft by 57 ft. At the time of the basins' construction, PCBs were widely added to sealants, caulks and other industrial products, and caulking in the expansion joints of the basins contained PCBs. Each of the basins had four horizontal expansion joints running north to south along the basin floors (57 ft long) and eight vertical expansion joints in the basin walls. Basin 16 had an additional 24 vertical expansion joints in the basin walls, for a total of 32 vertical expansion joints. **Figure 2** and **Figure 3** depict the distribution of floor and wall expansion joints in basins 15 and 16, respectively.

In 1995, Pepco conducted an environmental cleanup when the PCB-containing caulk and joint filler were found to be impacting the concrete basins, sludge and water in the cooling tower basins, and soil adjacent to the basin wall expansion joints. Caulking in the basins' expansion joints was analyzed and found to contain PCBs at concentrations up to 57,655 ppm (parts per million). Contaminated joint filler and caulk

was removed from the basin expansion joints to a depth of 3 to 6 inches, and replacement caulk was applied. The basins were double washed with heavy duty water-soluble solvents and double rinsed, then encapsulated with two coats of Sikadur 62 concrete sealant. An approximate 1 ft by 1 ft by 3 ft deep volume of soil adjacent to each of the wall expansion joints was excavated from the basins and restored with clean backfill. The highest levels of PCBs in the excavated soils from units 15 and 16 were 30 ppm and 975 ppm, respectively. A total of approximately 185 cubic ft of soil was removed from the basins. Surface soil samples were collected at distances of 1 to 2 ft from the basin walls at a depth of 0.5-1 inch below grade. PCBs in these non-excavated surface soils ranged from <1 ppm to 3 ppm.

In 2004, during a regular inspection of the basin interiors, it was found that the floor and wall coating in basin 15 was not intact in several places. A sludge sample collected from the basin bottom was analyzed and found to contain 4.5 ppm PCBs. The basin concrete surfaces were scarified, double washed/double rinsed, and two coats of fresh encapsulant were applied.

According to the cleanup report submitted to EPA, Pepco sampled, excavated, and replaced soil adjacent to the wall expansion joints around both cooling tower basins. Surface soil samples were also collected at distances of 1 to 2 ft from the basin walls at a depth of 0.5-1 inch below grade. PCBs in these non-excavated surface soils ranged from <1 ppm to 3 ppm.

In January 2012, Pepco retained AECOM to perform an existing conditions/hazardous materials assessment for the two cooling tower basins. A total of ten soil samples (SS-1 through SS-10) were collected by hand auger from a depth of less than 1 ft below grade at locations around the perimeters of the cooling towers. PCB levels in the samples ranged from <0.1 ppm to 3.3 ppm. The locations and PCB concentrations of the 2012 soil samples are presented in **Figure 2** and **Figure 3**.

In July 2013, AECOM collected additional soil samples as part of the SIP development. Two locations adjacent to the vertical expansion joints were sampled at two depths (0-3" and 3-6" below grade) at each basin, for a total of eight samples. PCB results for these samples ranged from <0.1 ppm to 10.0 ppm. The locations and PCB concentrations of the 2013 soil samples are presented in **Figure 2** and **Figure 3**.

In July and November 2013, AECOM conducting in-place characterization sampling of basin materials to support the cooling tower demolition. A total of 2 caulk samples, 2 foam (joint filler) samples, 10 encapsulant samples, and 128 concrete surface samples were collected. Caulk and foam samples contained PCBs at levels ranging up to 1300 ppm. Encapsulant samples from basin 15 contained PCBs at concentrations as high as 1,100 ppm, while levels of PCBs in encapsulant samples collected from basin 16 were all <50 ppm. Concrete samples collected from the basin floors and sidewalls contained PCBs at concentrations as high as 330 ppm in basin 15, and as high as 8.8 ppm in basin 16.

To support the CT basin and soil removal action, AECOM prepared Addendum #2 to the Remedial Investigation/Feasibility Study (RI/FS) Work Plan to describe a sampling plan for soils adjacent to and beneath the basin slabs. The Addendum #2 sampling was initiated in summer 2014 and completed in early 2015. The plan prescribed surface and subsurface soil sampling at multiple distances from the basin walls, as well as up to two feet below the basin floors. The results of the Addendum #2 soil sampling are presented on **Figure 2** and **Figure 3**. 188 field samples were analyzed, all of which exhibited PCBs <50 ppm, and only 12 of which contained >10 ppm. The observed contamination around the basin perimeters was limited primarily to the surficial three feet, with localized areas of deeper contamination, especially around the eastern portion of basin 16, where PCBs were observed at levels >1 ppm as deep as 5 ft below grade. Beneath the basin slabs, impacted soils were limited to a small area beneath basin 15, and a broader area below the eastern end of basin 16.

Based on these historical sample results, AECOM developed the Soil Removal Action Plan (RAP), to be implemented concurrently with the basin removal outlined in the SIP, to remediate (via removal) all soils in the vicinity of the CT basins containing PCBs at greater than 1 ppm, which represents the high occupancy/no further restrictions cleanup level for PCBs under the TSCA regulations at 40 CFR

761.61(a)(4)(i)(A). The RAP also included requirements for confirmatory sampling, to be conducted during soil excavation at locations where PCBs in soils adjacent to the basins were not bounded at <1 ppm by previous sampling.

Remedial Activities

Pre-Mobilization Activities

Pepco and its remediation contractor, Miller, conducted the follow pre-mobilization activities:

1. Obtained a demolition permit from the Department of Consumer and Regulatory Affairs (DCRA) for the basin concrete and soil removal;
2. Received DOEE approval for a revised Soil Erosion and Sediment Control (SESC) Plan;
3. Developed a project-specific Health and Safety Plan;
4. Performed a utility markout of the area surrounding the basins; and
5. Identified waste disposal facilities and backfill sources for use during the remediation.

Miller mobilized to the Site on January 23, 2017. Miller and Pepco's storm drain management contractor, Clean Venture, Inc., put in place sediment and erosion controls at the storm drain inlets in the vicinity of the basins, consisting of internal filter fabric, absorbent booms, top fabric, and cover gravel (at grade inlet protection). Miller constructed work area perimeter fencing, exclusion zone, contaminant reduction zone, and a truck wash station in accordance with the SESC Plan.

Air Monitoring

Daily work area perimeter air monitoring was conducted by AECOM throughout the duration of the CT basin area remediation in order to limit worker exposure and to prevent the release of PCBs to the environment and neighboring properties. The perimeter air monitoring program measured particulate matter smaller than 10 microns in diameter (PM_{10}) (a surrogate for PCBs) using TSI, Inc. DustTrak™ Model 8530 particulate monitors. In accordance with the SIP, a dust action level of 150 µg/m^3 above background (15-minute average) was used during the basin demolitions. A lower alert level of 100 µg/m^3 above background (15-minute average) was established to alert the operational crews that ambient particulate concentrations may be approaching the action level.

Baseline air monitoring was conducted on February 6, 2017, and work activity air monitoring was conducted from February 7 to March 30, 2017, during all disturbance, excavation or handling of basin materials and soils associated with the remediation. During work hours, instantaneous dust measurements were recorded hourly at four established perimeter locations surrounding the work area, in the four cardinal directions, as well as locations upwind and downwind from the work area. If an instantaneous reading greater than or equal to 100 µg/m^3 over background (upwind reading) was encountered, a 15-minute average reading was taken at the location. In no instance did a 15-minute average exceed the alert level.

In addition to particulate monitoring, AECOM also conducted noise level monitoring for the protection of Site workers and persons adjacent to the Site. Instantaneous noise measurements were collected using a Quest Technologies 2900 noise level meter. Recorded noise levels ranged from 53.5 to 82.2 decibels (dB) at the work site perimeter throughout the project, but were generally measured between 60 and 70 dB.

A summary of project particulate and noise monitoring data is provided as **Attachment 1**.

Confirmatory Sampling

In accordance with the sampling plan detailed in the RAP, nine confirmatory soil samples were collected on February 15, 2017 during the CT basin excavation, at locations where PCB contamination was not bounded to 1 ppm by previous sampling. Following rapid turnaround PCB analysis of these samples, an additional four samples were collected on March 1, 2017 at locations where PCB contamination remained unbounded. The locations and results of the 13 total confirmatory samples are shown on **Figure 2** and **Figure 3**, and laboratory reports for the samples are provided in **Attachment 2**.

As a result of the confirmatory sampling, all locations were bounded for PCBs except for location CT16SO9G, located 22' south of the eastern end of basin 16. This location is being addressed as part of the ongoing Site RI/FS investigation. To address contamination detected in the confirmatory samples, additional areas were excavated beyond what was proposed in the RAP, including a 5 ft by 80 ft by 1 ft deep area to the north of basin 15, and a 7 ft by 65 ft by 1 ft deep area to the south of basin 16. These additional excavation areas are shown in red on **Figure 2** and **Figure 3**.

Basin and Soil Removal Activities

The remediation contractor, Miller, excavated and removed the two CT concrete basins and adjacent soils between February 7 and March 30, 2017. The concrete basins were broken up by heavy machinery into blocks no greater than 2 ft on a side, and extending rebar was cut. Both soil and concrete waste materials were live loaded into trucks and transported directly to an approved subtitle D disposal facility (Republic's Old Dominion Landfill) for disposal. Waste transportation was provided by Payne Trucking Co., and waste disposal services were provided by Veolia Environmental Services. Final disposal quantities were 9,923 tons of soil and 6,666 tons of concrete debris.

The basin excavations were backfilled between March 24 and May 16, 2017 with clean backfill provided by RE-AGG. Backfill material was sampled and analyzed prior to use for Priority Pollutant List metals, SVOCs, PAHs, and PCBs, and the results submitted to and approved by DOEE. Copies of analytical results for backfill are provided as **Attachment 3**.

Approximately 28,000 gal of rainwater that had accumulated in the basins excavations prior to and during backfilling was pumped into an onsite frac tank and transported to Spirit Services, Inc. for treatment and disposal.

During remediation activities all site personnel donned rubber boot covers at the site entrance to avoid tracking contaminated material out of the work zone. The tires of the waste haul trucks were washed at the site exit at a truck wash station, and any heavy equipment leaving the site was pressure washed to remove gross contamination and adhered soil.

Site Restoration and Closure

Bioretention basins were designed by Advanced GeoServices Corp. and installed by Miller in place of the two CT basins to filter, treat and direct stormwater runoff from the basin footprint to the 54-inch diameter main drainage pipe that underlies the Site in the area of the former CT 16 basin and discharges to the Anacostia River. The former basin areas were graded with 2" stone. Final DOEE site inspection was completed on May 19, 2017, followed by demobilization; a copy of the DOEE final inspection approval is provided as **Attachment 4**.

If you have any questions or require additional information, please contact Ravi Damera at (301) 289-3809.

Sincerely,

Ben Daniels, P.G.
Project Geologist

Ravi Damera, P.E., BCEE
Senior Project Manager

cc: Ms. Fariba Mahvi, Pepco

Attachments:

Figure 1: Site Map
Figure 2: CT15 Sampling Results and Excavation Areas
Figure 3: CT16 Sampling Results and Excavation Areas

Attachment 1: Air & Noise Monitoring Data
Attachment 2: Confirmatory Soil Sampling Results
Attachment 3: Backfill Analytical Results
Attachment 4: DOEE Final Inspection Approval

Project Management Initials: Designer: Checked: Approved:

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AECOM

PROJECT

Cooling Tower Basins
Remedial Action Report

COOLING TOWER BASINS
BENNING ROAD FACILITY
WASHINGTON, DC

PREPARED FOR

pepco
A PHI Company

PEPCO
BENNING ROAD FACILITY
3400 BENNING ROAD, NE
WASHINGTON, DC 20019

PREPARED BY

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DATE

2017.08.09

PROJECT NUMBER

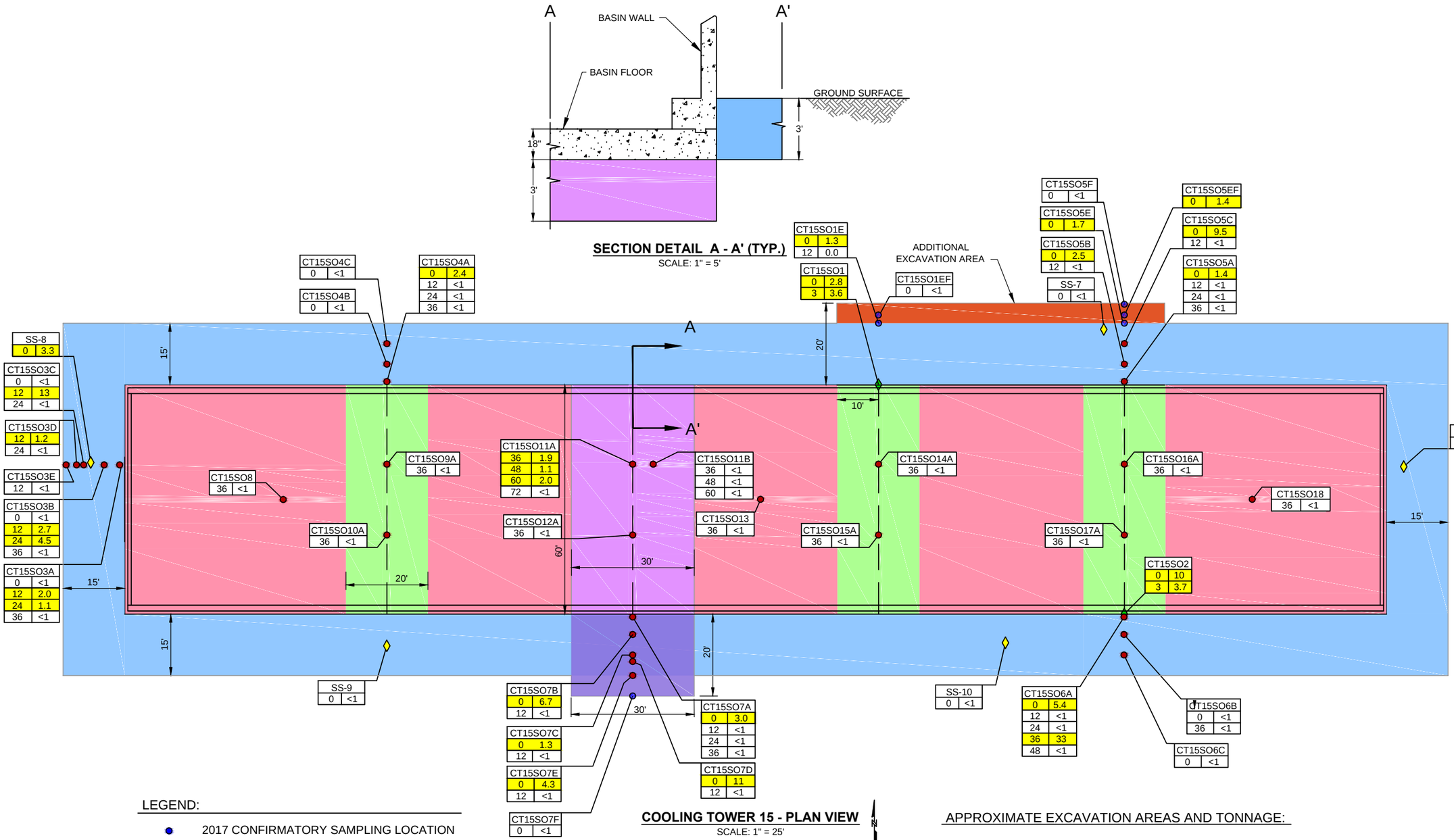
60287343

FIGURE TITLE

Benning Road Facility
Site Map

FIGURE NUMBER

1



COOLING TOWER 15 - PLAN VIEW

SCALE: 1" = 25'

N

LEGEND:

- 2017 CONFIRMATORY SAMPLING LOCATION
- 2014-2015 SAMPLING LOCATION
- 2013 SAMPLING LOCATION
- 2012 SAMPLING LOCATION
- EXPANSION JOINT
- PCBs POLYCHLORINATED BIPHENYLS
- mg/kg MILLIGRAMS PER KILOGRAM

NOTE: FOR EXTERIOR SAMPLES, LETTERS AT THE END OF THE SAMPLE ID INDICATE DISTANCE FROM THE BASIN AS FOLLOWS: A=0', B=5', C=10', D=12', E=15', EF=17', F=20', G=22".

DATA BOX KEY:

Sample ID (SO = Soil)	
Depth below grade (in)	Total PCBs (mg/kg)
0	1.1
12	<1

NOTE: RESULTS HIGHLIGHTED IN YELLOW INDICATE A TOTAL PCBs CONCENTRATION GREATER THAN OR EQUAL TO 1 mg/kg.

APPROXIMATE EXCAVATION AREAS AND TONNAGE:

REMEDIATION AREA	AREA (ft²)	DEPTH (ft)	VOLUME (cy)	MASS (tons)
	392	1.0	15	22
	11,490	3.0	1,277	1,915
	600	3.0	67	100
	13,080	0.5	242	363
	3,600	1.0	133	200
	1,800	3.0	200	300
TOTALS	30,570		1,934	2,900

NOTE: ALL REMEDIATION AREAS ARE BELOW GRADE. AREA IS BELOW BASE OF BOTTOM SLAB AND INSIDE THE BASIN.

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PROJECT

Cooling Tower Basins Remedial Action Report

COOLING TOWER BASINS
BENNING ROAD FACILITY
WASHINGTON, DC

PREPARED FOR

pepco
A PHI Company

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DATE

2017.08.07

PROJECT NUMBER

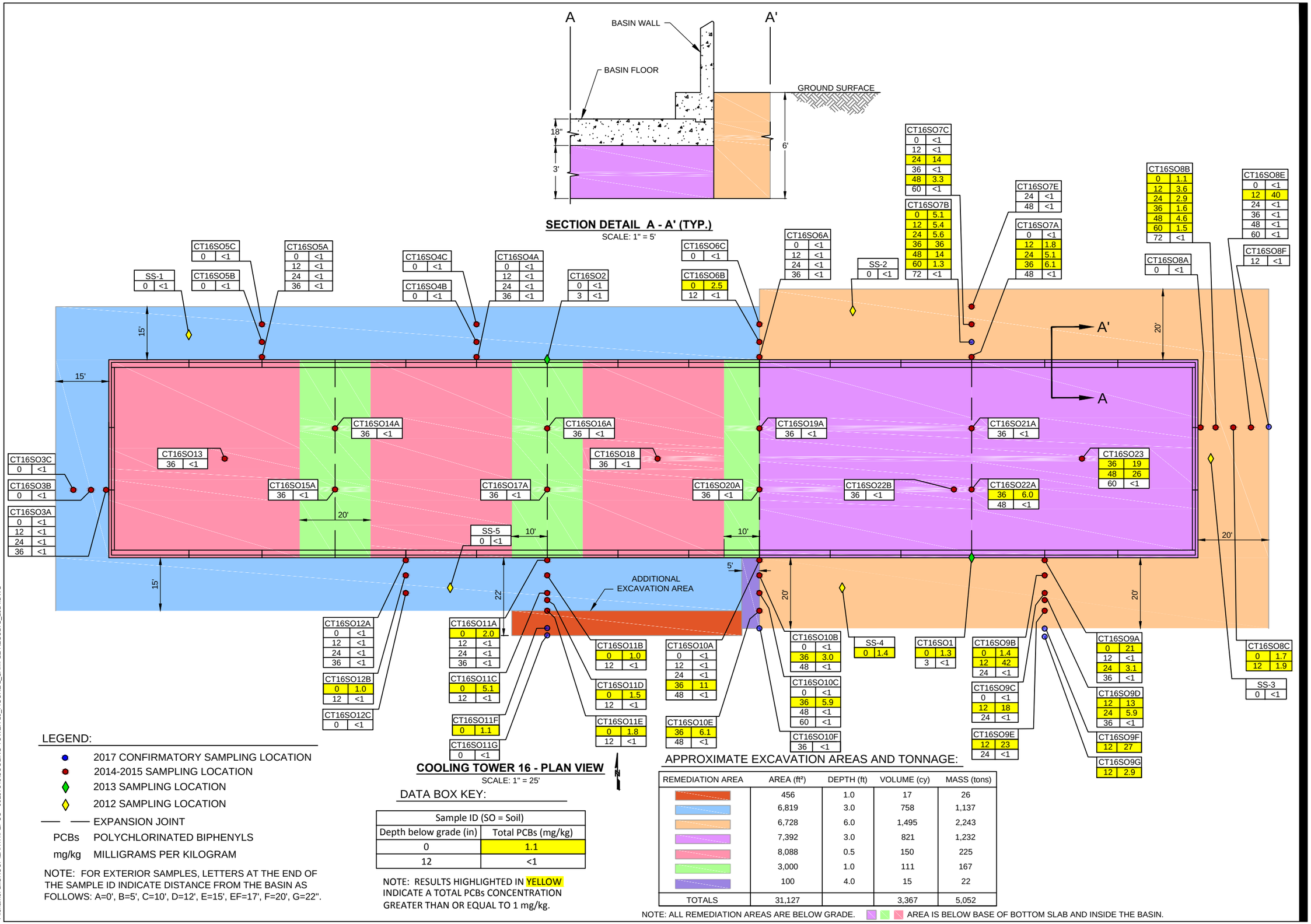
60340344

FIGURE TITLE

Cooling Tower 15 Sampling Results and Excavation Area

FIGURE NUMBER

2



COOLING TOWER 16 - PLAN VIEW

SCALE: 1" = 25'

LEGEND:

- 2017 CONFIRMATORY SAMPLING LOCATION
- 2014-2015 SAMPLING LOCATION
- 2013 SAMPLING LOCATION
- 2012 SAMPLING LOCATION
- —— —— EXPANSION JOINT
- PCBs POLYCHLORINATED BIPHENYLS
- mg/kg MILLIGRAMS PER KILOGRAM

NOTE: FOR EXTERIOR SAMPLES, LETTERS AT THE END OF THE SAMPLE ID INDICATE DISTANCE FROM THE BASIN AS FOLLOWS: A=0', B=5', C=10', D=12', E=15', EF=17', F=20', G=22".

DATA BOX KEY:

Sample ID (SO = Soil)	
Depth below grade (in)	Total PCBs (mg/kg)
0	1.1
12	<1

NOTE: RESULTS HIGHLIGHTED IN YELLOW INDICATE A TOTAL PCBs CONCENTRATION GREATER THAN OR EQUAL TO 1 mg/kg.

APPROXIMATE EXCAVATION AREAS AND TONNAGE:

REMEDIATION AREA	AREA (ft²)	DEPTH (ft)	VOLUME (cy)	MASS (tons)
	456	1.0	17	26
	6,819	3.0	758	1,137
	6,728	6.0	1,495	2,243
	7,392	3.0	821	1,232
	8,088	0.5	150	225
	3,000	1.0	111	167
	100	4.0	15	22
TOTALS	31,127		3,367	5,052

NOTE: ALL REMEDIATION AREAS ARE BELOW GRADE. AREA IS BELOW BASE OF BOTTOM SLAB AND INSIDE THE BASIN.

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DATE

2017.08.07

PROJECT NUMBER

60340344

FIGURE TITLE

Cooling Tower 16
Sampling Results and
Excavation Area

FIGURE NUMBER

3

Project Management Initials: Designer:____ Checked:____ Approved:____

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Attachment 1

Air and Noise Monitoring Data

Attachment 1
Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
2/6/17	10:13	63	58	68	71	N/A	N/A		SW	N/A						
2/6/17	11:05	43	75	46	69	51	51		SW	N/A						
2/6/17	12:10	46	50	74	33	46	104		SW	N/A						
2/6/17	13:04	31	32	45	40	31	32		SW	N/A						
2/6/17	14:00	24	34	25	32	24	34		SW	N/A						
2/6/17	15:05	21	24	17	23	20	25		SW	N/A						
2/6/17	16:06	20	23	18	36	19	29		SW	N/A						
2/6/17	16:42	26	31	16	28	17	24		SW	N/A						
2/7/17	6:55	61	53	38	32	58	46		SW	N/A						
2/7/17	8:05	30	32	44	70	30	71		SW	N/A						
2/7/17	9:08	52	75	58	68	42	79		SW	69.4						
2/7/17	10:02	31	28	52	71	29	78		SW	71.0						
2/7/17	11:05	26	29	48	69	21	69		SW	70.4						
2/7/17	12:05	51	64	64	40	36	41		SW	68.2						
2/7/17	13:00	32	44	57	48	31	47		SW	71.9						
2/7/17	14:00	29	38	51	52	27	49		SW	72.4						
2/7/17	15:00	31	39	168	56	29	61	111	SW	69.4						
2/7/17	16:00	27	46	96	61	34	72		SW	72.6						
2/8/17	6:50	58	53	46	49	43	48		SSW	64.6						
2/8/17	7:55	92	87	42	64	56	46		SSW	64.8						
2/8/17	9:00	39	42	52	58	37	48		SSW	65.2						
2/8/17	10:00	42	40	62	52	39	42		SSW	65.8						
2/8/17	11:05	38	39	78	48	42	41		SSW	64.2						
2/8/17	12:05	31	36	58	41	32	36		WNW	67.6						

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Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
2/8/17	13:00	46	42	37	28	31	46		WNW	68.4						
2/8/17	14:00	52	48	32	36	27	52		WNW	69.3						
2/8/17	15:00	48	36	29	32	29	48		WNW	68.5						
2/8/17	16:05	39	27	27	41	32	56		WNW	69.2						
2/9/17	6:55	19	22	36	19	11	21		NW	65.2						
2/9/17	8:00	16	24	38	22	17	36		NW	68.2						
2/9/17	8:55	38	27	46	24	24	28		NW	71.4						
2/9/17	9:55	17	14	37	21	36	32		NW	72.4						
2/9/17	10:55	24	19	15	51	28	54		NW	69.8						
2/9/17	12:00	16	31	29	46	17	59		SW	68.4						
2/9/17	13:00	22	27	42	52	23	46		SW	71.4						
2/9/17	14:00	38	18	38	48	28	38		WNW	74.1						
2/9/17	15:00	42	9	42	36	16	27		WNW	71.4						
2/9/17	16:00	16	16	51	28	12	31		WNW	70.7						
2/9/17	17:00	27	22	36	72	11	42		WNW	69.5						
2/10/17	7:00	17	21	19	19	17	19		SW	64.5						
2/10/17	8:00	58	24	20	22	24	58		SW	65.2						
2/10/17	9:05	17	25	20	51	25	51		SW	68.4						
2/10/17	10:05	20	13	37	19	26	28		SW	71.5						
2/10/17	11:20	13	25	47	20	14	20		SW	72.1						
2/10/17	12:15	20	32	15	16	21	16		SW	71.6						
2/10/17	13:15	21	35	36	14	56	30		SW	71.6						
2/10/17	14:15	40	20	35	24	28	24		SW	62.1						
2/10/17	15:15	14	34	17	22	10	10		SW	64.5	9	168	38	62.1	74.1	68.9

Attachment 1
Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
2/13/17	7:05	25	15	9	10	7	7		WNW	60.1						
2/13/17	8:05	12	16	14	11	8	12		WNW	62.0						
2/13/17	9:05	23	7	17	7	19	23		NW	61.0						
2/13/17	10:05	13	13	19	19	9	13		NW	64.0						
2/13/17	11:05	12	8	4	31	9	12		NW	63.0						
2/13/17	12:05	23	6	12	14	7	23		NW	65.0						
2/13/17	13:05	14	14	16	16	8	14		NW	60.1						
2/13/17	14:05	33	24	16	11	15	33		WNW	66.7						
2/13/17	15:05	31	14	20	18	20	31		WNW	64.0						
2/13/17	16:05	10	15	21	20	8	14		WNW	60.1						
2/13/17	17:05	18	11	10	13	11	18		WNW	64.2						
2/14/17	7:05	25	38	25	25	23	25		S	61.1						
2/14/17	8:05	21	20	41	25	19	25		S	65.0						
2/14/17	9:05	18	20	25	30	19	23		S	65.1						
2/14/17	10:05	22	19	30	22	19	30		S	65.4						
2/14/17	11:40	7	9	14	8	7	24		SW	67.5						
2/14/17	12:40	8	9	28	13	5	7		SW	64.0						
2/14/17	13:40	12	8	11	6	8	13		SSW	68.6						
2/14/17	14:40	25	16	57	28	17	28		SSW	80.8						
2/14/17	15:40	48	27	23	62	19	23		S	65.4						
2/14/17	17:00	24	19	28	20	15	25		S	62.7						
2/15/17	7:05	33	33	30	35	33	32		S	63.2						
2/15/17	8:05	51	274	57	56	50	57	56	SSW	73.5						
2/15/17	9:05	26	35	42	27	27	42		SSW	75.0						

Attachment 1
Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
2/15/17	10:05	27	17	45	22	17	22		SW	82.2						
2/15/17	11:05	30	23	23	35	17	30		SW	78.2						
2/15/17	12:05	28	20	42	25	20	32		W	60.5						
2/15/17	13:05	16	9	14	36	9	37		WNW	63.0						
2/15/17	14:05	14	27	10	45	8	45		WNW	64.1						
2/15/17	15:05	14	17	10	50	17	38		NW	67.5						
2/15/17	16:05	47	11	20	28	8	45		NW	66.6						
2/15/17	17:05	5	18	16	39	9	15		NW	62.2						
2/16/17	7:05	20	24	11	8	9	20		WNW	60.0						
2/16/17	8:05	15	10	11	20	10	29		WNW	72.5						
2/16/17	9:05	15	6	59	50	6	15		WNW	71.6						
2/16/17	10:05	9	12	10	11	19	49		W	66.0						
2/16/17	11:05	23	6	37	9	6	29		WNW	68.4						
2/16/17	12:05	17	21	11	33	7	33		WNW	60.3						
2/16/17	13:05	19	8	13	32	8	19		WNW	72.2						
2/16/17	14:05	9	9	19	7	5	9		WNW	62.2						
2/16/17	15:05	34	10	26	57	8	34		WNW	63.5						
2/16/17	16:05	11	6	35	19	35	11		WNW	66.2						
2/16/17	17:05	10	14	21	30	6	13		WNW	65.7						
2/17/17	7:00	22	23	26	24	21	22		W	62.4						
2/17/17	8:00	26	31	33	31	24	34		W	66.2						
2/17/17	9:00	54	21	17	21	19	23		NW	71.2						
2/17/17	10:00	46	23	31	34	24	31		NW	71.4						
2/17/17	11:00	31	27	27	46	31	44		NW	70.6						

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Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
2/17/17	12:00	22	34	62	39	26	38		W	69.2						
2/17/17	13:00	27	25	84	36	21	37		SW	68.2						
2/17/17	14:00	32	28	32	24	20	31		SW	69.4						
2/17/17	15:00	27	25	46	28	19	33		SW	70.8						
2/17/17	16:00	19	21	24	19	17	22		SW	71.5	4	274	23	60.0	82.2	66.6
2/21/17	7:35	23	17	21	21	16	31		E	54.3						
2/21/17	8:35	13	46	15	32	14	35		E	65.2						
2/21/17	9:35	14	18	16	14	17.4	15		ESE	68.5						
2/21/17	10:35	10	9	11	13	10	13		ESE	58.1						
2/21/17	11:35	9	10	8	29	9	11		SSE	61.1						
2/21/17	12:35	9	11	16	17	10	15		SWS	56.7						
2/21/17	13:35	16	21	11	11	13	22		W	54.2						
2/21/17	14:35	12	11	11	41	15	24		SSE	56.7						
2/21/17	15:35	10	10	13	58	10	32		SSE	58.5						
2/21/17	16:35	12	15	16	25	12	22		SSE	55.5						
2/21/17	17:15	12	13	19	14	14	22		ESE	56.3						
2/22/17	7:35	20	27	38	27	20	25		ENE	56.7						
2/22/17	8:35	42	30	29	65	26	40		ENE	75.6						
2/22/17	9:35	27	32	32	65	27	97		ENE	58.5						
2/22/17	10:35	29	31	30	58	30	62		ENN	56.4						
2/22/17	11:35	32	32	34	62	32	95		ENE	60.2						
2/22/17	12:35	33	36	33	32	32	32		ENE	54.5						
2/22/17	13:35	30	86	32	36	31	41		ENE	56.1						
2/22/17	14:35	28	36	25	62	38	65		ENE	54.5						

Attachment 1
Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
2/22/17	15:35	25	45	24	58	25	100		ENE	59.0						
2/22/17	16:35	25	38	29	50	25	53		ENE	57.7						
2/22/17	17:00	25	35	26	30	25	29		ENE	56.6						
2/23/17	7:35	39	40	34	43	30	32		SSW	65.3						
2/23/17	8:35	23	26	24	29	23	30		SSW	67.4						
2/23/17	9:35	19	29	19	27	18	24		SSW	53.5						
2/23/17	10:35	17	18	17	18	16	26		SW	58.0						
2/23/17	11:35	15	13	18	28	17	30		SW	60.1						
2/23/17	12:35	17	15	19	28	11	19		SW	56.5						
2/23/17	13:35	13	17	11	27	8	78		NW	57.7						
2/23/17	14:35	8	26	7	53	7	34		NW	63.1						
2/23/17	15:35	4	34	4	65	4	16		N	58.9						
2/23/17	16:35	10	14	15	16	10	28		N	55.5						
2/23/17	17:10	11	14	13	15	11	15		N	55.2						
2/24/17	7:35	10	10	18	19	10	15		SW	58.6						
2/24/17	8:35	15	26	12	26	10	21		W	62.7						
2/24/17	9:35	12	14	18	18	10	18		NW	63.8						
2/24/17	10:35	12	15	13	19	9	21		NW	61.2						
2/24/17	11:35	17	15	14	29	9	32		NW	60.8						
2/24/17	*12:35	9	14	8	21	5	14		NW	61.7						
2/24/17	1:35	22	15	13	19	5	16		NW	62.3						
2/24/17	2:35	8	13	10	10	9	10		NW	60.1						
2/24/17	3:00	10	13	11	12	8	12		NW	58.7	4	100	23	53.5	75.6	59.3
2/27/17	7:15	47	44	51	51	47	51		S	62.5						

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Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
2/27/17	8:05	30	30	56	29	30	33		SSW	65.3						
2/27/17	9:05	25	29	24	32	24	32		SSW	57.0						
2/27/17	10:05	27	20	20	20	22	22		SSE	60.1						
2/27/17	11:05	9	12	34	15	8	34		S	55.8						
2/27/17	12:05	10	9	8	7	5	7		S	56.2						
2/27/17	1:05	16	18	22	11	7	18		S	59.9						
2/27/17	2:05	6	10	12	17	9	17		S	62.1						
2/27/17	3:05	13	11	36	60	9	60		S	65.0						
2/27/17	4:05	9	12	13	10	10	10		S	55.9						
2/27/17	5:05	16	11	10	11	11	11		S	55.2						
2/28/17	7:00	20	19	39	20	20	19		NE	60.9						
2/28/17	8:00	29	36	35	37	36	36		E	60.9						
2/28/17	9:00	26	32	64	36	36	32		E	68.2						
2/28/17	10:00	21	24	24	52	21	25		S	64.3						
2/28/17	11:00	16	14	29	40	16	29		S	66.3						
2/28/17	12:00	15	16	15	18	15	15		S	60.5						
2/28/17	1:00	15	17	19	30	14	30		SW	65.0						
2/28/17	2:00	26	19	47	41	19	41		SW	74.1						
2/28/17	3:00	20	22	35	40	19	35		S	70.9						
2/28/17	4:00	20	18	42	18	18	42		S	72.5						
2/28/17	5:00	23	19	21	54	19	54		SW	61.9						
3/1/17	7:00	37	36	37	37	36	37		SSW	63.2						
3/1/17	8:00	43	41	44	45	41	45		SSW	64.5						
3/1/17	9:00	41	42	47	41	41	47		SSW	65.9						

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Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
3/1/17	10:00	44	44	44	43	43	44		SSW	61.5						
3/1/17	11:00	46	44	70	36	41	70		SSW	64.2						
3/1/17	12:00	33	33	44	33	32	33		SSW	63.5						
3/1/17	1:00	23	32	48	27	23	48	83	SSW	68.8						
3/1/17	*3:00	3	2	6	2	2	6		W	62.7						
3/1/17	4:00	7	5	12	7	5	12		SSW	64.5						
3/1/17	5:00	4	4	9	4	4	6		SSW	62.2						
3/2/17	7:15	4	6	3	5	3	9		WNN	63.4						
3/2/17	8:00	5	4	11	11	5	0		WNW	64.2						
3/2/17	9:00	3	13	12	3	1	12		WNW	64.4						
3/2/17	10:00	18	3	19	4	2	18		WNW	63.9						
3/2/17	11:00	6	4	5	5	4	6		WNW	67.9						
3/2/17	12:00	3	3	10	4	4	3		WNW	64.0						
3/2/17	1:15	34	3	6	13	2	34		WNW	74.9						
3/2/17	2:15	2	2	4	12	2	12		W	75.0						
3/2/17	3:00	4	2	13	18	2	18		W	65.1						
3/2/17	4:00	4	1	1	5	1	5		W	66.7						
3/2/17	5:00	10	3	7	10	4	10		WNN	61.7						
3/3/17	7:05	16	14	17	14	14	17		W	61.0						
3/3/17	8:05	10	11	10	35	11	11		W	64.5						
3/3/17	9:05	13	11	15	29	11	11		W	72.8						
3/3/17	10:05	7	7	22	26	7	7		W	67.1						
3/3/17	11:05	11	11	9	12	9	9		N	72.1						
3/3/17	12:05	12	12	10	8	10	10		WNW	60.0						

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Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
3/3/17	13:05	6	8	6	6	6	6		WNW	70.6						
3/3/17	14:15	5	4	5	7	2	2		WNW	63.8	0	70	20	55.2	75.0	64.4
3/6/17	7:20	29	11	16	60	29	16		SSE	69.0						
3/6/17	8:20	16	11	50	15	16	50		SSE	65.6						
3/6/17	9:20	28	18	13	36	28	13		S	60.5						
3/6/17	10:20	17	19	15	18	17	15		S	60.9						
3/6/17	11:20	23	49	46	10	23	46		SSE	62.3						
3/6/17	12:20	14	16	27	20	14	27		SSE	64.7						
3/6/17	13:20	18	25	57	19	18	57		SSE	63.0						
3/6/17	14:20	21	16	49	37	21	49		SSE	61.4						
3/6/17	15:20	19	19	40	27	19	40		S	61.0						
3/6/17	16:20	23	22	47	39	23	47		SSE	67.2						
3/7/17	7:30	51	74	49	62	51	49		SSE	62.6						
3/7/17	8:30	46	49	44	65	46	44		SSE	71.2						
3/7/17	9:30	47	32	60	42	47	60		S	65.4						
3/7/17	10:30	32	38	38	37	32	38		SSE	68.3						
3/7/17	11:30	22	20	34	33	22	34		SSW	64.1						
3/7/17	12:30	55	18	46	23	55	46		SSW	62.2						
3/7/17	13:30	45	19	51	25	45	51		SSW	64.3						
3/7/17	14:30	50	22	18	37	50	18		SSW	63.1						
3/7/17	15:30	14	16	28	20	14	28		SSW	66.9						
3/7/17	16:30	13	16	75	33	13	75		SSE	69.3						
3/8/17	7:15	4	3	4	5	3	5		WNW	60.1						
3/8/17	8:15	3	6	5	21	6	21		WNW	66.2						

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Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
3/8/17	9:15	4	2	4	2	2	2		WNW	61.4						
3/8/17	10:15	2	11	3	5	11	5		WNW	65.7						
3/8/17	11:15	3	2	1	8	2	8		WNW	69.6						
3/8/17	12:15	20	2	1.2	9	2	9		W	62.1						
3/8/17	13:15	8	9	1	5	9	5		W	63.0						
3/8/17	14:15	6	5	2	7	5	7		W	64.2						
3/8/17	15:15	8	3	19	26	3	26		WSW	66.7						
3/8/17	16:15	1	2	3	25	6	25		SW	64.8						
3/9/17	7:20	14	13	13	14	14	13		SSW	58.5						
3/9/17	8:20	12	22	21	12	12	21		SW	62.4						
3/9/17	9:20	16	50	8	12	12	8		SW	61.4						
3/9/17	10:20	6	36	7	6	6	7		SSW	63.4						
3/9/17	11:20	3	33	15	3	3	15		WSW	64.7						
3/9/17	12:20	12	36	20	16	16	20		WSW	63.9						
3/9/17	13:20	10	10	26	7	7	26		WSW	64.5						
3/9/17	14:20	23	33	51	25	25	51		W	66.7						
3/9/17	15:20	23	26	33	18	18	33		WSW	64.8						
3/9/17	16:20	23	42	88	24	24	88		WSW	62.6						
3/10/17	7:26	23	11	13	14	15	23		N	59.7						
3/10/17	8:20	37	9	10	14	10	37		N	78.4						
3/10/17	9:20	8	9	10	18	10	8		N	68.4						
3/10/17	10:20	6	7	9	12	9	6		NNW	64.7						
3/10/17	11:20	5	2	4	4	4	5		NNW	67.2						
3/10/17	12:20	7	4	4	4	4	7		NNW	68.1						

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Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
3/10/17	13:20	16	8	8	6	8	16		NNW	67.3						
3/10/17	14:20	11	15	7	9	7	11		NW	67.5	1	88	21	58.5	78.4	64.8
3/13/17	7:30	27	36	22	25	19	31		NE	65.1						
3/13/17	8:30	23	29	22	19	17	32		ENE	66.7						
3/13/17	9:30	22	33	20	21	17	35		E	65.4						
3/13/17	10:30	21	19	29	17	20	29		E	66.2						
3/13/17	11:30	24	18	25	18	21	27		E	67.4						
3/13/17	12:30	22	17	23	16	22	33		E	66.3						
3/13/17	13:30	19	16	25	18	23	29		E	64.9						
3/13/17	14:30	20	14	24	19	20	29		E	65.1						
3/13/17	15:30	21	16	26	21	19	29		E	64.2						
3/13/17	16:30	24	17	24	19	14	23		E	66.5						
3/13/17	17:15	22	16	22	20	16	25		E	65.7						
3/16/17	7:30	12	10	13	12	10	18		SW	62.6						
3/16/17	8:30	8	12	1	2	7	16		SW	64.2						
3/16/17	9:30	24	11	23	20	11	36		SE	66.2						
3/16/17	10:30	19	32	17	99	16	38		W	65.8						
3/16/17	11:30	21	28	32	14	17	28		W	66.7						
3/16/17	12:30	8	15	12	15	16	74		W	62.1						
3/16/17	13:30	18	21	14	17	11	19		W	64.2						
3/16/17	14:30	16	22	15	19	0	22		W	63.6						
3/16/17	15:30	15	20	17	18	13	25		W	64.5						
3/16/17	16:30	14	21	15	21	10	26		W	66.3						
3/17/17	7:30	42	62	54	58	52	82		SW	68.2						

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Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
3/17/17	8:30	39	61	79	52	50	80		SW	66.3						
3/17/17	9:30	29	33	42	31	29	51		SE	65.4						
3/17/17	10:30	30	42	52	52	47	57		SE	66.4						
3/17/17	11:30	27	28	56	51	42	51		SW	65.3						
3/17/17	12:30	21	30	27	42	29	32		SW	64.2						
3/17/17	13:30	29	37	21	39	29	41		SW	63.6						
3/17/17	14:30	28	42	16	41	21	43		SW	65.7	0	99	27	62.1	68.2	65.3
3/20/17	7:30	29	32	28	31	27	29		NW	66.5						
3/20/17	8:30	29	31	29	33	30	33		NW	65.2						
3/20/17	9:30	25	29	22.6	30	29	42		NW	67.2						
3/20/17	10:30	28	33	31	27	25	25		NW	66.5						
3/20/17	11:30	25	30	42	28	22	36		NW	66.8						
3/20/17	12:30	22	20	18	25	21	25		NW	64.4						
3/20/17	13:30	25	35	25	32	20	28		NW	65.8						
3/20/17	15:30	26	32	25	29	22	28		NW	64.8						
3/20/17	16:30	23	22	24	27	22	29		NW	65.7						
3/20/17	17:15	22	26	21	19	19	23		NW	64.2						
3/21/17	7:30	42	37	32	36	28	43		NNE	65.2						
3/21/17	8:30	45	39	31	38	29	42		NNE	66.3						
3/21/17	9:30	45	36	34	38	22	44		NNE	68.2						
3/21/17	10:30	48	35	33	33	25	48		NNE	67.2						
3/21/17	11:30	31	32	33	35	30	38		NNE	66.8						
3/21/17	12:30	37	33	35	34	29	41		NNE	64.4						
3/21/17	13:30	45	36	32	38	28	43		NNE	69.2						

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Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
3/21/17	15:30	48	35	31	33	29	42		NNE	64.3						
3/21/17	16:30	31	32	34	35	22	44		NNE	68.7						
3/21/17	17:15	29	27	35	32	25	28		NNE	64.1						
3/22/17	7:30	28	29	30	33	27	48		SE	64.3						
3/22/17	8:30	29	0	29	35	26	38		SE	65.8						
3/22/17	9:30	22	36	28	32	22	41		SE	66.2						
3/22/17	10:30	25	35	35	33	25	47		SE	69.1						
3/22/17	11:30	30	32	32	35	30	35		SE	66.8						
3/22/17	12:30	29	18	15	34	29	42		SE	64.4						
3/22/17	14:30	26	32	33	29	26	44		SE	65.1						
3/22/17	15:30	29	31	36	35	25	41		SE	63.4						
3/22/17	16:30	22	22	29	35	22	34		SE	67.8						
3/22/17	17:15	25	21	34	32	25	28		SE	61.4						
3/23/17	7:30	19	24	13	16	12	15		NNE	65.3						
3/23/17	8:30	20	21	12	18	11	14		NNE	65.2						
3/23/17	9:30	16	19	15	15	21	22		NNE	66.3						
3/23/17	10:30	18	23	13	16	14	16		NNE	66.2						
3/23/17	11:30	21	21	16	20	15	18		NNE	66.5						
3/23/17	12:30	24	12	18	14	13	14		NE	61.4						
3/23/17	13:30	13	19	15	22	13	25		NNE	59.8						
3/23/17	14:30	16	16	17	21	16	18		NNE	59.4						
3/23/17	15:30	13	32	12	17	14	21		WSW	63.4						
3/23/17	16:30	16	11	15	11	13	22		SSE	57.2						
3/24/17	7:30	31	22	21	18	22	28		S	65.5						

Attachment 1
Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
3/24/17	8:30	33	25	19	15	25	27		S	66.2						
3/24/17	9:30	32	20	18	18	23	26		S	64.0						
3/24/17	10:30	32	22	17	19	20	28		SE	65.1						
3/24/17	11:30	29	25	16	16	22	30		SE	66.3						
3/24/17	12:30	32	23	23	20	13	25		SE	62.1						
3/24/17	13:30	32	25	18	19	26	45		SE	65.4						
3/24/17	14:30	29	26	22	20	19	30		SE	66.4						
3/24/17	15:15	15	19	16	11	9	11		SE	62.1	0	48	26	57.2	69.2	65.1
3/27/17	7:15	53	58	65	77	53	60		SSE	61.1						
3/27/17	8:05	61	62	72	70	64	72		SSE	66.4						
3/27/17	9:05	60	60	67	66	60	62		SSE	66.6						
3/27/17	10:05	55	40	48	44	48	44		S	70.9						
3/27/17	11:05	21	22	22	23	21	23		S	64.2						
3/27/17	12:05	21	21	25	21	19	21		S	62.9						
3/27/17	13:05	27	25	20	42	33	42		S	63.2						
3/27/17	14:05	63	25	25	30	25	30		S	59.8						
3/27/17	15:00	23	18	19	21	23	27		S	59.7						
3/27/17	16:00	29	16	16	19	29	19		S	60.0						
3/27/17	17:00	14	13	23	20	14	25		S	62.3						
3/28/17	7:05	34	32	38	36	33	38		SSW	61.9						
3/28/17	8:05	41	41	41	41	41	41		SSE	66.9						
3/28/17	9:05	23	22	85	23	22	25		SSW	61.6						
3/28/17	11:05	37	19	24	19	19	24		WSW	70.8						
3/28/17	12:05	22	22	19	19	19	19		WSW	66.5						

Attachment 1
Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
3/28/17	13:05	23	20	20	19	20	23		WNW	66.1						
3/28/17	14:05	32	5	10	6	5	32		WNW	74.6						
3/28/17	15:05	7	6	13	7	7	25		WNW	70.6						
3/28/17	16:05	7	5	16	18	5	7		NW	73.2						
3/28/17	17:05	8	4	5	4	5	8		NW	71.0						
3/29/17	7:05	7	8	7	8	7	7		N	57.9						
3/29/17	8:05	9	4	4	4	4	9		N	72.4						
3/29/17	9:00	29	9	3	7	3	29		N	68.2						
3/29/17	10:00	3	6	2	3	2	3		N	70.2						
3/29/17	11:00	2	4	1	5	1	4		N	72.6						
3/29/17	12:00	10	11	7	12	5	10		NNW	65.5						
3/29/17	13:00	9	8	5	8	8	9		NNW	70.5						
3/29/17	14:00	15	27	14	6	6	15		NW	62.2						
3/29/17	15:00	8	7	19	3	3	8		NNW	60.2						
3/29/17	16:00	3	9	3	8	8	7		NNW	62.0						
3/29/17	17:00	8	2	3	3	3	8		NNW	60.9						
3/30/17	7:05	12	14	16	12	12	12		NE	60.5						
3/30/17	8:05	18	20	14	16	16	18		NE	65.5						
3/30/17	9:00	50	19	8	9	9	50		NE	60.7						
3/30/17	10:00	9	20	21	8	7	9		NE	63.5						
3/30/17	11:00	9	11	18	8	9	11		SE	60.1						
3/30/17	12:00	7	11	13	12	7	11		SE	65.2						
3/30/17	13:00	7	27	16	12	7	29		SE	59.9						
3/30/17	14:00	10	9	12	11	8	9		SE	57.2						

Attachment 1
Project Air Monitoring Data
Pepco Benning Road Cooling Tower Excavation

Date	Time	Monitoring Location ID - PM10 reading (µg/m3)						PM10 15-min Average (if applicable)	Wind Direction	Noise (dB)	Weekly PM10 (µg/m3)			Weekly Sound (dB)		
		1	2	3	4	Upwind	Downwind			At Northeast Corner of Site	Min	Max	Average	Min	Max	Average
3/30/17	15:00	12	18	8	6	12	18		SE	68.5						
3/30/17	16:00	7	21	13	7	7	21		ESE	66.3						
3/30/17	17:00	9	12	12	6	9	12		ESE	60.5	1	85	20	57.2	74.6	64.9
3/31/17	Rain - no work															

Attachment 2

Confirmatory Soil Sampling Results

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-63486-1
Client Project/Site: Pepco Benning Road Facility

For:
AECOM, Inc.
250 Apollo Drive
Chelmsford, Massachusetts 01824

Attn: Mr. Robert Kennedy

Authorized for release by:
2/21/2017 2:00:51 PM

Jill Colussy, Project Manager I
(412)963-2444
jill.colussy@testamericainc.com

Table of Contents

Job ID: 180-63486-1

Laboratory: TestAmerica Pittsburgh

Narrative

CASE NARRATIVE

Client: AECOM, Inc.

Project: Pepco Benning Road Facility

Report Number: 180-63486-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

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

RECEIPT
The samples were received on 02/16/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.6 C.

PCBS
Due to the concentration of PCBs detected, several samples were analyzed at a dilution. The reporting limits have been adjusted accordingly.

Sample CT16S09F-12 (180-63486-7) had the surrogates diluted out.

Several samples had one surrogate recover outside of the control limits. All samples had one surrogate recovery within the control limits. All data was reported.

The matrix spike recovered outside of the control limits for PCB-1016.

The matrix spike duplicate recovered outside of the control limits for PCB-1016 and PCB-1260.

PERCENT SOLIDS
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
X	Surrogate is outside control limits
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63486-1

Laboratory: TestAmerica Pittsburgh

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-17
California	State Program	9	2891	03-31-18
Connecticut	State Program	1	PH-0688	09-30-18
Florida	NELAP	4	E871008	06-30-17
Illinois	NELAP	5	200005	06-30-17
Kansas	NELAP	7	E-10350	01-31-18
Louisiana	NELAP	6	04041	06-30-17
New Hampshire	NELAP	1	2030	04-04-17
New Jersey	NELAP	2	PA005	06-30-17
New York	NELAP	2	11182	03-31-17
North Carolina (WW/SW)	State Program	4	434	12-31-17
Pennsylvania	NELAP	3	02-00416	04-30-17
South Carolina	State Program	4	89014	04-30-17
Texas	NELAP	6	T104704528-15-2	03-31-17
US Fish & Wildlife	Federal		LE94312A-1	10-31-17
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-17
Virginia	NELAP	3	460189	09-14-17
West Virginia DEP	State Program	3	142	01-31-18
Wisconsin	State Program	5	998027800	08-31-17

Sample Summary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63486-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-63486-1	CT15S07F-0	Solid	02/15/17 09:45	02/16/17 08:35
180-63486-2	CT15S05E-0	Solid	02/15/17 10:00	02/16/17 08:35
180-63486-3	CT15S01E-0	Solid	02/15/17 10:10	02/16/17 08:35
180-63486-4	CT15S01E-12	Solid	02/15/17 10:20	02/16/17 08:35
180-63486-5	CT16S011F-0	Solid	02/15/17 10:25	02/16/17 08:35
180-63486-6	CT16S010F-36	Solid	02/15/17 10:35	02/16/17 08:35
180-63486-7	CT16S09F-12	Solid	02/15/17 10:45	02/16/17 08:35
180-63486-8	CT16S08F-12	Solid	02/15/17 10:50	02/16/17 08:35
180-63486-9	CT16S07B-72	Solid	02/15/17 11:20	02/16/17 08:35

Method Summary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63486-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) (GC)	SW846	TAL PIT
PCB	Total PCB Calculation	TAL SOP	TAL PIT
2540G	SM 2540G	SM22	TAL PIT

Protocol References:

SM22 = SM22

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63486-1

Client Sample ID: CT15S07F-0
Date Collected: 02/15/17 09:45
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			203247	02/19/17 10:44	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT15S07F-0
Date Collected: 02/15/17 09:45
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-1
Matrix: Solid
Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	1.0 mL	203047	02/16/17 11:37	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	203097	02/17/17 04:08	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	203098	02/17/17 04:10	JMO	TAL PIT
Total/NA	Analysis	8082A		1			203101	02/17/17 06:56	JMO	TAL PIT
	Instrument ID: CHGC16									

Client Sample ID: CT15S05E-0
Date Collected: 02/15/17 10:00
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			203247	02/19/17 10:44	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT15S05E-0
Date Collected: 02/15/17 10:00
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-2
Matrix: Solid
Percent Solids: 94.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	1.0 mL	203047	02/16/17 11:37	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	203097	02/17/17 04:08	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	203098	02/17/17 04:10	JMO	TAL PIT
Total/NA	Analysis	8082A		20			203101	02/17/17 11:07	JMO	TAL PIT
	Instrument ID: CHGC16									

Client Sample ID: CT15S01E-0
Date Collected: 02/15/17 10:10
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT

Client Sample ID: CT15S01E-0
Date Collected: 02/15/17 10:10
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			203247	02/19/17 10:44	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT15S01E-0
Date Collected: 02/15/17 10:10
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-3
Matrix: Solid
Percent Solids: 96.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.1 g	1.0 mL	203047	02/16/17 11:37	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	203097	02/17/17 04:08	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	203098	02/17/17 04:10	JMO	TAL PIT
Total/NA	Analysis	8082A		20			203101	02/17/17 11:28	JMO	TAL PIT
	Instrument ID: CHGC16									

Client Sample ID: CT15S01E-12
Date Collected: 02/15/17 10:20
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			203247	02/19/17 10:44	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT15S01E-12
Date Collected: 02/15/17 10:20
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-4
Matrix: Solid
Percent Solids: 96.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	1.0 mL	203047	02/16/17 11:37	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	203097	02/17/17 04:08	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	203098	02/17/17 04:10	JMO	TAL PIT
Total/NA	Analysis	8082A		1			203101	02/17/17 08:41	JMO	TAL PIT
	Instrument ID: CHGC16									

Client Sample ID: CT16S011F-0
Date Collected: 02/15/17 10:25
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT

Lab Chronicle

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63486-1

Client Sample ID: CT16S011F-0
Date Collected: 02/15/17 10:25
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			203247	02/19/17 10:44	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT16S011F-0
Date Collected: 02/15/17 10:25
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-5
Matrix: Solid
Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	1.0 mL	203047	02/16/17 11:37	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	203097	02/17/17 04:08	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	203098	02/17/17 04:10	JMO	TAL PIT
Total/NA	Analysis	8082A		10			203101	02/17/17 11:49	JMO	TAL PIT
	Instrument ID: CHGC16									

Client Sample ID: CT16S010F-36
Date Collected: 02/15/17 10:35
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			203247	02/19/17 10:44	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT16S010F-36
Date Collected: 02/15/17 10:35
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-6
Matrix: Solid
Percent Solids: 85.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.3 g	1.0 mL	203047	02/16/17 11:37	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	203097	02/17/17 04:08	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	203098	02/17/17 04:10	JMO	TAL PIT
Total/NA	Analysis	8082A		1			203101	02/17/17 09:23	JMO	TAL PIT
	Instrument ID: CHGC16									

Client Sample ID: CT16S09F-12
Date Collected: 02/15/17 10:45
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT

Client Sample ID: CT16S09F-12
Date Collected: 02/15/17 10:45
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			203247	02/19/17 10:44	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT16S09F-12
Date Collected: 02/15/17 10:45
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-7
Matrix: Solid
Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	1.0 mL	203047	02/16/17 11:37	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	203097	02/17/17 04:08	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	203098	02/17/17 04:10	JMO	TAL PIT
Total/NA	Analysis	8082A		1000			203101	02/17/17 12:10	JMO	TAL PIT
	Instrument ID: CHGC16									

Client Sample ID: CT16S08F-12
Date Collected: 02/15/17 10:50
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			203247	02/19/17 10:44	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT16S08F-12
Date Collected: 02/15/17 10:50
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-8
Matrix: Solid
Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.1 g	1.0 mL	203047	02/16/17 11:37	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	203097	02/17/17 04:08	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	203098	02/17/17 04:10	JMO	TAL PIT
Total/NA	Analysis	8082A		10			203101	02/17/17 13:12	JMO	TAL PIT
	Instrument ID: CHGC16									

Client Sample ID: CT16S07B-72
Date Collected: 02/15/17 11:20
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT

Lab Chronicle

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63486-1

Client Sample ID: CT16S07B-72
Date Collected: 02/15/17 11:20
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			203485	02/16/17 11:37	SAB	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			203247	02/19/17 10:44	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT16S07B-72
Date Collected: 02/15/17 11:20
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-9
Matrix: Solid
Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	1.0 mL	203047	02/16/17 11:37	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	203097	02/17/17 04:08	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	203098	02/17/17 04:10	JMO	TAL PIT
Total/NA	Analysis	8082A		1			203101	02/17/17 10:25	JMO	TAL PIT
	Instrument ID: CHGC16									

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Cleanup

JMO = John Oravec

Batch Type: Prep

CBY = Charles Yushinski

Batch Type: Analysis

CLL = Cheryl Loheyde

JMO = John Oravec

SAB = Sharon Bacha

Client Sample ID: CT15S07F-0

Lab Sample ID: 180-63486-1

Date Collected: 02/15/17 09:45
Matrix: Solid
Date Received: 02/16/17 08:35
Percent Solids: 88.3

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.94	0.50	ug/Kg	☼	02/16/17 11:37	02/17/17 06:56	1
PCB-1221	ND		0.94	0.49	ug/Kg	☼	02/16/17 11:37	02/17/17 06:56	1
PCB-1232	ND		0.94	0.37	ug/Kg	☼	02/16/17 11:37	02/17/17 06:56	1
PCB-1242	ND		0.94	0.75	ug/Kg	☼	02/16/17 11:37	02/17/17 06:56	1
PCB-1248	ND		0.94	0.45	ug/Kg	☼	02/16/17 11:37	02/17/17 06:56	1
PCB-1254	**2.3**		0.94	0.41	ug/Kg	☼	02/16/17 11:37	02/17/17 06:56	1
PCB-1260	**2.3**	**F1**	0.94	0.63	ug/Kg	☼	02/16/17 11:37	02/17/17 06:56	1
PCB-1262	ND		0.94	0.68	ug/Kg	☼	02/16/17 11:37	02/17/17 06:56	1
PCB-1268	ND		0.94	0.29	ug/Kg	☼	02/16/17 11:37	02/17/17 06:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*75*		*20 - 150*	*02/16/17 11:37*	*02/17/17 06:56*	*1*
DCB Decachlorobiphenyl (Surr)	*64*		*20 - 150*	*02/16/17 11:37*	*02/17/17 06:56*	*1*
Tetrachloro-m-xylene	*52*		*20 - 130*	*02/16/17 11:37*	*02/17/17 06:56*	*1*
Tetrachloro-m-xylene	*60*		*20 - 130*	*02/16/17 11:37*	*02/17/17 06:56*	*1*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**4.6**		0.94	0.75	ug/Kg			02/16/17 11:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**11.7**		0.1	0.1	%			02/19/17 10:44	1

Client Sample ID: CT15S05E-0

Lab Sample ID: 180-63486-2

Date Collected: 02/15/17 10:00
Matrix: Solid
Date Received: 02/16/17 08:35
Percent Solids: 94.6

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		18	9.3	ug/Kg	☼	02/16/17 11:37	02/17/17 11:07	20
PCB-1221	ND		18	9.1	ug/Kg	☼	02/16/17 11:37	02/17/17 11:07	20
PCB-1232	ND		18	7.0	ug/Kg	☼	02/16/17 11:37	02/17/17 11:07	20
PCB-1242	ND		18	14	ug/Kg	☼	02/16/17 11:37	02/17/17 11:07	20
PCB-1248	ND		18	8.4	ug/Kg	☼	02/16/17 11:37	02/17/17 11:07	20
PCB-1254	**1200**		18	7.7	ug/Kg	☼	02/16/17 11:37	02/17/17 11:07	20
PCB-1260	**450**		18	12	ug/Kg	☼	02/16/17 11:37	02/17/17 11:07	20
PCB-1262	ND		18	13	ug/Kg	☼	02/16/17 11:37	02/17/17 11:07	20
PCB-1268	ND		18	5.4	ug/Kg	☼	02/16/17 11:37	02/17/17 11:07	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*112*		*20 - 150*	*02/16/17 11:37*	*02/17/17 11:07*	*20*
DCB Decachlorobiphenyl (Surr)	*116*		*20 - 150*	*02/16/17 11:37*	*02/17/17 11:07*	*20*
Tetrachloro-m-xylene	*116*		*20 - 130*	*02/16/17 11:37*	*02/17/17 11:07*	*20*
Tetrachloro-m-xylene	*93*		*20 - 130*	*02/16/17 11:37*	*02/17/17 11:07*	*20*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**1700**		18	14	ug/Kg			02/16/17 11:37	1

Client Sample ID: CT15S05E-0

Lab Sample ID: 180-63486-2
Date Collected: 02/15/17 10:00
Matrix: Solid
Date Received: 02/16/17 08:35
Percent Solids: 94.6

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**5.4**		0.1	0.1	%			02/19/17 10:44	1

Client Sample ID: CT15S01E-0

Lab Sample ID: 180-63486-3
Date Collected: 02/15/17 10:10
Matrix: Solid
Date Received: 02/16/17 08:35
Percent Solids: 96.6

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		17	9.1	ug/Kg	☼	02/16/17 11:37	02/17/17 11:28	20
PCB-1221	ND		17	8.9	ug/Kg	☼	02/16/17 11:37	02/17/17 11:28	20
PCB-1232	ND		17	6.8	ug/Kg	☼	02/16/17 11:37	02/17/17 11:28	20
PCB-1242	ND		17	14	ug/Kg	☼	02/16/17 11:37	02/17/17 11:28	20
PCB-1248	ND		17	8.2	ug/Kg	☼	02/16/17 11:37	02/17/17 11:28	20
PCB-1254	**1000**		17	7.5	ug/Kg	☼	02/16/17 11:37	02/17/17 11:28	20
PCB-1260	**310**		17	11	ug/Kg	☼	02/16/17 11:37	02/17/17 11:28	20
PCB-1262	ND		17	12	ug/Kg	☼	02/16/17 11:37	02/17/17 11:28	20
PCB-1268	ND		17	5.2	ug/Kg	☼	02/16/17 11:37	02/17/17 11:28	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*127*		*20 - 150*	*02/16/17 11:37*	*02/17/17 11:28*	*20*
DCB Decachlorobiphenyl (Surr)	*121*		*20 - 150*	*02/16/17 11:37*	*02/17/17 11:28*	*20*
Tetrachloro-m-xylene	*121*		*20 - 130*	*02/16/17 11:37*	*02/17/17 11:28*	*20*
Tetrachloro-m-xylene	*93*		*20 - 130*	*02/16/17 11:37*	*02/17/17 11:28*	*20*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**1300**		17	14	ug/Kg			02/16/17 11:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**3.4**		0.1	0.1	%			02/19/17 10:44	1

Client Sample ID: CT15S01E-12

Lab Sample ID: 180-63486-4
Date Collected: 02/15/17 10:20
Matrix: Solid
Date Received: 02/16/17 08:35
Percent Solids: 96.5

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.86	0.46	ug/Kg	☼	02/16/17 11:37	02/17/17 08:41	1
PCB-1221	ND		0.86	0.45	ug/Kg	☼	02/16/17 11:37	02/17/17 08:41	1
PCB-1232	ND		0.86	0.34	ug/Kg	☼	02/16/17 11:37	02/17/17 08:41	1
PCB-1242	ND		0.86	0.69	ug/Kg	☼	02/16/17 11:37	02/17/17 08:41	1
PCB-1248	ND		0.86	0.41	ug/Kg	☼	02/16/17 11:37	02/17/17 08:41	1
PCB-1254	**31**		0.86	0.38	ug/Kg	☼	02/16/17 11:37	02/17/17 08:41	1
PCB-1260	**30**		0.86	0.58	ug/Kg	☼	02/16/17 11:37	02/17/17 08:41	1
PCB-1262	ND		0.86	0.62	ug/Kg	☼	02/16/17 11:37	02/17/17 08:41	1
PCB-1268	ND		0.86	0.26	ug/Kg	☼	02/16/17 11:37	02/17/17 08:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*150*		*20 - 150*	*02/16/17 11:37*	*02/17/17 08:41*	*1*
DCB Decachlorobiphenyl (Surr)	*73*		*20 - 150*	*02/16/17 11:37*	*02/17/17 08:41*	*1*

Client Sample ID: CT15S01E-12

Lab Sample ID: 180-63486-4
Date Collected: 02/15/17 10:20
Matrix: Solid
Date Received: 02/16/17 08:35
Percent Solids: 96.5

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	*70*		*20 - 130*	*02/16/17 11:37*	*02/17/17 08:41*	*1*
Tetrachloro-m-xylene	*63*		*20 - 130*	*02/16/17 11:37*	*02/17/17 08:41*	*1*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**61**		0.86	0.69	ug/Kg			02/16/17 11:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**3.5**		0.1	0.1	%			02/19/17 10:44	1

Client Sample ID: CT16S011F-0

Lab Sample ID: 180-63486-5
Date Collected: 02/15/17 10:25
Matrix: Solid
Date Received: 02/16/17 08:35
Percent Solids: 92.2

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		9.0	4.8	ug/Kg	☼	02/16/17 11:37	02/17/17 11:49	10
PCB-1221	ND		9.0	4.7	ug/Kg	☼	02/16/17 11:37	02/17/17 11:49	10
PCB-1232	ND		9.0	3.6	ug/Kg	☼	02/16/17 11:37	02/17/17 11:49	10
PCB-1242	ND		9.0	7.2	ug/Kg	☼	02/16/17 11:37	02/17/17 11:49	10
PCB-1248	ND		9.0	4.3	ug/Kg	☼	02/16/17 11:37	02/17/17 11:49	10
PCB-1254	**630**		9.0	4.0	ug/Kg	☼	02/16/17 11:37	02/17/17 11:49	10
PCB-1260	**420**		9.0	6.0	ug/Kg	☼	02/16/17 11:37	02/17/17 11:49	10
PCB-1262	ND		9.0	6.5	ug/Kg	☼	02/16/17 11:37	02/17/17 11:49	10
PCB-1268	ND		9.0	2.8	ug/Kg	☼	02/16/17 11:37	02/17/17 11:49	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	*169*	*X*	*20 - 150*	*02/16/17 11:37*	*02/17/17 11:49*	*10*
DCB Decachlorobiphenyl (Surr)	*116*		*20 - 150*	*02/16/17 11:37*	*02/17/17 11:49*	*10*
Tetrachloro-m-xylene	*93*		*20 - 130*	*02/16/17 11:37*	*02/17/17 11:49*	*10*
Tetrachloro-m-xylene	*74*		*20 - 130*	*02/16/17 11:37*	*02/17/17 11:49*	*10*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**1100**		9.0	7.2	ug/Kg			02/16/17 11:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**7.8**		0.1	0.1	%			02/19/17 10:44	1

Client Sample ID: CT16S010F-36

Lab Sample ID: 180-63486-6
Date Collected: 02/15/17 10:35
Matrix: Solid
Date Received: 02/16/17 08:35
Percent Solids: 85.3

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.96	0.51	ug/Kg	☼	02/16/17 11:37	02/17/17 09:23	1
PCB-1221	ND		0.96	0.50	ug/Kg	☼	02/16/17 11:37	02/17/17 09:23	1
PCB-1232	ND		0.96	0.38	ug/Kg	☼	02/16/17 11:37	02/17/17 09:23	1
PCB-1242	ND		0.96	0.76	ug/Kg	☼	02/16/17 11:37	02/17/17 09:23	1

Client Sample ID: CT16S010F-36

Lab Sample ID: 180-63486-6
Date Collected: 02/15/17 10:35
Matrix: Solid
Date Received: 02/16/17 08:35
Percent Solids: 85.3

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1248	ND		0.96	0.46	ug/Kg	☼	02/16/17 11:37	02/17/17 09:23	1
PCB-1254	ND		0.96	0.42	ug/Kg	☼	02/16/17 11:37	02/17/17 09:23	1
PCB-1260	**210**		0.96	0.64	ug/Kg	☼	02/16/17 11:37	02/17/17 09:23	1
PCB-1262	ND		0.96	0.69	ug/Kg	☼	02/16/17 11:37	02/17/17 09:23	1
PCB-1268	ND		0.96	0.29	ug/Kg	☼	02/16/17 11:37	02/17/17 09:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*257*	*X*	*20 - 150*	*02/16/17 11:37*	*02/17/17 09:23*	*1*
DCB Decachlorobiphenyl (Surr)	*39*		*20 - 150*	*02/16/17 11:37*	*02/17/17 09:23*	*1*
Tetrachloro-m-xylene	*44*		*20 - 130*	*02/16/17 11:37*	*02/17/17 09:23*	*1*
Tetrachloro-m-xylene	*43*		*20 - 130*	*02/16/17 11:37*	*02/17/17 09:23*	*1*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**210**		0.96	0.76	ug/Kg			02/16/17 11:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**14.7**		0.1	0.1	%			02/19/17 10:44	1

Client Sample ID: CT16S09F-12

Lab Sample ID: 180-63486-7
Date Collected: 02/15/17 10:45
Matrix: Solid
Date Received: 02/16/17 08:35
Percent Solids: 92.5

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		900	480	ug/Kg	☼	02/16/17 11:37	02/17/17 12:10	1000
PCB-1221	ND		900	470	ug/Kg	☼	02/16/17 11:37	02/17/17 12:10	1000
PCB-1232	ND		900	360	ug/Kg	☼	02/16/17 11:37	02/17/17 12:10	1000
PCB-1242	ND		900	720	ug/Kg	☼	02/16/17 11:37	02/17/17 12:10	1000
PCB-1248	ND		900	430	ug/Kg	☼	02/16/17 11:37	02/17/17 12:10	1000
PCB-1254	ND		900	400	ug/Kg	☼	02/16/17 11:37	02/17/17 12:10	1000
PCB-1260	**27000**		900	600	ug/Kg	☼	02/16/17 11:37	02/17/17 12:10	1000
PCB-1262	ND		900	650	ug/Kg	☼	02/16/17 11:37	02/17/17 12:10	1000
PCB-1268	ND		900	270	ug/Kg	☼	02/16/17 11:37	02/17/17 12:10	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*0*	*D X*	*20 - 150*	*02/16/17 11:37*	*02/17/17 12:10*	*1000*
DCB Decachlorobiphenyl (Surr)	*0*	*D X*	*20 - 150*	*02/16/17 11:37*	*02/17/17 12:10*	*1000*
Tetrachloro-m-xylene	*0*	*D X*	*20 - 130*	*02/16/17 11:37*	*02/17/17 12:10*	*1000*
Tetrachloro-m-xylene	*0*	*D X*	*20 - 130*	*02/16/17 11:37*	*02/17/17 12:10*	*1000*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**27000**		900	720	ug/Kg			02/16/17 11:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**7.5**		0.1	0.1	%			02/19/17 10:44	1

Client Sample ID: CT16S08F-12

Date Collected: 02/15/17 10:50
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-8

Matrix: Solid
Percent Solids: 92.4

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		9.0	4.8	ug/Kg	☼	02/16/17 11:37	02/17/17 13:12	10
PCB-1221	ND		9.0	4.6	ug/Kg	☼	02/16/17 11:37	02/17/17 13:12	10
PCB-1232	ND		9.0	3.5	ug/Kg	☼	02/16/17 11:37	02/17/17 13:12	10
PCB-1242	ND		9.0	7.1	ug/Kg	☼	02/16/17 11:37	02/17/17 13:12	10
PCB-1248	ND		9.0	4.3	ug/Kg	☼	02/16/17 11:37	02/17/17 13:12	10
PCB-1254	ND		9.0	3.9	ug/Kg	☼	02/16/17 11:37	02/17/17 13:12	10
PCB-1260	**910**		9.0	6.0	ug/Kg	☼	02/16/17 11:37	02/17/17 13:12	10
PCB-1262	ND		9.0	6.4	ug/Kg	☼	02/16/17 11:37	02/17/17 13:12	10
PCB-1268	ND		9.0	2.7	ug/Kg	☼	02/16/17 11:37	02/17/17 13:12	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*102*		*20 - 150*	*02/16/17 11:37*	*02/17/17 13:12*	*10*
DCB Decachlorobiphenyl (Surr)	*93*		*20 - 150*	*02/16/17 11:37*	*02/17/17 13:12*	*10*
Tetrachloro-m-xylene	*68*		*20 - 130*	*02/16/17 11:37*	*02/17/17 13:12*	*10*
Tetrachloro-m-xylene	*64*		*20 - 130*	*02/16/17 11:37*	*02/17/17 13:12*	*10*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**910**		9.0	7.1	ug/Kg			02/16/17 11:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**7.6**		0.1	0.1	%			02/19/17 10:44	1

Client Sample ID: CT16S07B-72

Date Collected: 02/15/17 11:20
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-9

Matrix: Solid
Percent Solids: 89.6

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.93	0.49	ug/Kg	☼	02/16/17 11:37	02/17/17 10:25	1
PCB-1221	ND		0.93	0.48	ug/Kg	☼	02/16/17 11:37	02/17/17 10:25	1
PCB-1232	ND		0.93	0.37	ug/Kg	☼	02/16/17 11:37	02/17/17 10:25	1
PCB-1242	ND		0.93	0.74	ug/Kg	☼	02/16/17 11:37	02/17/17 10:25	1
PCB-1248	ND		0.93	0.44	ug/Kg	☼	02/16/17 11:37	02/17/17 10:25	1
PCB-1254	ND		0.93	0.41	ug/Kg	☼	02/16/17 11:37	02/17/17 10:25	1
PCB-1260	**11**		0.93	0.62	ug/Kg	☼	02/16/17 11:37	02/17/17 10:25	1
PCB-1262	ND		0.93	0.67	ug/Kg	☼	02/16/17 11:37	02/17/17 10:25	1
PCB-1268	ND		0.93	0.28	ug/Kg	☼	02/16/17 11:37	02/17/17 10:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*75*		*20 - 150*	*02/16/17 11:37*	*02/17/17 10:25*	*1*
DCB Decachlorobiphenyl (Surr)	*74*		*20 - 150*	*02/16/17 11:37*	*02/17/17 10:25*	*1*
Tetrachloro-m-xylene	*237*	*X*	*20 - 130*	*02/16/17 11:37*	*02/17/17 10:25*	*1*
Tetrachloro-m-xylene	*80*		*20 - 130*	*02/16/17 11:37*	*02/17/17 10:25*	*1*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**11**		0.93	0.74	ug/Kg			02/16/17 11:37	1

Client Sample Results

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63486-1

Client Sample ID: CT16S07B-72
Date Collected: 02/15/17 11:20
Date Received: 02/16/17 08:35

Lab Sample ID: 180-63486-9
Matrix: Solid
Percent Solids: 89.6

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	10.4		0.1	0.1	%			02/19/17 10:44	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 180-203047/1-C
Matrix: Solid
Analysis Batch: 203101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 203047

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.83	0.44	ug/Kg		02/16/17 11:37	02/17/17 06:35	1
PCB-1221	ND		0.83	0.43	ug/Kg		02/16/17 11:37	02/17/17 06:35	1
PCB-1232	ND		0.83	0.33	ug/Kg		02/16/17 11:37	02/17/17 06:35	1
PCB-1242	ND		0.83	0.66	ug/Kg		02/16/17 11:37	02/17/17 06:35	1
PCB-1248	ND		0.83	0.40	ug/Kg		02/16/17 11:37	02/17/17 06:35	1
PCB-1254	ND		0.83	0.37	ug/Kg		02/16/17 11:37	02/17/17 06:35	1
PCB-1260	ND		0.83	0.56	ug/Kg		02/16/17 11:37	02/17/17 06:35	1
PCB-1262	ND		0.83	0.60	ug/Kg		02/16/17 11:37	02/17/17 06:35	1
PCB-1268	ND		0.83	0.25	ug/Kg		02/16/17 11:37	02/17/17 06:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*90*		*20 - 150*	*02/16/17 11:37*	*02/17/17 06:35*	*1*
DCB Decachlorobiphenyl (Surr)	*82*		*20 - 150*	*02/16/17 11:37*	*02/17/17 06:35*	*1*
Tetrachloro-m-xylene	*76*		*20 - 130*	*02/16/17 11:37*	*02/17/17 06:35*	*1*
Tetrachloro-m-xylene	*88*		*20 - 130*	*02/16/17 11:37*	*02/17/17 06:35*	*1*

Lab Sample ID: LCS 180-203047/2-C
Matrix: Solid
Analysis Batch: 203101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 203047

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			16.7	12.1		ug/Kg		73	39 - 114		
PCB-1260			16.7	12.8		ug/Kg		77	34 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*81*		*20 - 150*
DCB Decachlorobiphenyl (Surr)	*77*		*20 - 150*
Tetrachloro-m-xylene	*69*		*20 - 130*
Tetrachloro-m-xylene	*72*		*20 - 130*

Lab Sample ID: 180-63486-1 MS
Matrix: Solid
Analysis Batch: 203101

Client Sample ID: CT15S07F-0
Prep Type: Total/NA
Prep Batch: 203047

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND		18.9	21.7	F1	ug/Kg	☼	115	39 - 114		
PCB-1260	2.3	F1	18.9	25.3		ug/Kg	☼	122	34 - 123		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*105*		*20 - 150*
DCB Decachlorobiphenyl (Surr)	*95*		*20 - 150*
Tetrachloro-m-xylene	*74*		*20 - 130*
Tetrachloro-m-xylene	*80*		*20 - 130*

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: 180-63486-1 MSD
Matrix: Solid
Analysis Batch: 203101

Client Sample ID: CT15S07F-0
Prep Type: Total/NA
Prep Batch: 203047

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND		18.9	22.0	F1	ug/Kg	☼	117	39 - 114	2	30
PCB-1260	2.3	F1	18.9	27.7	F1	ug/Kg	☼	135	34 - 123	9	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*82*		*20 - 150*
DCB Decachlorobiphenyl (Surr)	*78*		*20 - 150*
Tetrachloro-m-xylene	*59*		*20 - 130*
Tetrachloro-m-xylene	*73*		*20 - 130*

Method: 2540G - SM 2540G

Lab Sample ID: 180-63486-1 DU
Matrix: Solid
Analysis Batch: 203247

Client Sample ID: CT15S07F-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	11.7			12.2		%				4	20

GC Semi VOA

Prep Batch: 203047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63486-1	CT15S07F-0	Total/NA	Solid	3541	
180-63486-2	CT15S05E-0	Total/NA	Solid	3541	
180-63486-3	CT15S01E-0	Total/NA	Solid	3541	
180-63486-4	CT15S01E-12	Total/NA	Solid	3541	
180-63486-5	CT16S011F-0	Total/NA	Solid	3541	
180-63486-6	CT16S010F-36	Total/NA	Solid	3541	
180-63486-7	CT16S09F-12	Total/NA	Solid	3541	
180-63486-8	CT16S08F-12	Total/NA	Solid	3541	
180-63486-9	CT16S07B-72	Total/NA	Solid	3541	
MB 180-203047/1-C	Method Blank	Total/NA	Solid	3541	
LCS 180-203047/2-C	Lab Control Sample	Total/NA	Solid	3541	
180-63486-1 MS	CT15S07F-0	Total/NA	Solid	3541	
180-63486-1 MSD	CT15S07F-0	Total/NA	Solid	3541	

Cleanup Batch: 203097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63486-1	CT15S07F-0	Total/NA	Solid	3665A	203047
180-63486-2	CT15S05E-0	Total/NA	Solid	3665A	203047
180-63486-3	CT15S01E-0	Total/NA	Solid	3665A	203047
180-63486-4	CT15S01E-12	Total/NA	Solid	3665A	203047
180-63486-5	CT16S011F-0	Total/NA	Solid	3665A	203047
180-63486-6	CT16S010F-36	Total/NA	Solid	3665A	203047
180-63486-7	CT16S09F-12	Total/NA	Solid	3665A	203047
180-63486-8	CT16S08F-12	Total/NA	Solid	3665A	203047
180-63486-9	CT16S07B-72	Total/NA	Solid	3665A	203047
MB 180-203047/1-C	Method Blank	Total/NA	Solid	3665A	203047
LCS 180-203047/2-C	Lab Control Sample	Total/NA	Solid	3665A	203047
180-63486-1 MS	CT15S07F-0	Total/NA	Solid	3665A	203047
180-63486-1 MSD	CT15S07F-0	Total/NA	Solid	3665A	203047

Cleanup Batch: 203098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63486-1	CT15S07F-0	Total/NA	Solid	3660B	203097
180-63486-2	CT15S05E-0	Total/NA	Solid	3660B	203097
180-63486-3	CT15S01E-0	Total/NA	Solid	3660B	203097
180-63486-4	CT15S01E-12	Total/NA	Solid	3660B	203097
180-63486-5	CT16S011F-0	Total/NA	Solid	3660B	203097
180-63486-6	CT16S010F-36	Total/NA	Solid	3660B	203097
180-63486-7	CT16S09F-12	Total/NA	Solid	3660B	203097
180-63486-8	CT16S08F-12	Total/NA	Solid	3660B	203097
180-63486-9	CT16S07B-72	Total/NA	Solid	3660B	203097
MB 180-203047/1-C	Method Blank	Total/NA	Solid	3660B	203097
LCS 180-203047/2-C	Lab Control Sample	Total/NA	Solid	3660B	203097
180-63486-1 MS	CT15S07F-0	Total/NA	Solid	3660B	203097
180-63486-1 MSD	CT15S07F-0	Total/NA	Solid	3660B	203097

Analysis Batch: 203101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63486-1	CT15S07F-0	Total/NA	Solid	8082A	203098
180-63486-2	CT15S05E-0	Total/NA	Solid	8082A	203098
180-63486-3	CT15S01E-0	Total/NA	Solid	8082A	203098

GC Semi VOA (Continued)

Analysis Batch: 203101 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63486-4	CT15S01E-12	Total/NA	Solid	8082A	203098
180-63486-5	CT16S011F-0	Total/NA	Solid	8082A	203098
180-63486-6	CT16S010F-36	Total/NA	Solid	8082A	203098
180-63486-7	CT16S09F-12	Total/NA	Solid	8082A	203098
180-63486-8	CT16S08F-12	Total/NA	Solid	8082A	203098
180-63486-9	CT16S07B-72	Total/NA	Solid	8082A	203098
MB 180-203047/1-C	Method Blank	Total/NA	Solid	8082A	203098
LCS 180-203047/2-C	Lab Control Sample	Total/NA	Solid	8082A	203098
180-63486-1 MS	CT15S07F-0	Total/NA	Solid	8082A	203098
180-63486-1 MSD	CT15S07F-0	Total/NA	Solid	8082A	203098

Analysis Batch: 203485

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63486-1	CT15S07F-0	Total/NA	Solid	PCB	
180-63486-2	CT15S05E-0	Total/NA	Solid	PCB	
180-63486-3	CT15S01E-0	Total/NA	Solid	PCB	
180-63486-4	CT15S01E-12	Total/NA	Solid	PCB	
180-63486-5	CT16S011F-0	Total/NA	Solid	PCB	
180-63486-6	CT16S010F-36	Total/NA	Solid	PCB	
180-63486-7	CT16S09F-12	Total/NA	Solid	PCB	
180-63486-8	CT16S08F-12	Total/NA	Solid	PCB	
180-63486-9	CT16S07B-72	Total/NA	Solid	PCB	

General Chemistry

Analysis Batch: 203247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63486-1	CT15S07F-0	Total/NA	Solid	2540G	
180-63486-2	CT15S05E-0	Total/NA	Solid	2540G	
180-63486-3	CT15S01E-0	Total/NA	Solid	2540G	
180-63486-4	CT15S01E-12	Total/NA	Solid	2540G	
180-63486-5	CT16S011F-0	Total/NA	Solid	2540G	
180-63486-6	CT16S010F-36	Total/NA	Solid	2540G	
180-63486-7	CT16S09F-12	Total/NA	Solid	2540G	
180-63486-8	CT16S08F-12	Total/NA	Solid	2540G	
180-63486-9	CT16S07B-72	Total/NA	Solid	2540G	
180-63486-1 DU	CT15S07F-0	Total/NA	Solid	2540G	

180325

Chain of Custody Record

016396

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

BALTIMORE

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Robert Kennedy	Site Contact:	Date:	COC No:
Company Name: AECOM	Tel/Fax:	Lab Contact: Jill Collazy	Carrier:	___ of ___ COCs
Address: 250 Apollo Dr.	Analysis Turnaround Time			Sampler:
City/State/Zip: Chelmsford, MA 01824	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use:
Phone: 978-905-2269	TAT if different from Below ___			
Fax:	☑ 2 weeks = TPH			
Project Name: Benning Road Cooling Towers	☐ 1 week			
Site: Pepco Benning Road	☑ 2 days = PCB			
PO #	☐ 1 day			

180-63486 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	PCB - 8082A	TPH - DRO/ORO (8015C)	Sample Specific Notes:
CT15507F-0	2/15/17	0945	G	SO	1			X		2 day TAT
CT15505E-0		1000	G	SO	1			X		
CT15501E-0		1010	G	SO	1			X		
CT15501E-12		1020	G	SO	1			X		
CT16501IF-0		1025	G	SO	1			X		
CT16501OF-36		1035	G	SO	1			X		
CT16509F-12		1045	G	SO	1			X		
CT16508F-12		1050	G	SO	1			X		
CT16507B-72		1120	G	SO	1			X		
SBS0303N-NORTH		1100	G	SO	1				X	Standard TAT
SBS0303N-EAST		1105	G	SO	1				X	Standard TAT

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ___

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ___ Months

Special Instructions/QC Requirements & Comments: 2-day TAT on PCB samples only

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ___ Corr'd: ___ | Therm ID No.: ___

	Company	Date/Time		Company	Date/Time
Relinquished by:	AECOM	2/15/17 1340	Received by:	TA	2/15/17 1340
Relinquished by:	TestAmerica	2-15-2017/1504	Received by:	TAL	2-16-17 8:35
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

2/21/2017

ORIGIN ID:MTNA (410) 869-0085
KEN IVES
STL BALTIMORE
5710 EXECUTIVE DRIVE
SUITE 106
BALTIMORE, MD 21228
UNITED STATES US

SHIP DATE: 15FEB17
ACTWGT: 20.00 LB
CAD: 103046O/INET3850

BILL RECIPIENT

TO SAMPLE RECEIVING
TEST AMERICA PITTSBURGH
301 ALPHA DR
RIDC PARK
PITTSBURGH PA 15238
(412) 963-7058 REF AECOM/BENNING
INV
PO DEPT

546J1/33BB/53C1

180-63486 Waybill

FedEx Express

E

J171017810601uv

TRK# 0201 7784 3874 6539

THU - 16 FEB 3:00P
STANDARD OVERNIGHT

EV AGCA

15238
PA-US PIT

Uncorrected temp 2.6 °C
Thermometer ID 7
CF 0 Initials 13

PT WI-SR-001 effective 7/26/13

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Login Sample Receipt Checklist

Client: AECOM, Inc.

Job Number: 180-63486-1

Login Number: 63486
List Number: 1
Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-63926-1
Client Project/Site: Pepco Benning Road Facility

For:
AECOM, Inc.
250 Apollo Drive
Chelmsford, Massachusetts 01824

Attn: Mr. Robert Kennedy

Authorized for release by:
3/6/2017 2:59:28 PM

Jill Colussy, Project Manager I
(412)963-2444
jill.colussy@testamericainc.com

Table of Contents

Job ID: 180-63926-1

Laboratory: TestAmerica Pittsburgh

Narrative

CASE NARRATIVE

Client: AECOM, Inc.

Project: Pepco Benning Road Facility

Report Number: 180-63926-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

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

RECEIPT

The samples were received on 03/02/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.9 C.

PCBS

Due to the concentration of PCBs detected, ample CT15S05EF-0 (180-63926-4)] and CT16S09G-12 (180-63926-5) were analyzed at a dilution. The reporting limits have been adjusted accordingly.

Sample CT16S09G-12 (180-63926-5) had surrogate decachlorobiphenyl recover outside of the control limits on one column.

The matrix spike duplicate recovered outside of the control limits for PCB 1016. The relative percent difference between the matrix spike and the matrix spike duplicate was outside of the control limits for PCB 1016.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

The continuing calibration verification (CCV) associated with batch 204470 recovered above the upper control limit for 1254. The samples associated with this CCV were reported from the passing column for the affected analytes; therefore, the data have been reported. The

PERCENT SOLIDS

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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Definitions/Glossary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-1

Laboratory: TestAmerica Pittsburgh

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-17
California	State Program	9	2891	03-31-18
Connecticut	State Program	1	PH-0688	09-30-18
Florida	NELAP	4	E871008	06-30-17
Illinois	NELAP	5	200005	06-30-17
Kansas	NELAP	7	E-10350	01-31-18
Louisiana	NELAP	6	04041	06-30-17
New Hampshire	NELAP	1	2030	04-04-17
New Jersey	NELAP	2	PA005	06-30-17
New York	NELAP	2	11182	03-31-17
North Carolina (WW/SW)	State Program	4	434	12-31-17
Pennsylvania	NELAP	3	02-00416	04-30-17
South Carolina	State Program	4	89014	04-30-17
Texas	NELAP	6	T104704528-15-2	03-31-17
US Fish & Wildlife	Federal		LE94312A-1	10-31-17
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-17
Virginia	NELAP	3	460189	09-14-17
West Virginia DEP	State Program	3	142	01-31-18
Wisconsin	State Program	5	998027800	08-31-17

Sample Summary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-63926-2	CT15S01EF-0	Solid	03/01/17 10:30	03/02/17 09:20
180-63926-4	CT15S05EF-0	Solid	03/01/17 10:45	03/02/17 09:20
180-63926-5	CT16S09G-12	Solid	03/01/17 11:15	03/02/17 09:20
180-63926-6	CT16S011G-0	Solid	03/01/17 11:30	03/02/17 09:20

Method Summary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) (GC)	SW846	TAL PIT
PCB	Total PCB Calculation	TAL SOP	TAL PIT
2540G	SM 2540G	SM22	TAL PIT

Protocol References:

SM22 = SM22

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-1

Client Sample ID: CT15S01EF-0
Date Collected: 03/01/17 10:30
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			204680	03/06/17 11:48	CMR	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			204450	03/02/17 16:43	SJM	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT15S01EF-0
Date Collected: 03/01/17 10:30
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-2
Matrix: Solid
Percent Solids: 87.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.1 g	1.0 mL	204407	03/02/17 12:18	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	204465	03/03/17 04:53	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	204466	03/03/17 04:54	JMO	TAL PIT
Total/NA	Analysis	8082A		1	1 mL	1.0 mL	204470	03/03/17 07:50	JMO	TAL PIT
	Instrument ID: CHGC8									

Client Sample ID: CT15S05EF-0
Date Collected: 03/01/17 10:45
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			204680	03/06/17 11:48	CMR	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			204450	03/02/17 16:43	SJM	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT15S05EF-0
Date Collected: 03/01/17 10:45
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-4
Matrix: Solid
Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.2 g	1.0 mL	204407	03/02/17 12:18	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	204465	03/03/17 04:53	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	204466	03/03/17 04:54	JMO	TAL PIT
Total/NA	Analysis	8082A		20			204470	03/03/17 12:49	JMO	TAL PIT
	Instrument ID: CHGC8									

Client Sample ID: CT16S09G-12
Date Collected: 03/01/17 11:15
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			204680	03/06/17 11:48	CMR	TAL PIT

Lab Chronicle

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-1

Client Sample ID: CT16S09G-12
Date Collected: 03/01/17 11:15
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			204680	03/06/17 11:48	CMR	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			204450	03/02/17 16:43	SJM	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT16S09G-12
Date Collected: 03/01/17 11:15
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-5
Matrix: Solid
Percent Solids: 80.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.0 g	1.0 mL	204407	03/02/17 12:18	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	204465	03/03/17 04:53	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	204466	03/03/17 04:54	JMO	TAL PIT
Total/NA	Analysis	8082A		20			204470	03/03/17 13:09	JMO	TAL PIT
	Instrument ID: CHGC8									

Client Sample ID: CT16S011G-0
Date Collected: 03/01/17 11:30
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			204680	03/06/17 11:48	CMR	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			204450	03/02/17 16:43	SJM	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT16S011G-0
Date Collected: 03/01/17 11:30
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-6
Matrix: Solid
Percent Solids: 86.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.1 g	1.0 mL	204407	03/02/17 12:18	CBY	TAL PIT
Total/NA	Cleanup	3665A			2 mL	2 mL	204465	03/03/17 04:53	JMO	TAL PIT
Total/NA	Cleanup	3660B			2 mL	2 mL	204466	03/03/17 04:54	JMO	TAL PIT
Total/NA	Analysis	8082A		1			204470	03/03/17 09:30	JMO	TAL PIT
	Instrument ID: CHGC8									

Laboratory References:
TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-1

Analyst References:

Lab: TAL PIT

Batch Type: Cleanup

JMO = John Oravec

Batch Type: Prep

CBY = Charles Yushinski

Batch Type: Analysis

CMR = Carl Reagle

JMO = John Oravec

SJM = Samantha McDermott

Client Sample ID: CT15S01EF-0

Lab Sample ID: 180-63926-2

Date Collected: 03/01/17 10:30
Matrix: Solid
Date Received: 03/02/17 09:20
Percent Solids: 87.1

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	F2 F1	0.95	0.50	ug/Kg	☼	03/02/17 12:18	03/03/17 07:50	1
PCB-1221	ND		0.95	0.49	ug/Kg	☼	03/02/17 12:18	03/03/17 07:50	1
PCB-1232	ND		0.95	0.38	ug/Kg	☼	03/02/17 12:18	03/03/17 07:50	1
PCB-1242	ND		0.95	0.76	ug/Kg	☼	03/02/17 12:18	03/03/17 07:50	1
PCB-1248	ND		0.95	0.45	ug/Kg	☼	03/02/17 12:18	03/03/17 07:50	1
PCB-1254	ND		0.95	0.42	ug/Kg	☼	03/02/17 12:18	03/03/17 07:50	1
PCB-1260	**150**		0.95	0.63	ug/Kg	☼	03/02/17 12:18	03/03/17 07:50	1
PCB-1262	ND		0.95	0.68	ug/Kg	☼	03/02/17 12:18	03/03/17 07:50	1
PCB-1268	ND		0.95	0.29	ug/Kg	☼	03/02/17 12:18	03/03/17 07:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*123*		*20 - 150*	*03/02/17 12:18*	*03/03/17 07:50*	*1*
DCB Decachlorobiphenyl (Surr)	*139*		*20 - 150*	*03/02/17 12:18*	*03/03/17 07:50*	*1*
Tetrachloro-m-xylene	*86*		*20 - 130*	*03/02/17 12:18*	*03/03/17 07:50*	*1*
Tetrachloro-m-xylene	*77*		*20 - 130*	*03/02/17 12:18*	*03/03/17 07:50*	*1*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**150**		0.95	0.76	ug/Kg			03/06/17 11:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**12.9**		0.1	0.1	%			03/02/17 16:43	1

Client Sample ID: CT15S05EF-0

Lab Sample ID: 180-63926-4

Date Collected: 03/01/17 10:45
Matrix: Solid
Date Received: 03/02/17 09:20
Percent Solids: 87.7

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		19	9.9	ug/Kg	☼	03/02/17 12:18	03/03/17 12:49	20
PCB-1221	ND		19	9.7	ug/Kg	☼	03/02/17 12:18	03/03/17 12:49	20
PCB-1232	ND		19	7.4	ug/Kg	☼	03/02/17 12:18	03/03/17 12:49	20
PCB-1242	ND		19	15	ug/Kg	☼	03/02/17 12:18	03/03/17 12:49	20
PCB-1248	ND		19	8.9	ug/Kg	☼	03/02/17 12:18	03/03/17 12:49	20
PCB-1254	**880**		19	8.2	ug/Kg	☼	03/02/17 12:18	03/03/17 12:49	20
PCB-1260	**520**		19	13	ug/Kg	☼	03/02/17 12:18	03/03/17 12:49	20
PCB-1262	ND		19	13	ug/Kg	☼	03/02/17 12:18	03/03/17 12:49	20
PCB-1268	ND		19	5.7	ug/Kg	☼	03/02/17 12:18	03/03/17 12:49	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*105*		*20 - 150*	*03/02/17 12:18*	*03/03/17 12:49*	*20*
DCB Decachlorobiphenyl (Surr)	*121*		*20 - 150*	*03/02/17 12:18*	*03/03/17 12:49*	*20*
Tetrachloro-m-xylene	*95*		*20 - 130*	*03/02/17 12:18*	*03/03/17 12:49*	*20*
Tetrachloro-m-xylene	*100*		*20 - 130*	*03/02/17 12:18*	*03/03/17 12:49*	*20*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**1400**		19	15	ug/Kg			03/06/17 11:48	1

Client Sample ID: CT15S05EF-0

Lab Sample ID: 180-63926-4
Date Collected: 03/01/17 10:45
Matrix: Solid
Date Received: 03/02/17 09:20
Percent Solids: 87.7

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**12.3**		0.1	0.1	%			03/02/17 16:43	1

Client Sample ID: CT16S09G-12

Lab Sample ID: 180-63926-5
Date Collected: 03/01/17 11:15
Matrix: Solid
Date Received: 03/02/17 09:20
Percent Solids: 80.6

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		21	11	ug/Kg	☼	03/02/17 12:18	03/03/17 13:09	20
PCB-1221	ND		21	11	ug/Kg	☼	03/02/17 12:18	03/03/17 13:09	20
PCB-1232	ND		21	8.2	ug/Kg	☼	03/02/17 12:18	03/03/17 13:09	20
PCB-1242	ND		21	16	ug/Kg	☼	03/02/17 12:18	03/03/17 13:09	20
PCB-1248	ND		21	9.9	ug/Kg	☼	03/02/17 12:18	03/03/17 13:09	20
PCB-1254	ND		21	9.1	ug/Kg	☼	03/02/17 12:18	03/03/17 13:09	20
PCB-1260	**2900**		21	14	ug/Kg	☼	03/02/17 12:18	03/03/17 13:09	20
PCB-1262	ND		21	15	ug/Kg	☼	03/02/17 12:18	03/03/17 13:09	20
PCB-1268	ND		21	6.3	ug/Kg	☼	03/02/17 12:18	03/03/17 13:09	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*135*		*20 - 150*	*03/02/17 12:18*	*03/03/17 13:09*	*20*
DCB Decachlorobiphenyl (Surr)	*151*	*X*	*20 - 150*	*03/02/17 12:18*	*03/03/17 13:09*	*20*
Tetrachloro-m-xylene	*82*		*20 - 130*	*03/02/17 12:18*	*03/03/17 13:09*	*20*
Tetrachloro-m-xylene	*93*		*20 - 130*	*03/02/17 12:18*	*03/03/17 13:09*	*20*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**2900**		21	16	ug/Kg			03/06/17 11:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**19.4**		0.1	0.1	%			03/02/17 16:43	1

Client Sample ID: CT16S011G-0

Lab Sample ID: 180-63926-6
Date Collected: 03/01/17 11:30
Matrix: Solid
Date Received: 03/02/17 09:20
Percent Solids: 86.4

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.96	0.51	ug/Kg	☼	03/02/17 12:18	03/03/17 09:30	1
PCB-1221	ND		0.96	0.50	ug/Kg	☼	03/02/17 12:18	03/03/17 09:30	1
PCB-1232	ND		0.96	0.38	ug/Kg	☼	03/02/17 12:18	03/03/17 09:30	1
PCB-1242	ND		0.96	0.76	ug/Kg	☼	03/02/17 12:18	03/03/17 09:30	1
PCB-1248	ND		0.96	0.46	ug/Kg	☼	03/02/17 12:18	03/03/17 09:30	1
PCB-1254	**100**		0.96	0.42	ug/Kg	☼	03/02/17 12:18	03/03/17 09:30	1
PCB-1260	**72**		0.96	0.64	ug/Kg	☼	03/02/17 12:18	03/03/17 09:30	1
PCB-1262	ND		0.96	0.69	ug/Kg	☼	03/02/17 12:18	03/03/17 09:30	1
PCB-1268	ND		0.96	0.29	ug/Kg	☼	03/02/17 12:18	03/03/17 09:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*101*		*20 - 150*	*03/02/17 12:18*	*03/03/17 09:30*	*1*
DCB Decachlorobiphenyl (Surr)	*103*		*20 - 150*	*03/02/17 12:18*	*03/03/17 09:30*	*1*

Client Sample ID: CT16S011G-0
Date Collected: 03/01/17 11:30
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-6
Matrix: Solid
Percent Solids: 86.4

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*78*		*20 - 130*	*03/02/17 12:18*	*03/03/17 09:30*	*1*
Tetrachloro-m-xylene	*63*		*20 - 130*	*03/02/17 12:18*	*03/03/17 09:30*	*1*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	**170**		0.96	0.76	ug/Kg			03/06/17 11:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**13.6**		0.1	0.1	%			03/02/17 16:43	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 180-204407/1-C
Matrix: Solid
Analysis Batch: 204470

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 204407

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.83	0.44	ug/Kg		03/02/17 12:18	03/03/17 07:30	1
PCB-1221	ND		0.83	0.43	ug/Kg		03/02/17 12:18	03/03/17 07:30	1
PCB-1232	ND		0.83	0.33	ug/Kg		03/02/17 12:18	03/03/17 07:30	1
PCB-1242	ND		0.83	0.66	ug/Kg		03/02/17 12:18	03/03/17 07:30	1
PCB-1248	ND		0.83	0.40	ug/Kg		03/02/17 12:18	03/03/17 07:30	1
PCB-1254	ND		0.83	0.37	ug/Kg		03/02/17 12:18	03/03/17 07:30	1
PCB-1260	ND		0.83	0.56	ug/Kg		03/02/17 12:18	03/03/17 07:30	1
PCB-1262	ND		0.83	0.60	ug/Kg		03/02/17 12:18	03/03/17 07:30	1
PCB-1268	ND		0.83	0.25	ug/Kg		03/02/17 12:18	03/03/17 07:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*83*		*20 - 150*	*03/02/17 12:18*	*03/03/17 07:30*	*1*
DCB Decachlorobiphenyl (Surr)	*85*		*20 - 150*	*03/02/17 12:18*	*03/03/17 07:30*	*1*
Tetrachloro-m-xylene	*102*		*20 - 130*	*03/02/17 12:18*	*03/03/17 07:30*	*1*
Tetrachloro-m-xylene	*99*		*20 - 130*	*03/02/17 12:18*	*03/03/17 07:30*	*1*

Lab Sample ID: LCS 180-204407/2-C
Matrix: Solid
Analysis Batch: 204470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 204407

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			16.7	13.6		ug/Kg		82	39 - 114		
PCB-1260			16.7	14.3		ug/Kg		86	34 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*89*		*20 - 150*
DCB Decachlorobiphenyl (Surr)	*80*		*20 - 150*
Tetrachloro-m-xylene	*91*		*20 - 130*
Tetrachloro-m-xylene	*81*		*20 - 130*

Lab Sample ID: 180-63926-2 MS
Matrix: Solid
Analysis Batch: 204470

Client Sample ID: CT15S01EF-0
Prep Type: Total/NA
Prep Batch: 204407

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND	F2 F1	19.0	13.8		ug/Kg	☼	72	39 - 114		
PCB-1260	140		19.0	88.0	p 4	ug/Kg	☼	-352	34 - 123		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*147*		*20 - 150*
DCB Decachlorobiphenyl (Surr)	*74*	*p*	*20 - 150*
Tetrachloro-m-xylene	*88*		*20 - 130*
Tetrachloro-m-xylene	*78*		*20 - 130*

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: 180-63926-2 MSD
Matrix: Solid
Analysis Batch: 204470

Client Sample ID: CT15S01EF-0
Prep Type: Total/NA
Prep Batch: 204407

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND	F2 F1	19.0	22.8	F1 F2	ug/Kg	☼	120	39 - 114	50	30
PCB-1260	140		19.0	83.1	p 4	ug/Kg	☼	-378	34 - 123	6	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*129*		*20 - 150*
DCB Decachlorobiphenyl (Surr)	*76*	*p*	*20 - 150*
Tetrachloro-m-xylene	*74*		*20 - 130*
Tetrachloro-m-xylene	*66*		*20 - 130*

Method: 2540G - SM 2540G

Lab Sample ID: 180-63926-6 DU
Matrix: Solid
Analysis Batch: 204450

Client Sample ID: CT16S011G-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	13.6			15.6		%				14	20

GC Semi VOA

Prep Batch: 204407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-2	CT15S01EF-0	Total/NA	Solid	3541	
180-63926-4	CT15S05EF-0	Total/NA	Solid	3541	
180-63926-5	CT16S09G-12	Total/NA	Solid	3541	
180-63926-6	CT16S011G-0	Total/NA	Solid	3541	
MB 180-204407/1-C	Method Blank	Total/NA	Solid	3541	
LCS 180-204407/2-C	Lab Control Sample	Total/NA	Solid	3541	
180-63926-2 MS	CT15S01EF-0	Total/NA	Solid	3541	
180-63926-2 MSD	CT15S01EF-0	Total/NA	Solid	3541	

Cleanup Batch: 204465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-2	CT15S01EF-0	Total/NA	Solid	3665A	204407
180-63926-4	CT15S05EF-0	Total/NA	Solid	3665A	204407
180-63926-5	CT16S09G-12	Total/NA	Solid	3665A	204407
180-63926-6	CT16S011G-0	Total/NA	Solid	3665A	204407
MB 180-204407/1-C	Method Blank	Total/NA	Solid	3665A	204407
LCS 180-204407/2-C	Lab Control Sample	Total/NA	Solid	3665A	204407
180-63926-2 MS	CT15S01EF-0	Total/NA	Solid	3665A	204407
180-63926-2 MSD	CT15S01EF-0	Total/NA	Solid	3665A	204407

Cleanup Batch: 204466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-2	CT15S01EF-0	Total/NA	Solid	3660B	204465
180-63926-4	CT15S05EF-0	Total/NA	Solid	3660B	204465
180-63926-5	CT16S09G-12	Total/NA	Solid	3660B	204465
180-63926-6	CT16S011G-0	Total/NA	Solid	3660B	204465
MB 180-204407/1-C	Method Blank	Total/NA	Solid	3660B	204465
LCS 180-204407/2-C	Lab Control Sample	Total/NA	Solid	3660B	204465
180-63926-2 MS	CT15S01EF-0	Total/NA	Solid	3660B	204465
180-63926-2 MSD	CT15S01EF-0	Total/NA	Solid	3660B	204465

Analysis Batch: 204470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-2	CT15S01EF-0	Total/NA	Solid	8082A	204466
180-63926-4	CT15S05EF-0	Total/NA	Solid	8082A	204466
180-63926-5	CT16S09G-12	Total/NA	Solid	8082A	204466
180-63926-6	CT16S011G-0	Total/NA	Solid	8082A	204466
MB 180-204407/1-C	Method Blank	Total/NA	Solid	8082A	204466
LCS 180-204407/2-C	Lab Control Sample	Total/NA	Solid	8082A	204466
180-63926-2 MS	CT15S01EF-0	Total/NA	Solid	8082A	204466
180-63926-2 MSD	CT15S01EF-0	Total/NA	Solid	8082A	204466

Analysis Batch: 204680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-2	CT15S01EF-0	Total/NA	Solid	PCB	
180-63926-4	CT15S05EF-0	Total/NA	Solid	PCB	
180-63926-5	CT16S09G-12	Total/NA	Solid	PCB	
180-63926-6	CT16S011G-0	Total/NA	Solid	PCB	

QC Association Summary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-1

General Chemistry

Analysis Batch: 204450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-2	CT15S01EF-0	Total/NA	Solid	2540G	
180-63926-4	CT15S05EF-0	Total/NA	Solid	2540G	
180-63926-5	CT16S09G-12	Total/NA	Solid	2540G	
180-63926-6	CT16S011G-0	Total/NA	Solid	2540G	
180-63926-6 DU	CT16S011G-0	Total/NA	Solid	2540G	

016394

THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

BALTIMORE

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Robert Kennedy	Site Contact:	Date:	COC No:
Company Name: AECOM	Tel/Fax:	Lab Contact: Jill Collusy	Carrier:	____ of ____ COCs
Address: 250 Apollo Dr.	Analysis Turnaround Time			Sampler:
City/State/Zip: Chelmsford, MA 01824	☐ CALENDAR DAYS ☐ WORKING DAYS			
Phone: 978-905-2269	TAT if different from Below 48-hrs			
Fax:	☐ 2 weeks			
Project Name: Benning Rd. Cooling Towers	☐ 1 week			
Site: Benning Road	☐ 2 days			
PO#	☐ 1 day			

180-63926 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCB-8082A	Sample Specific Notes:
CT15501F-0	3/1/17	0940	G	SO	1			X	HOLD
CT15501EF-0	3	1030	G	SO	1			X	
CT15505F-0		1040	G	SO	1			X	HOLD
CT15505EF-0		1045	G	SO	1			X	
CT16509G-12		1115	G	SO	1			X	
CT16501IG-0		1130	G	SO	1			X	
CT16501IH-0	↓	1140	G	SO	1			X	HOLD

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: 48-hr TAT

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____		
Relinquished by:	Company: AECOM	Date/Time: 3/1/17 1335	Received by:	Company: TA	Date/Time: 3/1/17 1335
Relinquished by:	Company: TestAmerica	Date/Time: 3-2-2017/1615	Received by:	Company: TA	Date/Time: 3-2-17 9:30
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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3/6/2017

ORIGIN ID:MTNA (410) 869-0085
KEN IVES
STL BALTIMORE
5710 EXECUTIVE DRIVE
SUITE 106
BALTIMORE, MD 21228
UNITED STATES US

SHIP DATE: 01MAR17
ACTWGT: 19.00 LB
CAD: 103046011NET3850

BILL RECIPIENT

TO SAMPLE RECEIVING
TEST AMERICA PITTSBURGH
301 ALPHA DR
RIDC PARK
PITTSBURGH PA 15238
(412) 963-7058
INV
PO
REF AECOM/BENNING
DEPT

546J3/1ADB/53C1

180-63926 Waybill

J171117021401uv

FedEx Express

THU - 02 MAR 3:00P
STANDARD OVERNIGHT

TRK# 0201 7785 5009 6251

15238

Uncorrected temp 1.9 °C
Thermometer ID 9
CF 0 Initials TB

PT-WI-SR-001 effective 7/26/13

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Login Sample Receipt Checklist

Client: AECOM, Inc.

Job Number: 180-63926-1

Login Number: 63926
List Number: 1
Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

TestAmerica Job ID: 180-63926-3
Client Project/Site: Pepco Benning Road Facility

For:
AECOM, Inc.
250 Apollo Drive
Chelmsford, Massachusetts 01824

Attn: Mr. Robert Kennedy

Authorized for release by:
3/9/2017 12:16:57 PM

Jill Colussy, Project Manager I
(412)963-2444
jill.colussy@testamericainc.com

Table of Contents

Colussy, Jill

From: Kennedy, Robert (Chelmsford) <robert.kennedy@aecom.com>
Sent: Monday, March 06, 2017 5:30 PM
To: Colussy, Jill
Cc: Daniels, Ben
Subject: FW: Benning CT sampling

Jill,

Please take the sample CT15SO5F-0 (lab ID 180-63926-3) off hold and analyze with the 2-day rush. Thanks.

Robert Kennedy
Senior Project Chemist
Environment
D 978-905-2269
C 603-769-7451
robert.kennedy@aecom.com

AECOM
250 Apollo Drive, Chelmsford, MA 01824
T 978.905.2100 F 978.905.2101
www.aecom.com

From: Daniels, Ben
Sent: Monday, March 06, 2017 5:02 PM
To: Kennedy, Robert (Chelmsford)
Subject: Re: Benning CT sampling

Rush please.

From: "Kennedy, Robert (Chelmsford)" <robert.kennedy@aecom.com>
Date: Monday, March 6, 2017 at 4:51 PM
To: Ben Daniels <ben.daniels@aecom.com>
Subject: RE: Benning CT sampling

Ben, Do you want this released sample rush, or is std. TAT OK?

From: Daniels, Ben
Sent: Monday, March 06, 2017 4:30 PM
To: Kennedy, Robert (Chelmsford)
Cc: Damera, Ravi
Subject: Re: Benning CT sampling

Robert,

Based on these results please release the following sample from HOLD (48-hr TAT): CT15SO5F-0.

Job ID: 180-63926-3

Laboratory: TestAmerica Pittsburgh

Narrative

CASE NARRATIVE

Client: AECOM, Inc.

Project: Pepco Benning Road Facility

Report Number: 180-63926-3

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

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

RECEIPT

The samples were received on 03/02/2017; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.9 C.

Sample CT15SO5F-0 (180-63926-3) as taken off of hold and analyzed as per the client via e-mail on 3/6/2017. The e-mail is included in the report.

PCBS

Sample CT15S05F-0 (180-63926-3) was analyzed at a dilution due to matrix. The extract was thick and dark after the clean-ups. The reporting limits have been adjusted accordingly.

PERCENT SOLIDS

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-3

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-3

Laboratory: TestAmerica Pittsburgh

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-17
California	State Program	9	2891	03-31-18
Connecticut	State Program	1	PH-0688	09-30-18
Florida	NELAP	4	E871008	06-30-17
Illinois	NELAP	5	200005	06-30-17
Kansas	NELAP	7	E-10350	01-31-18
Louisiana	NELAP	6	04041	06-30-17
New Hampshire	NELAP	1	2030	04-04-17
New Jersey	NELAP	2	PA005	06-30-17
New York	NELAP	2	11182	03-31-17
North Carolina (WW/SW)	State Program	4	434	12-31-17
Pennsylvania	NELAP	3	02-00416	04-30-17
South Carolina	State Program	4	89014	04-30-17
Texas	NELAP	6	T104704528-15-2	03-31-17
US Fish & Wildlife	Federal		LE94312A-1	10-31-17
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-17
Virginia	NELAP	3	460189	09-14-17
West Virginia DEP	State Program	3	142	01-31-18
Wisconsin	State Program	5	998027800	08-31-17

Sample Summary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-63926-3	CT15S05F-0	Solid	03/01/17 10:40	03/02/17 09:20

Method Summary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-3

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) (GC)	SW846	TAL PIT
PCB	Total PCB Calculation	TAL SOP	TAL PIT
2540G	SM 2540G	SM22	TAL PIT

Protocol References:

SM22 = SM22

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

TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-3

Client Sample ID: CT15S05F-0

Date Collected: 03/01/17 10:40
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	PCB		1			205095	03/09/17 11:53	DFE	TAL PIT
	Instrument ID: NOEQUIP									
Total/NA	Analysis	2540G		1			204785	03/07/17 09:54	MTW	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: CT15S05F-0

Date Collected: 03/01/17 10:40
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-3

Matrix: Solid
Percent Solids: 86.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3541			15.3 g	1.0 mL	204887	03/08/17 03:31	BAP	TAL PIT
Total/NA	Cleanup	3665A			1 mL	1 mL	204962	03/08/17 12:52	DFE	TAL PIT
Total/NA	Cleanup	3660B			1 mL	1 mL	204963	03/08/17 12:54	DFE	TAL PIT
Total/NA	Analysis	8082A		5			205028	03/09/17 10:38	JMO	TAL PIT
	Instrument ID: CHGC8									

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Cleanup

DFE = David Eppinger

Batch Type: Prep

BAP = Brian Pino

Batch Type: Analysis

DFE = David Eppinger

JMO = John Oravec

MTW = Michael Wesoloski

Client Sample ID: CT15S05F-0
Date Collected: 03/01/17 10:40
Date Received: 03/02/17 09:20

Lab Sample ID: 180-63926-3
Matrix: Solid
Percent Solids: 86.2

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		4.7	2.5	ug/Kg	☼	03/08/17 03:31	03/09/17 10:38	5
PCB-1221	ND		4.7	2.5	ug/Kg	☼	03/08/17 03:31	03/09/17 10:38	5
PCB-1232	ND		4.7	1.9	ug/Kg	☼	03/08/17 03:31	03/09/17 10:38	5
PCB-1242	ND		4.7	3.8	ug/Kg	☼	03/08/17 03:31	03/09/17 10:38	5
PCB-1248	ND		4.7	2.3	ug/Kg	☼	03/08/17 03:31	03/09/17 10:38	5
PCB-1254	ND		4.7	2.1	ug/Kg	☼	03/08/17 03:31	03/09/17 10:38	5
PCB-1260	ND		4.7	3.2	ug/Kg	☼	03/08/17 03:31	03/09/17 10:38	5
PCB-1262	ND		4.7	3.4	ug/Kg	☼	03/08/17 03:31	03/09/17 10:38	5
PCB-1268	ND		4.7	1.4	ug/Kg	☼	03/08/17 03:31	03/09/17 10:38	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*71*	*p*	*20 - 150*	*03/08/17 03:31*	*03/09/17 10:38*	*5*
DCB Decachlorobiphenyl (Surr)	*113*		*20 - 150*	*03/08/17 03:31*	*03/09/17 10:38*	*5*
Tetrachloro-m-xylene	*58*	*p*	*20 - 130*	*03/08/17 03:31*	*03/09/17 10:38*	*5*
Tetrachloro-m-xylene	*102*		*20 - 130*	*03/08/17 03:31*	*03/09/17 10:38*	*5*

Method: PCB - Total PCB Calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Polychlorinated biphenyls, Total	ND		4.7	3.8	ug/Kg			03/09/17 11:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**13.8**		0.1	0.1	%			03/07/17 09:54	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 180-204887/1-C
Matrix: Solid
Analysis Batch: 205028

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 204887

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.83	0.44	ug/Kg		03/08/17 03:31	03/09/17 10:18	1
PCB-1221	ND		0.83	0.43	ug/Kg		03/08/17 03:31	03/09/17 10:18	1
PCB-1232	ND		0.83	0.33	ug/Kg		03/08/17 03:31	03/09/17 10:18	1
PCB-1242	ND		0.83	0.66	ug/Kg		03/08/17 03:31	03/09/17 10:18	1
PCB-1248	ND		0.83	0.40	ug/Kg		03/08/17 03:31	03/09/17 10:18	1
PCB-1254	ND		0.83	0.37	ug/Kg		03/08/17 03:31	03/09/17 10:18	1
PCB-1260	ND		0.83	0.56	ug/Kg		03/08/17 03:31	03/09/17 10:18	1
PCB-1262	ND		0.83	0.60	ug/Kg		03/08/17 03:31	03/09/17 10:18	1
PCB-1268	ND		0.83	0.25	ug/Kg		03/08/17 03:31	03/09/17 10:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*83*		*20 - 150*	*03/08/17 03:31*	*03/09/17 10:18*	*1*
DCB Decachlorobiphenyl (Surr)	*81*		*20 - 150*	*03/08/17 03:31*	*03/09/17 10:18*	*1*
Tetrachloro-m-xylene	*88*		*20 - 130*	*03/08/17 03:31*	*03/09/17 10:18*	*1*
Tetrachloro-m-xylene	*83*		*20 - 130*	*03/08/17 03:31*	*03/09/17 10:18*	*1*

Lab Sample ID: LCS 180-204887/5-C
Matrix: Solid
Analysis Batch: 205028

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 204887

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			16.3	13.6		ug/Kg		83	39 - 114		
PCB-1260			16.3	14.1		ug/Kg		86	34 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*80*		*20 - 150*
DCB Decachlorobiphenyl (Surr)	*80*		*20 - 150*
Tetrachloro-m-xylene	*85*		*20 - 130*
Tetrachloro-m-xylene	*82*		*20 - 130*

QC Association Summary

Client: AECOM, Inc.
Project/Site: Pepco Benning Road Facility

TestAmerica Job ID: 180-63926-3

GC Semi VOA

Prep Batch: 204887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-3	CT15S05F-0	Total/NA	Solid	3541	
MB 180-204887/1-C	Method Blank	Total/NA	Solid	3541	
LCS 180-204887/5-C	Lab Control Sample	Total/NA	Solid	3541	

Cleanup Batch: 204962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-3	CT15S05F-0	Total/NA	Solid	3665A	204887
MB 180-204887/1-C	Method Blank	Total/NA	Solid	3665A	204887
LCS 180-204887/5-C	Lab Control Sample	Total/NA	Solid	3665A	204887

Cleanup Batch: 204963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-3	CT15S05F-0	Total/NA	Solid	3660B	204962
MB 180-204887/1-C	Method Blank	Total/NA	Solid	3660B	204962
LCS 180-204887/5-C	Lab Control Sample	Total/NA	Solid	3660B	204962

Analysis Batch: 205028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-3	CT15S05F-0	Total/NA	Solid	8082A	204963
MB 180-204887/1-C	Method Blank	Total/NA	Solid	8082A	204963
LCS 180-204887/5-C	Lab Control Sample	Total/NA	Solid	8082A	204963

Analysis Batch: 205095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-3	CT15S05F-0	Total/NA	Solid	PCB	

General Chemistry

Analysis Batch: 204785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-63926-3	CT15S05F-0	Total/NA	Solid	2540G	

016394

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

BALTIMORE

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Robert Kennedy	Site Contact:	Date:	COC No:
Company Name: AECOM	Tel/Fax:	Lab Contact: Jill Collusy	Carrier:	____ of ____ COCs
Address: 250 Apollo Dr.	Analysis Turnaround Time			Sampler:
City/State/Zip: Chelmsford, MA 01824	☐ CALENDAR DAYS ☐ WORKING DAYS			
Phone: 978-905-2269	TAT if different from Below 48-hrs			
Fax:	☐ 2 weeks			
Project Name: Benning Rd. Cooling Towers	☐ 1 week			
Site: Benning Road	☐ 2 days			
PO#	☐ 1 day			

180-63926 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	PCB-8082A	Sample Specific Notes:
CT15501F-0	3/1/17	0940	G	SO	1			X	HOLD
CT15501EF-0	3	1030	G	SO	1			X	
CT15505F-0		1040	G	SO	1			X	HOLD
CT15505EF-0		1045	G	SO	1			X	
CT16509G-12		1115	G	SO	1			X	
CT16501IG-0		1130	G	SO	1			X	
CT16501IH-0	↓	1140	G	SO	1			X	HOLD

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: 48-hr TAT

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____		
Relinquished by:	Company: AECOM	Date/Time: 3/1/17 1335	Received by:	Company: TA	Date/Time: 3/1/17 1335
Relinquished by:	Company: TestAmerica	Date/Time: 3-1-2017/1615	Received by:	Company: TA	Date/Time: 3-2-17 9:30
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Page 13 of 15

3/9/2017

ORIGIN ID:MTNA (410) 869-0085
KEN IVES
STL BALTIMORE
5710 EXECUTIVE DRIVE
SUITE 106
BALTIMORE, MD 21228
UNITED STATES US

SHIP DATE: 01MAR17
ACTWGT: 19.00 LB
CAD: 103046O/INET3850

BILL RECIPIENT

TO SAMPLE RECEIVING
TEST AMERICA PITTSBURGH
301 ALPHA DR
RIDC PARK
PITTSBURGH PA 15238
(412) 963-7058 REF AECOM/BENNING
INV
PO DEPT

546J3/1ADB/53C1

180-63926 Waybill

FedEx Express

E

J171117021401uv

THU - 02 MAR 3:00P
STANDARD OVERNIGHT

TRK# 0201 7785 5009 6251

15238

Uncorrected temp 1.9 °C
Thermometer ID 9
CF 0 Initials TB

PT-WI-SR-001 effective 7/26/13

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Login Sample Receipt Checklist

Client: AECOM, Inc.

Job Number: 180-63926-3

Login Number: 63926
List Number: 1
Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh

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

Attachment 3

Backfill Analytical Results

Analytical Report for

Recycled Aggregates, LLC

Certificate of Analysis No.: 17022707

Project Manager: David Cantwell

Project Name : Barnabas

Project Location: Soil Stock pile

March 2, 2017

Phase Separation Science, Inc.

6630 Baltimore National Pike
Baltimore, MD 21228
Phone: (410) 747-8770
Fax: (410) 788-8723

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

March 2, 2017

David Cantwell
Recycled Aggregates, LLC
1721 S. Capitol St., SW
Washington, DC 20003

Reference: PSS Work Order(s) No: **17022707**
Project Name: Barnabas
Project Location: Soil Stock pile

Dear David Cantwell :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **17022707**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on April 3, 2017, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

Sample Summary

Client Name: Recycled Aggregates, LLC

Project Name: Barnabas

Work Order Number(s): 17022707

The following samples were received under chain of custody by Phase Separation Science (PSS) on 02/27/2017 at 02:10 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
17022707-001	3815329	SOIL	02/27/17 10:00

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17022707

Recycled Aggregates, LLC, Washington, DC

March 2, 2017

Project Name: Barnabas

Project Location: Soil Stock pile

Sample ID: 3815329 **Date/Time Sampled: 02/27/2017 10:00** **PSS Sample ID: 17022707-001**

Matrix: SOIL **Date/Time Received: 02/27/2017 14:10** **% Solids: 87**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**2.7**	mg/kg	0.43		1	02/27/17	03/02/17 14:27	1033
Barium	**56**	mg/kg	2.2		1	02/27/17	03/02/17 14:27	1033
Cadmium	ND	mg/kg	2.2		1	02/27/17	02/28/17 17:35	1033
Chromium	**17**	mg/kg	2.2		1	02/27/17	03/02/17 14:27	1033
Lead	**26**	mg/kg	2.2		1	02/27/17	02/28/17 17:35	1033
Mercury	ND	mg/kg	0.086		1	02/27/17	03/02/17 14:27	1033
Selenium	ND	mg/kg	2.2		1	02/27/17	03/02/17 14:27	1033
Silver	ND	mg/kg	2.2		1	02/27/17	02/28/17 17:35	1033

Chromium, Hexavalent — Analytical Method: SW-846 7196 A — Preparation Method: SW3060A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chromium, Hexavalent	ND	mg/kg	1.1		1	02/28/17	03/01/17 13:00	1053

Sample ID: 3815329 **Date/Time Sampled: 02/27/2017 10:00** **PSS Sample ID: 17022707-001**

Matrix: SOIL **Date/Time Received: 02/27/2017 14:10**

Trivalent Chromium by calculation — Analytical Method: Trivalent Calc.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Trivalent Chromium (by subtraction)	**17**	mg/kg			1	03/02/17	03/02/17 14:27	1041

Case Narrative Summary

Client Name: Recycled Aggregates, LLC

Project Name: Barnabas

Work Order Number(s): 17022707

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

Sample(s) received at a temperature greater than 6 degrees C and ice was not present.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 17022707
Report Prepared For: Recycled Aggregates, LLC, Washington, DC
Project Name: Barnabas
Project Manager: David Cantwell

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
SM2540G	3815329	Initial	17022707-001	1062	S	140341	140341	02/27/2017	02/27/2017 15:46	02/27/2017 15:46
SW-846 6020 A	3815329	Initial	17022707-001	1033	S	65052	140411	02/27/2017	02/27/2017 16:53	02/28/2017 17:35
	65052-1-BKS	BKS	65052-1-BKS	1033	S	65052	140411	--------	02/27/2017 16:53	02/28/2017 16:09
	65052-1-BLK	BLK	65052-1-BLK	1033	S	65052	140411	--------	02/27/2017 16:53	02/28/2017 16:02
	1706-TP-A S	MS	17022401-001 S	1033	S	65052	140411	02/23/2017	02/27/2017 16:53	02/28/2017 16:22
	1706-TP-A SD	MSD	17022401-001 SD	1033	S	65052	140411	02/23/2017	02/27/2017 16:53	02/28/2017 16:29
	3815329	Reanalysis	17022707-001	1033	S	65052	140464	02/27/2017	02/27/2017 16:53	03/02/2017 14:27
SW-846 7196 A	3815329	Initial	17022707-001	1053	S	65068	140429	02/27/2017	02/28/2017 14:26	03/01/2017 13:00
	65068-1-BKS	BKS	65068-1-BKS	1053	S	65068	140429	--------	02/28/2017 14:26	03/01/2017 12:39
	65068-1-BLK	BLK	65068-1-BLK	1053	S	65068	140429	--------	02/28/2017 14:26	03/01/2017 12:37
	65068-1-BSD	BSD	65068-1-BSD	1053	S	65068	140429	--------	02/28/2017 14:26	03/01/2017 12:41
	20' Beech (#10) D	MD	17022705-001 D	1053	S	65068	140429	02/17/2017	02/28/2017 14:26	03/01/2017 12:49
	20' Beech (#10) S	MS	17022705-001 S	1053	S	65068	140429	02/17/2017	02/28/2017 14:26	03/01/2017 12:52
Trivalent Calc.	3815329	Initial	17022707-001	1041	S	140466	140466	02/27/2017	03/02/2017 14:27	03/02/2017 14:27

PHASE SEPARATION SCIENCE, INC.

QC Summary 17022707

Recycled Aggregates, LLC
Barnabas

Analytical Method: SW-846 6020 A Prep Method: SW3050B
Seq Number: 140411 Matrix: Solid Date Prep: 02/27/17
MB Sample Id: 65052-1-BLK LCS Sample Id: 65052-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Arsenic	<0.3431	13.72	12.97	95	80-120	mg/kg	02/28/17 16:09	
Barium	<1.716	13.72	13.08	95	80-120	mg/kg	02/28/17 16:09	
Cadmium	<1.716	13.72	12.64	92	80-120	mg/kg	02/28/17 16:09	
Chromium	<1.716	13.72	12.62	92	80-120	mg/kg	02/28/17 16:09	
Lead	<1.716	13.72	13.67	100	80-120	mg/kg	02/28/17 16:09	
Mercury	<0.06862	0.3431	0.3260	95	80-120	mg/kg	02/28/17 16:09	
Selenium	<1.716	13.72	11.37	83	80-120	mg/kg	02/28/17 16:09	
Silver	<1.716	13.72	13.12	96	80-120	mg/kg	02/28/17 16:09	

Analytical Method: SW-846 7196 A Prep Method: SW3060A
Seq Number: 140429 Matrix: Solid Date Prep: 02/28/17
MB Sample Id: 65068-1-BLK LCS Sample Id: 65068-1-BKS LCSD Sample Id: 65068-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chromium, Hexavalent	<1.019	5.095	4.875	96	5.047	99	80-120	3	20	mg/kg	03/01/17 12:39	

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1) *CLIENT: ReAgs | *OFFICE LOC.

*PROJECT MGR: Lynn | *PHONE NO.: (240) 788 3610

EMAIL: dcantwell@re-agg.com | FAX NO.: ( )

*PROJECT NAME: Brennan | PROJECT NO.:

SITE LOCATION: Soil Stock pile | P.O. NO.:

SAMPLER(S): Dave Cantwell | DW CERT NO.:

PSS Work Order #: 17022707 | PAGE ____ OF ____

Matrix Codes: **SW**=Surface Wtr **DW**=Drinking Wtr **GW**=Ground Wtr **WW**=Waste Wtr **O**=Oil **S**=Soil **L**=Liquid **SOL**=Solid **A**=Air **WI**=Wipe

(2)

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used	(3) * Analysis/ Method Required: RCRA, CRG	REMARKS
	3815329	2.22.17	10am	S		G			

(5)

Relinquished By: (1)	Date	Time	Received By:
Dave Cantwell	2/27	2:10	Barb Weber
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)

*Requested TAT (One TAT per COC)
☐ 5-Day ☑ 3-Day ☐ 2-Day
☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required:
COA ☐ QC SUMM ☐ CLP LIKE ☐ OTHER ____

# of Coolers: 0
Custody Seal: Abs
Ice Present: Abs Temp: 19°
Shipping Carrier: Client

Special Instructions:

DW COMPLIANCE? YES ☐
EDD FORMAT TYPE: ____
STATE RESULTS REPORTED TO: MD ☐ DE ☐ PA ☐ VA ☐ WV ☐ OTHER ____

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Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	17022707	**Received By**	Barb Weber
Client Name	Recycled Aggregates, LLC	**Date Received**	02/27/2017 02:10:00 PM
Project Name	Barnabas	**Delivered By**	Client
Disposal Date	04/03/2017	**Tracking No**	Not Applicable
		Logged In By	Barb Weber

Shipping Container(s)

No. of Coolers 1

		Ice	N/A
Custody Seal(s) Intact?	N/A	Temp (deg C)	19
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	David Cantwell
COC agrees with sample labels?	Yes	MD DW Cert. No.	N/A
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 1 Total No. of Containers Received 1

Preservation

Total Metals	(pH<2)	N/A
Dissolved Metals, filtered within 15 minutes of collection	(pH<2)	N/A
Orthophosphorus, filtered within 15 minutes of collection		N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, DOC (field filtered), COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A
524 VOC (Rcvd with trip blanks)	(pH<2)	N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Sample(s) received at a temperature greater than 6 degrees C and ice was not present.

Samples Inspected/Checklist Completed By: Barb Weber Date: 02/27/2017

Barb Weber

PM Review and Approval: N Y Jackson Date: 02/27/2017

Lynn Jackson

Analytical Report for

Recycled Aggregates, LLC

Certificate of Analysis No.: 17040612

Project Manager: Ed Bingham

Project Name : 10 Van St.

Project ID : 12526

April 10, 2017

Phase Separation Science, Inc.

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Baltimore, MD 21228
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PHASE SEPARATION SCIENCE, INC.

April 10, 2017

Ed Bingham
Recycled Aggregates, LLC
1721 S. Capitol St., SW
Washington, DC 20003

Reference: PSS Work Order(s) No: **17040612**
Project Name: 10 Van St.

Project ID.: 12526

Dear Ed Bingham :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **17040612**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on April 19, 2017, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

Sample Summary

Client Name: Recycled Aggregates, LLC

Project Name: 10 Van St.

Work Order Number(s): 17040612

Project ID: 12526

The following samples were received under chain of custody by Phase Separation Science (PSS) on 03/15/2017 at 10:30 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
17040612-001	12526-TP3-8ft	SOIL	03/13/17 11:00
17040612-002	12526-TP4-8ft	SOIL	03/13/17 11:30

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17040612

Recycled Aggregates, LLC, Washington, DC

April 10, 2017

Project Name: 10 Van St.

Project ID: 12526

Sample ID: 12526-TP3-8ft | **Date/Time Sampled: 03/13/2017 11:00** | **PSS Sample ID: 17040612-001**

Matrix: SOIL | **Date/Time Received: 03/15/2017 10:30** | **% Solids: 85**

Chromium, Hexavalent — Analytical Method: SW-846 7196 A — Preparation Method: SW3060A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chromium, Hexavalent	ND	mg/kg	1.2		1	04/07/17	04/07/17 15:08	1053

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C — Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.061		1	04/06/17	04/07/17 11:41	1029
PCB-1221	ND	mg/kg	0.061		1	04/06/17	04/07/17 11:41	1029
PCB-1232	ND	mg/kg	0.061		1	04/06/17	04/07/17 11:41	1029
PCB-1242	ND	mg/kg	0.061		1	04/06/17	04/07/17 11:41	1029
PCB-1248	ND	mg/kg	0.061		1	04/06/17	04/07/17 11:41	1029
PCB-1254	ND	mg/kg	0.061		1	04/06/17	04/07/17 11:41	1029
PCB-1260	ND	mg/kg	0.061		1	04/06/17	04/07/17 11:41	1029
PCB-1262	ND	mg/kg	0.061		1	04/06/17	04/07/17 11:41	1029
PCB-1268	ND	mg/kg	0.061		1	04/06/17	04/07/17 11:41	1029

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17040612

Recycled Aggregates, LLC, Washington, DC

April 10, 2017

Project Name: 10 Van St.

Project ID: 12526

Sample ID: 12526-TP4-8ft **Date/Time Sampled: 03/13/2017 11:30** **PSS Sample ID: 17040612-002**

Matrix: SOIL **Date/Time Received: 03/15/2017 10:30** **% Solids: 85**

Chromium, Hexavalent — Analytical Method: SW-846 7196 A — Preparation Method: SW3060A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chromium, Hexavalent	ND	mg/kg	1.2		1	04/07/17	04/07/17 15:22	1053

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C — Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.057		1	04/06/17	04/07/17 12:09	1029
PCB-1221	ND	mg/kg	0.057		1	04/06/17	04/07/17 12:09	1029
PCB-1232	ND	mg/kg	0.057		1	04/06/17	04/07/17 12:09	1029
PCB-1242	ND	mg/kg	0.057		1	04/06/17	04/07/17 12:09	1029
PCB-1248	ND	mg/kg	0.057		1	04/06/17	04/07/17 12:09	1029
PCB-1254	ND	mg/kg	0.057		1	04/06/17	04/07/17 12:09	1029
PCB-1260	ND	mg/kg	0.057		1	04/06/17	04/07/17 12:09	1029
PCB-1262	ND	mg/kg	0.057		1	04/06/17	04/07/17 12:09	1029
PCB-1268	ND	mg/kg	0.057		1	04/06/17	04/07/17 12:09	1029

Case Narrative Summary

Client Name: Recycled Aggregates, LLC

Project Name: 10 Van St.

Work Order Number(s): 17040612

Project ID: 12526

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

Refer to previous work order 17031508.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 17040612
Report Prepared For: Recycled Aggregates, LLC, Washington, DC
Project Name: 10 Van St.
Project Manager: Ed Bingham

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
SW-846 7196 A	12526-TP3-8ft	Initial	17040612-001	1053	S	65586	141487	03/13/2017	04/07/2017 09:54	04/07/2017 15:08
	12526-TP4-8ft	Initial	17040612-002	1053	S	65586	141487	03/13/2017	04/07/2017 09:54	04/07/2017 15:22
	65586-1-BKS	BKS	65586-1-BKS	1053	S	65586	141487	--------	04/07/2017 09:54	04/07/2017 15:01
	65586-1-BLK	BLK	65586-1-BLK	1053	S	65586	141487	--------	04/07/2017 09:54	04/07/2017 14:59
	65586-1-BSD	BSD	65586-1-BSD	1053	S	65586	141487	--------	04/07/2017 09:54	04/07/2017 15:03
	12526-TP3-8ft D	MD	17040612-001 D	1053	S	65586	141487	03/13/2017	04/07/2017 09:54	04/07/2017 15:11
	12526-TP3-8ft S	MS	17040612-001 S	1053	S	65586	141487	03/13/2017	04/07/2017 09:54	04/07/2017 15:14
SW-846 8082 A	12526-TP3-8ft	Initial	17040612-001	1029	S	65572	141455	03/13/2017	04/06/2017 10:37	04/07/2017 11:41
	12526-TP4-8ft	Initial	17040612-002	1029	S	65572	141455	03/13/2017	04/06/2017 10:37	04/07/2017 12:09
	65572-1-BKS	BKS	65572-1-BKS	1029	S	65572	141455	--------	04/06/2017 10:37	04/06/2017 15:19
	65572-1-BLK	BLK	65572-1-BLK	1029	S	65572	141455	--------	04/06/2017 10:37	04/06/2017 14:50
	65572-1-BSD	BSD	65572-1-BSD	1029	S	65572	141455	--------	04/06/2017 10:37	04/06/2017 15:47
	12526-Sample 5 - 5 ft S	MS	17040517-001 S	1029	S	65572	141455	04/05/2017	04/06/2017 10:37	04/06/2017 16:15
	12526-Sample 5 - 5 ft SD	MSD	17040517-001 SD	1029	S	65572	141455	04/05/2017	04/06/2017 10:37	04/06/2017 16:43

PHASE SEPARATION SCIENCE, INC.

QC Summary 17040612

Recycled Aggregates, LLC
10 Van St.

Analytical Method: SW-846 8082 A Prep Method: SW3550C
Seq Number: 141455 Matrix: Soil Date Prep: 04/06/2017
PSS Sample ID: 17040612-001

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	84		61-150	%	04/07/17 11:41
Tetrachloro-m-xylene	76		42-142	%	04/07/17 11:41

Analytical Method: SW-846 8082 A Prep Method: SW3550C
Seq Number: 141455 Matrix: Soil Date Prep: 04/06/2017
PSS Sample ID: 17040612-002

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	82		61-150	%	04/07/17 12:09
Tetrachloro-m-xylene	76		42-142	%	04/07/17 12:09

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

PHASE SEPARATION SCIENCE, INC.

QC Summary 17040612

Recycled Aggregates, LLC
10 Van St.

Analytical Method: SW-846 7196 A Prep Method: SW3060A
Seq Number: 141487 Matrix: Solid Date Prep: 04/07/17
MB Sample Id: 65586-1-BLK LCS Sample Id: 65586-1-BKS LCSD Sample Id: 65586-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chromium, Hexavalent	<1.018	5.088	4.162	82	4.401	88	80-120	6	20	mg/kg	04/07/17 15:01	

Analytical Method: SW-846 7196 A Prep Method: SW3060A
Seq Number: 141487 Matrix: Soil Date Prep: 04/07/17
Parent Sample Id: 17040612-001 MD Sample Id: 17040612-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Chromium, Hexavalent	<1.169	<1.169	0	20	mg/kg	04/07/17 15:11	U

Analytical Method: SW-846 7196 A Prep Method: SW3060A
Seq Number: 141487 Matrix: Soil Date Prep: 04/07/17
Parent Sample Id: 17040612-001 MS Sample Id: 17040612-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chromium, Hexavalent	<1.186	5.928	4.769	80	75-125	mg/kg	04/07/17 15:14	

Analytical Method: SW-846 8082 A Prep Method: SW3550C
Seq Number: 141455 Matrix: Solid Date Prep: 04/06/17
MB Sample Id: 65572-1-BLK LCS Sample Id: 65572-1-BKS LCSD Sample Id: 65572-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
PCB-1016	<0.04878	0.4878	0.4172	86	0.4138	82	60-110	1	25	mg/kg	04/06/17 15:19	
PCB-1260	<0.04878	0.4878	0.3459	71	0.3465	68	60-98	0	25	mg/kg	04/06/17 15:19	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	86		83		83		61-150	%	04/06/17 15:19
Tetrachloro-m-xylene	91		89		90		42-142	%	04/06/17 15:19

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

17040612

(1) *CLIENT: ECC *OFFICE LOC.

*PROJECT MGR: John Dichl *PHONE NO.:( )

EMAIL: FAX NO.: ( )

*PROJECT NAME: 10 Van St. PROJECT NO.: 12526

SITE LOCATION: P.O. NO.:

SAMPLER(S): Drake H. DW CERT NO.:

PSS Work Order #: 17031508 PAGE 1 OF 1

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

(2)

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used: Ice	Analysis/ Method Required (3) * TPH-DRO	TPH-GRO	BTEX	PAHs TCLP VOC	RCRA Metals	Total Metals	PCBs	Hot TCLP	TCLP SVOCs	Total Pesticides	Total Herbicides	REMARKS
1	12526-TP3-8FT	03/13/17	11:00	S	5	G		X	X	X	X	X	X	X	X	X	X	X	
2	12526-TP4-8FT	03/13/17	11:30	S	5	G		X	X	X	X	X	X	X	X	X	X	X	

(5)

Relinquished By: (1)	Date	Time	Received By:
Drake Hagstrack	03/13/17		John Dichl
Relinquished By: (2) John Dichl	Date 3/15	Time 8:45	Received By: 15134
Relinquished By: (3) 15134	Date 3/15	Time 1630	Received By: Bart Weber
Relinquished By: (4)	Date	Time	Received By:

(4)

Requested TAT (One TAT per COC)
- [x] 5-Day
- [ ] 3-Day
- [ ] 2-Day
- [ ] Next Day
- [ ] Emergency
- [ ] Other

Data Deliverables Required:
COA [ ] QC SUMM [ ] CLP LIKE [ ] OTHER

# of Coolers: 1

Custody Seal: cooler intact

Ice Present: Yes Temp: 1°C

Shipping Carrier: TTE

Special Instructions:

DW COMPLIANCE? YES [ ]

EDD FORMAT TYPE

STATE RESULTS REPORTED TO: MD [ ] DE [ ] PA [ ] VA [ ] WV [ ] OTHER

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Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	17040612	**Received By**	Barb Weber
Client Name	Recycled Aggregates, LLC	**Date Received**	03/15/2017 10:30:00 AM
Project Name	10 Van St.	**Delivered By**	Trans Time Express
Project Number	12526	**Tracking No**	Not Applicable
Disposal Date	04/19/2017	**Logged In By**	Thomas Wingate

Shipping Container(s)

No. of Coolers 1

		Ice	Present
Custody Seal(s) Intact?	Yes	Temp (deg C)	1
Seal(s) Signed / Dated?	Yes	Temp Blank Present	No

Documentation

		Sampler Name	Not Provided
COC agrees with sample labels?	N/A		N/A
Chain of Custody	N/A		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	N/A	Seal(s) Signed / Dated	Not Applicable
Intact?	N/A		
Labeled and Labels Legible?	N/A		

Total No. of Samples Received 2 Total No. of Containers Received 2

Preservation

Total Metals	(pH<2)	N/A
Dissolved Metals, filtered within 15 minutes of collection	(pH<2)	N/A
Orthophosphorus, filtered within 15 minutes of collection		N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, DOC (field filtered), COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A
524 VOC (Rcvd with trip blanks)	(pH<2)	N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Refer to previous work order 17031508.

Samples Inspected/Checklist Completed By: Thomas Wingate Date: 04/06/2017

Thomas Wingate

PM Review and Approval: N Y Jackson Date: 04/07/2017

Lynn Jackson

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PHASE SEPARATION SCIENCE, INC.

February 14, 2017

[redacted]

Reference: PSS Work Order(s) No: 17020710
Project Name: Rolfe St.
Project Location: Arlington, VA

Dear [redacted]:

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered 17020710.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on March 14, 2017, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

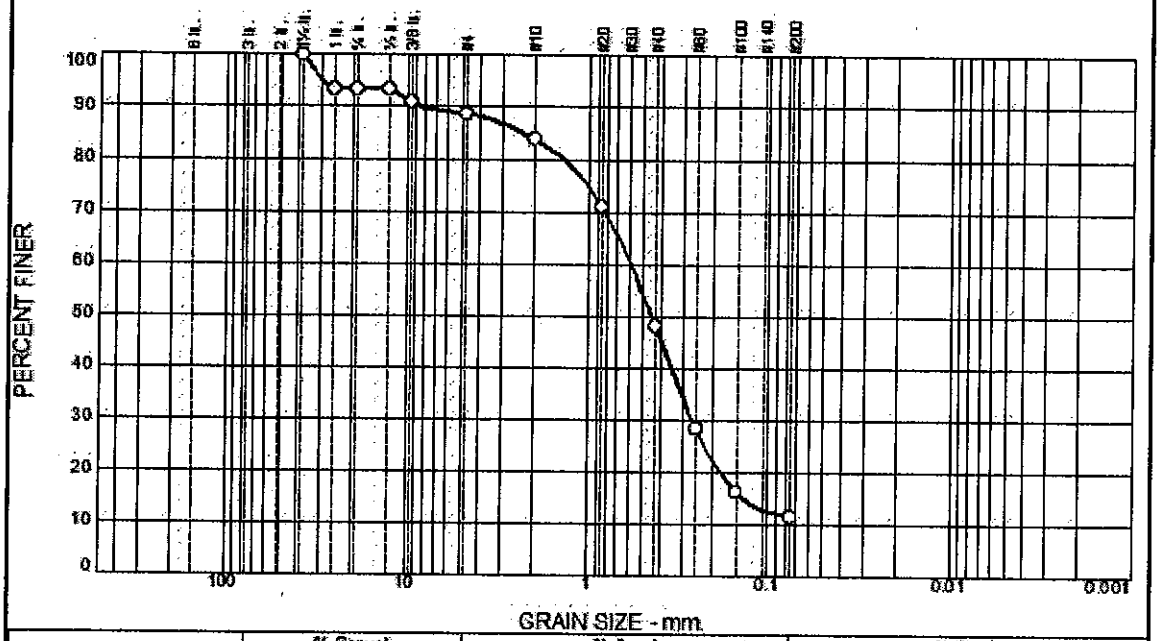
We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal

Dan Prucnal
Laboratory Manager

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0	7	4	5	36	37	11	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1 1/2 in.	100		
1 in.	93		
3/4 in.	93		
1/2 in.	93		
3/8 in.	91		
#4	89		
#10	84		
#20	71		
#40	48		
#60	28		
#100	16		
#200	11		

* (no specification provided)

Material Description

poorly graded sand with silt (SP-SM)

Atterberg Limits (ASTM D 4318)

PL= NP LL= NV PI= NP

Classification

USCS (D 2487)= SP-SM AASHTO (M 145)= A-1-b

Coefficients

D_{90}= 8.2660 D_{85}= 2.3081 D_{60}= 0.5892
D_{50}= 0.4476 D_{30}= 0.2640 D_{15}= 0.1386
D_{10}= C_u= C_c=

Remarks

Tested On 02-14-2017

Date Received: 02-14-2017 **Date Tested:** 02-14-2017

Tested By: Marco

Checked By: CO

Title:

Source of Sample: North Gables **Date Sampled:** 02-14-2017

KIM ENGINEERING, INC.

Gaithersburg, MD

Client: [redacted]

Project:

Project No: Figure

Analytical Report for

[redacted]

Certificate of Analysis No.: 17020710

Project Manager: [redacted]
Project Name : Rolfe St.
Project Location: Arlington, VA

February 14, 2017

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228
Phone: (410) 747-8770
Fax: (410) 788-8723

	A	B	C	D	E	F	G
1	**PSS**	**Client:** [redacted]					
2		Summary of Analytical Results for WO#(s): 17020710					
3		Method: Total (19) Metals					
4		Project Name: Rolfe St.					
5							
6				**#1**			
7				02/07/2017			
8	**Analyte Name**	**Units**	**Cas#**				
9	Aluminum	mg/kg	7429-90-5	**5700**			
10	Antimony	mg/kg	7440-36-0	<2.7			
11	Arsenic	mg/kg	7440-38-2	<0.55			
12	Barium	mg/kg	7440-39-3	**25**			
13	Beryllium	mg/kg	7440-41-7	<2.7			
14	Cadmium	mg/kg	7440-43-9	<2.7			
15	Chromium	mg/kg	7440-47-3	**6.1**			
16	Copper	mg/kg	7440-50-8	<2.7			
17	Iron	mg/kg	7439-89-6	**3000**			
18	Lead	mg/kg	7439-92-1	<2.7			
19	Manganese	mg/kg	7439-96-5	**15**			
20	Mercury	mg/kg	7439-97-6	<0.11			
21	Nickel	mg/kg	7440-02-0	<2.7			
22	Selenium	mg/kg	7782-49-2	<2.7			
23	Silver	mg/kg	7440-22-4	<2.7			
24	Thallium	mg/kg	7440-28-0	<2.2			
25	Tin	mg/kg	7440-31-5	<5.5			
26	Vanadium	mg/kg	7440-62-2	**10**			
27	Zinc	mg/kg	7440-66-6	<11			

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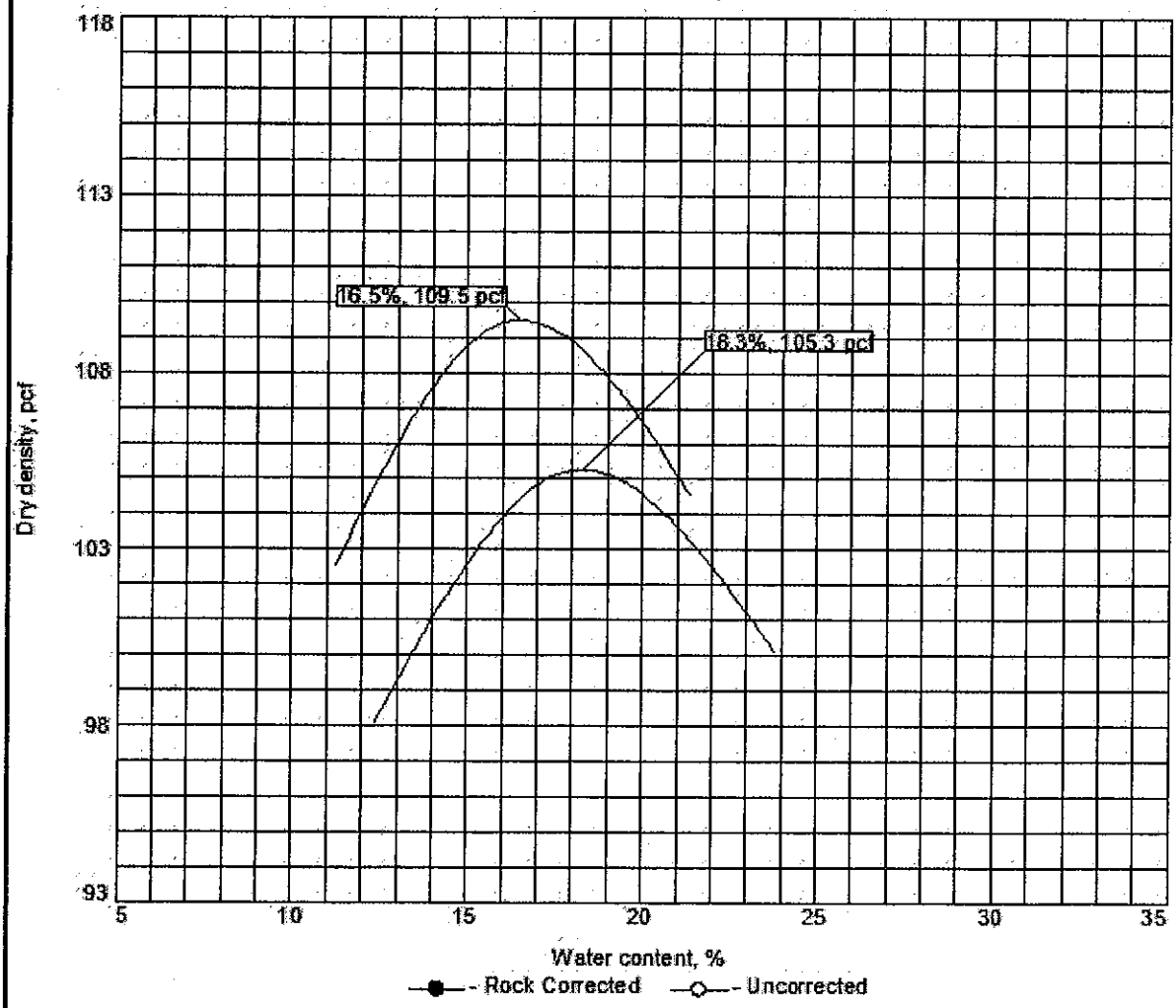
COMPACTION TEST REPORT



Test specification: ASTM D 698-07 Method A Standard
ASTM D 4718-87 Oversize Corr. Applied to Each Test Point

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
	SP-SM	A-1-b			NV	NP	11	11

ROCK CORRECTED TEST RESULTS	UNCORRECTED	MATERIAL DESCRIPTION
Maximum dry density = 109.5 pcf	105.3 pcf	poorly graded sand with silt (SP-SM)
Optimum moisture = 16.5 %	18.3 %	

Project No. Client: [redacted] Remarks:

Sample Summary

Client Name: [redacted]

Project Name: Rolfe St.

Work Order Number(s): 17020710

The following samples were received under chain of custody by Phase Separation Science (PSS) on 02/07/2017 at 10:50 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
17020710-001	#1	SOIL	02/07/17 07:00

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17020710

[redacted] Washington, DC

February 14, 2017

Project Name: Rolfe St.
Project Location: Arlington, VA

Sample ID: #1 — Date/Time Sampled: 02/07/2017 07:00 — PSS Sample ID: 17020710-001
Matrix: SOIL — Date/Time Received: 02/07/2017 10:50 — % Solids: 85

Total (19) Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Aluminum	5,700	mg/kg	550		10	02/08/17	02/10/17 20:21	1051
Antimony	ND	mg/kg	2.7		1	02/08/17	02/09/17 22:51	1051
Arsenic	ND	mg/kg	0.55		1	02/08/17	02/09/17 22:51	1051
Barium	25	mg/kg	2.7		1	02/08/17	02/10/17 19:20	1051
Beryllium	ND	mg/kg	2.7		1	02/08/17	02/09/17 22:51	1051
Cadmium	ND	mg/kg	2.7		1	02/08/17	02/09/17 22:51	1051
Chromium	6.1	mg/kg	2.7		1	02/08/17	02/09/17 22:51	1051
Copper	ND	mg/kg	2.7		1	02/08/17	02/09/17 22:51	1051
Iron	3,000	mg/kg	550		10	02/08/17	02/10/17 20:21	1051
Lead	ND	mg/kg	2.7		1	02/08/17	02/09/17 22:51	1051
Manganese	15	mg/kg	2.7		1	02/08/17	02/10/17 19:20	1051
Mercury	ND	mg/kg	0.11		1	02/08/17	02/09/17 22:51	1051
Nickel	ND	mg/kg	2.7		1	02/08/17	02/09/17 22:51	1051
Selenium	ND	mg/kg	2.7		1	02/08/17	02/09/17 22:51	1051
Silver	ND	mg/kg	2.7		1	02/08/17	02/09/17 22:51	1051
Thallium	ND	mg/kg	2.2		1	02/08/17	02/09/17 22:51	1051
Tin	ND	mg/kg	5.5		1	02/08/17	02/09/17 22:51	1051
Vanadium	10	mg/kg	2.7		1	02/08/17	02/09/17 22:51	1051
Zinc	ND	mg/kg	11		1	02/08/17	02/09/17 22:51	1051

Chromium, Hexavalent — Analytical Method: SW-846 7196 A — Preparation Method: SW3060A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chromium, Hexavalent	ND	mg/kg	1.2		1	02/13/17	02/14/17 11:55	1053

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	12		1	02/08/17	02/09/17 16:23	1059

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17020710

[redacted], Washington, DC

February 14, 2017

Project Name: Rolfe St.
Project Location: Arlington, VA

Sample ID: #1 | **Date/Time Sampled: 02/07/2017 07:00** | **PSS Sample ID: 17020710-001**
Matrix: SOIL | **Date/Time Received: 02/07/2017 10:50** | **% Solids: 85**

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/kg	120		1	02/08/17	02/09/17 01:40	1035

Organochlorine Pesticides — Analytical Method: SW-846 8081 B — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
alpha-BHC	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
gamma-BHC (Lindane)	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
beta-BHC	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
delta-BHC	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Heptachlor	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Aldrin	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Heptachlor epoxide	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
gamma-Chlordane	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
alpha-Chlordane	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
4,4-DDE	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Endosulfan I	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Dieldrin	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Endrin	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
4,4-DDD	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Endosulfan II	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
4,4-DDT	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Endrin aldehyde	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Methoxychlor	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Endosulfan sulfate	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Endrin ketone	ND	ug/kg	4.6		1	02/09/17	02/10/17 19:51	1029
Toxaphene	ND	ug/kg	110		1	02/09/17	02/10/17 19:51	1029
Chlordane	ND	ug/kg	110		1	02/09/17	02/10/17 19:51	1029

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17020710

[redacted] Washington, DC

February 14, 2017

Project Name: Rolfe St.
Project Location: Arlington, VA

Sample ID: #1 | **Date/Time Sampled: 02/07/2017 07:00** | **PSS Sample ID: 17020710-001**
Matrix: SOIL | **Date/Time Received: 02/07/2017 10:50** | **% Solids: 85**

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: SW3550C — Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.057		1	02/08/17	02/09/17 13:59	1029
PCB-1221	ND	mg/kg	0.057		1	02/08/17	02/09/17 13:59	1029
PCB-1232	ND	mg/kg	0.057		1	02/08/17	02/09/17 13:59	1029
PCB-1242	ND	mg/kg	0.057		1	02/08/17	02/09/17 13:59	1029
PCB-1248	ND	mg/kg	0.057		1	02/08/17	02/09/17 13:59	1029
PCB-1254	ND	mg/kg	0.057		1	02/08/17	02/09/17 13:59	1029
PCB-1260	ND	mg/kg	0.057		1	02/08/17	02/09/17 13:59	1029

Chlorinated Herbicides — Analytical Method: SW-846 8151 A — Preparation Method: 8151A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dalapon	ND	ug/kg	560		10	02/08/07	02/08/07 17:49	1029
Dicamba	ND	ug/kg	23		10	02/08/07	02/08/07 17:49	1029
MCPP	ND	ug/kg	23,000		10	02/08/07	02/08/07 17:49	1029
MCPA	ND	ug/kg	23,000		10	02/08/07	02/08/07 17:49	1029
Dichloroprop	ND	ug/kg	230		10	02/08/07	02/08/07 17:49	1029
2,4-D	ND	ug/kg	230		10	02/08/07	02/08/07 17:49	1029
2,4,5-TP (Silvex)	ND	ug/kg	23		10	02/08/07	02/08/07 17:49	1029
2,4,5-T	ND	ug/kg	23		10	02/08/07	02/08/07 17:49	1029
Dinoseb	ND	ug/kg	120		10	02/08/07	02/08/07 17:49	1029
2,4-DB	ND	ug/kg	230		10	02/08/07	02/08/07 17:49	1029

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17020710

[redacted], Washington, DC

February 14, 2017

Project Name: Rolfe St.
Project Location: Arlington, VA

Sample ID: #1 | **Date/Time Sampled: 02/07/2017 07:00** | **PSS Sample ID: 17020710-001**
Matrix: SOIL | **Date/Time Received: 02/07/2017 10:50** | **% Solids: 85**

TCL Volatile Organic Compounds | Analytical Method: SW-846 8260 B | Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acetone	100	ug/kg	24		1	02/09/17	02/09/17 16:44	1011
Benzene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Bromochloromethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Bromodichloromethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Bromoform	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Bromomethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
2-Butanone (MEK)	ND	ug/kg	24		1	02/09/17	02/09/17 16:44	1011
Carbon Disulfide	ND	ug/kg	12		1	02/09/17	02/09/17 16:44	1011
Carbon Tetrachloride	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Chlorobenzene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Chloroethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Chloroform	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Chloromethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Cyclohexane	ND	ug/kg	24		1	02/09/17	02/09/17 16:44	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	48		1	02/09/17	02/09/17 16:44	1011
Dibromochloromethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,2-Dichlorobenzene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,3-Dichlorobenzene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,4-Dichlorobenzene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Dichlorodifluoromethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,1-Dichloroethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,2-Dichloroethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,1-Dichloroethene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
cis-1,2-Dichloroethene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,2-Dichloropropane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
cis-1,3-Dichloropropene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
trans-1,2-Dichloroethene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
trans-1,3-Dichloropropene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Ethylbenzene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17020710

[redacted], Washington, DC

February 14, 2017

Project Name: Rolfe St.
Project Location: Arlington, VA

Sample ID: #1 | **Date/Time Sampled: 02/07/2017 07:00** | **PSS Sample ID: 17020710-001**
Matrix: SOIL | **Date/Time Received: 02/07/2017 10:50** | **% Solids: 85**

TCL Volatile Organic Compounds | Analytical Method: SW-846 8260 B | Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2-Hexanone	ND	ug/kg	24		1	02/09/17	02/09/17 16:44	1011
Isopropylbenzene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Methyl Acetate	ND	ug/kg	24		1	02/09/17	02/09/17 16:44	1011
Methylcyclohexane	ND	ug/kg	24		1	02/09/17	02/09/17 16:44	1011
Methylene Chloride	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
4-Methyl-2-Pentanone	ND	ug/kg	24		1	02/09/17	02/09/17 16:44	1011
Methyl-t-butyl ether	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Naphthalene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Styrene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Tetrachloroethene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Toluene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,2,3-Trichlorobenzene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,2,4-Trichlorobenzene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,1,1-Trichloroethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,1,2-Trichloroethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Trichloroethene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Trichlorofluoromethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
Vinyl Chloride	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011
m,p-Xylenes	ND	ug/kg	12		1	02/09/17	02/09/17 16:44	1011
o-Xylene	ND	ug/kg	5.9		1	02/09/17	02/09/17 16:44	1011

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17020710

[redacted], Washington, DC

February 14, 2017

Project Name: Rolfe St.
Project Location: Arlington, VA

Sample ID: #1 | **Date/Time Sampled: 02/07/2017 07:00** | **PSS Sample ID: 17020710-001**
Matrix: SOIL | **Date/Time Received: 02/07/2017 10:50** | **% Solids: 85**

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Acenaphthylene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Acetophenone	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Anthracene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Atrazine	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Benzo(a)anthracene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Benzo(a)pyrene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Benzo(b)fluoranthene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Benzo(g,h,i)perylene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Benzo(k)fluoranthene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Biphenyl (Diphenyl)	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Butyl benzyl phthalate	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
bis(2-chloroethoxy) methane	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
bis(2-chloroethyl) ether	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
bis(2-chloroisopropyl) ether	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
bis(2-ethylhexyl) phthalate	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
4-Bromophenylphenyl ether	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Di-n-butyl phthalate	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Carbazole	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Caprolactam	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
4-Chloro-3-methyl phenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
4-Chloroaniline	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
2-Chloronaphthalene	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
2-Chlorophenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
4-Chlorophenyl Phenyl ether	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Chrysene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Dibenz(a,h)Anthracene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Dibenzofuran	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
3,3-Dichlorobenzidine	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
2,4-Dichlorophenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17020710

[redacted], Washington, DC

February 14, 2017

Project Name: Rolfe St.
Project Location: Arlington, VA

Sample ID: #1 | Date/Time Sampled: 02/07/2017 07:00 | PSS Sample ID: 17020710-001
Matrix: SOIL | Date/Time Received: 02/07/2017 10:50 | % Solids: 85

TCL Semivolatile Organic Compounds | Analytical Method: SW-846 8270 C | Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Diethyl phthalate	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Dimethyl phthalate	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
2,4-Dimethylphenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
4,6-Dinitro-2-methyl phenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
2,4-Dinitrophenol	ND	ug/kg	390		1	02/10/17	02/11/17 20:50	1055
2,4-Dinitrotoluene	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
2,6-Dinitrotoluene	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Fluoranthene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Fluorene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Hexachlorobenzene	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Hexachlorobutadiene	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Hexachlorocyclopentadiene	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Hexachloroethane	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Indeno(1,2,3-c,d)Pyrene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Isophorone	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
2-Methylnaphthalene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
2-Methyl phenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
3&4-Methylphenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Naphthalene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
2-Nitroaniline	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
3-Nitroaniline	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
4-Nitroaniline	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Nitrobenzene	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
2-Nitrophenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
4-Nitrophenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
N-Nitrosodi-n-propyl amine	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
N-Nitrosodiphenylamine	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Di-n-octyl phthalate	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Pentachlorophenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Phenanthrene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17020710

[redacted] Washington, DC

February 14, 2017

Project Name: Rolfe St.
Project Location: Arlington, VA

Sample ID: #1 **Date/Time Sampled: 02/07/2017 07:00** **PSS Sample ID: 17020710-001**
Matrix: SOIL **Date/Time Received: 02/07/2017 10:50** **% Solids: 85**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: SW3550C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Phenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
Pyrene	ND	ug/kg	20		1	02/10/17	02/11/17 20:50	1055
Pyridine	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
2,4,5-Trichlorophenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055
2,4,6-Trichlorophenol	ND	ug/kg	200		1	02/10/17	02/11/17 20:50	1055

Cyanide — Analytical Method: SW-846 9014 — Preparation Method: SW9010C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Cyanide, Total	ND	mg/kg	0.078		1	02/09/17	02/09/17 13:48	1053

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17020710

[redacted], Washington, DC

February 14, 2017

Project Name: Rolfe St.
Project Location: Arlington, VA

Sample ID: #1 | **Date/Time Sampled: 02/07/2017 07:00** | **PSS Sample ID: 17020710-001**
Matrix: SOIL | **Date/Time Received: 02/07/2017 10:50**

TCLP Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3010A

	Result	Units	RL	Flag	Dil	TCLP Limit	Prepared	Analyzed	Analyst
Arsenic	ND	mg/L	0.050		1	5	02/08/17	02/08/17 15:26	1033
Barium	ND	mg/L	1.0		1	100	02/08/17	02/08/17 15:26	1033
Cadmium	ND	mg/L	0.050		1	1	02/08/17	02/08/17 15:26	1033
Chromium	ND	mg/L	0.050		1	5	02/08/17	02/08/17 15:26	1033
Lead	ND	mg/L	0.050		1	5	02/08/17	02/08/17 15:26	1033
Mercury	ND	mg/L	0.0020		1	0.2	02/08/17	02/08/17 15:26	1033
Selenium	ND	mg/L	0.050		1	1	02/08/17	02/08/17 15:26	1033
Silver	ND	mg/L	0.050		1	5	02/08/17	02/08/17 15:26	1033

TCLP Organochlorine Pesticides — Analytical Method: SW-846 8081 B — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	TCLP Limit	Prepared	Analyzed	Analyst
Gamma-BHC (Lindane)	ND	mg/L	0.00013		1	0.4	02/09/17	02/10/17 19:23	1029
Heptachlor	ND	mg/L	0.00013		1	0.008	02/09/17	02/10/17 19:23	1029
Heptachlor Epoxide	ND	mg/L	0.00013		1	0.008	02/09/17	02/10/17 19:23	1029
Endrin	ND	mg/L	0.00013		1	0.02	02/09/17	02/10/17 19:23	1029
Methoxychlor	ND	mg/L	0.00013		1	10	02/09/17	02/10/17 19:23	1029
Toxaphene	ND	mg/L	0.0033		1	0.5	02/09/17	02/10/17 19:23	1029
Chlordane	ND	mg/L	0.0033		1	0.03	02/09/17	02/10/17 19:23	1029

TCLP Chlorinated Herbicides — Analytical Method: SW-846 8151 A — Preparation Method: 8151A

	Result	Units	RL	Flag	Dil	TCLP Limit	Prepared	Analyzed	Analyst
2,4-D	ND	mg/L	0.0094		10	10	02/08/07	02/08/07 20:03	1029
2,4,5-TP (Silvex)	ND	mg/L	0.00095		10	1	02/08/07	02/08/07 20:03	1029

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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17020710

[redacted] Washington, DC

February 14, 2017

Project Name: Rolfe St.
Project Location: Arlington, VA

Sample ID: #1 **Date/Time Sampled: 02/07/2017 07:00** **PSS Sample ID: 17020710-001**
Matrix: SOIL **Date/Time Received: 02/07/2017 10:50**

TCLP Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	TCLP Limit	Prepared	Analyzed	Analyst
Vinyl chloride	ND	mg/L	0.10		100	0.2	02/10/17	02/10/17 16:10	1011
1,1-Dichloroethene	ND	mg/L	0.10		100	0.7	02/10/17	02/10/17 16:10	1011
2-Butanone (MEK)	ND	mg/L	1.0		100	200	02/10/17	02/10/17 16:10	1011
Chloroform	ND	mg/L	0.10		100	6	02/10/17	02/10/17 16:10	1011
1,2-Dichloroethane	ND	mg/L	0.10		100	0.5	02/10/17	02/10/17 16:10	1011
Carbon tetrachloride	ND	mg/L	0.10		100	0.5	02/10/17	02/10/17 16:10	1011
Benzene	ND	mg/L	0.10		100	0.5	02/10/17	02/10/17 16:10	1011
Trichloroethene	ND	mg/L	0.10		100	0.5	02/10/17	02/10/17 16:10	1011
Tetrachloroethene	ND	mg/L	0.10		100	0.7	02/10/17	02/10/17 16:10	1011
Chlorobenzene	ND	mg/L	0.10		100	100	02/10/17	02/10/17 16:10	1011
1,4-Dichlorobenzene	ND	mg/L	0.10		100	7.5	02/10/17	02/10/17 16:10	1011

TCLP Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	TCLP Limit	Prepared	Analyzed	Analyst
2,4-Dinitrotoluene	ND	mg/L	0.010		1	0.13	02/09/17	02/09/17 20:53	1055
Hexachlorobenzene	ND	mg/L	0.010		1	0.13	02/09/17	02/09/17 20:53	1055
Hexachlorobutadiene	ND	mg/L	0.010		1	0.5	02/09/17	02/09/17 20:53	1055
Hexachloroethane	ND	mg/L	0.010		1	3	02/09/17	02/09/17 20:53	1055
2-Methylphenol	ND	mg/L	0.010		1	200	02/09/17	02/09/17 20:53	1055
3&4-Methylphenol	ND	mg/L	0.010		1	200	02/09/17	02/09/17 20:53	1055
Nitrobenzene	ND	mg/L	0.010		1	2	02/09/17	02/09/17 20:53	1055
Pentachlorophenol	ND	mg/L	0.010		1	100	02/09/17	02/09/17 20:53	1055
Pyridine	ND	mg/L	0.010		1	5	02/09/17	02/09/17 20:53	1055
2,4,6-Trichlorophenol	ND	mg/L	0.010		1	2	02/09/17	02/09/17 20:53	1055
2,4,5-Trichlorophenol	ND	mg/L	0.010		1	400	02/09/17	02/09/17 20:53	1055

Trivalent Chromium by calculation — Analytical Method: Trivalent Calc.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Trivalent Chromium (by subtraction)	6.1	mg/kg			1	02/09/17	02/09/17 22:51	1041

Case Narrative Summary

Client Name: [redacted]

Project Name: Rolfe St.

Work Order Number(s): 17020710

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

Sample(s) received at 0 degrees but no samples were frozen.

Analytical:

Total (19) Metals

Batch: 139807
Initial continuing calibration verification fails high for Aluminum, beryllium, manganese, barium, nickel, copper, and antimony. The low level calibration verification passes for all these elements. Any hits re-run or run at dilution, all non-detect results reported.
Matrix spike and/or matrix spike duplicate (MS/MSD) exceedances identified; see MS summary form.
The concentration of the following analyte(s) in the reference sample was greater than four times the matrix spike concentration : Aluminum, Iron

Batch: 139835
Preceeding continuing calibration verification is low for manganese at 89% below the 90-110% limit. Low level calibrations pass and the closing calibration verifciation passes.
Closing calibration verification is low for barium at 89%, initial and preceeding calibration verifications pass and the low level calibration verificatoins pass for this element.

Chlorinated Herbicides

Batch: 139746
Matrix spike and/or matrix spike duplicate (MS/MSD) exceedances identified; see MS summary form.
Laboratory control sample and/or laboratory control sample duplicate (LCS/LCSD) exceedances identified; see LCS summary form.

TCL Volatile Organic Compounds

Batch: 139777
Surrogate exceedances identified; see surrogate summary form.

TCL Semivolatile Organic Compounds

Batch: 139836
Laboratory control sample and/or laboratory control sample duplicate (LCS/LCSD) exceedances identified; see LCS summary form.
Matrix spike and/or matrix spike duplicate (MS/MSD) exceedances identified; see MS summary form.

Case Narrative Summary

Client Name: [redacted]

Project Name: Rolfe St.

Work Order Number(s): 17020710

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 17020710
Report Prepared For: [redacted], Washington, DC
Project Name: Rolfe St.
Project Manager: [redacted]

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
SM2540G	#1	Initial	17020710-001	1062	S	139673	139673	02/07/2017	02/07/2017 11:39	02/07/2017 11:39
SW-846 6020 A	#1	Initial	17020710-001	1051	S	64775	139807	02/07/2017	02/08/2017 15:15	02/09/2017 22:51
	64775-1-BKS	BKS	64775-1-BKS	1051	S	64775	139807	------	02/08/2017 15:15	02/09/2017 22:45
	64775-1-BLK	BLK	64775-1-BLK	1051	S	64775	139807	------	02/08/2017 15:15	02/09/2017 22:39
	#1 S	MS	17020710-001 S	1051	S	64775	139807	02/07/2017	02/08/2017 15:15	02/09/2017 22:57
	#1 S	Reanalysis	17020710-001 S	1051	S	64775	139807	02/07/2017	02/08/2017 15:15	02/09/2017 22:57
	#1 SD	MSD	17020710-001 SD	1051	S	64775	139807	02/07/2017	02/08/2017 15:15	02/09/2017 23:03
	#1 SD	Reanalysis	17020710-001 SD	1051	S	64775	139807	02/07/2017	02/08/2017 15:15	02/09/2017 23:03
	#1	Reanalysis	17020710-001	1051	S	64775	139835	02/07/2017	02/08/2017 15:15	02/10/2017 19:20
	#1	Reanalysis	17020710-001	1051	S	64775	139835	02/07/2017	02/08/2017 15:15	02/10/2017 20:21
SW-846 6020 A	#1	Initial	17020710-001	1033	W	64753	139727	02/07/2017	02/08/2017 09:51	02/08/2017 15:26
	64753-1-BKS	BKS	64753-1-BKS	1033	W	64753	139727	------	02/08/2017 09:51	02/08/2017 13:46
	64753-1-BLK	BLK	64753-1-BLK	1033	W	64753	139727	------	02/08/2017 09:51	02/08/2017 13:40
	G+K S	MS	17020307-001 S	1033	W	64753	139727	02/03/2017	02/08/2017 09:51	02/08/2017 14:47
	G+K SD	MSD	17020307-001 SD	1033	W	64753	139727	02/03/2017	02/08/2017 09:51	02/08/2017 14:53
SW-846 7196 A	#1	Initial	17020710-001	1053	S	64839	139905	02/07/2017	02/13/2017 14:42	02/14/2017 11:55
	64839-1-BKS	BKS	64839-1-BKS	1053	S	64839	139905	------	02/13/2017 14:42	02/14/2017 11:34
	64839-1-BLK	BLK	64839-1-BLK	1053	S	64839	139905	------	02/13/2017 14:42	02/14/2017 11:32
	64839-1-BSD	BSD	64839-1-BSD	1053	S	64839	139905	------	02/13/2017 14:42	02/14/2017 11:36
	MP-1 D	MD	17020910-001 D	1053	S	64839	139905	01/27/2017	02/13/2017 14:42	02/14/2017 11:44
	MP-1 S	MS	17020910-001 S	1053	S	64839	139905	01/27/2017	02/13/2017 14:42	02/14/2017 11:47
SW-846 8015 C	#1	Initial	17020710-001	1059	S	64770	139763	02/07/2017	02/08/2017 11:30	02/09/2017 16:23
	64770-1-BKS	BKS	64770-1-BKS	1045	S	64770	139763	------	02/08/2017 11:30	02/09/2017 09:57
	64770-1-BLK	BLK	64770-1-BLK	1045	S	64770	139763	------	02/08/2017 11:30	02/09/2017 09:32
	64770-1-BSD	BSD	64770-1-BSD	1045	S	64770	139763	------	02/08/2017 11:30	02/09/2017 10:22
	SB-2 (27-30') S	MS	17020605-002 S	1045	S	64770	139763	02/04/2017	02/08/2017 11:30	02/09/2017 09:57
	SB-2 (27-30') SD	MSD	17020605-002 SD	1045	S	64770	139763	02/04/2017	02/08/2017 11:30	02/09/2017 10:22

Analytical Data Package Information Summary

Work Order(s): 17020710
Report Prepared For: [redacted], Washington, DC
Project Name: Rolfe St.
Project Manager: [redacted]

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
SW-846 8015C	#1	Initial	17020710-001	1035	S	64778	139743	02/07/2017	02/08/2017 19:29	02/09/2017 01:40
	64778-2-BKS	BKS	64778-2-BKS	1035	S	64778	139743	------	02/08/2017 19:29	02/08/2017 21:29
	64778-2-BLK	BLK	64778-2-BLK	1035	S	64778	139743	------	02/08/2017 19:29	02/08/2017 20:59
	11829-TestPit 1-5' S	MS	17020714-001 S	1035	S	64778	139743	02/06/2017	02/08/2017 19:29	02/09/2017 06:17
	11829-TestPit 1-5' SD	MSD	17020714-001 SD	1035	S	64778	139743	02/06/2017	02/08/2017 19:29	02/09/2017 06:49
SW-846 8081 B	#1	Initial	17020710-001	1029	S	64784	139837	02/07/2017	02/09/2017 10:11	02/10/2017 19:51
	64784-1-BKS	BKS	64784-1-BKS	1029	S	64784	139837	------	02/09/2017 10:11	02/10/2017 21:43
	64784-1-BLK	BLK	64784-1-BLK	1029	S	64784	139837	------	02/09/2017 10:11	02/10/2017 21:15
	64784-1-BSD	BSD	64784-1-BSD	1029	S	64784	139837	------	02/09/2017 10:11	02/10/2017 22:11
	#1 S	MS	17020710-001 S	1029	S	64784	139837	02/07/2017	02/09/2017 10:11	02/10/2017 20:47
	#1 SD	MSD	17020710-001 SD	1029	S	64784	139837	02/07/2017	02/09/2017 10:11	02/10/2017 20:19
SW-846 8081 B	#1	Initial	17020710-001	1029	W	64798	139834	02/07/2017	02/09/2017 14:37	02/10/2017 19:23
	64798-1-BKS	BKS	64798-1-BKS	1029	W	64798	139834	------	02/09/2017 14:37	02/10/2017 15:39
	64798-1-BLK	BLK	64798-1-BLK	1029	W	64798	139834	------	02/09/2017 14:37	02/10/2017 15:11
	64798-1-BSD	BSD	64798-1-BSD	1029	W	64798	139834	------	02/09/2017 14:37	02/10/2017 16:07
	173120005 S	MS	17020803-001 S	1029	W	64798	139834	01/26/2017	02/09/2017 14:37	02/10/2017 16:35
SW-846 8082 A	#1	Initial	17020710-001	1029	S	64750	139869	02/07/2017	02/08/2017 09:24	02/09/2017 13:59
	64750-1-BKS	BKS	64750-1-BKS	1029	S	64750	139869	------	02/08/2017 09:24	02/09/2017 10:14
	64750-1-BLK	BLK	64750-1-BLK	1029	S	64750	139869	------	02/08/2017 09:24	02/09/2017 09:46
	64750-1-BSD	BSD	64750-1-BSD	1029	S	64750	139869	------	02/08/2017 09:24	02/09/2017 10:42
	173120005 S	MS	17020803-001 S	1029	S	64750	139869	01/26/2017	02/08/2017 09:24	02/09/2017 11:11
	173120005 SD	MSD	17020803-001 SD	1029	S	64750	139869	01/26/2017	02/08/2017 09:24	02/09/2017 11:39
SW-846 8151 A	#1	Initial	17020710-001	1029	S	64762	139746	02/07/2017	02/08/2017 10:25	02/08/2007 17:49
	64762-1-BKS	BKS	64762-1-BKS	1029	S	64762	139746	------	02/08/2017 10:25	02/08/2007 15:37
	64762-1-BLK	BLK	64762-1-BLK	1029	S	64762	139746	------	02/08/2017 10:25	02/08/2007 15:05
	64762-1-BSD	BSD	64762-1-BSD	1029	S	64762	139746	------	02/08/2017 10:25	02/08/2007 16:10
	#1 S	MS	17020710-001 S	1029	S	64762	139746	02/07/2017	02/08/2017 10:25	02/08/2007 16:43

Analytical Data Package Information Summary

Work Order(s): 17020710
Report Prepared For: [redacted], Washington, DC
Project Name: Rolfe St.
Project Manager: [redacted]

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
SW-846 8151 A	#1 SD	MSD	17020710-001 SD	1029	S	64762	139746	02/07/2017	02/08/2017 10:25	02/08/2007 17:16
SW-846 8151 A	#1	Initial	17020710-001	1029	W	64758	139747	02/07/2017	02/08/2017 10:16	02/08/2007 20:03
	64758-1-BKS	BKS	64758-1-BKS	1029	W	64758	139747	------	02/08/2017 10:16	02/08/2007 21:42
	64758-1-BLK	BLK	64758-1-BLK	1029	W	64758	139747	------	02/08/2017 10:16	02/08/2007 22:15
	64758-1-BSD	BSD	64758-1-BSD	1029	W	64758	139747	------	02/08/2017 10:16	02/08/2007 21:09
	#1 S	MS	17020710-001 S	1029	W	64758	139747	02/07/2017	02/08/2017 10:16	02/08/2007 20:36
SW-846 8260 B	#1	Initial	17020710-001	1011	W	64837	139832	02/07/2017	02/10/2017 09:38	02/10/2017 16:10
	64837-1-BKS	BKS	64837-1-BKS	1011	W	64837	139832	------	02/10/2017 09:38	02/10/2017 10:48
	64837-1-BLK	BLK	64837-1-BLK	1011	W	64837	139832	------	02/10/2017 09:38	02/10/2017 12:03
	E. Side S	MS	17020820-001 S	1011	W	64837	139832	02/07/2017	02/10/2017 09:38	02/10/2017 14:21
	E. Side SD	MSD	17020820-001 SD	1011	W	64837	139832	02/07/2017	02/10/2017 09:38	02/10/2017 14:42
SW-846 8260 B	#1	Initial	17020710-001	1011	S	64809	139777	02/07/2017	02/09/2017 08:35	02/09/2017 16:44
	64809-1-BKS	BKS	64809-1-BKS	1011	S	64809	139777	------	02/09/2017 08:35	02/09/2017 11:22
	64809-1-BLK	BLK	64809-1-BLK	1011	S	64809	139777	------	02/09/2017 08:35	02/09/2017 12:02
	GP-8-1.5 S	MS	17020801-003 S	1011	S	64809	139777	02/07/2017	02/09/2017 08:35	02/09/2017 14:03
	GP-8-1.5 SD	MSD	17020801-003 SD	1011	S	64809	139777	02/07/2017	02/09/2017 08:35	02/09/2017 14:43
SW-846 8270 C	#1	Initial	17020710-001	1055	S	64805	139836	02/07/2017	02/10/2017 08:52	02/11/2017 20:50
	64805-1-BKS	BKS	64805-1-BKS	1055	S	64805	139836	------	02/10/2017 08:52	02/11/2017 19:03
	64805-1-BLK	BLK	64805-1-BLK	1055	S	64805	139836	------	02/10/2017 08:52	02/11/2017 18:36
	64805-1-BSD	BSD	64805-1-BSD	1055	S	64805	139836	------	02/10/2017 08:52	02/11/2017 19:30
	#1 S	MS	17020710-001 S	1055	S	64805	139836	02/07/2017	02/10/2017 08:52	02/11/2017 19:57
	#1 SD	MSD	17020710-001 SD	1055	S	64805	139836	02/07/2017	02/10/2017 08:52	02/11/2017 20:24
SW-846 8270 C	#1	Initial	17020710-001	1055	W	64786	139815	02/07/2017	02/09/2017 10:31	02/09/2017 20:53
	64786-1-BKS	BKS	64786-1-BKS	1055	W	64786	139815	------	02/09/2017 10:31	02/09/2017 18:38
	64786-1-BLK	BLK	64786-1-BLK	1055	W	64786	139815	------	02/09/2017 10:31	02/09/2017 18:11
	64786-1-BSD	BSD	64786-1-BSD	1055	W	64786	139815	------	02/09/2017 10:31	02/09/2017 19:05
	11829-TestPit 1-5' S	MS	17020714-001 S	1055	W	64786	139815	02/06/2017	02/09/2017 10:31	02/09/2017 19:32

Analytical Data Package Information Summary

Work Order(s): 17020710
Report Prepared For: [redacted], Washington, DC
Project Name: Rolfe St.
Project Manager: [redacted]

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
SW-846 9014	#1	Initial	17020710-001	1053	S	64790	139767	02/07/2017	02/09/2017 10:49	02/09/2017 13:48
	64790-1-BKS	BKS	64790-1-BKS	1053	S	64790	139767	------	02/09/2017 10:49	02/09/2017 13:42
	64790-1-BLK	BLK	64790-1-BLK	1053	S	64790	139767	------	02/09/2017 10:49	02/09/2017 13:39
	64790-1-BSD	BSD	64790-1-BSD	1053	S	64790	139767	------	02/09/2017 10:49	02/09/2017 13:45
	#1 S	MS	17020710-001 S	1053	S	64790	139767	02/07/2017	02/09/2017 10:49	02/09/2017 13:51
	#1 SD	MSD	17020710-001 SD	1053	S	64790	139767	02/07/2017	02/09/2017 10:49	02/09/2017 13:54
TrivaIent Calc.	#1	Initial	17020710-001	1041	S	139910	139910	02/07/2017	02/09/2017 22:51	02/09/2017 22:51

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted] Rolfe St.

Analytical Method: SW-846 8151 A
Seq Number: 139746
PSS Sample ID: 17020710-001

Matrix: Soil

Prep Method: SW8151A_PREP
Date Prep: 02/08/2017

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2,4-Dichlorophenylacetic Acid	85		61-144	%	02/08/07 17:49

Analytical Method: SW-846 8151 A
Seq Number: 139747
PSS Sample ID: 17020710-001

Matrix: Soil

Prep Method: SW8151A_PREP
Date Prep: 02/08/2017

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2,4-Dichlorophenylacetic Acid	87		64-126	%	02/08/07 20:03

Analytical Method: SW-846 8081 B
Seq Number: 139834
PSS Sample ID: 17020710-001

Matrix: Soil

Prep Method: SW3510C
Date Prep: 02/09/2017

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	126		43-150	%	02/10/17 19:23
Tetrachloro-m-xylene	65		40-126	%	02/10/17 19:23

Analytical Method: SW-846 8081 B
Seq Number: 139837
PSS Sample ID: 17020710-001

Matrix: Soil

Prep Method: SW3550C
Date Prep: 02/09/2017

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	87		23-165	%	02/10/17 19:51
Tetrachloro-m-xylene	54		31-145	%	02/10/17 19:51

Analytical Method: SW-846 8082 A
Seq Number: 139869
PSS Sample ID: 17020710-001

Matrix: Soil

Prep Method: SW3550C
Date Prep: 02/08/2017

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	73		61-150	%	02/09/17 13:59
Tetrachloro-m-xylene	51		42-142	%	02/09/17 13:59

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted] Rolfe St.

Analytical Method: SW-846 8015 C
Seq Number: 139763
PSS Sample ID: 17020710-001

Matrix: Soil

Prep Method: SW3550C
Date Prep: 02/08/2017

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
o-Terphenyl	85		34-133	%	02/09/17 16:23

Analytical Method: SW-846 8270 C
Seq Number: 139815
PSS Sample ID: 17020710-001

Matrix: Soil

Prep Method: SW3510C
Date Prep: 02/09/2017

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	84		35-107	%	02/09/17 20:53
2-Fluorophenol	72		32-106	%	02/09/17 20:53
Nitrobenzene-d5	76		34-123	%	02/09/17 20:53
Phenol-d6	76		36-111	%	02/09/17 20:53
Terphenyl-D14	125		43-143	%	02/09/17 20:53
2,4,6-Tribromophenol	85		26-122	%	02/09/17 20:53

Analytical Method: SW-846 8270 C
Seq Number: 139836
PSS Sample ID: 17020710-001

Matrix: Soil

Prep Method: SW3550C
Date Prep: 02/10/2017

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	93		32-107	%	02/11/17 20:50
2-Fluorophenol	77		34-113	%	02/11/17 20:50
Nitrobenzene-d5	84		35-123	%	02/11/17 20:50
Phenol-d6	83		34-120	%	02/11/17 20:50
Terphenyl-D14	110		46-154	%	02/11/17 20:50
2,4,6-Tribromophenol	90		31-113	%	02/11/17 20:50

Analytical Method: SW-846 8015C
Seq Number: 139743
PSS Sample ID: 17020710-001

Matrix: Soil

Prep Method: SW5030
Date Prep: 02/08/2017

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	75		50-122	%	02/09/17 01:40

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted] Rolfe St.

Analytical Method: SW-846 8260 B
Seq Number: 139777
PSS Sample ID: 17020710-001

Matrix: Soil

Prep Method: SW5030
Date Prep: 02/09/2017

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	129	*	82-126	%	02/09/17 16:44
Dibromofluoromethane	107		92-113	%	02/09/17 16:44
Toluene-D8	98		94-105	%	02/09/17 16:44

Analytical Method: SW-846 8260 B
Seq Number: 139832
PSS Sample ID: 17020710-001

Matrix: Soil

Prep Method: SW5030B
Date Prep: 02/10/2017

Surrogate	%Rec	Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	105		86-111	%	02/10/17 16:10
Dibromofluoromethane	107		91-119	%	02/10/17 16:10
Toluene-D8	96		90-117	%	02/10/17 16:10

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H = Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted] Rolfe St.

Analytical Method: SW-846 9014 — Prep Method: SW9010C
Seq Number: 139767 — Matrix: Solid — Date Prep: 02/09/17
MB Sample Id: 64790-1-BLK — LCS Sample Id: 64790-1-BKS — LCSD Sample Id: 64790-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Cyanide, Total	<0.06383	0.6383	0.5986	94	0.5157	93	85-115	15	25	mg/kg	02/09/17 13:42	

Analytical Method: SW-846 9014 — Prep Method: SW9010C
Seq Number: 139767 — Matrix: Soil — Date Prep: 02/09/17
Parent Sample Id: 17020710-001 — MS Sample Id: 17020710-001 S — MSD Sample Id: 17020710-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Cyanide, Total	<0.06853	0.6853	0.6091	89	0.6881	89	80-120	12	25	mg/kg	02/09/17 13:51	

Analytical Method: SW-846 6020 A — Prep Method: SW3010A
Seq Number: 139727 — Matrix: Water — Date Prep: 02/08/17
MB Sample Id: 64753-1-BLK — LCS Sample Id: 64753-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Arsenic	<0.05000	0.4000	0.4239	106	80-120	mg/L	02/08/17 13:46	
Barium	<1.000	2.000	2.007	100	80-120	mg/L	02/08/17 13:46	
Cadmium	<0.05000	0.4000	0.3596	90	80-120	mg/L	02/08/17 13:46	
Chromium	<0.05000	0.4000	0.3980	100	80-120	mg/L	02/08/17 13:46	
Lead	<0.05000	0.4000	0.4236	106	80-120	mg/L	02/08/17 13:46	
Mercury	<0.002000	0.01000	0.01040	104	80-120	mg/L	02/08/17 13:46	
Selenium	<0.05000	0.4000	0.4213	105	80-120	mg/L	02/08/17 13:46	
Silver	<0.05000	0.4000	0.3547	89	80-120	mg/L	02/08/17 13:46	

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted]
Rolfe St.

Analytical Method: SW-846 6020 A
Seq Number: 139807
MB Sample Id: 64775-1-BLK

Matrix: Solid
LCS Sample Id: 64775-1-BKS

Prep Method: SW3050B
Date Prep: 02/08/17

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Aluminum	<46.31	92.63	102.9	111	80-120	mg/kg	02/09/17 22:45	
Antimony	<2.316	18.53	20.40	110	80-120	mg/kg	02/09/17 22:45	
Arsenic	<0.4631	18.53	19.99	108	80-120	mg/kg	02/09/17 22:45	
Barium	<2.316	18.53	20.57	111	80-120	mg/kg	02/09/17 22:45	
Beryllium	<2.316	18.53	19.31	104	80-120	mg/kg	02/09/17 22:45	
Cadmium	<2.316	18.53	18.86	102	80-120	mg/kg	02/09/17 22:45	
Chromium	<2.316	18.53	20.15	109	80-120	mg/kg	02/09/17 22:45	
Copper	<2.316	18.53	20.45	110	80-120	mg/kg	02/09/17 22:45	
Iron	<46.31	185.3	202.4	109	80-120	mg/kg	02/09/17 22:45	
Lead	<2.316	18.53	19.65	106	80-120	mg/kg	02/09/17 22:45	
Manganese	<2.316	18.53	20.77	112	80-120	mg/kg	02/09/17 22:45	
Mercury	<0.09263	0.4631	0.4770	103	80-120	mg/kg	02/09/17 22:45	
Nickel	<2.316	18.53	20.33	110	80-120	mg/kg	02/09/17 22:45	
Selenium	<2.316	18.53	17.06	92	80-120	mg/kg	02/09/17 22:45	
Silver	<2.316	18.53	20.07	108	80-120	mg/kg	02/09/17 22:45	
Thallium	<1.853	18.53	17.88	96	80-120	mg/kg	02/09/17 22:45	
Tin	<4.631	18.53	19.89	107	80-120	mg/kg	02/09/17 22:45	
Vanadium	<2.316	18.53	19.79	107	80-120	mg/kg	02/09/17 22:45	
Zinc	<9.263	92.63	91.24	98	80-120	mg/kg	02/09/17 22:45	

Analytical Method: SW-846 6020 A
Seq Number: 139807
Parent Sample Id: 17020710-001

Matrix: Soil
MS Sample Id: 17020710-001 S

Prep Method: SW3050B
Date Prep: 02/08/17
MSD Sample Id: 17020710-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Aluminum	5213	106.4	8191	2799	6971	1577	75-125	16	30	mg/kg	02/09/17 22:57	X
Antimony	<2.659	21.27	13.00	61	12.09	54	75-125	7	30	mg/kg	02/09/17 22:57	X
Arsenic	<0.5319	21.27	20.91	98	19.46	87	75-125	7	30	mg/kg	02/09/17 22:57	
Barium	27.81	21.27	53.35	120	48.02	91	75-125	11	30	mg/kg	02/09/17 22:57	
Beryllium	<2.659	21.27	21.09	99	19.49	87	75-125	8	30	mg/kg	02/09/17 22:57	
Cadmium	<2.659	21.27	21.85	103	20.27	91	75-125	8	30	mg/kg	02/09/17 22:57	
Chromium	6.072	21.27	31.16	118	28.78	102	75-125	8	30	mg/kg	02/09/17 22:57	
Copper	<2.659	21.27	24.05	113	22.44	101	75-125	7	30	mg/kg	02/09/17 22:57	
Iron	2780	212.7	3997	572	3521	332	75-125	13	30	mg/kg	02/09/17 22:57	X
Lead	<2.659	21.27	25.64	121	23.51	105	75-125	9	30	mg/kg	02/09/17 22:57	
Manganese	16.92	21.27	36.76	93	32.06	68	75-125	14	30	mg/kg	02/09/17 22:57	X
Mercury	<0.1064	0.5319	0.5585	105	0.5186	93	75-125	7	30	mg/kg	02/09/17 22:57	
Nickel	<2.659	21.27	24.57	116	23.03	103	75-125	6	30	mg/kg	02/09/17 22:57	
Selenium	<2.659	21.27	18.56	87	17.24	77	75-125	7	30	mg/kg	02/09/17 22:57	
Silver	<2.659	21.27	22.91	108	21.46	96	75-125	7	30	mg/kg	02/09/17 22:57	
Thallium	<2.127	21.27	21.48	101	20.19	90	75-125	6	20	mg/kg	02/09/17 22:57	
Tin	<5.319	21.27	23.11	109	21.35	96	75-125	8	30	mg/kg	02/09/17 22:57	
Vanadium	10.05	21.27	34.81	116	32.55	101	75-125	7	30	mg/kg	02/09/17 22:57	
Zinc	<10.64	106.4	107	101	99.82	90	75-125	7	30	mg/kg	02/09/17 22:57	

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted]
Rolfe St.

Analytical Method: SW-846 7196 A
Seq Number: 139905
MB Sample Id: 64839-1-BLK

Matrix: Solid
LCS Sample Id: 64839-1-BKS

Prep Method: SW3060A
Date Prep: 02/13/17
LCSD Sample Id: 64839-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chromium, Hexavalent	<0.9990	4.995	4.697	94	4.176	85	80-120	12	20	mg/kg	02/14/17 11:34	

Analytical Method: SW-846 8081 B
Seq Number: 139837
MB Sample Id: 64784-1-BLK

Matrix: Solid
LCS Sample Id: 64784-1-BKS

Prep Method: SW3550C
Date Prep: 02/09/17
LCSD Sample Id: 64784-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
alpha-BHC	<4.073	20.37	19.08	94	20.23	98	58-120	6	25	ug/kg	02/10/17 21:43	
gamma-BHC (Lindane)	<4.073	20.37	19.37	95	20.62	100	57-120	6	25	ug/kg	02/10/17 21:43	
beta-BHC	<4.073	20.37	19.33	95	20.33	99	59-118	5	25	ug/kg	02/10/17 21:43	
delta-BHC	<4.073	20.37	18.25	90	19.26	93	52-123	5	25	ug/kg	02/10/17 21:43	
Heptachlor	<4.073	20.37	17.10	84	18.60	90	44-130	8	25	ug/kg	02/10/17 21:43	
Aldrin	<4.073	20.37	19.43	95	20.87	101	59-123	7	25	ug/kg	02/10/17 21:43	
Heptachlor epoxide	<4.073	20.37	19.95	98	21.45	104	61-119	7	25	ug/kg	02/10/17 21:43	
gamma-Chlordane	<4.073	20.37	20.33	100	21.96	107	61-122	8	25	ug/kg	02/10/17 21:43	
alpha-Chlordane	<4.073	20.37	19.81	97	21.44	104	61-123	8	25	ug/kg	02/10/17 21:43	
4,4-DDE	<4.073	20.37	20.66	101	22.30	108	49-131	8	25	ug/kg	02/10/17 21:43	
Endosulfan I	<4.073	20.37	20.07	99	21.73	105	66-118	8	25	ug/kg	02/10/17 21:43	
Dieldrin	<4.073	20.37	19.93	98	21.67	105	60-122	8	25	ug/kg	02/10/17 21:43	
Endrin	<4.073	20.37	16.01	79	17.52	85	39-133	9	25	ug/kg	02/10/17 21:43	
4,4-DDD	<4.073	20.37	21.19	104	22.79	111	44-130	7	25	ug/kg	02/10/17 21:43	
Endosulfan II	<4.073	20.37	21.55	106	23.23	113	59-118	8	25	ug/kg	02/10/17 21:43	
4,4-DDT	<4.073	20.37	19.50	96	22.05	107	28-134	12	25	ug/kg	02/10/17 21:43	
Endrin aldehyde	<4.073	20.37	22.14	109	24.12	117	51-129	9	25	ug/kg	02/10/17 21:43	
Methoxychlor	<4.073	20.37	20.24	99	23.14	112	33-135	13	25	ug/kg	02/10/17 21:43	
Endosulfan sulfate	<4.073	20.37	19.76	97	21.63	105	54-124	9	25	ug/kg	02/10/17 21:43	
Endrin ketone	<4.073	20.37	21.99	108	24.03	117	58-123	9	25	ug/kg	02/10/17 21:43	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	131		115		129		23-165	%	02/10/17 21:43
Tetrachloro-m-xylene	80		84		87		31-145	%	02/10/17 21:43

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted]
Rolfe St.

Analytical Method: SW-846 8081 B
Seq Number: 139834
MB Sample Id: 64798-1-BLK

Matrix: Water
LCS Sample Id: 64798-1-BKS

Prep Method: SW3510C
Date Prep: 02/09/17
LCSD Sample Id: 64798-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gamma-BHC (Lindane)	<0.00004	0.0002	0.0001838	92	0.0001836	92	57-120	0	20	mg/L	02/10/17 15:39	
Heptachlor	<0.00004	0.0002	0.0001597	80	0.0001605	80	49-127	0	20	mg/L	02/10/17 15:39	
Heptachlor Epoxide	<0.00004	0.0002	0.0001891	95	0.0001878	94	62-116	1	20	mg/L	02/10/17 15:39	
Endrin	<0.00004	0.0002	0.0001504	75	0.0001446	72	48-132	4	20	mg/L	02/10/17 15:39	
Methoxychlor	<0.00004	0.0002	0.0001814	91	0.0001751	88	26-156	4	20	mg/L	02/10/17 15:39	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	92		106		95		43-150	%	02/10/17 15:39
Tetrachloro-m-xylene	68		81		76		40-126	%	02/10/17 15:39

Analytical Method: SW-846 8081 B
Seq Number: 139837
Parent Sample Id: 17020710-001

Matrix: Soil
MS Sample Id: 17020710-001 S

Prep Method: SW3550C
Date Prep: 02/09/17
MSD Sample Id: 17020710-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
alpha-BHC	<4.542	22.71	19.31	85	16.57	71	56-114	15	30	ug/kg	02/10/17 20:47	
gamma-BHC (Lindane)	<4.542	22.71	20.19	89	18.32	79	55-116	10	30	ug/kg	02/10/17 20:47	
beta-BHC	<4.542	22.71	20.20	89	20.26	87	62-111	0	30	ug/kg	02/10/17 20:47	
delta-BHC	<4.542	22.71	19.69	87	19.82	85	52-122	1	30	ug/kg	02/10/17 20:47	
Heptachlor	<4.542	22.71	19.93	88	17.54	76	48-127	13	30	ug/kg	02/10/17 20:47	
Aldrin	<4.542	22.71	19.88	88	18.29	79	65-120	8	30	ug/kg	02/10/17 20:47	
Heptachlor epoxide	<4.542	22.71	21.36	94	20.92	90	61-118	2	30	ug/kg	02/10/17 20:47	
gamma-Chlordane	<4.542	22.71	21.51	95	21.52	93	56-126	0	30	ug/kg	02/10/17 20:47	
alpha-Chlordane	<4.542	22.71	21.13	93	20.99	90	54-127	1	30	ug/kg	02/10/17 20:47	
4,4-DDE	<4.542	22.71	22.14	97	22.33	96	52-124	1	30	ug/kg	02/10/17 20:47	
Endosulfan I	<4.542	22.71	21.29	94	21.02	91	61-123	1	30	ug/kg	02/10/17 20:47	
Dieldrin	<4.542	22.71	21.66	95	27.30	118	64-118	23	30	ug/kg	02/10/17 20:47	
Endrin	<4.542	22.71	22.03	97	20.42	88	51-122	8	30	ug/kg	02/10/17 20:47	
4,4-DDD	<4.542	22.71	22.44	99	22.69	98	48-119	1	30	ug/kg	02/10/17 20:47	
Endosulfan II	<4.542	22.71	23.09	102	23.18	100	59-118	0	30	ug/kg	02/10/17 20:47	
4,4-DDT	<4.542	22.71	25.86	114	24.24	104	35-148	6	30	ug/kg	02/10/17 20:47	
Endrin aldehyde	<4.542	22.71	23.98	106	23.25	100	48-123	3	30	ug/kg	02/10/17 20:47	
Methoxychlor	<4.542	22.71	27.10	119	24.65	106	40-137	9	30	ug/kg	02/10/17 20:47	
Endosulfan sulfate	<4.542	22.71	23.15	102	22.69	98	60-121	2	30	ug/kg	02/10/17 20:47	
Endrin ketone	<4.542	22.71	24.09	106	24.34	105	52-127	1	30	ug/kg	02/10/17 20:47	

Surrogate	MS Result	MS Flag	MSD Result	MSD Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	109		121		23-165	%	02/10/17 20:47
Tetrachloro-m-xylene	68		64		31-145	%	02/10/17 20:47

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted]
Rolfe St.

Analytical Method: SW-846 8082 A
Seq Number: 139869
MB Sample Id: 64750-1-BLK

Matrix: Solid
LCS Sample Id: 64750-1-BKS

Prep Method: SW3550C
Date Prep: 02/08/17
LCSD Sample Id: 64750-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
PCB-1016	<0.05092	0.5092	0.4222	83	0.4100	79	60-110	3	25	mg/kg	02/09/17 10:14	
PCB-1260	<0.05092	0.5092	0.4933	97	0.4799	92	60-98	3	25	mg/kg	02/09/17 10:14	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	99		95		103		61-150	%	02/09/17 10:14
Tetrachloro-m-xylene	89		90		96		42-142	%	02/09/17 10:14

Analytical Method: SW-846 8151 A
Seq Number: 139747
MB Sample Id: 64758-1-BLK

Matrix: Water
LCS Sample Id: 64758-1-BKS

Prep Method: SW8151A_PREP
Date Prep: 02/08/17
LCSD Sample Id: 64758-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
2,4-D	<0.001880	0.005640	0.004945	88	0.005527	98	70-104	11	20	mg/L	02/08/07 21:42	
2,4,5-TP (Silvex)	<0.00019	0.00057	0.000437	77	0.0005073	89	59-122	15	20	mg/L	02/08/07 21:42	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
2,4-Dichlorophenylacetic Acid	68		96		103		64-126	%	02/08/07 21:42

Analytical Method: SW-846 8151 A
Seq Number: 139746
MB Sample Id: 64762-1-BLK

Matrix: Solid
LCS Sample Id: 64762-1-BKS

Prep Method: SW8151A_PREP
Date Prep: 02/08/17
LCSD Sample Id: 64762-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Dalapon	<470	1410	796.2	56	615.9	46	66-117	26	25	ug/kg	02/08/07 15:37	LF
Dicamba	<19.42	58.26	53.02	91	47.42	85	73-126	11	25	ug/kg	02/08/07 15:37	
MCPP	<19420	58260	46560	80	40840	73	51-138	13	25	ug/kg	02/08/07 15:37	
MCPA	<19210	57640	45900	80	40220	73	70-133	13	25	ug/kg	02/08/07 15:37	
Dichloroprop	<194.2	582.6	551.5	95	487.3	88	88-162	12	25	ug/kg	02/08/07 15:37	
2,4-D	<194.2	582.6	565.6	97	491.6	88	66-133	14	25	ug/kg	02/08/07 15:37	
2,4,5-TP (Silvex)	<19.63	58.88	52.51	89	44.93	80	71-126	16	25	ug/kg	02/08/07 15:37	F
2,4,5-T	<19.63	58.88	61.93	105	45.30	81	66-125	31	25	ug/kg	02/08/07 15:37	F
Dinoseb	<98.14	294.4	229.8	78	168.6	60	52-101	31	25	ug/kg	02/08/07 15:37	
2,4-DB	<198.3	595	549.4	92	440.8	78	63-134	22	25	ug/kg	02/08/07 15:37	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
2,4-Dichlorophenylacetic Acid	82		90		87		61-144	%	02/08/07 15:37

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted]
Rolfe St.

Analytical Method: SW-846 8082 A
Seq Number: 139869
MB Sample Id: 64750-1-BLK
Matrix: Solid
LCS Sample Id: 64750-1-BKS
Prep Method: SW3550C
Date Prep: 02/08/17
LCSD Sample Id: 64750-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
PCB-1016	<0.05092	0.5092	0.4222	83	0.4100	79	60-110	3	25	mg/kg	02/09/17 10:14	
PCB-1260	<0.05092	0.5092	0.4933	97	0.4799	92	60-98	3	25	mg/kg	02/09/17 10:14	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
Decachlorobiphenyl	99		95		103		61-150	%	02/09/17 10:14
Tetrachloro-m-xylene	89		90		96		42-142	%	02/09/17 10:14

Analytical Method: SW-846 8151 A
Seq Number: 139747
MB Sample Id: 64758-1-BLK
Matrix: Water
LCS Sample Id: 64758-1-BKS
Prep Method: SW8151A_PREP
Date Prep: 02/08/17
LCSD Sample Id: 64758-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
2,4-D	<0.001880	0.005640	0.004945	88	0.005527	98	70-104	11	20	mg/L	02/08/07 21:42	
2,4,5-TP (Silvex)	<0.00019	0.00057	0.000437	77	0.0005073	89	59-122	15	20	mg/L	02/08/07 21:42	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
2,4-Dichlorophenylacetic Acid	68		96		103		64-126	%	02/08/07 21:42

Analytical Method: SW-846 8151 A
Seq Number: 139746
MB Sample Id: 64762-1-BLK
Matrix: Solid
LCS Sample Id: 64762-1-BKS
Prep Method: SW8151A_PREP
Date Prep: 02/08/17
LCSD Sample Id: 64762-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Dalapon	<470	1410	796.2	56	615.9	46	66-117	26	25	ug/kg	02/08/07 15:37	LF
Dicamba	<19.42	58.26	53.02	91	47.42	85	73-126	11	25	ug/kg	02/08/07 15:37	
MCPP	<19420	58260	46560	80	40840	73	51-138	13	25	ug/kg	02/08/07 15:37	
MCPA	<19210	57640	45900	80	40220	73	70-133	13	25	ug/kg	02/08/07 15:37	
Dichloroprop	<194.2	582.6	551.5	95	487.3	88	88-162	12	25	ug/kg	02/08/07 15:37	
2,4-D	<194.2	582.6	565.6	97	491.6	88	66-133	14	25	ug/kg	02/08/07 15:37	
2,4,5-TP (Silvex)	<19.63	58.88	52.51	89	44.93	80	71-126	16	25	ug/kg	02/08/07 15:37	
2,4,5-T	<19.63	58.88	61.93	105	45.30	81	66-125	31	25	ug/kg	02/08/07 15:37	F
Dinoseb	<98.14	294.4	229.8	78	168.6	60	52-101	31	25	ug/kg	02/08/07 15:37	F
2,4-DB	<198.3	595	549.4	92	440.8	78	63-134	22	25	ug/kg	02/08/07 15:37	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
2,4-Dichlorophenylacetic Acid	82		90		87		61-144	%	02/08/07 15:37

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted] Rolfe St.

Analytical Method: SW-846 8151 A
Seq Number: 139746
Parent Sample Id: 17020710-001

Matrix: Soil
MS Sample Id: 17020710-001 S

Prep Method: SW8151A_PREP
Date Prep: 02/08/17
MSD Sample Id: 17020710-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Dalapon	<552.4	1657	1077	65	939.5	56	29-140	14	30	ug/kg	02/08/07 16:43	
Dicamba	<22.63	68.48	63.57	93	55.81	81	78-127	13	30	ug/kg	02/08/07 16:43	
MCPP	<22830	68480	50570	74	44730	65	35-151	12	30	ug/kg	02/08/07 16:43	
MCPA	<22580	67750	51160	76	45840	67	66-140	11	30	ug/kg	02/08/07 16:43	
Dichloroprop	<228.3	684.8	613.4	90	559	81	88-160	9	30	ug/kg	02/08/07 16:43	X
2,4-D	<228.3	684.8	631.6	92	552.3	80	63-137	13	30	ug/kg	02/08/07 16:43	
2,4,5-TP (Silvex)	<23.07	69.20	56.75	82	51.75	74	71-134	9	30	ug/kg	02/08/07 16:43	
2,4,5-T	<23.07	69.20	69.55	101	57.69	83	74-127	19	30	ug/kg	02/08/07 16:43	
Dinoseb	<115.3	346	0	0	151.8	44	36-126	200	30	ug/kg	02/08/07 16:43	XF
2,4-DB	<233.1	699.3	645.9	92	566	80	59-139	13	30	ug/kg	02/08/07 16:43	

Surrogate	MS Result	MS Flag	MSD Result	MSD Flag	Limits	Units	Analysis Date
2,4-Dichlorophenylacetic Acid	89		75		61-144	%	02/08/07 16:43

Analytical Method: SW-846 8151 A
Seq Number: 139747
Parent Sample Id: 17020710-001

Matrix: Soil
MS Sample Id: 17020710-001 S

Prep Method: SW8151A_PREP
Date Prep: 02/08/17

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
2,4-D	<0.009400	0.02820	0.02393	85	51-124	mg/L	02/08/07 20:36	
2,4,5-TP (Silvex)	<0.00095	0.002850	0.002233	78	48-124	mg/L	02/08/07 20:36	

Surrogate	MS Result	MS Flag	Limits	Units	Analysis Date
2,4-Dichlorophenylacetic Acid	98		64-126	%	02/08/07 20:36

Analytical Method: SW-846 8015 C
Seq Number: 139763
MB Sample Id: 64770-1-BLK

Matrix: Solid
LCS Sample Id: 64770-1-BKS

Prep Method: SW3550C
Date Prep: 02/08/17
LCSD Sample Id: 64770-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
TPH-DRO (Diesel Range Organics)	<9.908	33.03	31.63	96	26.13	79	54-123	19	25	mg/kg	02/09/17 09:57	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
o-Terphenyl	84		90		73		34-133	%	02/09/17 09:57

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted]
Rolfe St.

Analytical Method: SW-846 8270 C
Seq Number: 139815
MB Sample Id: 64786-1-BLK

Matrix: Water
LCS Sample Id: 64786-1-BKS

Prep Method: SW3510C
Date Prep: 02/09/17
LCSD Sample Id: 64786-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
2,4-Dinitrotoluene	<0.005000	0.04000	0.03941	99	0.03908	98	70-119	1	20	mg/L	02/09/17 18:38	
Hexachlorobenzene	<0.005000	0.04000	0.03720	93	0.03539	88	76-110	5	20	mg/L	02/09/17 18:38	
Hexachlorobutadiene	<0.005000	0.04000	0.03441	86	0.03216	80	64-113	7	20	mg/L	02/09/17 18:38	
Hexachloroethane	<0.005000	0.04000	0.03173	79	0.02941	74	62-105	8	20	mg/L	02/09/17 18:38	
2-Methylphenol	<0.005000	0.04000	0.03344	84	0.03149	79	67-111	6	20	mg/L	02/09/17 18:38	
3&4-Methylphenol	<0.005000	0.04000	0.03321	83	0.03110	78	67-107	7	20	mg/L	02/09/17 18:38	
Nitrobenzene	<0.005000	0.04000	0.03333	83	0.03186	80	60-107	5	20	mg/L	02/09/17 18:38	
Pentachlorophenol	<0.005000	0.04000	0.03182	80	0.03054	76	63-119	4	20	mg/L	02/09/17 18:38	
Pyridine	<0.005000	0.04000	0.03081	77	0.02914	73	47-105	6	20	mg/L	02/09/17 18:38	
2,4,6-Trichlorophenol	<0.005000	0.04000	0.04025	101	0.03823	96	68-118	5	20	mg/L	02/09/17 18:38	
2,4,5-Trichlorophenol	<0.005000	0.04000	0.03916	98	0.03774	94	69-114	4	20	mg/L	02/09/17 18:38	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	102		104		97		35-107	%	02/09/17 18:38
2-Fluorophenol	95		89		83		32-106	%	02/09/17 18:38
Nitrobenzene-d5	93		91		86		34-123	%	02/09/17 18:38
Phenol-d6	95		90		83		36-111	%	02/09/17 18:38
Terphenyl-D14	135		132		134		43-143	%	02/09/17 18:38
2,4,6-Tribromophenol	94		106		101		26-122	%	02/09/17 18:38

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted]

Rolfe St.

Analytical Method: SW-846 8270 C
Seq Number: 139836
MB Sample Id: 64805-1-BLK

Matrix: Solid
LCS Sample Id: 64805-1-BKS

Prep Method: SW3550C
Date Prep: 02/10/17
LCSD Sample Id: 64805-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Acenaphthene	<16.65	1332	1511	113	1423	107	60-116	6	25	ug/kg	02/11/17 19:03	
Acenaphthylene	<16.65	1332	1506	113	1412	106	61-112	6	25	ug/kg	02/11/17 19:03	H
Acetophenone	<166.5	1332	1121	84	1063	80	57-114	5	25	ug/kg	02/11/17 19:03	
Anthracene	<16.65	1332	1253	94	1192	89	66-115	5	25	ug/kg	02/11/17 19:03	
Atrazine	<166.5	1332	1129	85	1059	80	7-109	6	25	ug/kg	02/11/17 19:03	
Benzo(a)anthracene	<16.65	1332	1349	101	1263	95	71-113	7	25	ug/kg	02/11/17 19:03	
Benzo(a)pyrene	<16.65	1332	1352	102	1273	96	69-118	6	25	ug/kg	02/11/17 19:03	
Benzo(b)fluoranthene	<16.65	1332	1383	104	1299	98	65-126	6	25	ug/kg	02/11/17 19:03	
Benzo(g,h,i)perylene	<16.65	1332	1407	106	1369	103	69-112	3	25	ug/kg	02/11/17 19:03	
Benzo(k)fluoranthene	<16.65	1332	1330	100	1225	92	57-129	8	25	ug/kg	02/11/17 19:03	
Biphenyl (Diphenyl)	<166.5	1332	1297	97	1218	91	62-117	6	25	ug/kg	02/11/17 19:03	
Butyl benzyl phthalate	<166.5	1332	1505	113	1424	107	81-111	6	25	ug/kg	02/11/17 19:03	H
bis(2-chloroethoxy) methane	<166.5	1332	1146	86	1072	80	56-119	7	25	ug/kg	02/11/17 19:03	
bis(2-chloroethyl) ether	<166.5	1332	1135	85	1073	81	55-107	6	25	ug/kg	02/11/17 19:03	
bis(2-chloroisopropyl) ether	<166.5	1332	1082	81	1036	78	44-103	4	25	ug/kg	02/11/17 19:03	
bis(2-ethylhexyl) phthalate	<166.5	1332	1567	118	1483	111	84-109	6	25	ug/kg	02/11/17 19:03	H
4-Bromophenylphenyl ether	<166.5	1332	1278	96	1207	91	63-125	6	25	ug/kg	02/11/17 19:03	
Di-n-butyl phthalate	<166.5	1332	1424	107	1381	104	76-110	3	25	ug/kg	02/11/17 19:03	
Carbazole	<166.5	1332	1248	94	1191	89	58-133	5	25	ug/kg	02/11/17 19:03	
Caprolactam	<166.5	1332	1343	101	1250	94	51-122	7	25	ug/kg	02/11/17 19:03	
4-Chloro-3-methyl phenol	<166.5	1332	1251	94	1173	88	74-119	6	25	ug/kg	02/11/17 19:03	
4-Chloroaniline	<166.5	1332	1169	88	1094	82	45-107	7	25	ug/kg	02/11/17 19:03	
2-Chloronaphthalene	<166.5	1332	1602	120	1513	114	56-113	6	25	ug/kg	02/11/17 19:03	H
2-Chlorophenol	<166.5	1332	1155	87	1097	82	59-113	5	25	ug/kg	02/11/17 19:03	
4-Chlorophenyl Phenyl ether	<166.5	1332	1462	110	1364	102	62-111	7	25	ug/kg	02/11/17 19:03	
Chrysene	<16.65	1332	1320	99	1249	94	72-114	6	25	ug/kg	02/11/17 19:03	
Dibenz(a,h)Anthracene	<16.65	1332	1406	106	1359	102	72-110	3	25	ug/kg	02/11/17 19:03	
Dibenzofuran	<166.5	1332	1477	111	1380	104	62-118	7	25	ug/kg	02/11/17 19:03	
3,3-Dichlorobenzidine	<166.5	1332	1829	137	1759	132	66-141	4	25	ug/kg	02/11/17 19:03	
2,4-Dichlorophenol	<166.5	1332	1153	87	1075	81	68-118	7	25	ug/kg	02/11/17 19:03	
Diethyl phthalate	<166.5	1332	1638	123	1536	115	61-113	6	25	ug/kg	02/11/17 19:03	H
Dimethyl phthalate	<166.5	1332	1537	115	1440	108	69-109	7	25	ug/kg	02/11/17 19:03	H
2,4-Dimethylphenol	<166.5	1332	1110	83	1050	79	57-122	6	25	ug/kg	02/11/17 19:03	
4,6-Dinitro-2-methyl phenol	<166.5	1332	1082	81	1029	77	50-134	5	25	ug/kg	02/11/17 19:03	
2,4-Dinitrophenol	<333	1332	976	73	962.4	72	24-144	1	25	ug/kg	02/11/17 19:03	
2,4-Dinitrotoluene	<166.5	1332	1468	110	1365	102	61-124	7	25	ug/kg	02/11/17 19:03	
2,6-Dinitrotoluene	<166.5	1332	1461	110	1379	104	59-124	6	25	ug/kg	02/11/17 19:03	
Fluoranthene	<16.65	1332	1315	99	1251	94	69-119	5	25	ug/kg	02/11/17 19:03	
Fluorene	<16.65	1332	1501	113	1400	105	65-115	7	25	ug/kg	02/11/17 19:03	
Hexachlorobenzene	<166.5	1332	1365	102	1290	97	63-118	6	25	ug/kg	02/11/17 19:03	
Hexachlorobutadiene	<166.5	1332	1197	90	1138	85	55-120	5	25	ug/kg	02/11/17 19:03	
Hexachlorocyclopentadiene	<166.5	1332	1022	77	1002	75	29-138	2	25	ug/kg	02/11/17 19:03	
Hexachloroethane	<166.5	1332	1149	86	1123	84	54-110	2	25	ug/kg	02/11/17 19:03	
Indeno(1,2,3-c,d)Pyrene	<16.65	1332	1369	103	1321	99	60-127	4	25	ug/kg	02/11/17 19:03	
Isophorone	<166.5	1332	1186	89	1108	83	57-116	7	25	ug/kg	02/11/17 19:03	
2-Methylnaphthalene	<16.65	1332	1129	85	1062	80	70-109	6	25	ug/kg	02/11/17 19:03	
2-Methyl phenol	<166.5	1332	1153	87	1096	82	59-118	5	25	ug/kg	02/11/17 19:03	
3&4-Methylphenol	<166.5	1332	1097	82	1057	79	59-113	4	25	ug/kg	02/11/17 19:03	
Naphthalene	<16.65	1332	1231	92	1157	87	59-108	6	25	ug/kg	02/11/17 19:03	
2-Nitroaniline	<166.5	1332	1466	110	1377	103	51-116	6	25	ug/kg	02/11/17 19:03	
3-Nitroaniline	<166.5	1332	1396	105	1323	99	57-111	5	25	ug/kg	02/11/17 19:03	

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted]

Rolfe St.

Analytical Method: SW-846 8270 C
Seq Number: 139836
MB Sample Id: 64805-1-BLK

Matrix: Solid
LCS Sample Id: 64805-1-BKS

Prep Method: SW3550C
Date Prep: 02/10/17
LCSD Sample Id: 64805-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
4-Nitroaniline	<166.5	1332	1302	98	1258	94	55-125	3	25	ug/kg	02/11/17 19:03	
Nitrobenzene	<166.5	1332	1198	90	1119	84	53-110	7	25	ug/kg	02/11/17 19:03	
2-Nitrophenol	<166.5	1332	1251	94	1182	89	58-124	6	25	ug/kg	02/11/17 19:03	
4-Nitrophenol	<166.5	1332	1295	97	1236	93	51-116	5	25	ug/kg	02/11/17 19:03	
N-Nitrosodi-n-propyl amine	<166.5	1332	1135	85	1066	80	60-98	6	25	ug/kg	02/11/17 19:03	
N-Nitrosodiphenylamine	<166.5	1332	1276	96	1211	91	65-111	5	25	ug/kg	02/11/17 19:03	
Di-n-octyl phthalate	<166.5	1332	1414	106	1281	96	69-120	10	25	ug/kg	02/11/17 19:03	
Pentachlorophenol	<166.5	1332	1185	89	1100	83	56-124	7	25	ug/kg	02/11/17 19:03	
Phenanthrene	<16.65	1332	1377	103	1308	98	67-117	5	25	ug/kg	02/11/17 19:03	
Phenol	<166.5	1332	1154	87	1094	82	58-114	5	25	ug/kg	02/11/17 19:03	
Pyrene	<16.65	1332	1353	102	1285	96	77-111	5	25	ug/kg	02/11/17 19:03	
Pyridine	<166.5	1332	1105	83	1048	79	37-110	5	25	ug/kg	02/11/17 19:03	
2,4,5-Trichlorophenol	<166.5	1332	1375	103	1299	98	64-114	6	25	ug/kg	02/11/17 19:03	
2,4,6-Trichlorophenol	<166.5	1332	1433	108	1330	100	60-125	7	25	ug/kg	02/11/17 19:03	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	LCSD Result	LCSD Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	107		106		102		32-107	%	02/11/17 19:03
2-Fluorophenol	100		89		86		34-113	%	02/11/17 19:03
Nitrobenzene-d5	99		92		88		35-123	%	02/11/17 19:03
Phenol-d6	98		89		86		34-120	%	02/11/17 19:03
Terphenyl-D14	124		117		112		46-154	%	02/11/17 19:03
2,4,6-Tribromophenol	93		108		103		31-113	%	02/11/17 19:03

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted] Rolfe St.

Analytical Method: SW-846 8270 C
Seq Number: 139836
Parent Sample Id: 17020710-001

Matrix: Soil
MS Sample Id: 17020710-001 S

Prep Method: SW3550C
Date Prep: 02/10/17
MSD Sample Id: 17020710-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Acenaphthene	<19.52	1561	1561	100	1621	102	61-106	4	30	ug/kg	02/11/17 19:57	
Acenaphthylene	<19.52	1561	1518	97	1585	100	60-104	4	30	ug/kg	02/11/17 19:57	
Acetophenone	<195.2	1561	1151	74	1213	76	57-103	5	30	ug/kg	02/11/17 19:57	
Anthracene	<19.52	1561	1365	87	1429	90	68-110	5	30	ug/kg	02/11/17 19:57	
Atrazine	<195.2	1561	1243	80	1287	81	6-106	3	30	ug/kg	02/11/17 19:57	
Benzo(a)anthracene	<19.52	1561	1486	95	1570	99	70-111	5	30	ug/kg	02/11/17 19:57	
Benzo(a)pyrene	<19.52	1561	1514	97	1594	101	71-114	5	30	ug/kg	02/11/17 19:57	
Benzo(b)fluoranthene	<19.52	1561	1577	101	1625	102	68-120	3	30	ug/kg	02/11/17 19:57	
Benzo(g,h,i)perylene	<19.52	1561	1611	103	1705	108	64-117	6	30	ug/kg	02/11/17 19:57	
Benzo(k)fluoranthene	<19.52	1561	1410	90	1511	95	60-128	7	30	ug/kg	02/11/17 19:57	
Biphenyl (Diphenyl)	<195.2	1561	1332	85	1397	88	61-107	5	30	ug/kg	02/11/17 19:57	
Butyl benzyl phthalate	<195.2	1561	1754	112	1725	109	74-111	2	30	ug/kg	02/11/17 19:57	X
bis(2-chloroethoxy) methane	<195.2	1561	1183	76	1249	79	55-109	5	30	ug/kg	02/11/17 19:57	
bis(2-chloroethyl) ether	<195.2	1561	1146	73	1229	77	53-98	7	30	ug/kg	02/11/17 19:57	
bis(2-chloroisopropyl) ether	<195.2	1561	1107	71	1172	74	43-93	6	30	ug/kg	02/11/17 19:57	
bis(2-ethylhexyl) phthalate	<195.2	1561	1837	118	1815	114	75-114	1	30	ug/kg	02/11/17 19:57	X
4-Bromophenylphenyl ether	<195.2	1561	1391	89	1441	91	67-114	4	30	ug/kg	02/11/17 19:57	
Di-n-butyl phthalate	<195.2	1561	1592	102	1666	105	72-106	5	30	ug/kg	02/11/17 19:57	
Carbazole	<195.2	1561	1352	87	1455	92	63-132	7	30	ug/kg	02/11/17 19:57	
Caprolactam	<195.2	1561	1426	91	1523	96	51-119	7	30	ug/kg	02/11/17 19:57	
4-Chloro-3-methyl phenol	<195.2	1561	1324	85	1383	87	68-113	4	30	ug/kg	02/11/17 19:57	
4-Chloroaniline	<195.2	1561	1221	78	1303	82	45-100	6	30	ug/kg	02/11/17 19:57	
2-Chloronaphthalene	<195.2	1561	1657	106	1722	109	56-104	4	30	ug/kg	02/11/17 19:57	X
2-Chlorophenol	<195.2	1561	1173	75	1249	79	60-97	6	30	ug/kg	02/11/17 19:57	
4-Chlorophenyl Phenyl ether	<195.2	1561	1543	99	1572	99	61-104	2	30	ug/kg	02/11/17 19:57	
Chrysene	<19.52	1561	1449	93	1518	96	72-114	5	30	ug/kg	02/11/17 19:57	
Dibenz(a,h)Anthracene	<19.52	1561	1619	104	1722	109	69-112	6	30	ug/kg	02/11/17 19:57	
Dibenzofuran	<195.2	1561	1513	97	1577	99	63-109	4	30	ug/kg	02/11/17 19:57	
3,3-Dichlorobenzidine	<195.2	1561	2039	131	2164	136	74-134	6	30	ug/kg	02/11/17 19:57	X
2,4-Dichlorophenol	<195.2	1561	1196	77	1259	79	63-109	5	30	ug/kg	02/11/17 19:57	
Diethyl phthalate	<195.2	1561	1769	113	1852	117	60-108	5	30	ug/kg	02/11/17 19:57	X
Dimethyl phthalate	<195.2	1561	1628	104	1708	108	64-104	5	30	ug/kg	02/11/17 19:57	X
2,4-Dimethylphenol	<195.2	1561	1046	67	1082	68	44-107	3	30	ug/kg	02/11/17 19:57	
4,6-Dinitro-2-methyl phenol	<195.2	1561	1201	77	1339	84	51-130	11	30	ug/kg	02/11/17 19:57	
2,4-Dinitrophenol	<390.3	1561	1102	71	1288	81	12-150	16	30	ug/kg	02/11/17 19:57	
2,4-Dinitrotoluene	<195.2	1561	1568	100	1666	105	61-123	6	30	ug/kg	02/11/17 19:57	
2,6-Dinitrotoluene	<195.2	1561	1567	100	1637	103	58-120	4	30	ug/kg	02/11/17 19:57	
Fluoranthene	<19.52	1561	1428	91	1522	96	69-114	6	30	ug/kg	02/11/17 19:57	
Fluorene	<19.52	1561	1559	100	1623	102	66-106	4	30	ug/kg	02/11/17 19:57	
Hexachlorobenzene	<195.2	1561	1490	95	1559	98	63-114	5	30	ug/kg	02/11/17 19:57	
Hexachlorobutadiene	<195.2	1561	1235	79	1295	82	55-107	5	30	ug/kg	02/11/17 19:57	
Hexachlorocyclopentadiene	<195.2	1561	1025	66	1159	73	36-120	12	30	ug/kg	02/11/17 19:57	
Hexachloroethane	<195.2	1561	1167	75	1253	79	52-99	7	30	ug/kg	02/11/17 19:57	
Indeno(1,2,3-c,d)Pyrene	<19.52	1561	1594	102	1694	107	63-123	6	30	ug/kg	02/11/17 19:57	
Isophorone	<195.2	1561	1219	78	1277	81	57-106	5	30	ug/kg	02/11/17 19:57	
2-Methylnaphthalene	<19.52	1561	1168	75	1236	78	63-102	6	30	ug/kg	02/11/17 19:57	
2-Methyl phenol	<195.2	1561	1180	76	1236	78	60-103	5	30	ug/kg	02/11/17 19:57	
3&4-Methylphenol	<195.2	1561	1150	74	1190	75	58-101	3	30	ug/kg	02/11/17 19:57	
Naphthalene	<19.52	1561	1237	79	1318	83	59-97	6	30	ug/kg	02/11/17 19:57	
2-Nitroaniline	<195.2	1561	1542	99	1616	102	52-109	5	30	ug/kg	02/11/17 19:57	
3-Nitroaniline	<195.2	1561	1479	95	1582	100	59-109	7	30	ug/kg	02/11/17 19:57	

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted]
Rolfe St.

Analytical Method: SW-846 8270 C
Seq Number: 139836
Parent Sample Id: 17020710-001
Matrix: Soil
MS Sample Id: 17020710-001 S
Prep Method: SW3550C
Date Prep: 02/10/17
MSD Sample Id: 17020710-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
4-Nitroaniline	<195.2	1561	1414	91	1544	97	60-121	9	30	ug/kg	02/11/17 19:57	
Nitrobenzene	<195.2	1561	1207	77	1290	81	52-100	7	30	ug/kg	02/11/17 19:57	
2-Nitrophenol	<195.2	1561	1281	82	1385	87	62-109	8	30	ug/kg	02/11/17 19:57	
4-Nitrophenol	<195.2	1561	1411	90	1538	97	48-114	9	30	ug/kg	02/11/17 19:57	
N-Nitrosodi-n-propylamine	<195.2	1561	1151	74	1217	77	50-96	6	30	ug/kg	02/11/17 19:57	
N-Nitrosodiphenylamine	<195.2	1561	1392	89	1454	92	64-108	4	30	ug/kg	02/11/17 19:57	
Di-n-octyl phthalate	<195.2	1561	1679	108	1707	108	69-117	2	30	ug/kg	02/11/17 19:57	
Pentachlorophenol	<195.2	1561	1321	85	1403	88	66-114	6	30	ug/kg	02/11/17 19:57	
Phenanthrene	<19.52	1561	1483	95	1563	99	67-115	5	30	ug/kg	02/11/17 19:57	
Phenol	<195.2	1561	1186	76	1245	78	55-106	5	30	ug/kg	02/11/17 19:57	
Pyrene	<19.52	1561	1537	98	1532	97	67-116	0	30	ug/kg	02/11/17 19:57	
Pyridine	<195.2	1561	1084	69	1160	73	41-92	7	30	ug/kg	02/11/17 19:57	
2,4,5-Trichlorophenol	<195.2	1561	1482	95	1537	97	65-107	4	30	ug/kg	02/11/17 19:57	
2,4,6-Trichlorophenol	<195.2	1561	1523	98	1550	98	62-114	2	30	ug/kg	02/11/17 19:57	

Surrogate	MS Result	MS Flag	MSD Result	MSD Flag	Limits	Units	Analysis Date
2-Fluorobiphenyl	98		101		32-107	%	02/11/17 19:57
2-Fluorophenol	78		83		34-113	%	02/11/17 19:57
Nitrobenzene-d5	82		88		35-123	%	02/11/17 19:57
Phenol-d6	81		85		34-120	%	02/11/17 19:57
Terphenyl-D14	115		117		46-154	%	02/11/17 19:57
2,4,6-Tribromophenol	104		108		31-113	%	02/11/17 19:57

Analytical Method: SW-846 8015C
Seq Number: 139743
MB Sample Id: 64778-2-BLK
Matrix: Solid
LCS Sample Id: 64778-2-BKS
Prep Method: SW5030
Date Prep: 02/08/17

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
TPH-GRO (Gasoline Range Organic	<100	5000	4612	92	75-123	ug/kg	02/08/17 21:29	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
a,a,a-Trifluorotoluene	74		91		50-122	%	02/08/17 21:29

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted] Rolfe St.

Analytical Method: SW-846 8260 B
Seq Number: 139777
MB Sample Id: 64809-1-BLK

Matrix: Solid
LCS Sample Id: 64809-1-BKS

Prep Method: SW5030
Date Prep: 02/09/17

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Acetone	<20.00	60.00	69.63	116	46-127	ug/kg	02/09/17 11:22	
Benzene	<5.000	60.00	63.02	105	70-127	ug/kg	02/09/17 11:22	
Bromochloromethane	<5.000	60.00	63.87	106	68-122	ug/kg	02/09/17 11:22	
Bromodichloromethane	<5.000	60.00	63.80	106	68-122	ug/kg	02/09/17 11:22	
Bromoform	<5.000	60.00	59.90	100	57-127	ug/kg	02/09/17 11:22	
Bromomethane	<5.000	60.00	56.40	94	68-123	ug/kg	02/09/17 11:22	
2-Butanone (MEK)	<20.00	60.00	71.86	120	41-136	ug/kg	02/09/17 11:22	
Carbon Disulfide	<10.00	60.00	59.38	99	66-135	ug/kg	02/09/17 11:22	
Carbon Tetrachloride	<5.000	60.00	63.19	105	64-147	ug/kg	02/09/17 11:22	
Chlorobenzene	<5.000	60.00	63.75	106	70-121	ug/kg	02/09/17 11:22	
Chloroethane	<5.000	60.00	51.18	85	66-142	ug/kg	02/09/17 11:22	
Chloroform	<5.000	60.00	63.86	106	68-123	ug/kg	02/09/17 11:22	
Chloromethane	<5.000	60.00	53.86	90	65-136	ug/kg	02/09/17 11:22	
Cyclohexane	<20.00	60.00	62.03	103	62-138	ug/kg	02/09/17 11:22	
1,2-Dibromo-3-Chloropropane	<40.00	60.00	63.72	106	55-122	ug/kg	02/09/17 11:22	
Dibromochloromethane	<5.000	60.00	64.05	107	61-122	ug/kg	02/09/17 11:22	
1,2-Dibromoethane (EDB)	<5.000	60.00	62.41	104	63-119	ug/kg	02/09/17 11:22	
1,2-Dichlorobenzene	<5.000	60.00	67.88	113	65-121	ug/kg	02/09/17 11:22	
1,3-Dichlorobenzene	<5.000	60.00	68.97	115	69-121	ug/kg	02/09/17 11:22	
1,4-Dichlorobenzene	<5.000	60.00	68.60	114	69-118	ug/kg	02/09/17 11:22	
Dichlorodifluoromethane	<5.000	60.00	69.04	115	53-162	ug/kg	02/09/17 11:22	
1,1-Dichloroethane	<5.000	60.00	60.05	100	70-127	ug/kg	02/09/17 11:22	
1,2-Dichloroethane	<5.000	60.00	62.10	104	68-118	ug/kg	02/09/17 11:22	
1,1-Dichloroethene	<5.000	60.00	63.64	106	69-133	ug/kg	02/09/17 11:22	
1,2-Dichloropropane	<5.000	60.00	60.81	101	70-122	ug/kg	02/09/17 11:22	
cis-1,2-Dichloroethene	<5.000	60.00	61.20	102	68-126	ug/kg	02/09/17 11:22	
cis-1,3-Dichloropropene	<5.000	60.00	62.66	104	68-121	ug/kg	02/09/17 11:22	
trans-1,2-Dichloroethene	<5.000	60.00	65.58	109	70-132	ug/kg	02/09/17 11:22	
trans-1,3-Dichloropropene	<5.000	60.00	60.19	100	67-115	ug/kg	02/09/17 11:22	
Ethylbenzene	<5.000	60.00	65.93	110	70-125	ug/kg	02/09/17 11:22	
2-Hexanone	<20.00	60.00	58.18	97	40-121	ug/kg	02/09/17 11:22	
Isopropylbenzene	<5.000	60.00	75.80	126	68-130	ug/kg	02/09/17 11:22	
Methyl Acetate	<20.00	60.00	74.33	124	60-125	ug/kg	02/09/17 11:22	
Methylcyclohexane	<20.00	60.00	68.03	113	62-150	ug/kg	02/09/17 11:22	
Methylene Chloride	<5.000	60.00	56.42	94	67-121	ug/kg	02/09/17 11:22	
4-Methyl-2-Pentanone	<20.00	60.00	63.90	107	48-117	ug/kg	02/09/17 11:22	
Methyl-t-butyl ether	<5.000	60.00	65.81	110	66-119	ug/kg	02/09/17 11:22	
Naphthalene	<5.000	60.00	61.60	103	54-115	ug/kg	02/09/17 11:22	
Styrene	<5.000	60.00	62.83	105	71-120	ug/kg	02/09/17 11:22	
1,1,2,2-Tetrachloroethane	<5.000	60.00	68.90	115	59-122	ug/kg	02/09/17 11:22	
Tetrachloroethene	<5.000	60.00	65.62	109	65-145	ug/kg	02/09/17 11:22	
Toluene	<5.000	60.00	61.59	103	69-129	ug/kg	02/09/17 11:22	
1,2,3-Trichlorobenzene	<5.000	60.00	66.65	111	60-114	ug/kg	02/09/17 11:22	
1,2,4-Trichlorobenzene	<5.000	60.00	69.49	116	64-115	ug/kg	02/09/17 11:22	H
1,1,1-Trichloroethane	<5.000	60.00	63.90	107	65-139	ug/kg	02/09/17 11:22	
1,1,2-Trichloroethane	<5.000	60.00	65.43	109	64-125	ug/kg	02/09/17 11:22	
Trichloroethene	<5.000	60.00	62.69	104	69-133	ug/kg	02/09/17 11:22	
Trichlorofluoromethane	<5.000	60.00	59.17	99	59-153	ug/kg	02/09/17 11:22	
1,1,2-Trichloro-1,2,2-Trifluoroethane	<5.000	60.00	57.33	96	62-139	ug/kg	02/09/17 11:22	
Vinyl Chloride	<5.000	60.00	60.63	101	69-142	ug/kg	02/09/17 11:22	
m,p-Xylenes	<10.00	120	130.6	109	71-124	ug/kg	02/09/17 11:22	

PHASE SEPARATION SCIENCE, INC.
QC Summary 17020710

[redacted] Rolfe St.

Analytical Method: SW-846 8260 B
Seq Number: 139777
MB Sample Id: 64809-1-BLK

Matrix: Solid
LCS Sample Id: 64809-1-BKS

Prep Method: SW5030
Date Prep: 02/09/17

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
o-Xylene	<5.000	60.00	64.05	107	72-123	ug/kg	02/09/17 11:22	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	133	*	103		82-126	%	02/09/17 11:22
Dibromofluoromethane	97		97		92-113	%	02/09/17 11:22
Toluene-D8	97		99		94-105	%	02/09/17 11:22

Analytical Method: SW-846 8260 B
Seq Number: 139832
MB Sample Id: 64837-1-BLK

Matrix: Water
LCS Sample Id: 64837-1-BKS

Prep Method: SW5030B
Date Prep: 02/10/17

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Vinyl chloride	<0.001000	0.05000	0.06076	122	74-138	mg/L	02/10/17 10:48	
1,1-Dichloroethene	<0.001000	0.05000	0.05234	105	85-127	mg/L	02/10/17 10:48	
2-Butanone (MEK)	<0.01000	0.05000	0.03746	75	39-135	mg/L	02/10/17 10:48	
Chloroform	<0.001000	0.05000	0.04966	99	85-128	mg/L	02/10/17 10:48	
1,2-Dichloroethane	<0.001000	0.05000	0.05656	113	86-138	mg/L	02/10/17 10:48	
Carbon tetrachloride	<0.001000	0.05000	0.05348	107	81-138	mg/L	02/10/17 10:48	
Benzene	<0.001000	0.05000	0.05086	102	85-123	mg/L	02/10/17 10:48	
Trichloroethene	<0.001000	0.05000	0.05216	104	87-127	mg/L	02/10/17 10:48	
Tetrachloroethene	<0.001000	0.05000	0.04969	99	83-138	mg/L	02/10/17 10:48	
Chlorobenzene	<0.001000	0.05000	0.05159	103	85-120	mg/L	02/10/17 10:48	
1,4-Dichlorobenzene	<0.001000	0.05000	0.05136	103	81-121	mg/L	02/10/17 10:48	

Surrogate	MB %Rec	MB Flag	LCS Result	LCS Flag	Limits	Units	Analysis Date
4-Bromofluorobenzene	101		101		86-111	%	02/10/17 10:48
Dibromofluoromethane	106		104		91-119	%	02/10/17 10:48
Toluene-D8	98		98		90-117	%	02/10/17 10:48

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H = Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

PSS Work Order #: 17020710   PAGE ___ OF ___

*CLIENT: [redacted]   *OFFICE LOC: Washington DC
*PROJECT MGR: [redacted]   *PHONE NO: [redacted]
EMAIL: [redacted]   FAX NO: ( )
*PROJECT NAME: Rolfe St.   PROJECT NO:
SITE LOCATION: [redacted]   P.O. NO:
SAMPLER(S): [redacted]   DW CERT NO:

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

Preservative Used / Analysis/Method Required: Bain Station All Profile

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	REMARKS
1	#1	2/7/17	7am		4	G	

Relinquished By	Date	Time	Received By
(1) [signature]	2/7/17	7:12	[signature]
(2) [signature]	2/7/17	1650	[signature]
(3)			
(4)			

*Requested TAT (One TAT per COC): ☒ 5-Day ☐ 3-Day ☐ 2-Day ☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required: COA ☐ QC SUMM ☐ CLP LIKE ☐ OTHER ____

Coolers: 1
Custody Seal: Absent
Ice Present: Yes Temp: 3°C
Shipping Carrier: Client

Special Instructions:

DW COMPLIANCE? YES ☐   EDD FORMAT TYPE ____

STATE RESULTS REPORTED TO: MD ☐ DE ☐ PA ☐ VA ☐ WV ☐ OTHER ____

Version 1.000

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. * = REQUIRED

Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	17020710	**Received By**	Thomas Wingate
Client Name	[redacted]	**Date Received**	02/07/2017 10:50:00 AM
Project Name	Rolfe St.	**Delivered By**	Client
Disposal Date	03/14/2017	**Tracking No**	Not Applicable
		Logged In By	Barb Weber

Shipping Container(s)

No. of Coolers 1

Custody Seal(s) Intact?	N/A	Ice	Present
Seal(s) Signed / Dated?	N/A	Temp (deg C)	3
		Temp Blank Present	No

Documentation

COC agrees with sample labels?	Yes	Sampler Name	Sid Chapman
Chain of Custody	Yes	MD DW Cert. No.	N/A

Sample Container

Appropriate for Specified Analysis?	Yes	Custody Seal(s) Intact?	Not Applicable
Intact?	Yes	Seal(s) Signed / Dated	Not Applicable
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 1

Total No. of Containers Received 4

Preservation

Total Metals	(pH<2)	N/A
Dissolved Metals, filtered within 15 minutes of collection	(pH<2)	N/A
Orthophosphorus, filtered within 15 minutes of collection		N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, DOC (field filtered), COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A
524 VOC (Rcvd with trip blanks)	(pH<2)	N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Sample(s) received at 0 degrees but no samples were frozen.

Samples Inspected/Checklist Completed By: Barb Weber Date: 02/07/2017

Barb Weber

PM Review and Approval: Amber Confer Date: 02/07/2017

Amber Confer

Analytical Report for

Recycled Aggregates, LLC

Certificate of Analysis No.: 17022216

Project Manager: David Cantwell

Project Name : Barnabas

Project ID : 1

February 24, 2017

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228
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FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

February 24, 2017

David Cantwell
Recycled Aggregates, LLC
1721 S. Capitol St., SW
Washington, DC 20003

Reference: PSS Work Order(s) No: **17022216**
Project Name: Barnabas

Project ID.: 1

Dear David Cantwell :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **17022216**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on March 29, 2017, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal

Dan Prucnal
Laboratory Manager

Sample Summary

Client Name: Recycled Aggregates, LLC

Project Name: Barnabas

Work Order Number(s): 17022216

Project ID: 1

The following samples were received under chain of custody by Phase Separation Science (PSS) on 02/22/2017 at 03:16 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
17022216-001	20' Beech (#10)	SOIL	02/17/17 14:00

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NBLAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

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BALTIMORE, MD 21228
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PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17022216

Recycled Aggregates, LLC, Washington, DC

February 24, 2017

Project Name: Barnabas

Project ID: 1

Sample ID: 20' Beech (#10) **Date/Time Sampled: 02/17/2017 14:00** **PSS Sample ID: 17022216-001**

Matrix: SOIL **Date/Time Received: 02/22/2017 16:16** **% Solids: 90**

RCRA Metals | Analytical Method: SW-846 6020 A | Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**3.1**	mg/kg	0.44		1	02/22/17	02/24/17 14:19	1051
Barium	**33**	mg/kg	2.2		1	02/22/17	02/24/17 14:19	1051
Cadmium	ND	mg/kg	2.2		1	02/22/17	02/23/17 17:08	1051
Chromium	**16**	mg/kg	2.2		1	02/22/17	02/24/17 14:19	1051
Lead	**7.5**	mg/kg	2.2		1	02/22/17	02/24/17 14:19	1051
Mercury	ND	mg/kg	0.088		1	02/22/17	02/23/17 17:08	1051
Selenium	ND	mg/kg	2.2		1	02/22/17	02/23/17 17:08	1051
Silver	ND	mg/kg	2.2		1	02/22/17	02/23/17 17:08	1051

Case Narrative Summary

Client Name: Recycled Aggregates, LLC

Project Name: Barnabas

Work Order Number(s): 17022216
Project ID: 1

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

Sample(s) received at a temperature greater than 6 degrees C and ice was not present.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 17022216
Report Prepared For: Recycled Aggregates, LLC, Washington, DC
Project Name: Barnabas
Project Manager: David Cantwell

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
SM2540G	20' Beech (#10)	Initial	17022216-001	1062	S	140255	140255	02/17/2017	02/23/2017 16:16	02/23/2017 16:16
SW-846 6020 A	20' Beech (#10)	Initial	17022216-001	1051	S	64988	140252	02/17/2017	02/22/2017 16:28	02/23/2017 17:08
	64988-1-BKS	BKS	64988-1-BKS	1051	S	64988	140252	-------	02/22/2017 16:28	02/23/2017 15:12
	64988-1-BLK	BLK	64988-1-BLK	1051	S	64988	140252	-------	02/22/2017 16:28	02/23/2017 15:06
	SB-1 S	MS	17022118-001 S	1051	S	64988	140252	02/20/2017	02/22/2017 16:28	02/23/2017 15:55
	SB-1 SD	MSD	17022118-001 SD	1051	S	64988	140252	02/20/2017	02/22/2017 16:28	02/23/2017 16:01
	20' Beech (#10)	Reanalysis	17022216-001	1051	S	64988	140286	02/17/2017	02/22/2017 16:28	02/24/2017 14:19

PHASE SEPARATION SCIENCE, INC.

QC Summary 17022216

Recycled Aggregates, LLC
Barnabas

Analytical Method: SW-846 6020 A Prep Method: SW3050B
Seq Number: 140252 Matrix: Solid Date Prep: 02/22/17
MB Sample Id: 64988-1-BLK LCS Sample Id: 64988-1-BKS

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	Limits	Units	Analysis Date	Flag
Arsenic	<0.4209	16.84	16.56	98	80-120	mg/kg	02/23/17 15:12	
Barium	<2.105	16.84	16.37	97	80-120	mg/kg	02/23/17 15:12	
Cadmium	<2.105	16.84	15.79	94	80-120	mg/kg	02/23/17 15:12	
Chromium	<2.105	16.84	16.47	98	80-120	mg/kg	02/23/17 15:12	
Lead	<2.105	16.84	15.87	94	80-120	mg/kg	02/23/17 15:12	
Mercury	<0.08418	0.4209	0.4041	96	80-120	mg/kg	02/23/17 15:12	
Selenium	<2.105	16.84	14.22	84	80-120	mg/kg	02/23/17 15:12	
Silver	<2.105	16.84	16.27	97	80-120	mg/kg	02/23/17 15:12	

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1) *CLIENT: Kelly *OFFICE LOC.
*PROJECT MGR: Cantwell *PHONE NO.: (301) 350-4000
EMAIL: dcantwell@ore-engr.com FAX NO.: ( )
*PROJECT NAME: Barnacles PROJECT NO.: 1
SITE LOCATION: P.O. NO.:
SAMPLER(S): DW CERT NO.:

PSS Work Order #: 1302216 PAGE ____ OF ____

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

(2)

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preservatives Used	(3) * Analysis/ Method Required: PCB's	REMARKS
1	20' Beach (#10)	2/17/11	2PM	S	2	G		4	

(5)

Relinquished By: (1)	Date	Time	Received By:
David Cantwell	2.22	3:16	Barb Wilson
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4) *Requested TAT (One TAT per COC)
☐ 5-Day ☐ 3-Day ☒ 2-Day
☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required:
COA QC SUMM CLP LIKE OTHER
☐ ☐ ☐ ____

Special Instructions:

DW COMPLIANCE? YES ☐
EDD FORMAT TYPE: ____
STATE RESULTS REPORTED TO: MD ☐ DE ☐ PA ☐ VA ☐ WV ☐ OTHER ____

Page 8 of 9

Version 1.000

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	17022216	**Received By**	Barb Weber
Client Name	Recycled Aggregates, LLC	**Date Received**	02/22/2017 03:16:00 PM
Project Name	Barnabas	**Delivered By**	Client
Project Number	1	**Tracking No**	Not Applicable
Disposal Date	03/29/2017	**Logged In By**	Barb Weber

Shipping Container(s)

No. of Coolers 0

		Ice	N/A
Custody Seal(s) Intact?	N/A	Temp (deg C)	17
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	Not Provided
COC agrees with sample labels?	Yes		N/A
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes		
Intact?	Yes	Seal(s) Signed / Dated	Not Applicable
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 1 Total No. of Containers Received 2

Preservation

Total Metals	(pH<2)	N/A
Dissolved Metals, filtered within 15 minutes of collection	(pH<2)	N/A
Orthophosphorus, filtered within 15 minutes of collection		N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, DOC (field filtered), COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A
524 VOC (Rcvd with trip blanks)	(pH<2)	N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Sample(s) received at a temperature greater than 6 degrees C and ice was not present.

Samples Inspected/Checklist Completed By: Barb Weber Date: 02/22/2017

Barb Weber

PM Review and Approval: Amber J Confer Date: 02/22/2017

Amber Confer

Analytical Report for

Recycled Aggregates, LLC

Certificate of Analysis No.: 17022705

Project Manager: David Cantwell

Project Name : Barnabas

Project ID : 1

March 2, 2017

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228
Phone: (410) 747-8770
Fax: (410) 788-8723

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410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

March 2, 2017

David Cantwell
Recycled Aggregates, LLC
1721 S. Capitol St., SW
Washington, DC 20003

Reference: PSS Work Order(s) No: **17022705**
Project Name: Barnabas

Project ID.: 1

Dear David Cantwell :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **17022705**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on March 29, 2017, with the exception of air canisters which are cleaned immediately following analysis. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal

Dan Prucnal
Laboratory Manager

Sample Summary

Client Name: Recycled Aggregates, LLC

Project Name: Barnabas

Work Order Number(s): 17022705

Project ID: 1

The following samples were received under chain of custody by Phase Separation Science (PSS) on 02/22/2017 at 03:16 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
17022705-001	20' Beech (#10)	SOIL	02/17/17 14:00

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. Unless otherwise noted in the case narrative, results are reported on a dry weight basis with the exception of pH, flashpoint, moisture, and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. Sample prepared under EPA 3550C with concentrations greater than 20 mg/Kg should employ the microtip extraction procedure if required to meet data quality objectives.
6. The analysis of acrolein by EPA 624 must be analyzed within three days of sampling unless pH is adjusted to 4-5 units [40 CFR part 136.3(e)].
7. Method 180.1, The Determination of Turbidity by Nephelometry, recommends samples over 40 NTU be diluted until the turbidity falls below 40 units. Routine samples over 40 NTU may not be diluted as long as the data quality objectives are not affected.
8. Alkalinity results analyzed by EPA 310.2 that are reported by dilution are estimated and are not in compliance with method requirements.

Standard Flags/Abbreviations:

B	A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C	Results Pending Final Confirmation.
E	The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail	The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J	The target analyte was positively identified below the reporting limit but greater than the MDL.
MDL	This is the Laboratory Method Detection Limit which is equivalent to the Limit of Detection (LOD). The LOD is an estimate of the minimum amount of a substance that an analytical process can reliably detect. This value will remain constant across multiple similar instrumentation and among different analysts. An LOD is analyte and matrix specific.
ND	Not Detected at or above the reporting limit.
RL	PSS Reporting Limit.
U	Not detected.

Certifications:

NELAP Certifications: PA 68-03330, VA 460156
State Certifications: MD 179, WV 303
Regulated Soil Permit: P330-12-00268
NSWC USCG Accepted Laboratory
LDBE MWAA LD1997-0041-2015

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ROUTE 40 WEST
BALTIMORE, MD 21228
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800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 17022705

Recycled Aggregates, LLC, Washington, DC

March 2, 2017

Project Name: Barnabas

Project ID: 1

Sample ID: 20' Beech (#10) **Date/Time Sampled: 02/17/2017 14:00** **PSS Sample ID: 17022705-001**
Matrix: SOIL **Date/Time Received: 02/22/2017 15:16** **% Solids: 87**

Chromium, Hexavalent — Analytical Method: SW-846 7196 A — Preparation Method: SW3060A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Chromium, Hexavalent	ND	mg/kg	1.1		1	02/28/17	03/01/17 12:46	1053

Sample ID: 20' Beech (#10) **Date/Time Sampled: 02/17/2017 14:00** **PSS Sample ID: 17022705-001**
Matrix: SOIL **Date/Time Received: 02/22/2017 15:16**

Trivalent Chromium by calculation — Analytical Method: Trivalent Calc.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Trivalent Chromium (by subtraction)	**16**	mg/kg			1	02/24/17	02/24/17 14:19	1041

Case Narrative Summary

Client Name: Recycled Aggregates, LLC

Project Name: Barnabas

Work Order Number(s): 17022705
Project ID: 1

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for drinking water and non-potable samples tested for compliance have a maximum holding time of 15 minutes. As such, all laboratory analyses for these analytes exceed holding times.

Matrix spike and matrix spike duplicate analyses may not be performed due to insufficient sample quantity. In these instances, a laboratory control sample and laboratory control sample duplicate are analyzed unless otherwise noted or specified in the method.

Sample Receipt:

Refer to previous Work Order 17022216.

Analytical:

Chromium, Hexavalent

Batch: 140429

Matrix spike and/or matrix spike duplicate (MS/MSD) exceedances identified; see MS summary form.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

Analytical Data Package Information Summary

Work Order(s): 17022705
Report Prepared For: Recycled Aggregates, LLC, Washington, DC
Project Name: Barnabas
Project Manager: David Cantwell

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Prepared	Analyzed
SW-846 7196 A	20' Beech (#10)	Initial	17022705-001	1053	S	65068	140429	02/17/2017	02/28/2017 14:26	03/01/2017 12:46
	65068-1-BKS	BKS	65068-1-BKS	1053	S	65068	140429	--------	02/28/2017 14:26	03/01/2017 12:39
	65068-1-BLK	BLK	65068-1-BLK	1053	S	65068	140429	--------	02/28/2017 14:26	03/01/2017 12:37
	65068-1-BSD	BSD	65068-1-BSD	1053	S	65068	140429	--------	02/28/2017 14:26	03/01/2017 12:41
	20' Beech (#10) D	MD	17022705-001 D	1053	S	65068	140429	02/17/2017	02/28/2017 14:26	03/01/2017 12:49
	20' Beech (#10) S	MS	17022705-001 S	1053	S	65068	140429	02/17/2017	02/28/2017 14:26	03/01/2017 12:52
Trivalent Calc.	20' Beech (#10)	Initial	17022705-001	1041	S	140440	140440	02/17/2017	02/24/2017 14:19	02/24/2017 14:19

PHASE SEPARATION SCIENCE, INC.
QC Summary 17022705

Recycled Aggregates, LLC
Barnabas

Analytical Method: SW-846 7196 A Prep Method: SW3060A
Seq Number: 140429 Matrix: Solid Date Prep: 02/28/17
MB Sample Id: 65068-1-BLK LCS Sample Id: 65068-1-BKS LCSD Sample Id: 65068-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chromium, Hexavalent	<1.019	5.095	4.875	96	5.047	99	80-120	3	20	mg/kg	03/01/17 12:39	

Analytical Method: SW-846 7196 A Prep Method: SW3060A
Seq Number: 140429 Matrix: Soil Date Prep: 02/28/17
Parent Sample Id: 17022705-001 MD Sample Id: 17022705-001 D

Parameter	Parent Result	MD Result	%RPD	RPD Limit	Units	Analysis Date	Flag
Chromium, Hexavalent	<1.155	<1.155	0	20	mg/kg	03/01/17 12:49	U

Analytical Method: SW-846 7196 A Prep Method: SW3060A
Seq Number: 140429 Matrix: Soil Date Prep: 02/28/17
Parent Sample Id: 17022705-001 MS Sample Id: 17022705-001 S

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	Limits	Units	Analysis Date	Flag
Chromium, Hexavalent	<1.164	5.821	3.143	54	75-125	mg/kg	03/01/17 12:52	X

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
H= Recovery of BS,BSD or both exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.
www.phaseonline.com
email: info@phaseonline.com

17022705

①			
*CLIENT: Koltz		*OFFICE LOC.:	
*PROJECT MGR: Cartwell		*PHONE NO.: (301) 35?-400?	
EMAIL: dcartwell@ore-ops.com		FAX NO.: ( )	
*PROJECT NAME: [illegible]		PROJECT NO.: 1	
SITE LOCATION:		P.O. NO.:	
SAMPLER(S):		DW CERT NO.:	

PAGE ____ OF ____

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

② *SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C=COMP G=GRAB	③ Preservative Used / Analysis/Method Required*: RCRA 8												REMARKS
20' Beach (#10)	2/17/17	2PM	S	2	G	4												

⑤ Relinquished By:	Date	Time	Received By:
(1) David Cartwell	2-22	3:16	[illegible]
(2)			
(3)			
(4)			

④ *Requested TAT (One TAT per COC)
☐ 5-Day ☐ 3-Day ☒ 2-Day
☐ Next Day ☐ Emergency ☐ Other

Data Deliverables Required:
☐ COA ☐ QC SUMM ☐ CLP LIKE OTHER ____

Special Instructions:

DW COMPLIANCE? YES ☐

EDD FORMAT TYPE ____

STATE RESULTS REPORTED TO: ☐ MD ☐ DE ☐ PA ☐ VA ☐ WV OTHER ____

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Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	17022705	**Received By**	Barb Weber
Client Name	Recycled Aggregates, LLC	**Date Received**	02/22/2017 03:16:00 PM
Project Name	Barnabas	**Delivered By**	Client
Project Number	1	**Tracking No**	Not Applicable
Disposal Date	03/29/2017	**Logged In By**	Barb Weber

Shipping Container(s)

No. of Coolers 1

		Ice	Absent
Custody Seal(s) Intact?	N/A	Temp (deg C)	17
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

Documentation

		Sampler Name	Not Provided
COC agrees with sample labels?	Yes		N/A
Chain of Custody	N/A		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	N/A	Seal(s) Signed / Dated	Not Applicable
Intact?	N/A		
Labeled and Labels Legible?	N/A		

Total No. of Samples Received 1 Total No. of Containers Received 1

Preservation

Total Metals	(pH<2)	N/A
Dissolved Metals, filtered within 15 minutes of collection	(pH<2)	N/A
Orthophosphorus, filtered within 15 minutes of collection		N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, DOC (field filtered), COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	N/A
Do VOA vials have zero headspace?		N/A
624 VOC (Rcvd at least one unpreserved VOA vial)		N/A
524 VOC (Rcvd with trip blanks)	(pH<2)	N/A

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Refer to previous Work Order 17022216.

Samples Inspected/Checklist Completed By: NYLJackson Date: 02/27/2017
Lynn Jackson

PM Review and Approval: NYLJackson Date: 02/27/2017
Lynn Jackson

Sample_Nu	Client_Sam	Test_Grou	Analysis	Cas_Numb	Method	Qual	Result_Tex	RL	Units	Date_Prepar	Date_Perfor
17022705-1	20' Beech (	Chromium,	Chromium,	18540-29-9	SW-846 7196 A		ND	1.1	mg/kg	2/28/2017	3/1/2017
17022705-1	20' Beech (	Trivalent Cl	Trivalent Cl	16065-83-1	Trivalent Calc.		16		mg/kg	2/24/2017	2/24/2017

Date_Sample	Matrix_Name
2/17/2017	SOIL
2/17/2017	SOIL

	A	B	C	D	E	F	G
1	PSS	Client: Recycled Aggregates, LLC					
2		Summary of Analytical Results for WO#(s): 17022705					
3		Method: Chromium, Hexavalent					
4		Project Name: Barnabas					
5							
6				20' Beech (#10			
7				02/17/2017			
8	**Analyte Name**	**Units**	**Cas#**				
9	Chromium, Hexavalent	mg/kg	18540-29-9	<1.1			

	H
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Attachment 4

DOEE Final Inspection Approval

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF ENERGY AND ENVIRONMENT
INSPECTION AND ENFORCMENT BRANCH

Final Approval Notice

6/18/2017

Ms. Fariba Mahvi, SR. Project Manager
POTOMAC ELECTRIC POWER COMPANY(PEPCO)
PEPCO COOLING TOWER REMEDIATION 3400 BENNING RD., SE
701 NINTH STREET, NW
Washington, DC 20019

RE: 3400 BENNING ROAD NE

Plan No. 5114, File No. 16-5114, Building Permit No. D1600373

Dear Sir or Madam:

In accordance with Title 21 of the District of Columbia Municipal Regulation, Section 503.7 and 518.12, a final inspection and receipt and approval of an As-Built Plan and supporting documents of the completed stormwater management best management practices or land cover was approved by this office on 6/1/2017. A list of BMPs may be found beginning on page 2.

The final inspection and receipt and approval of the As-Built plan for 3400 BENNING ROAD NE satisfies the District's regulations for the implementation of stormwater management for land disturbance. This letter, therefore, confers the final approval of the completed stormwater management best practice or land cover for the above referenced address and Building Permit. A maintenance and operation inspection will be completed within one year of the date of this notice.

If you have any questions regarding this matter, please contact me at (202) 497-8581 or at lawrence.omoregbe@dc.gov.

Sincerely,

LAWRENCE U. OMOREGBE, CFM

Signed electronically on 6/18/2017 2:36:00 AM

Lawrence Omoregbe, , Environmental Engineer, CFM
Inspection & Enforcement Branch
Watershed Protection Division

This property may be eligible for a discount on stormwater and impervious fees on the DC Water bill. For more information, visit doee.dc.gov/riversmartrewards

BMPs at 3400 BENNING ROAD NE

BMP Name	BMP type
5114-1-1 Bioretention Basin #1	Traditional bioretention
5114-1-2 Bioretention Basin #2	Traditional bioretention