water is life

DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY | 5000 OVERLOOK AVENUE, SW | WASHINGTON, DC 20032

March 27, 2019

Ms. Maggie Green (3WP41)
Pretreatment Coordinator
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

RE: Pretreatment Program 2018 Annual Report
NPDES No. DC0021199

Dear Ms. Green:

Enclosed is the DC Water and Sewer Authority's (DC Water) 2018 Annual Pretreatment Program report. The report is arranged as follows:

2018 Annual Report Parts A and B for Blue Plains Advanced Wastewater Treatment Plant (AWTP) Users with the following attachments:

Attachment 1 – Part A with attachments for Significant Industrial Users (SIUs) in the District of Columbia

Attachment 2 – Parts A and B with attachments for Washington Suburban Sanitary Commission (WSSC) SIUs discharging to Blue Plains

Attachment 3 – Parts A and B with attachments for Fairfax County Department of Public Works SIUs discharging to Blue Plains

Attachment 4 - Parts A and B with attachments for Loudoun Water SIUs discharging to Blue Plains

Attachment 5 – Part A for the Town of Vienna

Attachment 6 – Influent, effluent, and sludge data tables
Annual influent and biosolids priority pollutant data
Quarterly influent, effluent, and biosolids additional toxic organics data

If you have any questions or need additional information, please contact Elaine Wilson at 202-787-4177 or elaine.wilson@dcwater.com.

Sincerely,

Aklile Tesfaye
Vice President, Wastewater Operations

Enclosure

cc: Nicoline Shulterbrandt, DOEE
Elaine Wilson, DC Water
I-Hsin McConnell, WSSC (electronic copy)
John Botts, Fairfax County (electronic copy)
Frank Stokes, Loudoun Water (electronic copy)
John Cassidy, Greeley and Hansen (electronic copy)

PART A
PRETREATMENT PERFORMANCE SUMMARY

I. General Information

Control Authority Name	*DC Water and Sewer Authority*				
Address	*5000 Overlook Ave., SW*				
City	*Washington*	State	*DC*	Zip+4	*20032*
Contact Person	*Aklile Tesfaye*		Telephone No.	*202-787-4008*	
Contact Title	*Vice President*		E-mail Address	*atesfaye@dcwater.com*	
NPDES No.	*DC 0021199*		Reporting Period	*01-01-18 to 12-31-18*	
Issuance Date	*07/26/18*		Expiration Date	*08/25/23*	
Total CIUs	*13*		Total MTCIUs	*0*	
Total SNIUs	*34*		Total NSCIUs	*0*	

CIUs - Categorical Industrial Users
MTCIUs – Middle Tier Categorical Industrial Users
SNIUs - Significant Noncategorical Industrial Users
NSCIUs – Nonsignificant Categorical Industrial Users

II. Compliance Monitoring Program

1.	No. of SIUs with current Control Documents	47
2.	No. of SIU Facilities Inspected	47
3.	No. of SIU Facilities Sampled	47
4.	No. of SIUs Submitting Self-Monitoring Reports	47

III. Significant Industrial User Compliance

1.	No. of SIUs Violating a Compliance Schedule / No. on a Schedule	1/6
2.	No. of SIUs in SNC for the July to December Period	0
3.	No. of SIUs in SNC At Any Time During the Calendar Year	1
4.	No. of SIUs in SNC Also in SNC During the Previous Calendar Year	0
5.	No. of NSCIUs that violated any standards or requirements	0

IV. Enforcement Actions

1.	Notices/Letters of Violation Issued to SIUs	23
2.	Enforceable Compliance Schedules Issued to SIUs	29
3.	Civil/Criminal Suits Filed	0
4.	No. of SIUs from which Penalties have been Collected	1
5.	Other Actions (sewer bans, etc.)	3

I certify that the information contained in this report and attachments is complete and accurate to the best of my knowledge (see Part B.V of the instructions).

Aklile Tesfaye	Vice President, Wastewater Operations
Name of Authorized Representative (Print)	Title (Print)
	3/26/19
Signature of Authorized Representative	Date

Section I Attachment
Summary of Blue Plains AWTP Significant Industrial Users

Table 1. List of Categorical Industrial Users and Category as of December 31, 2018

#	Categorical Industrial User	Address	Category	Jurisdiction
1	Adelphi Laboratory Center	2800 Powder Mill Road Adelphi, MD 20783	PSNS 433.17 Metal Finishing; PSNS 469.18 Semiconductor; PSNS 461 – no discharge	WSSC
2	ATK Space Systems	11313 Frederick Avenue Beltsville, MD 20705	PSNS 433.17 Metal Finishing	WSSC
3	Bureau of Engraving and Printing	14th and C Streets, SW Washington, DC 20228	PSNS 433.17 Metal Finishing	DC Water
4	Eaton Corporation	11642 Old Baltimore Pike Beltsville, MD 20705-1294	PSNS 433.17 Metal Finishing	WSSC
5	Emergent BioSolutions	9920 Medical Center Dr. Rockville, MD 20850	PSNS 439.47 Subpart D Pharmaceutical Mfg	WSSC
6	Human Genome Sciences (Large Scale Mfg)	9911 Belward Campus Drive Rockville, MD 20850	PSNS 439.17 Pharmaceutical Mfg	WSSC
7	Human Genome Sciences (Small Scale Mfg)	9910 Belward Campus Drive Rockville, MD 20850	PSNS 439.17 Pharmaceutical Mfg	WSSC
8	Maryland Metal Plating & Polishing	4110 Howard Avenue Kensington, MD 20895	PSNS 433.17 Metal Finishing	WSSC
9	Mid-Atlantic Finishing, Inc.	4656 Addison Road Capitol Heights, MD 20743	PSNS 433.17 Metal Finishing	WSSC
10	Precision Sheet Metal Supply	354 Victory Drive Herndon, VA 20170	PSNS 433 Metal Finishing	Fairfax County
11	TTM Technologies NA	1200 Severn Way Sterling, VA 20166-8904	PSNS 433 Metal Finishing	Loudoun Water
12	United Therapeutics Corp.	1040 Spring St. Silver Spring, MD 20910	PSNS 439.47 Subpart D Pharmaceutical Mfg	WSSC
13	University of MD/DOD Physical Sciences Lab	8050 Greenmeade Drive College Park, MD 20740	PSNS 469.18 Electrical & Electronic Components - Semiconductor	WSSC

Section I Attachment (continued)
Summary of Blue Plains AWTP Significant Industrial Users

Table 2. List of Significant Non-categorical Industrial Users as of December 31, 2018

#	Significant Non-categorical Industrial User	Address	Jurisdiction
1	Amtrak	1401 W St., NE Washington, DC 20018	DC Water
2	Capitol Power Plant	25 E St., SE Washington, DC 20003	DC Water
3	Coca-Cola Bottling Company Consolidated, Inc.	1710 Elton Road Silver Spring, MD 20903	WSSC
4	District Apartments Realty Holding Company, LLC	1401 S St., NW Washington, DC 20009	DC Water
5	District Photo, Inc.	10619 Baltimore Avenue Beltsville, MD 20705	WSSC
6	Fairfax Water	1295 Fred Morin Road Herndon, VA 20170	Fairfax County
7	Fort Detrick-Forest Glen Annex	9100 Brookville Road Silver Spring, MD 20910	WSSC
8	General Services Administration Central Heating and Refrigeration Plant	13th and C Streets, SW Washington, DC 20407	DC Water
9	George Bush Center for Intelligence	930 Dolly Madison Blvd. McLean, VA 22101	Fairfax County
10	GlaxoSmithKline	14200 Shady Grove Road Rockville, MD 20850	WSSC
11	Marva Maid of Landover	6300 Sheriff Road Landover, MD 20785	WSSC
12	MedImmune, Inc.	1 MedImmune Way Gaithersburg, MD 20878	WSSC
13	Metropolitan Washington Airports Authority – Dulles International Airport	44701 Propeller Court Dulles, VA 20166	DC Water
14	National Archives and Records Administration	8601 Adelphi Road College Park, MD 20740	WSSC
15	National Institute of Standards & Technology	00 Muddy Branch Road Gaithersburg, MD 20899	WSSC
16	National Institutes of Health	9000 Rockville Pike Bethesda, MD 20892	WSSC
17	National Institutes of Health – NIAID Fishers Lane	5625 Fishers Lane Bethesda, MD 20852	WSSC

Section I Attachment (continued)
Summary of Blue Plains AWTP Significant Industrial Users

Table 2. List of Significant Non-categorical Industrial Users as of December 31, 2018 (cont.)

#	Significant Noncategorical Industrial User	Address	Jurisdiction
18	Naval Research Laboratory	4555 Overlook Ave., SW Washington, DC 20375-5320	DC Water
19	Naval Support Activity Bethesda	Building 14, Code 0143 8901 Wisconsin Avenue Bethesda, MD 20889	WSSC
20	Naval Support Facility Carderock	9500 MacArthur Blvd. West Bethesda, MD 20817	DC Water
21	Nixon Uniform Services, Inc.	11860 Old Baltimore Pike Beltsville, MD 20705	WSSC
22	Oaks Sanitary Landfill	6001 Olney-Laytonsville Road Laytonsville, MD 20706	WSSC
23	Pepsi Beverages Company	2611 Pepsi Place Cheverly, MD 20781	WSSC
24	Ritchie Rubble Land Reclamation, LLC (formerly Ritchie Rubble Landfill)	2001 Ritchie Marlboro Road Upper Marlboro, MD 20774	WSSC
25	UniFirst Corporation	6201 Sheriff Road Landover, MD 20785	WSSC
26	United States Geological Survey	12201 Sunrise Valley Drive Reston, VA 20192	Fairfax County
27	Venator Americas LLC (formerly Huntsman P&A Americas, LLC)	7011 Muirkirk Road Beltsville, MD 20705	WSSC
28	WMATA Bladensburg Bus Division	2250/51 26th Street, NW Washington, DC 20018	DC Water
29	WMATA Brentwood Major Repair and Overhaul Yard (Rail Yard)	601 T Street, NE Washington, DC 20018	DC Water
30	WMATA Greenbelt (Rail Yard)	5801 Sunnyside Ave. Beltsville, MD 20705	WSSC
31	WMATA Shady Grove (Rail Yard)	15903 Somerville Dr. Rockville, MD 20855	WSSC
32	WMATA Shepherd Parkway Bus Division	2 DC Village, SW Washington, DC 20032	DC Water
33	Watergate Partners LLC	2500 Virginia Ave., NW Washington, DC 20037	DC Water
34	WSSC Potomac Water Filtration Plant	12200 River Road Potomac, MD 20854	WSSC

Section I Attachment (continued)
Summary of Blue Plains AWTP Significant Industrial Users

Additions to the 2018 List of Industrial Users:

None

Deletions to the 2018 List of Industrial Users:

1. InnoScience, Inc. (WSSC) – permit terminated on June 21, 2018

Section II Attachment
Summary of Blue Plains AWTP Significant Industrial Users

Table 3. Summary of Categorical Industrial User Inspection and Monitoring Activities for 2018

#	Categorical Industrial User	Permit Issuance[1]	Permit Effective	Permit Expiration	No. of Inspections	No. of Sampling Events		
						by POTW	by IU	Required
1	Adelphi Laboratory Center	05/19/16	05/22/16	06/30/20	2	2*	8	8
2	ATK Space Systems	06/20/16	06/21/16	06/20/20	1	2	8	8
3	Bureau of Engraving and Printing	08/30/18	09/01/18	08/31/22	1	1	15*	10*
4	Eaton Corporation	06/27/16	06/28/16	06/27/20	2	2*	8	8
5	Emergent BioSolutions	10/03/16	10/03/16	10/02/20	2	2*	8	8
6	Human Genome (LSM)	01/10/15	01/10/15	01/09/19[1]	2	2*	10*	8
7	Human Genome (SSM)	10/20/16	10/22/16	10/21/20	4	2*	14*	14
8	Maryland Metal Plating & Polishing	06/09/16	06/12/16	06/11/20	2	2*	8	8
9	Mid-Atlantic Finishing, Inc.	05/22/16	05/22/16	05/21/20	2	2*	8	8
10	Precision Sheet Metal Supply	11/20/18	11/20/18	11/20/23	1	1	2*	2*
11	TTM Technologies NA	12/31/15	11/01/15	10/31/20	1	1	12	12
12	United Therapeutics Corp.	09/30/15	09/30/15	09/29/19	1	2*	22	22
13	University of MD/DOD Physical Sciences Lab	06/23/16	06/27/16	06/26/20	1	2*	6* [2]	8

*Additional pH monitoring conducted.
(1) Permit administratively extended to March 31, 2019 on December 18, 2018
(2) No process flow for 2nd quarter 2018

Section II Attachment (continued)
Summary of Blue Plains AWTP Significant Industrial Users

Table 4. Summary of Significant Non-Categorical Industrial User Inspection and Monitoring Activities for 2018

#	Categorical Industrial User	Permit Issuance[1]	Permit Effective	Permit Expiration	No. of Inspections	No. of Sampling Events		
						by POTW	by IU	Required
1	Amtrak	06/28/12	07/01/15	06/30/19	1	1	9*	9*
2	Capitol Power Plant	09/25/15	10/01/15	09/30/19	1	1	2*	2*
3	Coca-Cola Bottling Company Consolidated	06/06/16	06/06/16	06/05/20	2	2*	8*	8
4	District Apartments Realty Holding Co., LLC	12/18/15	12/18/15	12/17/19	1	1	2	2
5	District Photo, Inc.	06/09/16	06/13/16	06/12/20	2	2*	8	8
6	Fairfax Water	12/20/17	01/01/18	12/31/20	1	2	2	2
7	Fort Detrick-Forest Glen Annex	09/22/16	09/22/16	09/21/20	4	2*	8*	8*
8	GSA Central Heating and Refrigeration Plant	06/10/16	06/12/16	06/11/20	1	1	2*	2*
9	George Bush Center for Intelligence	12/29/17	01/01/18	12/31/22	1	2	3	3
10	GlaxoSmithKline	01/09/17	01/10/17	01/09/21	3	2*	8*	8
11	Marva Maid of Landover	07/26/16	07/28/16	07/27/20	2	2*	8*	8
12	MedImmune, Inc.	02/01/16	02/04/16	02/03/20	3	2*	8	8
13	Metropolitan Washington Airports Authority – Dulles	11/05/15	12/01/15	11/30/19	1	1	10/ 0 [2]	10/ 0 [2]
14	National Archives and Records Administration	10/11/16	10/11/16	10/10/20	1	2*	8	8
15	National Institute of Standards & Technology	05/26/16	06/01/16	05/31/20	2	2*	9	8

Section II Attachment (continued)
Summary of Blue Plains AWTP Significant Industrial Users

Table 4. Summary of Significant Non-Categorical Industrial User Inspection and Monitoring Activities for 2018 (continued)

#	Categorical Industrial User	Permit Issuance	Permit Effective	Permit Expiration	No. of Inspections	No. of Sampling Events		
						by POTW	by IU	Required
16	National Institutes of Health	06/02/16	06/06/16	06/05/20	2	2*	8	8
17	National Institutes of Health – (NIAID/Fishers Lane)	05/19/17	05/19/17	05/18/21	1	2*	11	8
18	Naval Research Laboratory	09/09/16	09/11/16	09/10/20	1	1	2	2
19	Naval Support Activity Bethesda	08/29/16	08/31/16	08/30/20	2	2*	10	8
20	Naval Support Facility Carderock	04/27/16	04/27/16	03/14/20	1	1	9	8
21	Nixon Uniform Services, Inc.	06/27/16	06/28/16	06/27/20	2	2*	8	8
22	Oaks Sanitary Landfill	08/29/16	08/31/16	08/30/20	2	2	12	11
23	Pepsi Beverages Co.	06/20/16	06/22/16	06/21/20	3	2*	8*	8*
24	Ritchie Land Reclamation	02/06/17	02/08/17	02/07/21	3	2	9	9
25	UniFirst Corporation	05/26/16	05/30/16	05/29/20	4	2*	14*	14*
26	Venator Americas, LLC	06/28/16	06/28/16	06/27/20	2	2*	6 (3)	8
27	United States Geological Survey	12/20/17	01/01/18	12/31/20	1	2	2	2
28	WMATA Bladensburg Bus Division	11/15/16	12/02/16	12/01/20	1	1	2	2
29	WMATA Brentwood MROY	07/08/16	07/22/16	07/21/20	1	1	2	2
30	WMATA Greenbelt Yard	09/04/15	09/04/15	09/03/19	1	2*	8	8
31	WMATA Shady Grove Yard	03/23/18	03/23/18	03/22/22	2	2*	10	10

Section II Attachment (continued)
Summary of Blue Plains AWTP Significant Industrial Users

Table 4. Summary of Significant Non-Categorical Industrial User Inspection and Monitoring Activities for 2018 (continued)

#	Categorical Industrial User	Permit Issuance	Permit Effective	Permit Expiration	No. of Inspections	No. of Sampling Events		
						by POTW	by IU	Required
32	WMATA Shepherd Parkway Bus Division	09/25/15	09/30/15	09/29/19	1	1	2	2
33	WSSC Potomac Water Filtration Plant	09/08/16	10/05/16	10/04/20	2	2*	8	8
34	Watergate Partners LLC	11/19/18	11/22/18	11/21/22	1	1	2	2

* Additional pH monitoring conducted.
(1) Original permit issuance dates.
(2) MWAA Dulles Airport is required to conduct daily monitoring on the glycol discharge. Discharged 0 times during 2018.
(3) No process flow for 1st quarter 2018.

List of SIUs Covered by a General Control Mechanism

Not Applicable

List of CIUs Assigned Mass-Based Limits in place of Concentration-Based Limits

None

List of CIUs With Waivers for Categorically Regulated Pollutants

None

List of Facilities Not Inspected During 2018:

None

List of Facilities Not Sampled by POTW During 2018:

None

Section II Attachment (continued)
Summary of Blue Plains AWTP Significant Industrial Users

List of Facilities Submitting Less Than the Required Number of Self-Monitoring Reports:

1. University of MD/DOD (WSSC) – no process flow in 2nd quarter 2018.
2. Venator Americas, LLC (WSSC) – no process flow in 1st quarter 2018

Note: All self-monitoring reports received by DC Water through 1/14/19 were counted as received in 2018.

Section III Attachment
Summary of Blue Plains AWTP Significant Industrial Users

Table 5. List of SIUs in SNC During 2018

Industrial User	Reason for SNC	Evaluation Period	Actions Planned or Taken	Status
Coca-Cola Bottling Company Consolidated (WSSC)	Failure to notify	Apr – Sep 2018	Notice of Violation, Directive, Publication	In compliance

List of Facilities in SNC for 2018 that were also in SNC for 2017:

None

List of Users Previously Designated as Non-significant CIUs that have Violated a Pretreatment Standard or Requirement During 2018:

Not applicable

Newspaper Listing of SIUs in SNC During 2018:

WSSC will provide their newspaper listing of SIUs in SNC no later than June 30, 2019.

Section IV Attachment
Summary of Blue Plains AWTP Significant Industrial Users

Table 6. List of SIUs Receiving Written Notices of Violation in 2018

Categorical Significant Industrial User	**Number of Written Notices Issued**
Bureau of Engraving and Printing (DC Water)	1
Human Genome - LSM (WSSC)	1
Human Genome - SSM (WSSC)	1
Precision Sheet Metal (Fairfax County)	2
TTM Technologies NA (Loudoun Water)	1
Non-Categorical Significant Industrial User	**Number of Written Notices Issued**
Capitol Power Plant (DC Water)	2
Coca-Cola Bottling Company Consolidated (WSSC)	1
Fort Detrick-Forest Glen Annex (WSSC)	3
GSA Central Heating and Refrigeration Plant (DC Water)	1
GlaxoSmithKline LLC (WSSC)	1
MedImmune, LLC (WSSC)	1
Naval Support Activity Bethesda (WSSC)	1
Naval Support Facility Carderock (DC Water)	2
Pepsi Beverages Compnay (WSSC)	1
Ritchie Land Reclamation, LLC (WSSC)	1
Unifirst Corporation (WSSC)	3

Section IV Attachment (continued)
Summary of Blue Plains AWTP Significant Industrial Users

Table 7. List of SIUs Receiving Administrative Orders/Enforceable Compliance Schedules in 2018 and First Quarter 2019 (if violation occurred in 2018) and Number Issued

Categorical Significant Industrial User	**Number of Orders/Directives Issued**
Eaton Corporation	6
Emergent BioSolutions	1
Human Genome - LSM (WSSC)	2
Human Genome - SSM (WSSC)	3
Non-Categorical Significant Industrial User	**Number of Orders/Directives Issued**
Coca-Cola Bottling Company Consolidated (WSSC)	1
Fort Detrick-Forest Glen Annex (WSSC)	2
GlaxoSmithKline LLC (WSSC)	1
MedImmune, Inc. (WSSC)	2
National Institutes of Health (NIAID) (WSSC)	2
Naval Support Activity Bethesda (WSSC)	3
Pepsi Beverages Company (WSSC)	1
Ritchie Land Reclamation, LLC (WSSC)	1
Unifirst Corporation (WSSC)	3
Venator Americas LLC (WSSC)	1

Section IV Attachment (continued)
Summary of Blue Plains AWTP Significant Industrial Users

Table 8. List of Administrative Orders/Enforceable Compliance Schedules Issued to SIUs in 2018 and First Quarter 2019 (if violation occurred in 2018):

Significant Industrial User	Date Issued	Type of Schedule	Reason	FCD	Status	By FCD ?
Coca-Cola Bottling Company Consolidated (WSSC)	12/20/18	Directive	Corrective Measures	12/31/18	Compliance	Yes
Eaton Corporation (WSSC)	05/24/18	Directive	Pretreatment System Mod	06/25/18	FCD Extended	NA
Eaton Corporation (WSSC)	06/28/18	Directive	Pretreatment System Mod	07/31/18	FCD Extended	NA
Eaton Corporation (WSSC)	08/02/18	Directive	Pretreatment System Mod	09/04/18	FCD Extended	NA
Eaton Corporation (WSSC)	09/06/18	Directive	Pretreatment System Mod	10/26/18	FCD Extended	NA
Eaton Corporation (WSSC)	11/05/18	Directive	Pretreatment System Mod	01/02/19	FCD Extended	NA
Eaton Corporation (WSSC)	01/10/19	Directive	Pretreatment System Mod	03/31/19	Interim	Yes
Emergent BioSolutions (WSSC)	12/11/18	Directive	Submit Plan	01/07/19	Compliance	Yes
Fort Detrick-Forest Glen Annex (WSSC)	05/24/18	Directive	Corrective Measures	06/15/18	Compliance	NA
Fort Detrick-Forest Glen Annex (WSSC)	09/27/18	Directive	Corrective Measures	10/12/18	Compliance	NA
GlaxoSmithKline LLC (WSSC)	02/20/18	Directive	Corrective Measures	03/02/18	Compliance	NA
Human Genome Sciences (LSM) (WSSC)	05/16/18	Directive	Corrective Measures	06/15/18	Compliance	NA
Human Genome Sciences (LSM) (WSSC)	12/21/18	Directive	Provide Information	01/31/19	Compliance	Yes
Human Genome Sciences (SSM) (WSSC)	01/12/18	Directive	Corrective Measures	02/28/18	Compliance	NA
Human Genome Sciences (SSM) (WSSC)	05/16/18	Directive	Corrective Measures	07/15/18	Compliance	NA
Human Genome Sciences (SSM) (WSSC)	08/13/18	Directive	Corrective Measures	10/31/18	Compliance	NA

Section IV Attachment (continued)
Summary of Blue Plains AWTP Significant Industrial Users

Table 8. Description of Administrative Orders/Enforceable Compliance Schedules Issued to SIUs in 2018 and First Quarter 2019 (if violation occurred in 2018) (continued):

Significant Industrial User	Date Issued	Type of Schedule	Reason	FCD	Status	By FCD ?
MedImmune, Inc. (WSSC)	02/07/18	Directive	Corrective Measures	02/21/18	Compliance	NA
MedImmune, Inc. (WSSC)	10/24/18	Directive	Corrective Measures	03/12/19	Interim	Yes
National Institutes of Health (NIAID) (WSSC)	01/02/18	Directive	Corrective Measures	01/26/18	Compliance	NA
National Institutes of Health (NIAID) (WSSC)	02/08/18	Directive	Corrective Measures	02/14/18	Compliance	NA
Naval Support Activity Bethesda (WSSC)	02/12/18	Directive	Corrective Measures	03/30/18	FCD Extended	NA
Naval Support Activity Bethesda (WSSC)	04/13/18	Directive	Corrective Measures	11/30/18	Non-Compliance	No
Naval Support Activity Bethesda (WSSC)	09/07/18	Directive	Corrective Measures	11/30/18	Compliance	NA
Pepsi Beverages Company (WSSC)	12/05/18	Directive	Corrective Measures	12/19/18	Compliance	NA
Ritchie Land Reclamation, LLC (WSSC)	11/02/18	Directive	Corrective Measures	11/30/18	Compliance	NA
Unifirst Corporation (WSSC)	01/22/18	Directive	Corrective Measures	02/08/18	Compliance	NA
Unifirst Corporation (WSSC)	05/24/18	Directive	Corrective Measures	06/18/18	Compliance	NA
Unifirst Corporation (WSSC)	09/04/18	Directive	Corrective Measures	09/17/18	Compliance	NA
Venator Americas (WSSC)	12/10/18	Directive	Remove IWMP	03/31/19	Interim	Yes

Section IV Attachment (continued)
Summary of Blue Plains AWTP Significant Industrial Users

List of SIUs on compliance schedules that are in writing but not considered "formal":

None

List of SIUs Sued in 2018:

None

Table 9. List of SIUs Assessed/Collected Penalties in 2018:

#	Significant Industrial User	Amount Assessed	Amount Collected	Reason	Assessed in Previous Years?
1	Unifirst Corporation (WSSC)	$750 $1000 $1000	$750 $1000 $1000	Failure to submit complete PCR Failure to submit complete PCR Failure to submit complete PCR	No

Description of all Actions Included as Administrative Orders:

None

Description of "Other Actions":

1. **MWAA (DC Water)** - DC Water issued a Directive Letter to MWAA (Dulles International Airport) on August 15, 2018, notifying MWAA that they were discharging a prohibited substance (rags > 1 inch) that may cause or contribute to blockages in the sewer system and requiring them to notify tenants, post signs, and submit a follow-up report to DC Water.
2. **Precision Sheet Metal (Fairfax County)** – was issued a verbal NOV by Fairfax County on August 31, 2018, for sample chain of custody error and improper sample preservation. The Town of Herndon followed up with a written NOV for the same reason.
3. **Precision Sheet Metal (Fairfax County)** – was issued a verbal NOV by the Town of Herndon on February 22, 2019, for incorrect reporting of the monthly average daily flow for the month of October 2018.

List of SIUs with SNC Violations Not Subject to Enforcement:

None

PART B
PRETREATMENT DEVELOPMENTS

I. Summary of POTW Operations

1. There were no NPDES permit violations in 2018 at the Blue Plains Advanced Wastewater Treatment Plant (AWTP). Furthermore, there were no instances of major problems (e.g., corrosion, fire or explosive hazards, sewer blockages) in the collection system that may have been attributable to industrial wastes.

2. As required by the NPDES permit, plant influent, effluent, and biosolids data for all local limit parameters are submitted to EPA Region III on a quarterly basis with the Discharge Monitoring Reports (DMRs) by the 28th day of the following month. Additionally, a complete priority pollutant scan is conducted annually on the influent and biosolids. The 2018 influent, effluent, and biosolids concentrations for the local limit pollutants are provided in summary tables in Attachment 6. The annual priority pollutant scans and additional toxics data collected, but not documented in the summary table, are also provided in Attachment 6.

   The effluent metals data collected on August 30, 2018 was considered to be a laboratory error, per the DMR letter submitted to EPA on November 2, 2018 and included in Attachment 6. Therefore these data were not included in the effluent summary table provided in Attachment 6. DC Water had retained a preserved effluent sample from July 12, 2018, that was submitted for analysis when it was discovered that the August 30, 2018 sample results were clearly not representative.

   Influent values were calculated based on an estimated flow-weighted average of three contributing waste streams and reported as "<" if at least one of the individual waste streams was non-detect (below the MDL or method detection limit) for that parameter. Estimated values reported below the Reporting Detection Limit and above the MDL (i.e., J-flagged data) are indicated in bold. Influent and effluent goals are based on EPA Region III's evaluation of DC Water's local limits published in the DC Register on September 10, 2010. Influent and effluent goals were consistently met in 2018, and in general, influent pollutant concentrations have remained fairly consistent with minor fluctuations. There is a seasonal peak for molybdenum for the 3rd quarter sampling which has been consistent over the last five years and most likely due to an increase in cooling tower discharges during this season.

3. DC Water currently accepts hauled waste from domestic, commercial, and pre-approved industrial sources at the headworks to the Blue Plains AWTP. Additional hauled waste is received at designated septage receiving stations in the Blue Plains service area from WSSC and Loudoun Water. Fairfax County no longer discharges hauled waste to Blue Plains from a remote septage receiving station. Table B-1 summarizes the hauled waste contributions to the Blue Plains AWTP. Loudoun Water periodically uses the backup septage receiving station that discharges to the Potomac Interceptor (and ultimately to the Blue Plains AWTP) when their main septage receiving facility is down. No brine wastes (oil and gas drilling wastes) are accepted at the designated septage receiving stations.

PART B (Continued)

PRETREATMENT DEVELOPMENTS

I. Summary of POTW Operations (Continued)

Table B-1. Summary of Hauled Waste Discharged to the Blue Plains AWTP

Jurisdiction	Discharge Site	Sources of Wastewater*	Estimated Volume/Yr.	Controls on Users
DC Water	Blue Plains AWTP	Domestic, commercial, and non-wastewater	26.9M Total gal/yr 11.5 M gal/yr (grease) 5.3 M gal/yr (septage) 10.0 M gal/yr (other*)	Manned site, permits, manifests, random sampling
WSSC	Muddy Branch	Domestic and commercial	5.9 M gal/yr (grease waste) 3.6 M gal/yr (septic waste)	Permits, manifests, restricted hours, surveillance cameras, fines, random sampling
WSSC	Muddy Branch	IU - Dickerson Generating Station (domestic sewage sludge)	92,655 gal/year	Contract, self-monitoring
WSSC	Muddy Branch or Tanglewood	SIU – Ritchie Land Reclamation (leachate)	20.8 M gal/yr 107,600 gpd max	SIU Permit, self-monitoring
WSSC	Tanglewood	Domestic Septage	128,600 gal/yr	Permits, manifests, restricted hours, surveillance cameras, fines
WSSC	Montgomery Co. Solid Waste Disposal Site	SIU - Oaks Sanitary Landfill (leachate), also includes water from catch basin cleaning in the county	5.4 M gal/yr 74,124 gpd max	SIU permit, self-monitoring
Loudoun Water	Manhole S-17	Domestic septage	1.2 M gal/yr	Permits, manifests, restricted access, surveillance camera, random sampling

*Domestic sources of hauled wastewater are primarily septic holding tanks and portable toilets. The majority of commercial wastewater is from grease traps. Other commercial sources of hauled wastewater are from building sumps/sewage ejector pits. Industrial hauled waste is primarily from landfill leachate. Non-wastewater sources include groundwater, storm runoff, and domestic sewage sludge.

PART B (Continued)
PRETREATMENT DEVELOPMENTS

I. Summary of POTW Operations (Continued)

3. DC Water, WSSC, and Loudoun Water require waste hauler permits. As of December 31, 2018, DC Water had 41 permitted waste haulers, WSSC had 51 permitted waste haulers (excluding buses, RV's, and including zero discharge haulers), and Loudoun Water had 15 permitted waste haulers. All jurisdictions require manifest forms to document the source and volume of each hauled waste load discharged.

   In 2018, the Blue Plains AWTP Septage Receiving Facility received on average 2.2 million gallons of hauled waste per month. Random sampling is conducted by DC Water generally twice a month and waste is typically analyzed for pH, oil and grease, total metals, PCBs, and conventional pollutants. In January 2018, DC Water updated the hauled waste regulations to allow a waiver for trucked waste, so that local limits did not have to be met if authorized by DC Water in writing. In 2018, DC Water did not issue any variances, so ten notices of violation (NOVs) were issued to haulers in 2018 for exceedances of local limits, typically for pH, copper, and/or zinc and occasionally for total petroleum hydrocarbons and other heavy metals (cadmium, lead, and mercury). Thirteen additional NOVs were issued for out of service area waste, which is currently not accepted. Typical corrective action is to increase the frequency of the pump-out for the customer with elevated metals concentrations. If a source is identified in violation more than once, then it is typically banned for disposal at the Blue Plains AWTP, until the user can demonstrate compliance through self-monitoring of the waste. No hauled waste violations have resulted in plant upset or interference.

   Many of the SIUs within the District have waste hauled off-site for disposal. Table B-2 summarizes the information updated during the 2018 inspections. Recycled wastes including used oil and fryer oil are not included in this table.

II. Pretreatment Program Changes

Staffing, Funding, and Local Limits

DC Water underwent a reorganization in 2018 but there were no direct impacts on the Pretreatment Program. DC Water acquired one new FTE position for the pretreatment program in April 2018, increasing staff from two to three persons. DC Water is currently working on a local limits re-evaluation and submitted a sampling plan to EPA Region III in November 2018 that was approved on December 28, 2018. DC Water continues to enforce the local limits approved by EPA Region III on May 25, 2010 that became effective on September 10, 2010.

There were no significant changes in staffing and funding for the user jurisdiction pretreatment programs (WSSC, Fairfax County, and Loudoun Water) in 2018. WSSC's new local limits became effective on July 1, 2018. Adoption of new local limits by WSSC does not impact those facilities discharging to Blue Plains, unless limits are more stringent than EPA-approved DC Water local limits.

PART B (Continued)
PRETREATMENT DEVELOPMENTS

Table B-2. Summary of Hauled Waste from SIUs in the District

Type of Hauled Waste	Description of Operations	Name(s) of Facilities Used by SIUs for Waste Disposal and Disposal Location (if known)
Oily wastewater/ pretreatment sludge and other non-hazardous waste	Maintenance cleaning activities, treatment residuals, printing	ACV Enviro (Williamsport, MD) Atlantic Wastewater Solutions (Fairfax, VA) Clean Harbors (Baltimore, MD/Reidsville, NC) CPAC (Everett, VA) Clean Ventures (Cycle Chem/Lewisbury, PA) Eagle Paper FCC Environmental Hepaco Heritage Crystal Clean (Alexandria, VA) IMS (Norfolk, VA) Lorco Onsite Environmental Pollution Control Industries Safety Kleen (Manassas, VA) Sphinx (Spirit Services in Williamsport, MD) Tradebe (E. Chicago, IN) Triumvirate Environmental
Grease trap waste	Treatment residuals	Adams Liming and Septic Tank (Fairfax, VA) B&P Environmental (WSSC and Blue Plains) Burns Septic (WSSC) Crystal Clean H&R Environmental Clean Harbors (Baltimore, MD) Magnolia Plumbing (WSSC and Blue Plains) Valley Proteins (Blue Plains)
Spent car wash reclaim	Vehicle cleaning activities	Capitol Tank and Drain (UOSA, VA) LNT Enterprises Onsite Environmental Parr Industries Safety Kleen (Manassas, VA)
Hazardous waste	Cleaning, lab waste, solvent use, treatment residuals, etc.	Clean Harbors (Baltimore MD/Reidsville, NC) Clean Ventures (Cycle Chem/Lewisbury, PA) EMSI (Env Enterprises/Cincinnati, OH) Hepaco Tradebe (E. Chicago, IN)

III. Miscellaneous Developments

Dental Program Regulations

DC Water published the Final Rulemaking for the Dental Program Regulations on January 19, 2018 (submitted to EPA Region III with the 2017 annual report). All existing dental facilities within the District were required to submit a dental facility wastewater discharge questionnaire by July 14, 2018, documenting their applicability to the new rule. DC Water sent out two mailings in 2018 to disseminate information and forms and collaborated with the DC Dental Society to email their members. DC Water obtained a list of dentists licensed to practice in the District (approximately 1,400) from the DC Department of Health (DOH) in 2017. The DOH list was condensed to approximately 1,100 dentists for the initial mailing, eliminating the dentists that had addresses outside the DC metropolitan area. A further analysis of the list resulted in 425 individual address locations (some of which were a residential address for a dentist). A list of dental providers was also obtained from EPA Region III in 2018 consisting of 375 dentists. The EPA list was reduced to 263 dental facilities after eliminating duplicate addresses.

PART B (Continued)
PRETREATMENT DEVELOPMENTS

III. Miscellaneous Developments (continued)

Dental Program Regulations

To date, of the 510 questionnaires/responses received, 154 dental facilities are subject to the dental amalgam rule and have installed or required to install an amalgam separator, 124 facilities are subject to the rule and are not required to install an amalgam separator, 52 facilities are not subject to the rule, and 180 dentists responding to the questionnaire don't own a dental practice in the District. To date, DC Water has received approximately 144 One Time Compliance Reports (out of 278 dental facilities identified that must submit one) and will continue to track and monitor responses to ensure all dental facilities in the District are in compliance with the regulations.

WSSC obtained dental licensing information from the Maryland Board of Dental Examiners and sent out 1,701 dental surveys in 2017. In 2018, this list of dentists was cross-referenced with a business listing from the TOKAY system and a list provided by EPA Region III to come up with a total of 864 dental facilities, 597 of which discharge to Blue Plains. Of these 597 facilities: 171 dental facilities have certified that they are exempt from/not subject to the dental amalgam rule. The remaining facilities are subject to the rule and have either installed a compliant amalgam separator (11 facilities) or require follow-up in 2020 (79 facilities) or 2027 (25 facilities). Additional surveys were sent out in 2019 to the remaining dental facilities that did not provide a response or additional information was needed.

For all Virginia jurisdictions, including Loudoun Water, Town of Vienna, and Fairfax County, the Virginia Department of Environmental Quality (VDEQ) is acting as the Control Authority for all dental dischargers, thus centralizing the Virginia Dental Rule Compliance Form collection and tracking compliance with the Rule. VDEQ has a website for dentists to submit forms online, compiles information in a tracking spreadsheet, and will be providing periodic updates to POTWs on compliance status of dental dischargers in their collection system. Fairfax County will also be sending a notice of the requirements to dental service providers and coordinating with the Building Plan Review Office to identify new dental service provider facilities.

Hauled Wastewater and High Strength Waste Fee Regulations

DC Water published the Final Rulemaking for volume-based hauled waste fees and high strength waste fees and updated regulations on January 19, 2018 (attached). These regulations authorized DC Water to collect volume-based disposal fees for waste haulers rather than charging a flat fee for unlimited disposal. The regulations also provided DC Water the authority to surcharge DC Water permitted Significant Industrial Users for high strength wastewater discharged to the collection system based on cost per pound of pollutant discharged (derived from actual operating costs and a percentage of associated capital costs). These regulations allowed DC Water to recover additional revenue for treating the higher strength wastewater.

PART B (Continued)
PRETREATMENT DEVELOPMENTS

III. Miscellaneous Developments (continued)

Control of Batch Discharges During Wet Weather

As part of the Combined Sewer Overflow (CSO) Nine Minimum Controls, DC Water is required by NPDES permit to 1) use pretreatment regulations to control any industrial discharges that may be identified as impacting CSOs and 2) to require permitted SIUs discharging directly to the CSS to establish management practices to control batch discharges during wet weather conditions whenever possible.

As of December 31, 2018, there are five (5) SIUs that currently discharge directly to the combined sewer system. A list of these facilities is provided in Table B-3. Each facility has a permit requirement to prepare an annual report identifying all batch discharges to the combined sewer system, with the exception of the Watergate Hotel, currently permitted as Watergate Partners LLC, and District Apartments Realty Holding Company, LLC, which are only permitted for their groundwater remediation systems and have a continuous operation. These annual reports were due March 31, 2018. Following DC Water review, it was determined that all SIU discharges were either continuous or intermittent and that none of these discharges met the definition of a batch discharge. DC Water is not requiring development of management practices to control intermittent discharges at this time, since no pollutants of concern in combined sewer overflows have been attributed to these discharges.

Table B-3. Significant Industrial Users Discharging Directly to Combined Sewers

#	Permit No.	Industrial User	Facility Address	Batch/Intermittent Discharges
1	011	Amtrak (including High Speed Rail facility)	1401 W Street, NE Washington, DC 20018	Train Wash
2	022	Capitol Power Plant	N. Jersey Ave & E St., SE Washington, DC 20003	None
3	057	District Apartments Realty Holding Co., LLC	1401 S St., NW Washington, DC 20009	None (no report required treated groundwater only)
4	039	Watergate Partners, LLC	2500 Virginia Ave., NW Washington, DC 20037	None (no report required treated groundwater only)
5	053	WMATA Brentwood Yard	601 T Street, NE Washington, DC 20018	Steam Cleaning

PART B (Continued)
PRETREATMENT DEVELOPMENTS

III. Miscellaneous Developments (continued)

Pollution Prevention

DC Water has incorporated pollution prevention (P2) surveys into the routine annual inspections of SIUs. P2 surveys are conducted every two years and significant P2 accomplishments or deficiencies may be noted annually in the inspection report. These surveys were conducted in 2018. DC Water's public education efforts to reduce influent mercury concentrations include posting educational content on our website and permitting hospitals in the area (as Non-Significant Industrial Users). Additional educational content on PCBs is also on our website.

WSSC continued to promote and dedicate resources to a number of pollution prevention initiatives in 2018 including the following:

- Industrial User training classes;
- Annual Pretreatment Bulletin; and
- Continuation of the annual Pollution Prevention Award program.

Industrial User Survey

DC Water conducts occasional surveys, sampling, and/or inspections of non-permitted commercial/ industrial users to determine whether facilities should be permitted and assist them in conforming to the District of Columbia municipal regulations on wastewater discharges. DC Water has developed a network of contacts at other agencies in the District of Columbia to obtain information on potential violators including the District Department of Public Works, the Mayor's Neighborhood Service Coordinators, and the District Department of Energy & Environment Hazardous Waste and Water Quality Divisions.

Temporary Discharge Authorizations

As of December 31, 2018, DC Water had 65 active Temporary Discharge Authorization (TDA) permits for discharges to the sanitary or combined sewer system consisting primarily of construction dewatering, façade cleaning, and other miscellaneous discharges. The maximum permit term is two years. Most of these permits require periodic self-monitoring, depending on flow and the characteristics of the wastewater discharge.

IV. Signatory Requirements

The Vice President of Wastewater Operations (previously known as the Assistant General Manager or AGM of Blue Plains prior to the 2018 reorganization) has signed Part A of this report. This individual is directly responsible for wastewater treatment plant operations and has been authorized to sign the report by the previous General Manager (written authorization letter to EPA Region III dated January 27, 2016, previously submitted).

Attachment 1

Part A with attachments for Significant Industrial Users (SIUs) in the District of Columbia

PART A
PRETREATMENT PERFORMANCE SUMMARY

I. General Information

Control Authority Name	*DC Water and Sewer Authority*				
Address	*5000 Overlook Ave., SW*				
City	*Washington*	State	*DC*	Zip+4	*20032*
Contact Person	*Aklile Tesfaye*		Telephone No.	*202-787-4008*	
Contact Title	*Vice President*		E-mail Address	*atesfaye@dcwater.com*	
NPDES No.	*DC 0021199*		Reporting Period	*01-01-18 to 12-31-18*	
Issuance Date	*07/26/18*		Expiration Date	*08/25/23*	
Total CIUs	*1*		Total MTCIUs	*0*	
Total SNIUs	*11*		Total NSCIUs	*0*	

CIUs - Categorical Industrial Users *MTCIUs – Middle Tier Categorical Industrial Users*

SNIUs - Significant Noncategorical Industrial Users *NSCIUs – Nonsignificant Categorical Industrial Users*

II. Compliance Monitoring Program

1.	No. of SIUs with current Control Documents	12
2.	No. of SIU Facilities Inspected	12
3.	No. of SIU Facilities Sampled	12
4.	No. of SIUs Submitting Self-Monitoring Reports	12

III. Significant Industrial User Compliance

1.	No. of SIUs Violating a Compliance Schedule / No. on a Schedule	0
2.	No. of SIUs in SNC for the July to December Period	0
3.	No. of SIUs in SNC At Any Time During the Calendar Year	0
4.	No. of SIUs in SNC Also in SNC During the Previous Calendar Year	0
5.	No. of NSCIUs that violated any standards or requirements	0

IV. Enforcement Actions

1.	Notices/Letters of Violation Issued to SIUs	6
2.	Enforceable Compliance Schedules Issued to SIUs	0
3.	Civil/Criminal Suits Filed	0
4.	No. of SIUs from which Penalties have been Collected	0
5.	Other Actions (sewer bans, etc.)	1

I certify that the information contained in this report and attachments is complete and accurate to the best of my knowledge (see Part B.V of the instructions).

Aklile Tesfaye	Vice President, Wastewater Operations
Name of Authorized Representative (Print)	Title (Print)
	3/26/19
Signature of Authorized Representative	Date

Section I Attachment
District of Columbia Significant Industrial Users

Table 1. List of Categorical Industrial Users with DC Water Permits as of December 31, 2018

#	Permit No.	Industrial User	Category	Facility Address
1	017-11	Bureau of Engraving and Printing	PSNS 433 metal finishing	14th and C Streets, SW Washington, DC 20228

Table 2. List of Significant Non-Categorical Industrial Users with DC Water Permits as of December 31, 2018

#	Permit No.	Industrial User	Facility Address
1	011-9	Amtrak	1401 W St., NE, Washington, DC 20018
2	022-10	Capitol Power Plant	25 E St., SE, Washington, DC 20003
3	057-1	District Apartments Realty Holding Company, LLC	1401 S St., NW, Washington, DC 20009
4	019-10	GSA Central Heating and Refrigeration Plant	13th and C Streets, SW, Washington, DC 20407
5	025-10	MWAA – Dulles International Airport	44701 Propeller Court, Dulles, VA 20166
6	002-9	Naval Research Laboratory	4555 Overlook Ave., SW, Washington, DC 20375-5320
7	028-10	Naval Support Facility Carderock	9500 MacArthur Blvd., West Bethesda, MD 20817
8	008-11	WMATA Bladensburg Bus Division	2250/51 26th St., NW, Washington, DC 20018
9	053-7	WMATA Brentwood Major Repair and Overhaul Yard (Rail Yard)	601 T St., NE, Washington, DC 20018
10	055-1	WMATA Shepherd Parkway Bus Division	2 DC Village Lane, SW, Washington, DC 20032
11	039-2	Watergate Partners LLC	2500 Virginia Ave., NW, Washington, DC 20037

GSA = General Services Administration
MWAA = Metropolitan Washington Airports Authority
WMATA = Washington Metropolitan Area Transit Authority

Section I Attachment (Continued)
District of Columbia Significant Industrial Users

Additions to the 2017 List of Industrial Users:

None

Deletions to the 2017 List of Industrial Users:

None

Section II Attachment
District of Columbia Significant Industrial Users

Table 3. Summary of Industrial User Inspection and Monitoring Activities for 2018

Permit No.	Industrial User	Permit Issuance	Permit Effective	Permit Expiration	Number of POTW Inspections	No. of Sampling Events		
						by POTW	by IU	Required
011-9	Amtrak	06/23/15	07/01/15	06/30/19	1	1	9*	9*
017-11	Bureau of Engraving and Printing	08/30/18	09/01/18	08/31/22	1	1	15*	10*
022-10	Capitol Power Plant	09/25/15	10/01/15	09/30/19	1	1	2*	2*
057-1	District Apartments Realty Holding Company, LLC	12/18/15	12/18/15	12/17/19	1	1	2	2
019-10	GSA Central Heating and Refrigeration Plant	06/10/16	06/12/16	06/11/20	1	1	2*	2*
025-10	MWAA - Dulles International Airport	11/05/15	12/01/15	11/30/19	1	1	10/ 0 (a)	10/ 0 (a)
002-9	Naval Research Laboratory	09/09/16	09/11/16	09/10/20	1	1	2	2
028-10	Naval Support Facility Carderock	04/27/16	04/27/16	03/14/20	1	1	9	8
008-11	WMATA Bladensburg Bus Division	11/15/16	12/02/16	12/01/20	1	1	2	2
053-7	WMATA Brentwood Major Repair and Overhaul Yard	07/08/16	07/22/16	07/21/20	1	1	2	2
055-1	WMATA Shepherd Parkway Bus Division	09/25/15	09/30/15	09/29/19	1	1	2	2
039-2	Watergate Partners LLC (formerly Greenpenz, 2600 Va. Ave., LLC)	11/19/18	11/22/18	11/21/22	1	1	2	2

(*) Includes daily pH monitoring when discharging.
(a) MWAA Dulles Airport is required to conduct daily monitoring on the glycol discharge. Discharged 0 times during 2018.

Section II Attachment (Continued)
District of Columbia Significant Industrial Users

List of SIUs Covered by a General Control Mechanism

Not Applicable

List of CIUs Assigned Mass-Based Limits in place of Concentration-Based Limits

None

List of CIUs With Waivers for Categorically Regulated Pollutants

None

List of Facilities Not Inspected During 2018

None

List of Facilities Not Sampled by POTW During 2018

None

List of Facilities Submitting Less Than the Required Number of Self-Monitoring Reports and Reason:

None

Note: All self-monitoring reports received by DC Water by 1/14/19 were counted as received in 2018.

Section III Attachment
District of Columbia Significant Industrial Users

List of SIUs in SNC During 2018:

None

List of SIUs in SNC for 2018 that were also in SNC for 2017:

None

List of Users Previously Designated as Non-significant CIUs that have Violated a Pretreatment Standard or Requirement During 2018:

Not applicable

Newspaper Listing of SIUs in SNC During 2018:

Not applicable

Section IV Attachment
District of Columbia Significant Industrial Users

Table 4. List of SIUs Receiving Written Notices of Violation in 2018

Significant Industrial User	Number of Written Notices Issued
Bureau of Engraving and Printing	1
Capitol Power Plant	2
GSA Central Heating and Refrigeration Plant	1
Naval Support Facility Carderock	2

List of SIUs Receiving Administrative Orders/Enforceable Compliance Schedules in 2018 and First Quarter 2019 (if violation occurred in 2018):

None

List of SIUs on Compliance Schedules in writing but not considered Formal:

None

List of SIUs Sued in 2018:

None

List of SIUs Assessed Penalties in 2018:

None

Description of all Actions Included as Administrative Orders:

None

Description of "Other Actions":

1. DC Water issued a Directive Letter to MWAA (Dulles International Airport) on August 15, 2018, notifying MWAA that they were discharging a prohibited substance (rags > 1 inch) that may cause or contribute to blockages in the sewer system and requiring them to notify tenants, post signs, and submit a follow-up report to DC Water.

List of SIUs with SNC Violations Not Subject to Enforcement:

None

Attachment 2

Parts A and B with attachments for Washington Suburban Sanitary Commission (WSSC) SIUs discharging to Blue Plains

PART A
PRETREATMENT PERFORMANCE SUMMARY

I. General Information

Control Authority Name	*Washington Suburban Sanitary Commission*				
Address	*14501 Sweitzer Lane*				
City	*Laurel*	State	*Maryland*	Zip+4	*20707-5901*
Contact Person	*I-Hsin McConnell*		Telephone No.	*301-206-8597*	
Contact Title	*Section Manger*		E-mail Address	*I-Hsin.McConnell@wsscwater.com*	
NPDES No.	*DC 0021199*		Reporting Period	*01-01-18 to 12-31-18*	
Issuance Date	*07/26/18*		Expiration Date	*08/25/23*	
Total CIUs	*10 (as of 12/31/2018)*		Total MTCIUs	*NA*	
Total SNIUs	*20*		Total NSCIUs	*NA*	

CIUs - Categorical Industrial Users *MTCIUs – Middle Tier Categorical Industrial Users*
SNIUs - Significant Noncategorical Industrial Users *NSCIUs – Nonsignificant Categorical Industrial Users*

II. Compliance Monitoring Program

1.	No. of SIUs with current Control Documents	30
2.	No. of SIU Facilities Inspected	30
3.	No. of SIU Facilities Sampled	30
4.	No. of SIUs Submitting Self-Monitoring Reports	30

III. Significant Industrial User Compliance

1.	No. of SIUs Violating a Compliance Schedule / No. on a Schedule	1/56 EW
2.	No. of SIUs in SNC for the July to December Period	0
3.	No. of SIUs in SNC At Any Time During the Calendar Year	1
4.	No. of SIUs in SNC That Were Also in SNC During the Previous Calendar Year	0
5.	No. of NSCIUs that violated any standards or requirements	NA

IV. Enforcement Actions

1.	Notices/Letters of Violation Issued to SIUs	14
2.	Enforceable Compliance Schedules Issued to SIUs	29
3.	Civil/Criminal Suits Filed	0
4.	No. of SIUs from which Penalties have been Collected	1
5.	Other Actions (sewer bans, etc.)	0

I certify that the information contained in this report and attachments is complete and accurate to the best of my knowledge (see Part B.V of the instructions).

John H. Matthews
Name of Authorized Representative (Print)

Acting Industrial Discharge Control Section Manager.
Title (Print)

John H. Matthews
Signature of Authorized Representative

3/12/2019
Date

PART B
PRETREATMENT DEVELOPMENTS

I. Summary of Trucked Wastes

There are two waste hauler disposal sites located within the Washington Suburban Sanitary Commission (WSSC) that discharge to Blue Plains wastewater treatment plant (WWTP): Muddy Branch Disposal Site located in Montgomery County, MD and Tanglewood Disposal Site located in Prince George's County, MD. Of these two sites, only the Muddy Branch Disposal Site has been designated to accept fats, oil and grease (FOG) wastewaters. WSSC continues to use the surveillance cameras at each site and the cameras are in operation twenty-four hours per day. WSSC Investigators are able to connect to the cameras while at their desk to monitor the sites and download surveillance images. WSSC will issue enforcement actions as outlined in WSSC's enforcement response plan to violators of WSSC's waste hauler permit conditions. In addition, WSSC will notify the waste hauler community by email, when there are urgent matters such as the shutdown of a disposal site.

WSSC continues to implement a manifest program (first implemented in 2013) to quantify the amount of septage and grease that haulers discharge at its sites. In addition, WSSC prohibits the discharge of septage and grease from counties located outside of the Blue Plains service area. The manifest program assists WSSC in determining whether the hauled waste was generated within the Blue Plains service area as well as determining the volumes discharged.

Table 1 (below) outlines the summary for the number of septage and FOG Waste events and total volumes discharged in 2018.

Table 1: 2018 Summary of Hauled Waste Discharged to DC Water

	Septage Waste		**FOG Waste**	
	Number of Events	***Volume (gallons/year)***	***Number of Events***	***Volume (gallons/year)***
Muddy Branch Disposal Site	2,697	3,642,757	4,838	5,879,810
Tanglewood Disposal Site	81	128,600	Not applicable	Not applicable

On February 19, 2016, DC Water amended the IMA requirement for WSSC to conduct random sample collection of hauled waste at the Tanglewood disposal site. The amendment revised the requirement to conduct two random sample events to one random sample per year of a hauler at the disposal point. WSSC has made every effort to conduct a random sample of hauled waste at the site and also tried to schedule a sampling event with haulers at the site in 2018. However, WSSC was not able to collect any hauled waste samples at the site because of the very limited disposal events at this location. However, because of the infrequent nature for disposals at this site, none of the permitted haulers responded to our request. [Note: WSSC was successful in collecting a sample from a waste hauler at Tanglewood in 2019.]

Table 2 (below) outlines the summary for all of the dates that WSSC attempted to collect hauled waste samples at the Tanglewood Disposal Site in 2018.

Table 2: 2018 Summary for Sampling Attempts at Tanglewood

1st Quarter Dates Attempted	2nd Quarter Dates Attempted	3rd Quarter Dates Attempted	4th Quarter Dates Attempted
1/16/18	4/13/18	7/2/18	10/4/18
1/31/18	4/26/18	7/11/18	10/12/18
2/16/18	5/10/18	7/20/18	10/19/18
3/2/18	5/25/18	7/25/18	10/25/18
3/14/18	6/6/18	8/3/18	11/2/18
3/30/18	6/21/18	8/17/18	11/8/18
		8/23/18	11/20/18
		9/6/18	12/5/18
		9/14/18	12/10/18
		9/18/18	12/12/18
		9/28/18	12/17/18
			12/27/18
			12/28/18

The number of hauled waste disposal events at the Tanglewood Disposal Site increased for this period. In 2015, 2016, and 2017, there were 211, 133, and 28 disposal events, respectively. However, in 2018, the number of disposal events increased to 81, which however, is still below the 2015 and 2016 periods. In addition to the increase in the number of disposal events in 2018, the total volume of hauled waste discharged at the Tanglewood Disposal Site also increased. In 2018, a total of 128,600 gallons was discharged. This is a 242.5 percent increase from the total volume discharged in 2017 (37,550 gallons).

WSSC conducted two random hauled waste sample activities at Muddy Branch during 2018: March 1st, and September 19th.

As of December 31, 2018, WSSC permitted 51 waste hauler companies with 126 waste hauler vehicles. Of the 126 waste hauler vehicles permitted, 68 vehicles are zero dischargers (i.e. vehicles do not discharge at WSSC's waste disposal sites). Additionally, WSSC permitted 13 bus companies with 37 buses.

WSSC continues with its plan for new hauled waste disposal sites. WSSC has identified two disposal sites in Prince George's County (Anacostia and Piscataway) and one Montgomery County (Rock Creek). The bid ready designs for the Anacostia and Rock Creek sites are complete and were sent to Procurement for advertisement in late December 2018. The project, however, has not yet been advertised. WSSC is still working on the design of the Piscataway Facility.

WSSC is also evaluating alternative methods for billing for hauled waste. Currently, waste haulers are billed an annual permit fee depending on the size of their vehicle. Each permitted hauler is then allowed to discharge unlimitedly for the duration of the permit. WSSC is considering implementing volumetric fee, which would include an automatic debiting system for the future disposal sites.

Oaks Sanitary Landfill, a significant industrial user (SIU), continues to truck its leachate for disposal to a designated manhole located at the Montgomery County's Shady Grove Processing Facility and Transfer Station located in Derwood, MD. This location discharges to Blue Plains WWTP. WSSC regulates the landfill by a Discharge Authorization Permit, which contains requirements for monitoring, reporting, and pretreating their waste. The amount of wastewater

discharged on a monthly basis varies based on seasonal changes; however, the average monthly discharge is 452,975 gallons (with a maximum daily and monthly discharge of 74,124 gallons and 932,727 gallons respectively) and the minimum daily volume discharged was 6,117 gallons. Oaks Sanitary Landfill's permit specifies that the facility cannot exceed a discharge of 80,000 gallons per day of hauled leachate or discharge above a rate of 200 gallons per minute.

Ritchie Land Reclamation, LLC (Ritchie Land), an SIU (name change via permit modification on October 1, 2018), has been hauling its leachate to either the Muddy Branch or the Tanglewood disposal site since June 2016. WSSC obtained DC Water's approval to revise the facility's permit to authorize discharge at either the Muddy Branch or the Tanglewood disposal site in April 2016. WSSC issued the revised permit on June 2, 2016. Like Oaks Sanitary Landfill, Ritchie Land's discharge varies seasonally, but the average monthly discharge is 1,736,404 gallons (with a maximum daily and monthly discharge of 107,600 gallons and 2,725,700 gallons, respectively) and the minimum daily volume discharge was 5,500 gallons. Ritchie Land's permit specifies that the facility cannot exceed a discharge of 140,000 gallons per day of hauled waste.

One nonsignificant industrial user, Dickerson Generating Station (NRG Energy, Inc.) continues to truck its sewerage sludge to the Muddy Branch disposal site. The Dickerson Generating Station operates a small wastewater treatment plant to treat the domestic wastewaters generated on site. DC Water has authorized Dickerson Generating Station to discharge the sewerage sludges from its wastewater treatment plant. Dickerson Generating Station is required to analyze and submit quarterly sludge results. In 2018, Dickerson Generating Station hauled a total of 92,655 gallons (January 2018) of sewerage sludge to the Muddy Branch disposal site.

II. Pretreatment Program Changes

WSSC continues our efforts for ensuring compliance with the new Dental Office Point Source Category (40 CFR Part 441) for 2018. Based on the 2017 survey results, WSSC determined that our original list of dentists did not include all dental facilities within WSSC's service area. In addition, the original list includes dentists who receive their Maryland Dental License within WSSC's jurisdiction but might not have a dental practice within the service area. As such, in 2018, WSSC cross-referenced our original list with an internal WSSC local business list generated from our TOKAY System and the EPA Region 3 provided list of dentists subject to 40 CFR Part 441 generated from Reference USA. This effort resulted in a new master list of dental facilities, not just dentist names, located within WSSC's service area. The following is a summary of WSSC's findings:

- 864 dental facilities within WSSC's service area
- 408 dental facilities provided responses during the 2017 effort
    - 220 of these facilities have certified that they are exempt from the rule
    - 5 of these facilities certified that they are not subject to the rule
    - 111 of these facilities will need a 2020 follow-up
    - 30 of these facilities will need a 2027 follow-up
    - 14 of these facilities indicated that they have installed the required
    - 28 of these facilities submitted incomplete surveys
- 456 surveys will be sent to the newly identified dental facilities and/or facilities that did not respond during the 2017 effort

WSSC completed its local limits re-evaluation and the Maryland Department of the Environment has approved the new limits proposed by WSSC. The new limits became effective July 1, 2018. Even though the revisions to WSSC's local limits does not affect DC Water, WSSC modified the

Discharge Authorization Permits (DAPs) for all but two SIUs to ensure consistency among all of the permits. Eaton Corporation's DAP was modified on February 7, 2019; and National Archives & Records Administration's DAP is the last permit which remains to be modified.

III. Miscellaneous Developments

SIU Information

On June 21, 2018, WSSC inactivated DAP No. 13990 for InnoScience, Inc. located at 15892 Gaither Drive, Suite A, Gaithersburg, Maryland. InnoScience's permit was deactivated based on discontinued operations at the site.

On December 18, 2018, WSSC issued an Administrative Extension for Human Genome Science, Inc., Large Scale Manufacturing (HGS LSM) DAP No. 10116 to March 31, 2019. The notification of this event is included in this report even though the permit was to expire on January 9, 2019; however, the deadline to apply for renewal was October 9, 2018. HGS LSM's permit was extended since they were not able to provide WSSC with additional information needed to complete the permitting process before the permit expired. Additionally, this permit extension does not violate the federal requirement of 5-year permit terms since this permit was initially issued on January 10, 2015.

Industry name changes via permit modifications for the following occurred in 2018:

- National Institutes of Health (NIAID) changed to National Institutes of Health – 5625 Fishers Lane on January 23, 2018
- Ritchie Rubble Landfill changed to Ritchie Land Reclamation, LLC on October 1, 2018
- Huntsman P&A Americas, LLC changed to Venator Americas, LLC on April 16, 2018

Other Miscellaneous Information

On May 3rd and May 10th, 2018, WSSC's IDC staff conducted SIU Training Sessions for our permitted users. The training session provided an overview of WSSC's pretreatment program requirements and how that translates to each user's permit requirements. Topics discussed during the training sessions included:

- Periodic Compliance Report (PCR) Reporting Requirements: Reviewed what is a PCR, contents of a PCR, laboratory analytical results, chain of custody, avoiding common PCR violations , and other PCR requirements.
- Choosing the Right Lab: Reviewed the DAP and things to consider when choosing a lab.
- WSSC Local Limits Development: Reviewed different types of discharge limits, local limits development process, and implementation of local limits.

On June 21, 2018, WSSC held our 10th Annual Pretreatment Recognition Award ceremony. WSSC's Pretreatment Recognition Award process was revamped so that more than just one industry could be a winner. In doing so, the new Pretreatment Recognition Award recognizes all industries that have demonstrated consistent compliance under three levels of recognition (Bronze, Silver, and Gold). Winners for each level were recognized during the first annual awards luncheon held at the WSSC Headquarters Building.

Additionally, the IDC Section publishes an annual Pretreatment Bulletin to keep our SIU community informed of important topics. This year's topics included information regarding the Pretreatment Recognition Award Luncheon and Award Winners, IDC staff updates, the new EPA Dental Amalgam Recycling Rule, Sources of Industrial Water Pollution, Prohibited Discharges, and Wastewater Treatment (An Overview of the Dissolved Air Flotation System).

The IDC staff is Hazwoper certified and are required to take 12 additional safety classes related to the hazards of their job.

WSSC follows the Office of National Drug Control Policy's guidelines for disposal of prescription drugs.

3/11/2019

Status update of WSSC Dental Amalgam Compliance Efforts

In 2017, WSSC used a list of dentists licensed by the Maryland Dental Board of Examiners to send out approximately 1,707 surveys. Responses were received from 38% of surveys (643/1,707). This list was over-inclusive as it included all licensed dentists with mailing addresses in both counties, not those who owned a practice. The list also did not include those dentists who live outside the jurisdiction but practice in Montgomery or Prince George's County.

For 2018, WSSC attempted to get a better list from WSSC's internal TOKAY system using keywords in the business name. WSSC combined these lists into one master list by facility (not dentist name). Then dentists from the 2017 list that already received substantive responses that were subject to the Rule, were included in the combined list. By combing these lists, this generates the most accurate list of potential dentist offices subject to the Rule to date.

Ultimately instead of the 1,707 surveys, WSSC identified 867 total facilities (692 of which were on the 2017 Board of Dental Examiners list, almost 80%) potentially subject to the Rule. WSSC sent out 451 new one-time compliance reports on 2/22/2019 to facilities that either (1) WSSC did not receive a response in 2017 or (2) new facilities identified from the WSSC internal TOKAY list of dentist offices and/or the EPA Region 3 list. The responses to both mailings are in the process of being tallied together as shown in the below table up to date as of 3/11/2019. Approximately 69% (597/867) of these facilities discharge to the District of Columbia Water and Sewer Authority's (DC WATER) Blue Plains Advanced Wastewater Treatment Plant. This list is a work in progress and will be updated as more facilities are identified that are subject to the Rule or facilities are identified as not being an active dentist office that would be subject to the Rule.

Table 1. Current estimate of Dental Office responses to WSSC one-time compliance reports

Category	Blue Plains AWTP	Charles County	WSSC WRRF	Total
Survey sent 2018. No response received. New survey sent 2/22/2019	191	3	83	277
New to list, survey sent 2/22/2019	111		63	174
Survey sent. 2020 follow-up needed.[1]	79		37	116
Survey sent. 2027 follow-up needed.[2]	25		7	32
Survey sent. Certified Exempt.[3]	166		65	231
Survey sent. Compliant Separator Installed.	11		5	16
Survey sent. Not subject to the Rule.[4]	5		1	6
More clarification needed.	9		6	15
Total	**597**	**3**	**267**	**867**

[1] Do not have separators but use amalgam. Will need to install by 2020.

[2] Installed non-compliant separator prior to June 2017, will need to replace by June 14, 2027 or if they break (grandfathering provision).

[3] Does not place amalgam AND does not remove except in limited unplanned circumstances.

[4] Facility claims they are not subject (specialty practice, mobile dentistry, other, wrong address, retired, etc.).

LIST OF ATTACHMENTS For PART A

Attachment A	List of Categorical Industrial Users and Applicable Categories
Attachment B	List of Non-Categorical Significant Industrial Users
Attachment C	List of Significant Industrial User Control Documents
Attachment D	Compliance Monitoring, Investigations and Self-Monitoring Summary
Attachment E	List of Facilities Not Inspected or Sampled and Submitting less than the Required Number of Self-Monitoring Events
Attachment F	List of Significant Industrial Users in SNC
Attachment G	List of Significant Industrial Users on Formal Compliance Schedules
Attachment H	Copy of Newspaper Listing of Significant Industrial Users in SNC During the Calendar Year
Attachment I	List of Significant Industrial Users Issued Notices of Violation
Attachment J	List of Significant Industrial Users Issued Administrative Orders and Significant Industrial Users That Have Been Sued for Pretreatment Violations
Attachment K	List of Industrial Users Assessed Penalties
Attachment L	Description of All Actions Included in Administrative Orders and List of Significant Industrial Users That Had SNC Violations But Were Not Subject to Enforcement

BLUE PLAINS DISCHARGERS

CATEGORICAL INDUSTRIAL USERS

December 2018

INDUSTRY NAME & ADDRESS	CATEGORY	STANDARDS
Adelphi Laboratory Center[1] 2800 Powder Mill Road Adelphi, MD 20783	Metal Finishing Battery Manufacturing Semiconductor Manufacturing	PSNS 433.17; 40 CFR Part 461 (no discharge); PSNS 469.18; {As, Cd, CN, Cu, Hg, Mo, Ni, O&G[2], PCB}[3]; [FOG[4], pH Tetrachloroethylene, Trichloroethylene, Temp][5]
ATK Space Systems, Inc. 11313 Frederick Avenue Beltsville, MD 20705	Metal Finishing	PSNS 433.17; {As, Cd, CN, Cu, Hg, Mo, Ni, O&G[2], PCB}[3]; [FOG[4], pH, Tetrachloroethylene, Trichloroethylene, Temp][5]
Eaton Corporation 11642 Old Baltimore Pike Beltsville, MD 20705	Metal Finishing	PSNS 433.17; {As, Cd, CN, Cu, Hg, Mo, Ni, O&G[2], PCB}[3]; [FOG[4], pH, Tetrachloroethylene, Trichloroethylene, Temp][5]
Emergent BioSolutions 9920 Medical Center Drive Rockville, MD 20850	Pharmaceutical Manufacturing	PSNS 439.47; {As, Ag, Cd, CN, Cu, Hg, Mo, Ni, O&G[2], Pb, PCB, Zn}[3]; [FOG[4], pH, Tetrachloroethylene, Trichloroethylene, Temp][5]
Human Genome Sciences, Inc. Large Scale Manufacturing 9911 Belward Campus Drive Rockville, MD 20850	Pharmaceutical Manufacturing	PSNS 439.17; {As, Ag, Cd, CN, Cu, Hg, Mo, Ni, O&G[2], Pb, PCB, Zn}[3]; [FOG[4], pH, Tetrachloroethylene, Trichloroethylene, Temp][5]
Human Genome Sciences, Inc. Small Scale Manufacturing 9910 Belward Campus Drive Rockville, MD 20850	Pharmaceutical Manufacturing	PSNS 439.17; {As, Ag, Cd, CN, Cu, Hg, Mo, Ni, O&G[2], Pb, PCB, Zn}[3]; [FOG[4], pH, Tetrachloroethylene, Trichloroethylene, Temp][5]
Maryland Metal Plating & Polishing 4110 Howard Avenue Kensington, MD 20895	Metal Finishing	PSNS 433.17; {As, Cd, CN, Cu, Hg, Mo, Ni, O&G[2], PCB}[3]; [FOG[4], pH, Tetrachloroethylene, Trichloroethylene, Temp][5]

BLUE PLAINS DISCHARGERS

CATEGORICAL INDUSTRIAL USERS
December 2018

INDUSTRY NAME & ADDRESS	CATEGORY	STANDARDS
Mid-Atlantic Finishing, Inc. 4656 Addison Road Capitol Heights, MD 20743	Metal Finishing	PSNS 433.17; {As, Cd, CN, Cu, Hg, Mo, Ni, O&G[2], PCB}[3]; [FOG[4], pH, Tetrachloroethylene, Trichloroethylene, Temp][5]
United Therapeutics Corp[1] 1040 Spring Street Silver Spring, MD 20910	Pharmaceutical Manufacturing	PSNS 439.47; PSNS 439.27 {As, Ag, Cd, CN, Cu, Hg, Mo, Ni, O&G[2], Pb, PCB, Zn}[3]; [FOG[4], pH, Tetrachloroethylene, Trichloroethylene, Temp][5]
University of Maryland/DOD Physical Sciences Laboratory 8050 Greenmeade Drive College Park, MD 20740	Electrical & Electronic Components – Semiconductor	PSNS 469.18; {As, Ag, Cd, CN, Cu, Hg, Mo, Ni, O&G[2], Pb, PCB, Zn}[3]; [FOG[4], pH, Tetrachloroethylene, Trichloroethylene, Temp][5]

1 Facility has categorical and non-categorical monitoring points
2 Oil & Grease (Nonpolar, Petroleum)
3 Blue Plains' Local Limits
4 Fats, Oils & Grease (Polar)
5 WSSC's Local Limits

BLUE PLAINS DISCHARGERS

CATEGORICAL DISCHARGE LIMITATIONS

40 CFR 433.17 PSNS

POLLUTANT	DAILY MAXIMUM mg/l	MONTHLY AVERAGE mg/l
Cadmium	0.11 (0.07)*	0.07
Chromium	2.77	1.71
Copper	3.38 (2.3)*	2.07
Lead	0.69	0.43
Nickel	3.98 (2.2)*	2.38
Silver	0.43	0.24
Zinc	2.61	1.48
Cyanide, T	1.20 (0.56)*	0.65
TTO	2.13	(N/A)

40 CFR 469.18 PSNS

POLLUTANT	DAILY MAXIMUM mg/l	30-CONSEC. DAY AVG. mg/l
TTO	1.37	(N/A)

* More stringent Blue Plains' local limits.

BLUE PLAINS DISCHARGERS

CATEGORICAL DISCHARGE LIMITATIONS (Continued)

40 CFR 439.17 PSNS

POLLUTANT	DAILY MAXIMUM mg/l	MONTHLY AVERAGE mg/l
Cyanide	33.5 (0.56)*	9.4
Acetone	20.7	8.2
4-Methyl-2-pentanone (MIBK)	20.7	8.2
Isobutyraldehyde	20.7	8.2
n-Amyl acetate	20.7	8.2
n-Butyl acetate	20.7	8.2
Ethyl acetate	20.7	8.2
Isopropyl acetate	20.7	8.2
o-Dichlorobenzene	20.7	8.2
Tetrahydrofuran	9.2	3.4
Benzene	3	0.7
Chlorobenzene	3	0.7
Toluene	0.3	0.1
Xylenes	3	0.7
n-Hexane	3	0.7
n-Heptane	3	0.7
Methylene chloride	3	0.7
Chloroform†	0.1	0.03
1,2-Dichloroethane	20.7	8.2
Diethyl amine	255	100
Triethylamine	255	100
Ammonia, nitrogen	84.1	29.4
Methyl formate	20.7	8.2
Isopropyl ether	20.7	8.2

40 CFR 439.27 PSNS and 439.47 PSNS

POLLUTANT	DAILY MAXIMUM mg/l	MONTHLY AVERAGE mg/l
Acetone	20.7	8.2
n-Amyl Acetate	20.7	8.2
Ethyl acetate	20.7	8.2
Isopropyl acetate	20.7	8.2
Methylene chloride	3.0	0.7

* More stringent Blue Plains' local limits.

BLUE PLAINS DISCHARGERS

NON-CATEGORICAL SIGNIFICANT INDUSTRIAL USERS
December 2018

INDUSTRY NAME & ADDRESS	CATEGORY	STANDARDS
Coca-Cola Bottling Company Consolidated 1710 Elton Road Silver Spring, MD 20903	Bottling Company	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
District Photo, Inc. 10619 Baltimore Avenue Beltsville, MD 20705	Photoprocessor	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene][4]
Fort Detrick-Forest Glen Annex 9100 Brookville Road Silver Spring, MD 20910	Federal Facility	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
GlaxoSmithKline LLC 14200 Shady Grove Road Rockville, MD 20850	Pharmaceutical Research and Development	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
Marva Maid of Landover 6300 Sheriff Road Landover, MD 20785	Dairy	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
MedImmune, Inc. 1 MedImmune Way Gaithersburg, MD 20878	Pharmaceutical Research and Development	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
National Archives and Records Administration[5] 8601 Adelphi Road College Park, MD 20740	Federal Facility	{As, Cd, Hg, Mo, Ni, Zn, CN, O&G[1], PCB}[2]; [Ag, Cr, Cu, Pb, pH, TTO][4]
National Institute of Standards and Technology 00 Muddy Branch Road Gaithersburg, MD 20899	Federal Facility	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]

BLUE PLAINS DISCHARGERS

NON-CATEGORICAL SIGNIFICANT INDUSTRIAL USERS
December 2018

INDUSTRY NAME & ADDRESS	CATEGORY	STANDARDS
National Institutes of Health 9000 Rockville Pike Bethesda, MD 20892	Federal Facility	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
National Institutes of Health – 5625 Fishers Lane[6] 5625 Fishers Lane Rockville, MD 20852	Federal Facility	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
Naval Support Activity Bethesda 8901 Wisconsin Avenue Bethesda, MD 20889	Federal Facility	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
Nixon Uniform Service, Inc. 11860 Old Baltimore Pike Beltsville, MD 20705	Industrial Laundry	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
Oaks Sanitary Landfill 6001 Olney-Laytonsville Road Laytonville, MD 20706	Sanitary Landfill	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp, TSS][4]
Pepsi Beverages Company 2611 Pepsi Place Cheverly, MD 20781	Bottling Company	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
Ritchie Land Reclamation, LLC[7] 2001 Ritchie Marlboro Road Upper Marlboro, MD 20774	Solid Waste Landfill	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
UniFirst Corporation 6201 Sheriff Road Landover, MD 20785	Industrial Laundry	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]

BLUE PLAINS DISCHARGERS

NON-CATEGORICAL SIGNIFICANT INDUSTRIAL USERS
December 2018

INDUSTRY NAME & ADDRESS	CATEGORY	STANDARDS
Venator Americas LLC.[8] 7011 Muirkirk Road Beltsville, MD 20705	Pigment Production	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
Washington Metropolitan Area Transit Authority (Greenbelt) 5801 Sunnyside Avenue Beltsville, MD 20705	Rail Car Maintenance and Cleaning	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
Washington Metropolitan Area Transit Authority (Shady Grove) 15903 Somerville Dr. Rockville, MD 20855	Rail Car Maintenance and Cleaning	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]
WSSC Potomac Water Filtration Plant 12200 River Road Potomac, MD 20854	Water Filtration Plant	{Ag, As, Cd, Cu, Hg, Mo, Ni, Pb, Zn, CN, O&G[1], PCB}[2]; [FOG[3], pH, Tetrachloroethylene, Trichloroethylene, Temp][4]

1 Oil & Grease (Nonpolar Petroleum)
2 Blue Plains' local limits
3 Fats, Oils & Grease (Polar)
4 WSSC's local limits
5 No Permit modification in 2018, facility under review for potential delisting
6 National Institutes of Health (NIAID) name change via permit modification on January 22, 2018
7 Ritchie Rubble Landfill name change via permit modification on October 1, 2018
8 Huntsman P&A Americas, LLC name change via permit modification on April 16, 2018

BLUE PLAINS DISCHARGERS

NONCATEGORICAL SIGNIFICANT INDUSTRIAL USERS
LOCAL DISCHARGE LIMITATIONS

POLLUTANT	LIMIT
Arsenic	0.23 mg/l*
Cadmium	0.07 mg/l*
Chromium	7.0 mg/l
Copper	2.3 mg/l*
Cyanide	0.56 mg/l*
Lead	1.0 mg/l*
Mercury	<0.001 mg/l*
Molybdenum	0.89 mg/l*
Nickel	2.2 mg/l*
Selenium	0.40 mg/l
Silver	1.3 mg/l*
Zinc	3.4 mg/l*
Polychlorinated Biphenyls	Non-detect[1]*
Tetrachloroethylene	0.0945 mg/l
Trichloroethylene	0.026 mg/l
Ammonia	190 mg/l
BOD (5-day, 20°c)	3,000 mg/l
Fats, Oil & Grease (Polar)	200 mg/l
Oil & Grease (Nonpolar, Petroleum)	100 mg/l*
pH	6.0 - 10.0 units
Dissolved Solids	5,000 mg/l
Suspended Solids	3,000 mg/l
Total Solids	8,000 mg/l
Total Phosphorus	8 mg/l
Temperature	140° F

*DC WATER Local Limits implemented for pollutants based on wastewater treatment plant performance in place of WSSC Local Limits

[1] Total PCBs shall be measured using EPA Method 608 with a detection limit of at least 0.001 mg/l.

WSSC
Where Water Matters

BLUE PLAINS DISCHARGERS
SIGNIFICANT INDUSTRIAL USER CONTROL DOCUMENTS
2018

	Industrial User	Issuance Date	Effective Date	Expiration Date
1	Adelphi Laboratory Center	05/19/16	05/22/16	06/30/20
2	ATK Space Systems, Inc.	06/20/16	06/21/16	06/20/20
3	Coca-Cola Bottling Company Consolidated	06/06/16	06/06/16	06/05/20
4	District Photo, Inc.	06/09/16	06/13/16	06/12/20
5	Eaton Corporation	06/27/16	06/28/16	06/27/20
6	Emergent BioSolutions	10/03/16	10/03/16	10/02/20
7	Fort Detrick-Forest Glen Annex	09/22/16	09/22/16	09/21/20
8	GlaxoSmithKline LLC	01/09/17	01/10/17	01/09/21
9	Human Genome Sciences, Inc. Large Scale Manufacturing	01/10/15	01/10/15	01/09/19[1]
10	Human Genome Sciences, Inc. Small Scale Manufacturing	10/20/16	10/22/16	10/21/20
11	Marva Maid of Landover	07/26/16	07/28/16	07/27/20
12	Maryland Metal Plating & Polishing, Inc.	06/09/16	06/12/16	06/11/20
13	MedImmune, Inc.	02/01/16	02/04/16	02/03/20
14	Mid-Atlantic Finishing, Inc.	05/22/16	05/22/16	05/21/20
15	National Archives and Records Administration	10/11/16	10/11/16	10/10/20
16	National Institute of Standards and Technology	05/26/16	06/01/16	05/31/20
17	National Institutes of Health	06/02/16	06/06/16	06/05/20
18	National Institutes of Health – 5625 Fishers Lane[2]	05/19/17	05/19/17	05/18/21
19	Naval Support Activity Bethesda	08/29/16	08/31/16	08/30/20
20	Nixon Uniform Service, Inc.	06/27/16	06/28/16	06/27/20
21	Oaks Sanitary Landfill	08/29/16	08/31/16	08/30/20
22	Pepsi Beverages Company	06/20/16	06/22/16	06/21/20
23	Ritchie Land Reclamation, LLC[3]	02/06/17	02/08/17	02/07/21
24	UniFirst Corporation	05/26/16	05/30/16	05/29/20
25	United Therapeutics Corporation	09/30/15	09/30/15	09/29/19
26	University of MD/DOD, Physical Sciences Laboratory	06/23/16	06/27/16	06/26/20
27	Venator Americas LLC[4]	06/28/16	06/28/16	06/27/20
28	Washington Metropolitan Area Transit Authority (Greenbelt)	09/04/15	09/04/15	09/03/19
29	Washington Metropolitan Area Transit Authority (Shady Grove)	03/23/18	03/23/18	03/22/22
30	WSSC Potomac Water Filtration Plant	09/08/16	10/05/16	10/04/20

[1] Permit administratively extended to March 31, 2019 on December 18, 2018
[2] National Institutes of Health (NIAID) name change via permit modification on January 22, 2018
[3] Ritchie Rubble Landfill name change via permit modification on October 1, 2018
[4] Huntsman P&A Americas, LLC name change via permit modification on April 16, 2018

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Where Water Matters

CATEGORICAL INDUSTRIAL USERS (CIU)
COMPLIANCE MONITORING, INVESTIGATIONS AND SELF-MONITORING
SUMMARY FOR CY 2018

INDUSTRY NAME AND ADDRESS	ID #	NUMBER OF SAMPLING VISITS	NUMBER OF INSPECTION VISITS	NUMBER OF SELF-MONITORING EVENTS	NUMBER OF SELF-MONITORING EVENTS REQUIRED
Adelphi Laboratory Center 2800 Powder Mill Road Adelphi, MD 20783	00166	2-Outfall 001 6[1]-Outfall FAC	2	4 8	4 8
ATK Space Systems, Inc. 11313 Frederick Avenue Beltsville, MD 20705	08027	2-Outfall 001 2-Outfall 002	1	8 8	8 8
Eaton Corporation 11642 Old Baltimore Pike Beltsville, MD 20705	00405	5[1]-Outfall 003 2-Outfall 004	2	8 8	8 8
Emergent BioSolutions 9920 Medical Center Drive Rockville, MD 20850	10618	5[1]	2	8	8
Human Genome Sciences, Inc. Large Scale Manufacturing 9911 Belward Campus Drive Rockville, MD 20850	10116	6[1]	2	8 13 add'l pH events 2 add'l Diethylamine and Triethylamine 2 add'l Method 1666 and Method 524.1	8
Human Genome Sciences, Inc. Small Scale Manufacturing 9910 Belward Campus Drive Rockville, MD 20850	08093	7[1]	4	8 10 add'l pH 5 add'l Tetrahydrofuran per SNC 1 add'l Tetrahydrofuran per NOV	8

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CATEGORICAL INDUSTRIAL USERS (CIU)
COMPLIANCE MONITORING, INVESTIGATIONS AND SELF-MONITORING
SUMMARY FOR CY 2018

INDUSTRY NAME AND ADDRESS	ID #	NUMBER OF SAMPLING VISITS	NUMBER OF INSPECTION VISITS	NUMBER OF SELF-MONITORING EVENTS	NUMBER OF SELF-MONITORING EVENTS REQUIRED
Maryland Metal Plating & Polishing, Inc. 4110 Howard Avenue Kensington, MD 20895	07777	4[1]	2	8	8
Mid-Atlantic Finishing, Inc. 4656 Addison Road Capitol Heights, MD 20743	07771	5[1]	2	8	8
United Therapeutics, Corporation 1040 Spring Street Silver Spring, MD 20910	13288	6[1]-Outfall 001 2-Outfall 002 2-Outfall 003 2-Outfall 004 2-Outfall 005	1	8 8 add'l pH 22 4 4 8	8 22[2] 4[3] 4[3] 8
University of MD/DOD, Physical Sciences Laboratory 8050 Greenmeade Drive College Park, MD 20740	07987	5[1]	1	6[4] 3 add'l pH	8

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NON-CATEGORICAL SIGNIFICANT INDUSTRIAL USERS (SIU) COMPLIANCE SAMPLING AND INVESTIGATION SUMMARY CY 2018

INDUSTRY NAME AND ADDRESS	ID #	NUMBER OF SAMPLING VISITS	NUMBER OF INSPECTION VISITS	NUMBER OF SELF-MONITORING EVENTS	NUMBER OF SELF-MONITORING EVENTS REQUIRED
Coca-Cola Bottling Company Consolidated 1710 Elton Road Silver Spring, MD 20903	00080	6[1]	5	8 1 add'l pH per NOV 2 add'l pH	8
District Photo, Inc. 10619 Baltimore Avenue Beltsville, MD 20705	03812	6[1]	2	8	8
Fort Detrick-Forest Glen Annex 9100 Brookville Road Silver Spring, MD 20910	08091	9[1]	4	8 14 pH only per NOV and self-directed	8
GlaxoSmithKline LLC 14200 Shady Grove Road Rockville, MD 20850	14006	7[1]	3	8 1 add'l pH	8
Marva Maid of Landover 1805 South Club Drive Landover, MD 20785	00238	7[1]	2	8 8 add'l pH	8
MedImmune, Inc. 1 MedImmune Way Gaithersburg, MD 20878	10801	6[1]	3	8	8
National Archives and Records Administration 8601 Adelphi Road College Park, MD 20740	08017	6[1]	1	8	8

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NON-CATEGORICAL SIGNIFICANT INDUSTRIAL USERS (SIU)
COMPLIANCE SAMPLING AND INVESTIGATION SUMMARY
CY 2018

INDUSTRY NAME AND ADDRESS	ID #	NUMBER OF SAMPLING VISITS	NUMBER OF INSPECTION VISITS	NUMBER OF SELF-MONITORING EVENTS	NUMBER OF SELF-MONITORING EVENTS REQUIRED
National Institute of Standards and Technology 00 Muddy Branch Road Gaithersburg, MD 20899	05813	6[1]	2	8 1 add'l day full suite	8
National Institutes of Health 9000 Rockville Pike Bethesda, MD 20892	08111	6[1]	2	8	8
National Institutes of Health – 5625 Fishers Lane 5625 Fishers Lane Rockville, MD 20854	08108	5[1]	1	8 3 add'l Hg per SNC	8
Naval Support Activity Bethesda 8901 Wisconsin Avenue Bethesda, MD 20889	06501	6[1]	2	8 2 add'l TTO	8
Nixon Uniform Service, Inc. 11860 Old Baltimore Pike Beltsville, MD 20705	08095	6[1]	2	8	8
Oaks Sanitary Landfill 6001 Olney-Laytonsville Rd. Laytonsville, MD 20706	07741	2	2	12[5]	11[5]
Pepsi Beverages Company One Pepsi Place Cheverly, MD 20781	00140	6[1]	3	8 8 add'l pH 1 add'l pH per NOV	8
Ritchie Land Reclamation, LLC 2001 Ritchie Marlboro Road Upper Marlboro, MD 20774	08101	2 – Outfall FAC 2 – Outfall 001	3	8 8 1 add'l PCBs per NOV	8 8

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Where Water Matters

NON-CATEGORICAL SIGNIFICANT INDUSTRIAL USERS (SIU) COMPLIANCE SAMPLING AND INVESTIGATION SUMMARY CY 2018

INDUSTRY NAME AND ADDRESS	ID #	NUMBER OF SAMPLING VISITS	NUMBER OF INSPECTION VISITS	NUMBER OF SELF-MONITORING EVENTS	NUMBER OF SELF-MONITORING EVENTS REQUIRED
UniFirst Corporation 6201 Sheriff Road Landover, MD 20785	00100	10[1]	4	8 2 add'l TTO per NOV 2 add'l Tetrachloroethylene & Trichloroethylene per NOV 2 add'l O&G per NOV 6 add'l pH per NOV	8
Venator Americas LLC 7011 Muirkirk Road Beltsville, MD 20705	00056	3[1]	2	6[6]	8
Washington Metropolitan Area Transit Authority (Greenbelt) 5801 Sunnyside Avenue Beltsville, MD 20705	10123	6[1]	1	8	8
Washington Metropolitan Area Transit Authority (Shady Grove) 15903 Somerville Drive Rockville, MD 20855	08107	6[1]	2	8 2 add'l days per NOV	8
WSSC Potomac Water Filtration Plant 12200 River Road Potomac, MD 20854	14011	6[1]	2	8	8

[1] Industry was sampled for 2 full events, remainder of events were pH only
[2] Permit required events are variable depending on process discharges
[3] Monitoring Requirement is once a calendar year per 40 CFR 439.2
[4] No process flow 2nd quarter of 2018
[5] Monthly monitoring requirement removed via permit modification October 1, 2018, however industry monitored each month during the 4th Q
[6] No process flow 1st quarter of 2018

BLUE PLAINS DISCHARGERS

FACILITIES NOT INSPECTED AND REASON
CY 2018

FACILITY	REASON
None	

FACILITIES NOT SAMPLED AND REASON
CY 2018

FACILITY	REASON
None	

FACILITIES CONDUCTING LESS THAN THE REQUIRED NUMBER OF SELF-MONITORING EVENTS
CY 2018

FACILITY	REASON
University of MD/DOD	No process flow 2nd quarter
Venator Americas LLC	No process flow 1st quarter

BLUE PLAINS DISCHARGERS SIGNIFICANT INDUSTRIAL USERS IN SNC 2018[1]				
INDUSTRIAL USER	EVALUATION FOR SNC	PERIOD	ACTIONS PLANNED OR TAKEN	CURRENT STATUS
Coco-Cola Bottling Company Consolidated	SNC for Failure to Notify	April 2018 – September 2018	Notice of Violation and Publication	Compliance

[1] The evaluation periods include: October 2017-March 2018, January 2018-June 2018, April 2018-September 2018 and July 2018-December 2018.

SIGNIFICANT INDUSTRIAL USER IN SNC FOR THIS REPORTING YEAR AND LAST REPORTING YEAR

INDUSTRIAL USER	REASON FOR SNC
None	

BLUE PLAINS DISCHARGERS
SIGNIFICANT INDUSTRIAL USERS ON FORMAL COMPLIANCE SCHEDULES
2018

INDUSTRIAL USERS	TYPE OF SCHEDULE	DATE OF VIOLATION	DATE COMPLIANCE SCHEDULE ISSUED	REASON	FINAL COMPLIANCE DATE (FCD)	CURRENT STATUS	COMPLIANCE EXPECTED BY FCD
Coca-Cola Bottling Company Consolidated	Directive	5/31/2018	12/20/2018	Corrective Measures	12/31/2018	Compliance	N/A
Eaton Corporation	Directive	N/A	5/24/2018	Pretreatment System Modification	6/25/2018	FCD Extended	N/A
Eaton Corporation	Directive	N/A	6/28/2018	Pretreatment System Modification	7/31/2018	FCD Extended	N/A
Eaton Corporation	Directive	N/A	8/2/2018	Pretreatment System Modification	9/4/2018	FCD Extended	N/A
Eaton Corporation	Directive	N/A	9/6/2018	Pretreatment System Modification	10/26/2018	FCD Extended	N/A
Eaton Corporation	Directive	N/A	11/5/2018	Pretreatment System Modification	1/2/2019	FCD Extended	N/A
Eaton Corporation	Directive	N/A	1/10/2019	Pretreatment System Modification	3/31/2019	Interim	3/31/2019
Emergent BioSolutions	Directive	N/A	12/11/2018	Submit Plan	1/7/2019	Compliance	1/7/2019
Fort Detrick-Forest Glen Annex	Directive	3/8/2018	5/24/2018	Corrective Measures	6/15/2018	Compliance	N/A

INDUSTRIAL USERS	TYPE OF SCHEDULE	DATE OF VIOLATION	DATE COMPLIANCE SCHEDULE ISSUED	REASON	FINAL COMPLIANCE DATE (FCD)	CURRENT STATUS	COMPLIANCE EXPECTED BY FCD
Fort Detrick-Forest Glen Annex	Directive	7/11/2018 7/12/2018 7/26/2018 7/27/2018 7/31/2018	9/27/2018	Corrective Measures	10/12/2018	Compliance	N/A
GlaxoSmithKline LLC	Directive	11/14/2017 11/15/2017	2/20/2018	Corrective Measures	3/2/2018	Compliance	N/A
Human Genome Sciences, Inc. Large Scale Manufacturing	Directive	4/7/2018	5/16/2018	Corrective Measures	6/15/2018	Compliance	N/A
Human Genome Sciences, Inc. Large Scale Manufacturing	Directive	N/A	12/21/2018	Provide Information	1/31/2019	Compliance	1/31/2019
Human Genome Sciences, Inc. Small Scale Manufacturing	Directive	11/8/2017 11/30/2017	1/12/2018	Corrective Measures	2/28/2018	Compliance	N/A
Human Genome Sciences, Inc. Small Scale Manufacturing	Directive	4/7/2018	5/16/2018	Corrective Measures	7/15/2018	Compliance	N/A
Human Genome Sciences, Inc. Small Scale Manufacturing	Directive	4/8/2018	8/13/2018	Corrective Measures	10/31/2018	Compliance	N/A
MedImmune, Inc.	Directive	10/10/2017 10/11/2017	2/7/2018	Corrective Measures	2/21/2018	Compliance	N/A
MedImmune, Inc.	Directive	N/A	10/24/2018	Corrective Measures	3/12/2019	Interim	3/12/2019
National Institutes Of Health – 5625 Fishers Lane	Directive	8/23/2017	1/2/2018	Corrective Measures	1/26/2018	Compliance	N/A
National Institutes Of Health – 5625 Fishers Lane	Directive	8/23/2017	2/8/2018	Corrective Measures	2/14/2018	Compliance	N/A

INDUSTRIAL USERS	TYPE OF SCHEDULE	DATE OF VIOLATION	DATE COMPLIANCE SCHEDULE ISSUED	REASON	FINAL COMPLIANCE DATE (FCD)	CURRENT STATUS	COMPLIANCE EXPECTED BY FCD
Naval Support Activity Bethesda	Directive	12/18/2017	2/12/2018	Corrective Measures	3/30/2018	FCD Extended	N/A
Naval Support Activity Bethesda	Directive	12/18/2017	4/13/2018	Corrective Measures	11/30/2018	Non-Compliance	N/A
Naval Support Activity Bethesda	Directive	8/3/2018	9/7/2018	Corrective Measures	11/30/2018	Compliance	N/A
Pepsi Beverages Company	Directive	9/10/2018	12/5/2018	Corrective Measures	12/19/2018	Compliance	N/A
Ritchie Land Reclamation, LLC	Directive	10/7/2018	11/2/2018	Corrective Measures	11/30/2018	Compliance	N/A
UniFirst Corporation	Directive	1/7/2018	1/22/2018	Corrective Measures	2/8/2018	Compliance	N/A
UniFirst Corporation	Directive	4/7/2018	5/24/2018	Corrective Measures	6/18/2018	Compliance	N/A
UniFirst Corporation	Directive	7/7/2018	9/4/2018	Corrective Measures	9/17/2018	Compliance	N/A
Venator Americas LLC	Directive	N/A	12/10/2018	Remove IWMP	3/31/2019	Interim	3/31/2019

COPY OF NEWSPAPER LISTING OF SIGNIFICANT INDUSTRIAL USERS (SIUs) IN SIGNIFICANT NONCOMPLIANCE (SNC) DURING THE CALENDAR YEAR 2018

WSSC has not yet published the list of SIUs in SNC for the calendar year. A copy of the newspaper listing will be forwarded to DC Water no later than June 30, 2019.

BLUE PLAINS DISCHARGERS
SIGNIFICANT INDUSTRIAL USERS (SIUs) ISSUED
NOTICES OF VIOLATION IN 2018

CATEGORICAL SIUs	NUMBER ISSUED
Human Genome Sciences, Inc., Large Scale Manufacturing	1
Human Genome Sciences, Inc., Small Scale Manufacturing	1

NON-CATEGORICAL SIUs	
Coca-Cola Bottling Company Consolidated	1[1]
Fort Detrick-Forest Glen Annex	3[1]
GlaxoSmithKline LLC	1[1]
MedImmune, LLC	1[1]
Naval Support Activity Bethesda	1
Pepsi Beverages Company	1
Ritchie Land Reclamation, LLC	1
UniFirst Corporation	3

TOTAL = 14 NOVs

[1] Notice of Violation issued for multiple non-compliance occurrences.

BLUE PLAINS DISCHARGERS

SIGNIFICANT INDUSTRIAL USERS ISSUED ADMINSTRATIVE ORDERS IN 2018

INDUSTRIAL USER	ACTION	NUMBER ISSUED
None		

SIGNIFICANT INDUSTRIAL USERS THAT HAVE BEEN SUED FOR PRETREATMENT VIOLATIONS IN 2018

INDUSTRIAL USER	DATE FILED	REASON FOR SUIT	STATUS
None			

BLUE PLAINS DISCHARGERS

SIGNIFICANT INDUSTRIAL USERS ASSESSED PENALTIES IN 2018

INDUSTRIAL USER	PENALTY AMOUNT	REASON	AMOUNT COLLECTED
UniFirst Corporation	$750	Failure to submit a complete PCR	$750
UniFirst Corporation	$1000	Failure to submit a complete PCR	$1000
UniFirst Corporation	$1000	Failure to submit a complete PCR	$1000

TOTAL ASSESSED: $2750 in 2018 **TOTAL COLLECTED:** $2750 in 2018

PENALTIES ASSESSED IN 2017 AND COLLECTED IN 2018

INDUSTRIAL USER	AMOUNT COLLECTED
None	

BLUE PLAINS DISCHARGERS

DESCRIPTION OF ALL ACTIONS INCLUDED AS ADMINISTRATIVE ORDERS IN 2018

DESCRIPTION OF ANY "OTHER ACTION"

No "other actions" were taken.

LIST OF SIUs THAT HAD SNC VIOLATIONS BUT WERE NOT SUBJECT TO ENFORCEMENT IN 2018

INDUSTRIAL USER	REASON FOR NO ACTION
None	

Attachment 3

Parts A and B with attachments for Fairfax County SIUs discharging to Blue Plains

PART A
PRETREATMENT PERFORMANCE SUMMARY

I. General Information

Control Authority Name	*Fairfax County, VA, Jurisdiction Contributing to DC Water's Blue Plains Advanced Wastewater Treatment Plant (AWTP)*			
Address	*Blue Plains AWTP, 5000 Overlook Avenue, S.W.*			
City	*Washington, D.C.*	State	Zip+4	*20032-5397*
Contact Name	*John Botts*		*Telephone No.*	*703-550-9740, ext.429*
Contact Title	*Pretreatment Manager*		*E-mail Address*	*John.Botts@fairfaxcounty.gov*
NPDES No.	*DC 0021199*		Reporting Period	*01-01-18 to 12-31-18*
Issuance Date	*7/26/18*		Expiration Date	*8/25/23*
Total CIUs*	*1*		Total MTCIUs[+]	*Not applicable*
Total SNIUs**	*3*		Total NSCIUs[++]	*Not applicable*

* CIUs - Categorical Industrial Users
** SNIUs - Significant Noncategorical Users
[+]MTCIUs – Middle Tier Categorical Industrial Users
[++]NSCIUs – Nonsignificant Categorical Industrial Users

II. Compliance Monitoring Program

1.	No. of SIUs[#] with current Control Documents.....	4
2.	No. of SIU Facilities Inspected.....	4
3.	No. of SIU Facilities Sampled.....	4
4.	No. of SIUs Submitting Self-Monitoring Reports.....	4

[#] SIUs – significant industrial users, which consist of CIUs and SNIUs

III. Significant Industrial User Compliance

1.	No. of SIUs Violating a Compliance Schedule / No. on a Schedule.....	0/0
2.	No. of SIUs in SNC for the July to December Period.....	0
3.	No. of SIUs in SNC At Any Time During the Calendar Year.....	0
4.	No. of SIUs in SNC That Were Also in SNC During the Previous Calendar Year	0
5.	No. of NSCIUs that violated any standards or requirements	0

IV. Enforcement Actions

1.	Notices/Letters of Violation Issued to SIUs.....	2
2.	Enforceable Compliance Schedules Issued to SIUs.....	0
3.	Civil/Criminal Suits Filed.....	0
4.	No. of SIUs from which Penalties have been Collected.....	0
5.	Other Actions (verbal Notice of Violation).....	2

I certify that the information contained in this report and attachments is complete and accurate to the best of my knowledge (see Part B.V of the instructions).

Shahram Mohseni
Name of Authorized Representative (Print)

Director, WPMD
Title (Print)

Signature of Authorized Representative

3/15/19
Date

Attachment I - General Information

1. SIU List and Designation
2. Changes to SIU List

ATTACHMENT I — GENERAL INFORMATION

JURISDICTION Fairfax County, Virginia
SERVICE AREA Blue Plains Advanced Wastewater Treatment Plant

1. SIU List and designation

USER ID	USER NAME	SPECIFY CATEGORY; IF NOT CATEGORICAL INDICATE NOT CIU
A30222	George Bush Center for Intelligence (GBCI) (formerly CIA) 930 Dolly Madison Blvd* McLean, VA 22101	SIU, NOT CIU
A30320	Fairfax Water (formerly Fairfax County Water Authority) James J. Corbalis, Jr. Water Treatment Plant 1295 Fred Morin Road Herndon, VA 20180	SIU, NOT CIU
A30920	U.S. Geological Survey 12201 Sunrise Valley Drive* Reston, VA 20192	SIU, NOT CIU
001G	Precision Sheet Metal Supply, Inc. (within the Town of Herndon)** 354 Victory Drive Herndon, VA 20180	CIU 40 CFR §433 (Metal Finishing-New Source)

* Addresses listed are users' premises addresses. Users A30222 and A30920 have mailing addresses that differ from their premises addresses.
** Permit for Precision Sheet Metal Supply, Inc. (001G) is issued and administered by the Town of Herndon

2. Changes to SIU list

Fairfax County conducts a continuous annual industrial waste survey in lieu of a survey once during the VPDES permit cycle (i.e., every five years) for the County's Noman M. Cole, Jr Pollution Control Plant (NMCPCP). The survey is conducted county-wide and includes the sanitary sewer service area for D.C. Water's Blue Plains Advanced Wastewater Treatment Plant (AWTP). Information for the survey is obtained through coordination with various County agencies, review of Fairfax Water's non-residential customer database, business inspections, applications for discharges to sanitary sewer, and a commercial database of businesses. During calendar year 2018, Fairfax County did not identify any new SIUs in Fairfax County that discharge to the Blue Plains AWTP. The industrial waste survey report for 2018, which includes SIUs and surveyed businesses, is provided in Appendix A.

Fairfax County continues to convey wastewater from the entire Town of Herndon to D.C. Water's Blue Plains AWTP under an agreement executed in 1990. The Town of Herndon has developed a pretreatment program to administer permits, assess compliance, and, as needed, take enforcement action to regulate sources of non-domestic wastewater located within the Town. The Interjurisdictional Pretreatment Agreement with the Town of Herndon (dated 1995) requires Fairfax County's review of pretreatment permits issued by the Town, and the submittal of pretreatment reports by the Town to the County. The Town of Herndon currently administers the permit for the single SIU, Precision Sheet Metal Supply, Inc., located in the Town.

ATTACHMENT I — GENERAL INFORMATION (Continued)

The Town of Herndon did not identify new SIUs within their jurisdictional boundaries during 2018 (see Appendix B).

Fairfax County continues to convey wastewater from a portion of Arlington County to the Blue Plains AWTP under an agreement executed in 1994. Arlington County did not identify new SIUs in the noted area during 2018 (see Appendix C).

No brine wastes (oil and gas drilling fluids) were known to be discharged to the County's portion of the Blue Plains AWTP service area in 2018.

Attachment II - Compliance Monitoring Program

1. Control mechanism
2. Permits administratively extended
3. Facilities not inspected and reason
4. Facilities not sampled and reason
5. Number of POTW sampling events and inspections, number of self- monitoring events, and reports

ATTACHMENT II — COMPLIANCE MONITORING PROGRAM

JURISDICTION Fairfax County, Virginia
SERVICE AREA Blue Plains Advanced Wastewater Treatment Plant

1. Control mechanism

USER NAME & NO.	TYPE OF CONTROL MECHANISM	PERMIT DATES			PERMIT ACTIONS DURING THE REPORTING PERIOD
		ISSUANCE	EFFECTIVE	EXPIRATION	
A30222 GBCI	Individual permit	12-29-17	01-01-18	12-31-22	Permit pages changed, issued and effective February 2, 2018. (copy provided in Appendix D)
A30320 Fairfax Water	Individual permit	12-20-17	01-01-18	12-31-20	None
A30920 USGS	Individual permit	12-20-17	01-01-18	12-31-20	None
001G Precision Sheet Metal*	Individual permit	11-20-18	11-20-18	11-20-23	Permit reissued (copy provided in Appendix D)

* User's CIU permit incorporates concentration-based limits as specified by 40 CFR Part 433.13 (metal finishing sub-category) and applicable local limits. Total toxic organics (TTO) monitoring requirement is waived because TTOs are not present; initial TTO monitoring conducted in 1991 and follow-up annual inspections confirm TTOs are not discharged. User implements an approved toxic organics management plan and submits a semi-annual statement certifying that TTOs are not present in the discharge in conformance with 40 CFR 433.12(a).

2. Permits administratively extended — NONE

3. Facilities not inspected and reason — NONE

4. Facilities not sampled and reason — NONE

ATTACHMENT II — COMPLIANCE MONITORING PROGRAM (Continued)

5. **Number of POTW sampling events and inspections for, and number of self-monitoring events and self-monitoring reports submitted by, each SIU.**

USER NO.	NO. BY POTW DURING THE YEAR		NO. BY USER DURING THE YEAR			
			SELF-MONITORING EVENTS		SELF-MONITORING REPORTS	
	SAMPLINGS	INSPECTIONS	CONDUCTED	REQUIRED	SUBMITTED	REQUIRED
A30222 GBCI	2	1	3*	3*	4	4
A30320 Fairfax Water	2	1	2	2	4	4
A30920 USGS	2	1	2	2	2	2
001G Precision Sheet Metal	1	1	2**	2**	4	4

* Permit issued to User 30222 required quarterly self-monitoring in the first 3 quarters of 2018.

** User 001G samples and analyzes the discharge from the regulated process for compliance with categorical standards semi-annually. In addition, User 001G tests pH twice daily during any day the regulated process is operated. During calendar year 2018, User 001G operated the regulated process 252 days, and monitored for pH 504 times.

Attachment III - Significant Industrial User Compliance

1. Users in significant noncompliance (SNC), listed by quarter
2. Users on compliance schedules (formal and informal)
3. Summary of users' compliance status

ATTACHMENT III- SIGNIFICANT INDUSTRIAL USER COMPLIANCE

JURISDICTION Fairfax County, Virginia
SERVICE AREA Blue Plains Advanced Wastewater Treatment Plant

1. Users in significant noncompliance (SNC), listed by quarter — NONE

2. Users on compliance schedules (formal and informal) — NONE

3. Summary of users' compliance status

USER NO.	COMPLIANCE SUMMARY
A30222 GBCI	User consistently achieved compliance with pretreatment standards and requirements in 2018. User is currently in compliance with the permit, Fairfax County's Sanitary Sewers and Sewage Disposal Code, and Blue Plains Service Area local limits.
A30320 Fairfax Water	User consistently achieved compliance with pretreatment standards and requirements in 2018. User is currently in compliance with the permit, Fairfax County's Sanitary Sewers and Sewage Disposal Code, and Blue Plains Service Area local limits.
A30920 USGS	User consistently achieved compliance with pretreatment standards and requirements in 2018. User is currently in compliance with the permit, Fairfax County's Sanitary Sewers and Sewage Disposal Code, and Blue Plains Service Area local limits.
001F/G Precision Sheet Metal	User consistently achieved compliance with pretreatment standards and inconsistently achieved compliance with pretreatment requirements in 2018. The Town of Herndon served User with a written NOV on June 29, 2018 for late submission of a wastewater discharge application. User submitted the application as required by the NOV letter. Fairfax County issued a verbal NOV on August 31, 2018 and the Town of Herndon served a written NOV on September 27, 2018 for sampling errors identified in the User's third quarter periodic compliance report. As part of a corrective action plan, User repeated sampling and the results demonstrated compliance with the permit limits and Blue Plains Service Area local limits. Town of Herndon issued a verbal NOV to the User on February 22, 2019 for incorrect reporting of the monthly average daily flow for the month of October. User submitted a corrected report. User continued to implement a corrective action plan (revised March 28, 2017) that required semi-annual self-monitoring for polychlorinated biphenyls (PCBs) until April 2018. Discharge monitoring results for 2018 indicate compliance with the Blue Plains

	local limit for PCBs. User is currently in compliance with the permit, Fairfax County's Sanitary Sewers and Sewage Disposal Code, and Blue Plains Service Area local limits.

ATTACHMENT III- SIGNIFICANT INDUSTRIAL USER COMPLIANCE (Continued)

USER NO.	COMPLIANCE SUMMARY

Attachment IV - Enforcement Actions

1. Users requiring formal compliance schedules
2. Users issued written notices/letters of violation
3. Number of criminal suits filed in court
4. Users assessed penalties (if assessed, amount, reason, and if paid)
5. Users issued administrative orders
6. Users subject to "other actions" (written NOV to sewage handling contractors registered by Fairfax County)
7. Copy of newspaper listing of users in significant non-compliance
8. Users with violations but not subject to enforcement

ATTACHMENT IV — ENFORCEMENT ACTIONS

JURISDICTION Fairfax County, Virginia
SERVICE AREA Blue Plains Advanced Wastewater Treatment Plant

1. **Users requiring formal compliance schedules — NONE**

2. **Users issued notices/letters of violation**

USER NUMBER & NAME	DATE OF NOV ISSUANCE	TYPE OF ACTION
001G Precision Sheet Metal	June 29, 2018	Written NOV Issued By Town of Herndon
	September 27, 2018	Written NOV Issued By Town of Herndon

3. **Number of criminal suits filed in court — NONE**

4. **Users assessed penalties (if assessed, amount, reason, and if paid) — NONE**

5. **Users issued administrative orders — NONE**

6. **Users subject to "other actions" (verbal Notice of Violation)**

USER NAME & NO.	DATE OF ACTION	TYPE OF ACTION
001G Precision Sheet Metal	August 31, 2018	Verbal NOV Issued By Fairfax County
	February 22, 2019	Verbal NOV Issued By Town of Herndon

7. **Copy of newspaper listing of users in significant non-compliance (submit by March 31 as an addendum if listing is published after report submission) — NOT APPLICABLE**

8. **Users with violations but not subject to enforcement — NOT APPLICABLE**

PART B
PRETREATMENT DEVELOPMENTS

I. Summary of POTW Operations

Trucked or Hauled Wastewater.

As of April 2017, Fairfax County no longer discharges hauled wastewater to the Blue Plains AWTP. Hauler waste manifests show that the majority of the septage collected in the northern part of the county is being disposed of at the Upper Occoquan Service Authority's Regional Water Reclamation Plant (UOSA-RWRP) in Centreville, Virginia, and the Blue Plains Advanced Wastewater Treatment Plant. Both of these facilities are closer geographically to northern Fairfax County than the county's septage receiving facility located at the Noman M. Cole Pollution Control Plant in Lorton, Virginia.

Dental Amalgam Rule Implementation

Fairfax County is in the process of implementing the U.S. Environmental Protection Agency's Dental Amalgam Rule, which was promulgated on June 14, 2017. The dental facility dischargers cited by the rule are not classified as SIUs. DEQ has provided an online system for dental facilities to use to file one-time compliance reports by October 12, 2020 (or within 90 days of transfer of ownership) for existing sources or within 90 days of start of discharge for new sources, as required by the rule. DEQ advised that a summary of the reports filed by dental facilities located in the Fairfax County would be provided to the County. Fairfax County is in the process of finalizing a notice to educate dental providers about the requirements to file the compliance report and ensure proper operation and maintenance of an approved dental amalgam separator. Fairfax County is also coordinating with its Building Plan Review Office to identify new dental facilities that are subject to the rule.

II. Pretreatment Program Changes

Funding, Staffing, and Equipment

No significant changes in the operation of the pretreatment program were planned or implemented during 2018; including funding and equipment. Pretreatment program staff consist of seven full-time equivalents, including one manager, one program coordinator, and five inspector positions. The program manager and one inspector are responsible for code compliance assessment and enforcement in the Blue Plains service areas. Approximately half of the inspector's time and ten percent of manager's time was attributed to pretreatment activities within the Blue Plains service area in 2018. The pretreatment program uses gas meters, pH meters, dissolved oxygen meters, conductivity meters, and manual and automatic samplers to monitor users for compliance with the county code and Blue Plains local limits. Monitoring samples are analyzed by Fairfax County's environmental laboratory, a certified Virginia Environmental Laboratory Accreditation Laboratory (VELAP), which is equipped with a gas chromatography and mass spectrometer (GC-MS), inductively coupled plasma optical emission spectrometer (ICP-OES), atomic absorption spectrometer with graphite furnace, PC-BOD biochemical oxygen demand analysis system, Lachat 8500 series flow injection analyzer, Horizon Technology 3000XL oil and grease instrument, and HACH DR UV/VIS spectrophotometers for analyzing samples of user discharges.

Legal Authority

a. State of Virginia

The pretreatment program modifications approved by Virginia's Department of Environmental Quality (VDEQ) in 1994, 2010, and 2012 remain in effect. There have been no changes to the County's Sewer Use Ordinance, Standard Form Wastewater Discharge Permit, or Enforcement Response Plan, since submittal of the 2017 annual pretreatment program report to D.C. Water on March 15, 2018.

b. Interjurisdictional Pretreatment Agreements (IPA)

The Town of Herndon's sanitary sewer system discharges to the Blue Plains AWTP via Fairfax County's conveyance system, pursuant to a sewer service agreement between Fairfax County and the Town. Fairfax County and the Town developed an interjurisdictional pretreatment agreement when a CIU was identified within the Town. The agreement was signed by the Fairfax County Board of Supervisors on February 22, 1996. Preceding the agreement's execution, the Town adopted a pretreatment ordinance with substantially the same provisions as the County's pretreatment ordinance. The Town Code was updated in 2012 to incorporate provisions of the EPA Pretreatment Streamlining Rule (September 27, 2005) and Virginia law (§15.2-2122 of the Code of Virginia).

An area within Arlington County, consisting of the Gulf Run, Donaldson Run, and Pimmit Run sewersheds, discharges to the Blue Plains AWTP, via Fairfax County, pursuant to a sewer service agreement between Arlington and Fairfax counties enacted in 1994. Fairfax and Arlington counties entered into an interjurisdictional pretreatment agreement in 1994.

c. Blue Plains Local Limits

Fairfax County, Town of Herndon, and Arlington County enforce the local limits adopted by the District of Columbia for service areas that are tributary to the Blue Plains AWTP. Revised local limits for the Blue Plains AWTP became effective September 10, 2010. Fairfax County began enforcement of the new limits upon adoption and added the revised local limits to wastewater discharge permits of SIUs in the Blue Plains service area.

III. Miscellaneous Developments

None.

Attachment 4

Parts A and B with attachments for Loudoun Water SIUs discharging to Blue Plains

PART A
PRETREATMENT PERFORMANCE SUMMARY*

I. General Information

Control Authority Name	*Loudoun Water*				
Address	*44865 Loudoun Water Way*				
City	*Ashburn*	State	*VA*	Zip+4	*20147-6109*
Contact Person	*Frank Stokes Jr.*		Telephone No.	*571-291-7834*	
Contact Title	*Regulatory Programs Manager*		E-mail Address	*fstokes@loudounwater.org*	
NPDES No.	*DC 0021199*		Reporting Period	*01-01-18 to 12-31-18*	
Issuance Date	*07/26/18*		Expiration Date*	*08/25/23*	
Total CIU's	*1*		Total MTCIU's	*0*	
Total SNIU's	*0*		Total NSCIU's	*0*	

CIUs - Categorical Industrial Users
SNIUs - Significant Noncategorical Industrial Users
MTCIUs – Middle Tier Categorical Industrial Users
NSCIUs – Nonsignificant Categorical Industrial Users

II. Compliance Monitoring Program

1.	No. of SIUs with current Control Documents.....	1
2.	No. of SIU Facilities Inspected.....	1
3.	No. of SIU Facilities Sampled.....	1
4.	No. of SIUs Submitting Self-Monitoring Reports.....	1

III. Significant Industrial User Compliance

1.	No. of SIUs Violating a Compliance Schedule / No. on a Schedule.....	0
2.	No. of SIUs in SNC for the July to December Period.....	0
3.	No. of SIUs in SNC At Any Time During the Calendar Year.....	0
4.	No. of SIUs in SNC That Were Also in SNC During the Previous Calendar Year	0
5.	No. of NSCIUs that violated any standards or requirements	0

IV. Enforcement Actions

1.	Notices/Letters of Violation Issued to SIUs.....	1
2.	Enforceable Compliance Schedules Issued to SIUs.....	0
3.	Civil/Criminal Suits Filed.....	
4.	No. of SIUs from which Penalties have been Collected.....	0
5.	Other Actions (sewer bans, etc.)	0

I certify that the information contained in this report and attachments are complete and accurate to the best of my knowledge (see Part B.V of the instructions).

Frank Stokes Jr
Name of Authorized Representative (Print)

Regulatory Program Manager
Title (Print)

Frank Stokes Jr.
Signature of Authorized Representative

2/19/2019
Date

Attachment for Section I

CATEGORICAL INDUSTRIAL USER (CIU)	CATEGORY
TTM Technologies North America LLC 1200 Severn Way, Sterling VA 20166-8904	Metal Finisher

Attachment for Section II

SIGNIFICANT INDUSTRIAL USER (SIU)	CONTROL DOCUMENT ISSUANCE DATE	CONTROL DOCUMENT EFFECTIVE DATE	CONTROL DOCUMENT EXPIRATION DATE	CONDUCTED BY POTW DURING THE 2018 CALENDAR YEAR		SELF MONITOR EVENTS CONDUCTED BY SIU	SELF MONITOR EVENTS REQ'D
				SAMPLING VISITS	INSPECTIONS		
TTM Technologies North America LLC	12/31/2015	11/1/2015	10/31/2020	1	1	12	12

Attachment for Section III

There were no compliance schedules issued, and no categorical industrial user entered significant non-compliance during this reporting period.

Attachment for Section IV

SIGNIFICANT INDUSTRIAL USER (SIU)	USER PERMIT # NO.	NUMBER OF NOTICES OF VIOLATIONS DURING THE 2018 CALENDAR YEAR
TTM Technologies North America LLC	005	1

ATTACHMENT FOR PART B – PRETREATMENT DEVELOPMENTS

I. Summary of POTW Operations

There were four-hundred and ten (410) hauled septage waste loads discharged at the Alternative (S-17) Septage Dump Site to the DC Water Blue Plains WWTP via the Potomac Interceptor during the 2018 calendar year while the septage receiving station was closed due to maintenance repairs, routine scheduled preventive maintenance and septage tank cleaning.

	# DAYS DELIVERED	# LOADS	TOTAL GALS	AVERAGE GALS	AVERAGE LOADS
Q1-2018	2	8	11,278	5,639	4.00
Q2-2018	13	70	205,211	15,785	5.38
Q3-2018	36	201	615,550	17,098	5.58
Q4-2018	19	131	405,260	21,329	6.89
TOTAL	**70**	**410**	**1,237,299**	**17,675.7**	

II. Pretreatment Program Changes

The Pretreatment Program was not approved for the Broad Run Water Reclamation Facility by the Virginia Department of Environmental Quality North Regional Office (VADEQ_NRO) during the 2018 calendar year.

The VADEQ-NRO requested an amendment to the Loudoun County Pretreatment Ordinance Chapter 1068 Civil Fines & Penalties. This request was presented to the Loudoun County Board of Supervisors to amend and adopt the revisions during the next scheduled Board of Supervisors public hearing. The Board of Supervisors ratified the ordinance during the January 2019 meeting.

The Virginia Department of Environmental Quality (VADEQ) has compiled a spreadsheet of all dental office in the state of Virginia. The VADEQ has already mailed the "One-Time Compliance Report for Dental Discharges" to comply with 40 CFR 441.50. Upon receipt of these reports, VADEQ updates the tracking spreadsheets and provides periodic updates to all POTW's on dentist submitting reports complying with the new dental reporting requirements

The VADEQ Office is also working closely with the Virginia Dental Association on the Amalgam Separator "Dental Rule" and reporting requirements.

III. Miscellaneous Developments

None

Septage Hauler Discharge Permits

Loudoun Water issued (15) fifteen Septage Hauler Discharge Permits during the 2018 calendar year authorizing the disposal of residential domestic sewage at the BRWRF Septage Receiving Facility and/or the S-17 Alternative Disposal site.

Broad Run Water Reclamation Facility
2018 Septage Hauler Discharge
Permit Control Documents

1. Permit # 2018-01
   Advantage Septic Services (Rid A Dump, LLC DBA)
   10302 Bristow Center Dr.
   Bristow VA 20136
   Mike Lynn
   Suzanne Lynn
   (703)392-7070 Office
   (703)369-7921 Fax

2. Permit # 2018-02
   All-Star Septic
   13676 Hume Road
   Hums VA 22639
   Chris Boucher
   (540)631-0225 Office
   (888)815-7867 Fax

3. Permit #2018-03
   Don's John's
   5524 Wellington Road
   Gainesville VA 20155
   Rob Weghorst
   Tammy Graham
   (703)273-7101 Office
   (703)991-3002 Fax

4. Permit #2018-04
   Five Star Septic Services
   PO Box 2785
   45910 Transamerica Plaza
   Suite 103 Sterling VA 20166
   Aaron Goins
   Patricia Goins
   (703)713-0707 Office
   (703)481-1864 Fax

Broad Run Water Reclamation Facility
2018 Septage Hauler Discharge
Permit Control Documents
Cont.

5. Permit #2018-05
   Great Falls Septic
   34176 Charlestown Pike
   Purcellville VA 20132-1819
   David Hott
   (540)668-7660 Office
   (540)668-7661 Fax

6. Permit #2018-06
   Greens Septic Service
   171 Stone Hill Lane
   Berryville VA 22611
   Richard Green
   (540)955-2960 Office
   (540)955-9186 Fax

7. Permit #2018-07
   Larry Royston Septic Service, LLC
   Martins Plumbing
   104 Meadowbrook Drive
   Stephens City VA 22655
   Larry Royston
   (540)667-4038 Office
   (540)869-8983 Fax

8. Permit #2018-08
   Loudoun Septic Tank Service Inc.
   105 Delaware Ave.
   Hamilton VA 20158
   Clifton Hott
   Laurie
   (540)338-6007 Office
   (540)338-6450 Fax

9. Permit #2018-09
   McKim Construction
   PO Box 951
   Purcellville VA 20134-0951
   Walt McKim
   (540)822-4600 Office
   (540)338-2244 Fax

Broad Run Water Reclamation Facility
2018 Septage Hauler Discharge
Permit Control Documents
Cont.

10. Permit #2018-10
    Powell's Plumbing Inc
    152 Windy Hill Lane
    Winchester VA 22602-4381
    John D Powell
    Cynthia Neilson
    (540)665-8183 Office
    (540)665-8183 Fax

11. Permit #2018-11
    SeptiClean Inc.
    11502 Robertson Drive
    Manassas VA 20109
    Ronald Thomas
    Deena Post
    (540)428-3986 Office
    (571)229-9280 Fax

12. Permit #2018-12
    Stewart Septic Tank Service
    18604 Foggy Bottom Road
    Bluemont VA 20135
    Jerry Stewart
    Elaine
    Sue
    (540)554-9015 Office
    (540)554-4839 Fax
    (703)777-4177

13. Permit #2018-13
    United Site Services Inc
    41096 John Mosby Hwy
    Aldie VA 20105
    Matthew Wood
    Kristal Swann
    (800)864-5387 Office
    (301)396-8501 Office

Broad Run Water Reclamation Facility
2018 Septage Hauler Discharge
Permit Control Documents
Cont.

14. Permit #2018-14
    USA Septic Services
    42234 Glenrose Terrence
    Leesburg VA 20176
    Edgar Romero
    (703)930-7062 Office

15. Permit #2018-15
    Vienna Septic Tank Service
    327 Owaissa Road SE
    Ben Wood
    (703)281-3202 Office
    (703)938-2970 Fax

Attachment 5

Part A for the Town of Vienna

PART A
PRETREATMENT PERFORMANCE SUMMARY

I. General Information

Control Authority Name	*Town of Vienna*				
Address	*127 Center Street South*				
City	*Vienna*	State	*VA*	Zip+4	*22180*
Contact Person	*David Donahue*		Telephone No.	*703-319-8610*	
Contact Title	*Deputy Director, DPW*		E-mail Address	*David.donahue@viennava.gov*	
NPDES No.	*DC 0021199*		Reporting Period	*01-01-18 to 12-31-18*	
Issuance Date	*07/26/18*		Expiration Date	*08/25/23*	
Total CIUs	*0*		Total MTCIUs	*0*	
Total SNIUs	*0*		Total NSCIUs	*0*	

CIUs - Categorical Industrial Users
MTCIUs – Middle Tier Categorical Industrial Users
SNIUs - Significant Noncategorical Industrial Users
NSCIUs – Nonsignificant Categorical Industrial Users

II. Compliance Monitoring Program

1. No. of SIUs with current Control Documents..... 0
2. No. of SIU Facilities Inspected..... 0
3. No. of SIU Facilities Sampled..... 0
4. No. of SIUs Submitting Self-Monitoring Reports..... 0

III. Significant Industrial User Compliance

1. No. of SIUs Violating a Compliance Schedule / No. on a Schedule..... 0
2. No. of SIUs in SNC for the July to December Period..... 0
3. No. of SIUs in SNC At Any Time During the Calendar Year..... 0
4. No. of SIUs in SNC Also in SNC During the Previous Calendar Year 0
5. No. of NSCIUs that violated any standards or requirements 0

IV. Enforcement Actions

1. Notices/Letters of Violation Issued to SIUs..... 0
2. Enforceable Compliance Schedules Issued to SIUs..... 0
3. Civil/Criminal Suits Filed..... 0
4. No. of SIUs from which Penalties have been Collected..... 0
5. Other Actions (sewer bans, etc.)..... 0

I certify that the information contained in this report and attachments is complete and accurate to the best of my knowledge (see Part B.V of the instructions).

David Donahue	Deputy Director, DPW
Name of Authorized Representative (Print)	Title (Print)
Signature of Authorized Representative	1/2/2019
	Date

Attachment 6

Influent, Effluent, and Sludge Data Tables
(local limits/conventional pollutants)

Annual Influent and Biosolids Data
(priority pollutants)

Quarterly Influent, Effluent, and Biosolids Data
(additional toxic organics data)

Facility Name:	DC WATER AND SEWER AUTHORITY									
Facility ID:	DCP021199	**UNITS:**	MG/L							
Location:	**INFLUENT**			Date	Date	Date	Date	Date	Date	Date
	Pollutant	Goals	Frequency	1/31/2018	2/28/2018	3/26/2018	3/28/2018	3/31/2018	4/30/2018	5/23/2018
01002	ARSENIC- TOTAL	0.0262	4				**0.00080**			
00310	BOD- 5-DAY	585.156	0	216.42	184.51		215.2	188.71	206.44	
01027	CADMIUM- TOTAL	0.0056	4				**0.000171**			
01034	CHROMIUM- TOTAL	1.3889	1				0.00273			
01042	COPPER- TOTAL	0.3043	4				0.0529			
00720	CYANIDE- TOTAL	0.1167	4				<0.0022			
01051	LEAD- TOTAL	0.0994	4				0.00276			
71900	MERCURY- TOTAL	0.0043	4			0.0000103				0.0000127
01062	MOLYBDENUM- TOTAL	0.072	4				0.0070			
01067	NICKEL- TOTAL	0.1882	4				0.00706			
00610	NITROGEN- AMMONIA	52.7869	0	32.39	28.52		25.4	26.5	29.7	
04166	PCB- TOTAL	Monitor	4				<0.00096			
00665	PHOSPHORUS- TOTAL	11.1498	0	5.1	3.6		4.89	4.16	5.14	
01147	SELENIUM- TOTAL	0.0574	1				**0.00067**			
01077	SILVER- TOTAL	0.1047	4				**0.00054**			
00530	SOLIDS- TOTAL SUSPENDED	690.567	0	259.49	247.71		345.20	254.11	263.92	
01092	ZINC- TOTAL	0.381	4				0.10500			

Facility Name:	DC WATER AND SEWER AUTHORITY									
Facility ID:	DCP021199									
Location:	**INFLUENT**	Date	Date	Date	Date	Date	Date	Date	Date	Date
	Pollutant	5/30/2018	5/31/2018	6/30/2018	7/31/2018	8/28/2018	8/30/2018	8/31/2018	9/30/2018	10/16/2018
01002	ARSENIC- TOTAL	**0.00092**					**0.00066**			
00310	BOD- 5-DAY	200.5	156.3	168.16	156.44	135.45	178.3	135.45	143.53	
01027	CADMIUM- TOTAL	**0.000193**					**0.000200**			
01034	CHROMIUM- TOTAL	0.00269					0.00224			
01042	COPPER- TOTAL	0.0589					0.0531			
00720	CYANIDE- TOTAL	<0.0022					**0.00330**			
01051	LEAD- TOTAL	0.00402					0.01025			
71900	MERCURY- TOTAL	<0.00016				0.0000078				0.0000115
01062	MOLYBDENUM- TOTAL	0.0078					0.0106			
01067	NICKEL- TOTAL	0.00699					0.00948			
00610	NITROGEN- AMMONIA	32.2	24.5	24.51	26.04		24.7	25.52	17.94	
04166	PCB- TOTAL	<0.00033					<0.00036			
00665	PHOSPHORUS- TOTAL	5.10	4.24	4.38	3.19		4.65	3.62	3.31	
01147	SELENIUM- TOTAL	**0.00060**					**0.00116**			
01077	SILVER- TOTAL	**0.00060**					**0.00031**			
00530	SOLIDS- TOTAL SUSPENDED	297.60	239.79	236.85	239.55		265.70	227.65	216.45	
01092	ZINC- TOTAL	0.12800					0.11960			

Facility Name:	DC WATER AND SEWER AUTHORITY						
Facility ID:	DCP021199						
Location:	**INFLUENT**	Date	Date	Date	Date		Entry Count
	Pollutant	10/18/2018	10/31/2018	11/30/2018	12/31/2018	DTfl	118 Total
01002	ARSENIC- TOTAL	**0.00088**					4
00310	BOD- 5-DAY	184.2	160	156.72	147.03		17
01027	CADMIUM- TOTAL	**0.000197**					4
01034	CHROMIUM- TOTAL	0.00198					4
01042	COPPER- TOTAL	0.0449					4
00720	CYANIDE- TOTAL	0.00369					4
01051	LEAD- TOTAL	0.00196					4
71900	MERCURY- TOTAL						5
01062	MOLYBDENUM- TOTAL	0.0085					4
01067	NICKEL- TOTAL	0.00680					4
00610	NITROGEN- AMMONIA	25.1	26.33	23.35	20.01		16
04166	PCB- TOTAL	<0.0017					4
00665	PHOSPHORUS- TOTAL	4.30	3.97	4.05	3.85		16
01147	SELENIUM- TOTAL	**0.00072**					4
01077	SILVER- TOTAL	**0.00129**					4
00530	SOLIDS- TOTAL SUSPENDED	329.60	231.33	221.17	222.16		16
01092	ZINC- TOTAL	0.09700					4
							0
							0

Facility Name:	DC WATER AND SEWER AUTHORITY								
Facility ID:	DCP021199	**UNITS:**	MG/L						
Location:	**EFFLUENT**			Date	Date	Date	Date	Date	Date
	Pollutant	Goals	Frequency	1/10/2018	3/8/2018	3/28/2018	5/9/2018	5/30/2018	7/12/2018
01002	ARSENIC- TOTAL	0.8408	4			<0.00032		<0.00032	<0.00032
00310	BOD- 5-DAY	No Goal	0						
01027	CADMIUM- TOTAL	0.0028	4			<0.00012		<0.00012	<0.00012
01034	CHROMIUM- TOTAL	0.95	0			<0.00029		**0.0003**	<0.00029
01042	COPPER- TOTAL	0.0443	4			0.0048		0.0043	0.0046
00720	CYANIDE- TOTAL	0.0397	4			**0.004**		0.005	
01051	LEAD- TOTAL	0.0455	4			**0.00018**		<0.00011	**0.00013**
71900	MERCURY- TOTAL	0.0035	4	0.00000185	0.0000015		0.0000013		0.00000077
01062	MOLYBDENUM- TOTAL	Monitor	4			0.0055		0.0056	0.0081
01067	NICKEL- TOTAL	0.49	4			0.0071		0.0063	0.008
00610	NITROGEN- AMMONIA	No Goal	0						
04166	PCB- TOTAL	Monitor	4			<0.00047		<0.00032	
00665	PHOSPHORUS- TOTAL	No Goal	0						
01147	SELENIUM- TOTAL	0.0382	0			**0.00026**		<0.00015	**0.00061**
01077	SILVER- TOTAL	0.0175	4			<0.00003		<0.00003	<0.00003
00530	SOLIDS- TOTAL SUSPENDED	No Goal	0						
01092	ZINC- TOTAL	0.3741	4			0.014		0.012	0.0094

Facility Name:	DC WATER AND SEWER AUTHORITY							
Facility ID:	DCP021199							
Location:	**EFFLUENT**	Date	Date	Date	Date	Date		Entry Count
	Pollutant	8/30/2018	9/5/2018	10/18/2018	11/7/2018		DTfl	53 Total
01002	ARSENIC- TOTAL			<0.00032				4
00310	BOD- 5-DAY							0
01027	CADMIUM- TOTAL			<0.00012				4
01034	CHROMIUM- TOTAL			<0.00029				4
01042	COPPER- TOTAL			0.004				4
00720	CYANIDE- TOTAL	0.006		0.0087				4
01051	LEAD- TOTAL			<0.00011				4
71900	MERCURY- TOTAL		**0.00000031**		0.0000014			5
01062	MOLYBDENUM- TOTAL			0.008				4
01067	NICKEL- TOTAL			0.0058				4
00610	NITROGEN- AMMONIA							0
04166	PCB- TOTAL	<0.0017		<0.0017				4
00665	PHOSPHORUS- TOTAL							0
01147	SELENIUM- TOTAL			**0.00032**				4
01077	SILVER- TOTAL			<0.00003				4
00530	SOLIDS- TOTAL SUSPENDED							0
01092	ZINC- TOTAL			0.0076				4
								0
								0
								0
								0
								0
								0

Facility Name:	DC WATER AND SEWER AUTHORITY									
Facility ID:	DCP021199	**UNITS:**	MG/KG							
Location:	**SLUDGE**		DRY WT	Date	Date	Date	Date	Date	Date	Date
	Pollutant	Goals	Frequency	1/2/2018	1/4/2018	2/1/2018	2/5/2018	3/1/2018	3/7/2018	3/28/2018
01002	ARSENIC- TOTAL	41	4	**3.8**	**4.1**	4.8	4.5	**3.8**	**4**	
00310	BOD- 5-DAY	No Goal	0							
01027	CADMIUM- TOTAL	25	4	1.8	2.1	2.8	2.3	1.5	1.6	
01034	CHROMIUM- TOTAL	Monitor	1	58.7	68.2	87.8	70.9	72.4	58.2	
01042	COPPER- TOTAL	1000	4	394	453	586	446	320	319	
00720	CYANIDE- TOTAL	Monitor	4							2.9
01051	LEAD- TOTAL	300	4	17	18.3	31.3	23.3	19.5	18.5	
71900	MERCURY- TOTAL	10	4	0.49	0.48	0.57	0.59	0.51	0.5	
01062	MOLYBDENUM- TOTAL	75	4	20.6	24.8	27.3	22.2	28.8	16.9	
01067	NICKEL- TOTAL	200	4	20	23.8	38.9	25	49	20.5	
00610	NITROGEN- AMMONIA	No Goal	0							
04166	PCB- TOTAL	4	4	<0.01	<0.0097	<0.0097	<0.009	0.16	0.17	
00665	PHOSPHORUS- TOTAL	No Goal	0							
01147	SELENIUM- TOTAL	100	1	**4**	**3.8**	**5.7**	**3.8**	**3.2**	**3.6**	
01077	SILVER- TOTAL	Monitor	4	6.9	7.5	8.7	7.1	4.8	4.5	
00530	SOLIDS- TOTAL SUSPENDED	No Goal	0							
01092	ZINC- TOTAL	2500	4	628	715	871	679	509	478	

Facility Name:	DC WATER AND SEWER AUTHORITY									
Facility ID:	DCP021199									
Location:	**SLUDGE**	Date	Date	Date	Date	Date	Date	Date	Date	Date
	Pollutant	4/3/2018	4/5/2018	5/8/2018	5/30/2018	6/5/2018	6/7/2018	7/3/2018	7/5/2018	8/2/2018
01002	ARSENIC- TOTAL	**4.1**	5.7	4.8		6.4	7.2	5.6	5.4	6.1
00310	BOD- 5-DAY									
01027	CADMIUM- TOTAL	2	2.5	2.3		2.2	2.2	2	2	2.2
01034	CHROMIUM- TOTAL	61.7	78.7	73.1		65.7	67.3	63.6	62.9	67.6
01042	COPPER- TOTAL	336	394	428		356	403	394	424	342
00720	CYANIDE- TOTAL				3.3					
01051	LEAD- TOTAL	17.3	21.1	33.7		54.3	49.2	38.6	34.5	46.3
71900	MERCURY- TOTAL	0.45	0.5	0.66		1	0.56	0.68	0.73	0.74
01062	MOLYBDENUM- TOTAL	16.3	20	18.1		17.8	18.7	17.2	18.5	22.7
01067	NICKEL- TOTAL	18.3	27.9	24.4		24.1	29.7	25.8	24.9	24.8
00610	NITROGEN- AMMONIA									
04166	PCB- TOTAL	<0.0095	**0.1**	<0.19		**0.42**	**0.2**	<0.18	<0.17	<0.87
00665	PHOSPHORUS- TOTAL									
01147	SELENIUM- TOTAL	**3.1**	**5**	**5.1**		4.8	**5**	**5.4**	**4.5**	4
01077	SILVER- TOTAL	5	6.2	9.9		7	6.7	5.7	5.1	4.9
00530	SOLIDS- TOTAL SUSPENDED									
01092	ZINC- TOTAL	541	656	647		571	697	714	729	589

Facility Name:	DC WATER AND SEWER AUTHORITY									
Facility ID:	DCP021199									
Location:	**SLUDGE**	Date	Date	Date	Date	Date	Date	Date	Date	Date
	Pollutant	8/7/2018	8/30/2018	9/4/2018	9/6/2018	10/2/2018	10/4/2018	10/18/2018	11/6/2018	11/8/2018
01002	ARSENIC- TOTAL	6.7		6.3	5.8	15.9	7.3		6.6	5
00310	BOD- 5-DAY									
01027	CADMIUM- TOTAL	2.2		2	2.1	4.9	2.1		2.2	2.5
01034	CHROMIUM- TOTAL	63.5		69.9	68	150	74		73.4	67.9
01042	COPPER- TOTAL	356		390	384	915	439		424	419
00720	CYANIDE- TOTAL		1.6					1.2		
01051	LEAD- TOTAL	44.2		42.3	46	128	53.5		34.5	35.9
71900	MERCURY- TOTAL	0.55		0.59	0.57	0.57	0.56		0.59	0.58
01062	MOLYBDENUM- TOTAL	22.5		22.3	20.9	48	21.2		22.4	22.5
01067	NICKEL- TOTAL	24.2		25.6	24.1	55.6	28.9		28.3	26.5
00610	NITROGEN- AMMONIA									
04166	PCB- TOTAL	<0.17		<0.16	<0.17	<0.17	<0.17	<0.016	<0.16	<0.19
00665	PHOSPHORUS- TOTAL									
01147	SELENIUM- TOTAL	**4.3**		**4.7**	**4.7**	11.4	**5.1**		6.3	**4.5**
01077	SILVER- TOTAL	5.2		5.5	10.3	14	6.1		7.2	7.9
00530	SOLIDS- TOTAL SUSPENDED									
01092	ZINC- TOTAL	617		666	693	1520	714		730	721

Facility Name:	DC WATER AND SEWER AUTHORITY							
Facility ID:	DCP021199							
Location:	**SLUDGE**	Date	Date	Date	Date		Entry Count	
	Pollutant	12/4/2018	12/6/2018			DTfl	281	Total
01002	ARSENIC- TOTAL	7.1	6.5				23	
00310	BOD- 5-DAY						0	
01027	CADMIUM- TOTAL	3.2	2.7				23	
01034	CHROMIUM- TOTAL	85.2	78				23	
01042	COPPER- TOTAL	517	435				23	
00720	CYANIDE- TOTAL						4	
01051	LEAD- TOTAL	43	34.5				23	
71900	MERCURY- TOTAL	0.78	0.65				23	
01062	MOLYBDENUM- TOTAL	23.3	21.8				23	
01067	NICKEL- TOTAL	34.6	31.3				23	
00610	NITROGEN- AMMONIA						0	
04166	PCB- TOTAL	**0.35**	**0.22**				24	
00665	PHOSPHORUS- TOTAL						0	
01147	SELENIUM- TOTAL	**6.4**	**5.8**				23	
01077	SILVER- TOTAL	8.3	7.4				23	
00530	SOLIDS- TOTAL SUSPENDED						0	
01092	ZINC- TOTAL	882	736				23	
							0	
							0	
							0	
							0	
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							0	
							0	

Influent Priority Pollutant Data

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

September 20, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Wastewater (WW)**	Workorder:	**2335706**
Purchase Order:	**180018**	Workorder ID:	**WW/Influent Annual**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 30, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Susan J. Scherer
Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2335706 WW/Influent Annual

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2335706001	18-Influent A - Potomac CS-A	Waste Water	8/30/2018 11:35	8/30/2018 22:00	Collected by Client
2335706002	18-Influent A - Potomac CS-A	Waste Water	8/30/2018 12:30	8/30/2018 22:00	Collected by Client
2335706003	18-Influent B - Potomac SS-A	Waste Water	8/30/2018 11:45	8/30/2018 22:00	Collected by Client
2335706004	18-Influent B - Potomac SS-A	Waste Water	8/30/2018 12:45	8/30/2018 22:00	Collected by Client
2335706005	18-Influent C - Boiling-A	Waste Water	8/30/2018 12:15	8/30/2018 22:00	Collected by Client
2335706006	18-Influent C - Boiling-A	Waste Water	8/30/2018 13:00	8/30/2018 22:00	Collected by Client

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SAMPLE SUMMARY

Workorder: 2335706 WW/Influent Annual

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 2335706 WW/Influent Annual

Workorder Comments

See attached results from EMSL Analytical for Asbestos by EPA 100.2. SJS 09/13/18

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706001** Date Collected: 8/30/2018 11:35 Matrix: Waste Water

Sample ID: **18-Influent A - Potomac CS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acrolein	ND	1	ug/L	50.0	9.5	EPA 624		9/1/18 14:06	CPK	C
Acrylonitrile	ND		ug/L	25.0	6.0	EPA 624		9/1/18 14:06	CPK	C
Benzene	ND		ug/L	5.0	1.2	EPA 624		9/1/18 14:06	CPK	C
Bromodichloromethane	ND		ug/L	5.0	1.4	EPA 624		9/1/18 14:06	CPK	C
Bromoform	ND		ug/L	5.0	2.0	EPA 624		9/1/18 14:06	CPK	C
Bromomethane	ND		ug/L	5.0	2.0	EPA 624		9/1/18 14:06	CPK	C
Carbon Tetrachloride	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:06	CPK	C
Chlorobenzene	ND		ug/L	5.0	0.95	EPA 624		9/1/18 14:06	CPK	C
Chlorodibromomethane	ND		ug/L	5.0	2.3	EPA 624		9/1/18 14:06	CPK	C
Chloroethane	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:06	CPK	C
2-Chloroethylvinyl ether	ND		ug/L	10.0	1.9	EPA 624		9/1/18 14:06	CPK	C
Chloroform	5.2		ug/L	5.0	1.1	EPA 624		9/1/18 14:06	CPK	C
Chloromethane	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:06	CPK	C
1,2-Dichlorobenzene	ND		ug/L	5.0	1.9	EPA 624		9/1/18 14:06	CPK	C
1,3-Dichlorobenzene	ND		ug/L	5.0	1.3	EPA 624		9/1/18 14:06	CPK	C
1,4-Dichlorobenzene	ND		ug/L	5.0	1.4	EPA 624		9/1/18 14:06	CPK	C
1,1-Dichloroethane	ND		ug/L	5.0	1.4	EPA 624		9/1/18 14:06	CPK	C
1,2-Dichloroethane	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:06	CPK	C
1,1-Dichloroethene	ND		ug/L	5.0	1.5	EPA 624		9/1/18 14:06	CPK	C
trans-1,2-Dichloroethene	ND		ug/L	5.0	1.3	EPA 624		9/1/18 14:06	CPK	C
1,2-Dichloropropane	ND		ug/L	5.0	1.2	EPA 624		9/1/18 14:06	CPK	C
cis-1,3-Dichloropropene	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:06	CPK	C
trans-1,3-Dichloropropene	ND		ug/L	5.0	1.5	EPA 624		9/1/18 14:06	CPK	C
1,3-Dichloropropene, Total	ND		ug/L	10.0	2.4	EPA 624		9/1/18 14:06	CPK	C
Ethylbenzene	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:06	CPK	C
Methylene Chloride	ND		ug/L	5.0	2.3	EPA 624		9/1/18 14:06	CPK	C
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:06	CPK	C
Tetrachloroethene	ND		ug/L	5.0	1.8	EPA 624		9/1/18 14:06	CPK	C
Toluene	2.1J	J	ug/L	5.0	1.2	EPA 624		9/1/18 14:06	CPK	C
1,1,1-Trichloroethane	ND		ug/L	5.0	1.1	EPA 624		9/1/18 14:06	CPK	C
1,1,2-Trichloroethane	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:06	CPK	C
Trichloroethene	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:06	CPK	C
Trichlorofluoromethane	ND		ug/L	5.0	1.2	EPA 624		9/1/18 14:06	CPK	C
Vinyl Chloride	ND		ug/L	5.0	1.5	EPA 624		9/1/18 14:06	CPK	C

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	92.7		%	72 - 142	EPA 624		9/1/18 14:06	CPK	C

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706001** Date Collected: 8/30/2018 11:35 Matrix: Waste Water

Sample ID: **18-Influent A - Potomac CS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
4-Bromofluorobenzene (S)	101		%	73 - 119		EPA 624			9/1/18 14:06	CPK	C
Dibromofluoromethane (S)	96.4		%	74 - 132		EPA 624			9/1/18 14:06	CPK	C
Toluene-d8 (S)	93.6		%	75 - 133		EPA 624			9/1/18 14:06	CPK	C
WET CHEMISTRY											
Cyanide, Total	0.0030J	J	mg/L	0.0050	0.0022	EPA 335.4	9/6/18 13:00	JXB	9/10/18 06:51	KXK	A
Oil/Grease Hexane Extractable	11.7		mg/L	2.4	0.8	EPA 1664B			9/4/18 10:45	MPP	B
Oil/Grease Silica Gel Treated	1.2J	J	mg/L	2.4	0.7	EPA 1664B			9/4/18 10:45	MPP	B
Phenolics	0.033		mg/L	0.005	0.002	EPA 420.4	9/12/18 14:13	RXB	9/18/18 12:41	RXB	E

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706002** Date Collected: 8/30/2018 12:30 Matrix: Waste Water

Sample ID: **18-Influent A - Potomac CS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES											
Acenaphthene	ND		ug/L	1.6	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Acenaphthylene	ND		ug/L	1.6	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Anthracene	ND		ug/L	1.6	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Benzidine	ND		ug/L	8.5	3.3	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Benzo(a)anthracene	ND		ug/L	1.6	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Benzo(a)pyrene	ND		ug/L	1.6	0.23	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Benzo(b)fluoranthene	ND		ug/L	1.6	0.14	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Benzo(g,h,i)perylene	ND		ug/L	1.6	0.23	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Benzo(k)fluoranthene	ND		ug/L	1.6	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
4-Bromophenyl-phenylether	ND		ug/L	3.2	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Butylbenzylphthalate	ND		ug/L	3.2	0.13	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
4-Chloro-3-methylphenol	ND		ug/L	3.2	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
bis(2-Chloroethoxy)methane	ND		ug/L	3.2	0.22	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
bis(2-Chloroethyl)ether	ND		ug/L	3.2	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
bis(2-Chloroisopropyl)ether	ND		ug/L	3.2	0.30	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2-Chloronaphthalene	ND		ug/L	3.2	0.19	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2-Chlorophenol	ND		ug/L	3.2	0.35	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
4-Chlorophenyl-phenylether	ND		ug/L	3.2	0.15	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Chrysene	ND		ug/L	1.6	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Di-n-Butylphthalate	1.5J	J	ug/L	3.2	0.15	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Di-n-Octylphthalate	ND		ug/L	3.2	0.11	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Dibenzo(a,h)anthracene	ND		ug/L	1.6	0.22	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
3,3-Dichlorobenzidine	ND		ug/L	3.2	0.51	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2,4-Dichlorophenol	ND		ug/L	3.2	0.34	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Diethylphthalate	3.0J	J	ug/L	3.2	0.19	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2,4-Dimethylphenol	ND		ug/L	3.2	0.22	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Dimethylphthalate	ND		ug/L	3.2	0.15	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2,4-Dinitrophenol	ND		ug/L	6.4	2.7	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2,4-Dinitrotoluene	ND		ug/L	3.2	0.14	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2,6-Dinitrotoluene	ND		ug/L	3.2	0.22	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
1,2-Diphenylhydrazine	ND		ug/L	3.2	0.28	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
bis(2-Ethylhexyl)phthalate	6.9		ug/L	3.2	0.23	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Fluoranthene	ND		ug/L	1.6	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Fluorene	ND		ug/L	1.6	0.21	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Hexachlorobenzene	ND		ug/L	3.2	0.24	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Hexachlorobutadiene	ND		ug/L	3.2	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Hexachlorocyclopentadiene	ND		ug/L	3.2	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706002** Date Collected: 8/30/2018 12:30 Matrix: Waste Water

Sample ID: **18-Influent A - Potomac CS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachloroethane	ND		ug/L	3.2	0.32	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Indeno(1,2,3-cd)pyrene	ND		ug/L	1.6	0.13	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Isophorone	ND		ug/L	3.2	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2-Methyl-4,6-dinitrophenol	ND		ug/L	6.4	0.35	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Naphthalene	ND		ug/L	1.6	0.19	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Nitrobenzene	ND		ug/L	3.2	0.30	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2-Nitrophenol	ND		ug/L	3.2	0.48	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
4-Nitrophenol	ND		ug/L	3.2	1.1	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
N-Nitrosodimethylamine	ND		ug/L	3.2	0.68	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
N-Nitroso-di-n-propylamine	ND		ug/L	3.2	0.26	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
N-Nitrosodiphenylamine	ND		ug/L	3.2	0.19	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Pentachlorophenol	ND		ug/L	6.4	1.3	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Phenanthrene	ND		ug/L	1.6	0.14	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Phenol	1.7J	J	ug/L	8.5	0.24	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Pyrene	ND		ug/L	1.6	0.17	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
1,2,4-Trichlorobenzene	ND		ug/L	3.2	0.17	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2,4,6-Trichlorophenol	ND		ug/L	3.2	0.61	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	93.8		%	47 - 128	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2-Fluorobiphenyl (S)	73.2		%	52 - 118	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
2-Fluorophenol (S)	47.7		%	20 - 87	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Nitrobenzene-d5 (S)	84.6		%	27 - 139	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Phenol-d5 (S)	37.4		%	10 - 81	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Terphenyl-d14 (S)	99		%	46 - 133	EPA 625	9/4/18 10:30	MXL	9/5/18 12:26	DHF	B
Pesticides and PCBs										
Aldrin	ND		ug/L	0.022	0.0055	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
beta-BHC	ND		ug/L	0.022	0.0088	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
delta-BHC	ND		ug/L	0.022	0.0033	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
gamma-BHC	ND		ug/L	0.022	0.0033	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Chlordane	ND		ug/L	0.22	0.039	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
4,4'-DDD	ND		ug/L	0.022	0.0077	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
4,4'-DDE	ND		ug/L	0.022	0.0077	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
4,4'-DDT	ND		ug/L	0.022	0.0066	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Dieldrin	ND		ug/L	0.022	0.0033	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Endosulfan I	ND		ug/L	0.022	0.0033	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Endosulfan II	ND		ug/L	0.022	0.0066	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Endosulfan Sulfate	ND		ug/L	0.022	0.0044	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706002** Date Collected: 8/30/2018 12:30 Matrix: Waste Water

Sample ID: **18-Influent A - Potomac CS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Endrin	ND		ug/L	0.022	0.0088	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Endrin Aldehyde	ND		ug/L	0.022	0.011	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
alpha-HCH (alpha-BHC)	ND	1	ug/L	0.022	0.0022	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Heptachlor	ND		ug/L	0.022	0.0033	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Heptachlor Epoxide	ND		ug/L	0.022	0.0044	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Mirex	ND	2	ug/L	0.022	0.0044	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Total Polychlorinated Biphenyl	ND		ug/L	3.9	1.9	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Toxaphene	ND		ug/L	1.1	0.21	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Aroclor-1016	ND		ug/L	0.55	0.35	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Aroclor-1221	ND		ug/L	0.55	0.36	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Aroclor-1232	ND		ug/L	0.55	0.25	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Aroclor-1242	ND		ug/L	0.55	0.27	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Aroclor-1248	ND		ug/L	0.55	0.17	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Aroclor-1254	ND		ug/L	0.55	0.15	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Aroclor-1260	ND		ug/L	0.55	0.29	EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	44.5		%	30 - 150		EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Decachlorobiphenyl (S)	47.7		%	30 - 150		EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Tetrachloro-m-xylene (S)	63		%	36 - 112		EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
Tetrachloro-m-xylene (S)	60.6		%	36 - 112		EPA 608	9/5/18 11:30	CAC	9/11/18 04:14	RWS	D
WET CHEMISTRY											
Chloride	118		mg/L	10.0	1.2	EPA 300.0			8/31/18 10:42	CHW	H
METALS											
Antimony, Total	0.0012		mg/L	0.0010	0.00010	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Arsenic, Total	0.00085J	J	mg/L	0.0015	0.00032	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Beryllium, Total	0.000068 J	J	mg/L	0.00050	0.00004 0	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Cadmium, Total	0.00016J	J	mg/L	0.00020	0.00012	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Chromium, Total	0.0013		mg/L	0.0010	0.00029	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Copper, Total	0.040		mg/L	0.0025	0.00038	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Lead, Total	0.0045		mg/L	0.0010	0.00011	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Manganese, Total	0.16		mg/L	0.0025	0.00011	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Molybdenum, Total	0.011		mg/L	0.0010	0.00004 0	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Nickel, Total	0.0082		mg/L	0.0025	0.00012	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Selenium, Total	0.0017J	J	mg/L	0.0020	0.00015	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Silver, Total	0.00029J	J	mg/L	0.00050	0.00003 0	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706002** Date Collected: 8/30/2018 12:30 Matrix: Waste Water

Sample ID: **18-Influent A - Potomac CS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Thallium, Total	ND		mg/L	0.00050	0.000030	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Zinc, Total	0.092		mg/L	0.0025	0.00057	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:34	LXC	A1
Sub'd-EMSL Labs											
Asbestos	See attached					Subcontract			9/13/18 00:00	SUB	G

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706003** Date Collected: 8/30/2018 11:45 Matrix: Waste Water

Sample ID: **18-Influent B - Potomac SS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acrolein	ND	1	ug/L	50.0	9.5	EPA 624		9/1/18 14:28	CPK	C
Acrylonitrile	ND		ug/L	25.0	6.0	EPA 624		9/1/18 14:28	CPK	C
Benzene	ND		ug/L	5.0	1.2	EPA 624		9/1/18 14:28	CPK	C
Bromodichloromethane	ND		ug/L	5.0	1.4	EPA 624		9/1/18 14:28	CPK	C
Bromoform	ND		ug/L	5.0	2.0	EPA 624		9/1/18 14:28	CPK	C
Bromomethane	ND		ug/L	5.0	2.0	EPA 624		9/1/18 14:28	CPK	C
Carbon Tetrachloride	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:28	CPK	C
Chlorobenzene	ND		ug/L	5.0	0.95	EPA 624		9/1/18 14:28	CPK	C
Chlorodibromomethane	ND		ug/L	5.0	2.3	EPA 624		9/1/18 14:28	CPK	C
Chloroethane	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:28	CPK	C
2-Chloroethylvinyl ether	ND		ug/L	10.0	1.9	EPA 624		9/1/18 14:28	CPK	C
Chloroform	4.6J	J	ug/L	5.0	1.1	EPA 624		9/1/18 14:28	CPK	C
Chloromethane	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:28	CPK	C
1,2-Dichlorobenzene	ND		ug/L	5.0	1.9	EPA 624		9/1/18 14:28	CPK	C
1,3-Dichlorobenzene	ND		ug/L	5.0	1.3	EPA 624		9/1/18 14:28	CPK	C
1,4-Dichlorobenzene	ND		ug/L	5.0	1.4	EPA 624		9/1/18 14:28	CPK	C
1,1-Dichloroethane	ND		ug/L	5.0	1.4	EPA 624		9/1/18 14:28	CPK	C
1,2-Dichloroethane	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:28	CPK	C
1,1-Dichloroethene	ND		ug/L	5.0	1.5	EPA 624		9/1/18 14:28	CPK	C
trans-1,2-Dichloroethene	ND		ug/L	5.0	1.3	EPA 624		9/1/18 14:28	CPK	C
1,2-Dichloropropane	ND		ug/L	5.0	1.2	EPA 624		9/1/18 14:28	CPK	C
cis-1,3-Dichloropropene	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:28	CPK	C
trans-1,3-Dichloropropene	ND		ug/L	5.0	1.5	EPA 624		9/1/18 14:28	CPK	C
1,3-Dichloropropene, Total	ND		ug/L	10.0	2.4	EPA 624		9/1/18 14:28	CPK	C
Ethylbenzene	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:28	CPK	C
Methylene Chloride	ND		ug/L	5.0	2.3	EPA 624		9/1/18 14:28	CPK	C
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:28	CPK	C
Tetrachloroethene	ND		ug/L	5.0	1.8	EPA 624		9/1/18 14:28	CPK	C
Toluene	2.1J	J	ug/L	5.0	1.2	EPA 624		9/1/18 14:28	CPK	C
1,1,1-Trichloroethane	ND		ug/L	5.0	1.1	EPA 624		9/1/18 14:28	CPK	C
1,1,2-Trichloroethane	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:28	CPK	C
Trichloroethene	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:28	CPK	C
Trichlorofluoromethane	ND		ug/L	5.0	1.2	EPA 624		9/1/18 14:28	CPK	C
Vinyl Chloride	ND		ug/L	5.0	1.5	EPA 624		9/1/18 14:28	CPK	C

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	91.2		%	72 - 142	EPA 624		9/1/18 14:28	CPK	C

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706003** Date Collected: 8/30/2018 11:45 Matrix: Waste Water

Sample ID: **18-Influent B - Potomac SS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
4-Bromofluorobenzene (S)	103		%	73 - 119		EPA 624			9/1/18 14:28	CPK	C
Dibromofluoromethane (S)	96.4		%	74 - 132		EPA 624			9/1/18 14:28	CPK	C
Toluene-d8 (S)	92.6		%	75 - 133		EPA 624			9/1/18 14:28	CPK	C
WET CHEMISTRY											
Cyanide, Total	0.0040J	J	mg/L	0.0050	0.0022	EPA 335.4	9/6/18 13:00	JXB	9/10/18 06:51	KXK	A
Oil/Grease Hexane Extractable	9.9		mg/L	2.4	0.8	EPA 1664B			9/4/18 10:45	MPP	B
Oil/Grease Silica Gel Treated	2.8		mg/L	2.4	0.7	EPA 1664B			9/4/18 10:45	MPP	B
Phenolics	0.022		mg/L	0.005	0.002	EPA 420.4	9/12/18 14:13	RXB	9/18/18 12:41	RXB	E

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706004** Date Collected: 8/30/2018 12:45 Matrix: Waste Water

Sample ID: **18-Influent B - Potomac SS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES											
Acenaphthene	ND		ug/L	1.4	0.14	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Acenaphthylene	ND		ug/L	1.4	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Anthracene	ND		ug/L	1.4	0.14	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Benzidine	15.7		ug/L	7.5	2.9	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Benzo(a)anthracene	ND		ug/L	1.4	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Benzo(a)pyrene	ND		ug/L	1.4	0.21	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Benzo(b)fluoranthene	ND		ug/L	1.4	0.12	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Benzo(g,h,i)perylene	ND		ug/L	1.4	0.21	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Benzo(k)fluoranthene	ND		ug/L	1.4	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
4-Bromophenyl-phenylether	ND		ug/L	2.8	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Butylbenzylphthalate	3.4		ug/L	2.8	0.11	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
4-Chloro-3-methylphenol	ND		ug/L	2.8	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
bis(2-Chloroethoxy)methane	ND		ug/L	2.8	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
bis(2-Chloroethyl)ether	ND		ug/L	2.8	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
bis(2-Chloroisopropyl)ether	ND		ug/L	2.8	0.26	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2-Chloronaphthalene	ND		ug/L	2.8	0.17	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2-Chlorophenol	ND		ug/L	2.8	0.31	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
4-Chlorophenyl-phenylether	ND		ug/L	2.8	0.13	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Chrysene	ND		ug/L	1.4	0.14	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Di-n-Butylphthalate	1.2J	J	ug/L	2.8	0.13	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Di-n-Octylphthalate	ND		ug/L	2.8	0.094	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Dibenzo(a,h)anthracene	ND		ug/L	1.4	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
3,3-Dichlorobenzidine	ND		ug/L	2.8	0.45	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2,4-Dichlorophenol	ND		ug/L	2.8	0.30	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Diethylphthalate	2.4J	J	ug/L	2.8	0.17	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2,4-Dimethylphenol	ND		ug/L	2.8	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Dimethylphthalate	ND		ug/L	2.8	0.13	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2,4-Dinitrophenol	ND		ug/L	5.7	2.4	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2,4-Dinitrotoluene	ND		ug/L	2.8	0.12	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2,6-Dinitrotoluene	ND		ug/L	2.8	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
1,2-Diphenylhydrazine	0.49J	J	ug/L	2.8	0.25	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
bis(2-Ethylhexyl)phthalate	7.0		ug/L	2.8	0.21	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Fluoranthene	0.20J	J	ug/L	1.4	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Fluorene	ND		ug/L	1.4	0.19	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Hexachlorobenzene	ND		ug/L	2.8	0.22	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Hexachlorobutadiene	ND		ug/L	2.8	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Hexachlorocyclopentadiene	ND		ug/L	2.8	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706004** Date Collected: 8/30/2018 12:45 Matrix: Waste Water

Sample ID: **18-Influent B - Potomac SS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachloroethane	ND		ug/L	2.8	0.28	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Indeno(1,2,3-cd)pyrene	ND		ug/L	1.4	0.11	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Isophorone	ND		ug/L	2.8	0.14	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2-Methyl-4,6-dinitrophenol	ND		ug/L	5.7	0.31	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Naphthalene	ND		ug/L	1.4	0.17	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Nitrobenzene	ND		ug/L	2.8	0.26	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2-Nitrophenol	ND		ug/L	2.8	0.42	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
4-Nitrophenol	ND		ug/L	2.8	0.99	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
N-Nitrosodimethylamine	ND		ug/L	2.8	0.60	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
N-Nitroso-di-n-propylamine	ND		ug/L	2.8	0.23	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
N-Nitrosodiphenylamine	ND		ug/L	2.8	0.17	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Pentachlorophenol	ND		ug/L	5.7	1.1	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Phenanthrene	0.14J	J	ug/L	1.4	0.12	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Phenol	5.0J	J	ug/L	7.5	0.22	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Pyrene	ND		ug/L	1.4	0.15	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
1,2,4-Trichlorobenzene	ND		ug/L	2.8	0.15	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2,4,6-Trichlorophenol	ND		ug/L	2.8	0.54	EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	88.5		%	47 - 128		EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2-Fluorobiphenyl (S)	75.1		%	52 - 118		EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
2-Fluorophenol (S)	44.2		%	20 - 87		EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Nitrobenzene-d5 (S)	87.8		%	27 - 139		EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Phenol-d5 (S)	32.4		%	10 - 81		EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Terphenyl-d14 (S)	95.1		%	46 - 133		EPA 625	9/4/18 10:30	MXL	9/5/18 12:53	DHF	B
Pesticides and PCBs											
Aldrin	ND		ug/L	0.021	0.0051	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
beta-BHC	ND		ug/L	0.021	0.0082	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
delta-BHC	ND		ug/L	0.021	0.0031	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
gamma-BHC	ND		ug/L	0.021	0.0031	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Chlordane	ND		ug/L	0.21	0.036	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
4,4'-DDD	ND		ug/L	0.021	0.0072	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
4,4'-DDE	ND		ug/L	0.021	0.0072	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
4,4'-DDT	ND		ug/L	0.021	0.0062	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Dieldrin	ND		ug/L	0.021	0.0031	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Endosulfan I	ND		ug/L	0.021	0.0031	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Endosulfan II	ND		ug/L	0.021	0.0062	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Endosulfan Sulfate	ND		ug/L	0.021	0.0041	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706004** Date Collected: 8/30/2018 12:45 Matrix: Waste Water

Sample ID: **18-Influent B - Potomac SS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Endrin	ND		ug/L	0.021	0.0082	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Endrin Aldehyde	ND		ug/L	0.021	0.010	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
alpha-HCH (alpha-BHC)	ND	1	ug/L	0.021	0.0021	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Heptachlor	ND		ug/L	0.021	0.0031	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Heptachlor Epoxide	ND		ug/L	0.021	0.0041	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Mirex	ND	2	ug/L	0.021	0.0041	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Total Polychlorinated Biphenyl	ND		ug/L	3.6	1.7	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Toxaphene	ND		ug/L	1.0	0.19	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Aroclor-1016	ND		ug/L	0.51	0.33	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Aroclor-1221	ND		ug/L	0.51	0.34	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Aroclor-1232	ND		ug/L	0.51	0.24	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Aroclor-1242	ND		ug/L	0.51	0.25	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Aroclor-1248	ND		ug/L	0.51	0.15	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Aroclor-1254	ND		ug/L	0.51	0.14	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Aroclor-1260	ND		ug/L	0.51	0.27	EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	64.7		%	30 - 150		EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Decachlorobiphenyl (S)	52.5		%	30 - 150		EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Tetrachloro-m-xylene (S)	80.8		%	36 - 112		EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
Tetrachloro-m-xylene (S)	67.7		%	36 - 112		EPA 608	9/5/18 11:30	CAC	9/11/18 04:37	RWS	D
WET CHEMISTRY											
Chloride	114		mg/L	10.0	1.2	EPA 300.0			8/31/18 10:54	CHW	H
METALS											
Antimony, Total	0.0017		mg/L	0.0010	0.00010	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Arsenic, Total	ND		mg/L	0.0015	0.00032	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Beryllium, Total	0.000068 J	J	mg/L	0.00050	0.00004 0	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Cadmium, Total	0.00024		mg/L	0.00020	0.00012	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Chromium, Total	0.0027		mg/L	0.0010	0.00029	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Copper, Total	0.069		mg/L	0.0025	0.00038	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Lead, Total	0.011		mg/L	0.0010	0.00011	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Manganese, Total	0.11		mg/L	0.0025	0.00011	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Molybdenum, Total	0.0095		mg/L	0.0010	0.00004 0	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Nickel, Total	0.011		mg/L	0.0025	0.00012	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Selenium, Total	0.0015J	J	mg/L	0.0020	0.00015	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Silver, Total	0.00039J	J	mg/L	0.00050	0.00003 0	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706004** Date Collected: 8/30/2018 12:45 Matrix: Waste Water

Sample ID: **18-Influent B - Potomac SS-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Thallium, Total	ND		mg/L	0.00050	0.000030	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Zinc, Total	0.16		mg/L	0.0025	0.00057	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:38	LXC	A1
Sub'd-EMSL Labs											
Asbestos	See attached					Subcontract			9/13/18 00:00	SUB	G

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706005** Date Collected: 8/30/2018 12:15 Matrix: Waste Water

Sample ID: **18-Influent C - Boiling-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acrolein	ND	1	ug/L	50.0	9.5	EPA 624		9/1/18 14:49	CPK	C
Acrylonitrile	ND		ug/L	25.0	6.0	EPA 624		9/1/18 14:49	CPK	C
Benzene	ND		ug/L	5.0	1.2	EPA 624		9/1/18 14:49	CPK	C
Bromodichloromethane	ND		ug/L	5.0	1.4	EPA 624		9/1/18 14:49	CPK	C
Bromoform	ND		ug/L	5.0	2.0	EPA 624		9/1/18 14:49	CPK	C
Bromomethane	ND		ug/L	5.0	2.0	EPA 624		9/1/18 14:49	CPK	C
Carbon Tetrachloride	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:49	CPK	C
Chlorobenzene	ND		ug/L	5.0	0.95	EPA 624		9/1/18 14:49	CPK	C
Chlorodibromomethane	ND		ug/L	5.0	2.3	EPA 624		9/1/18 14:49	CPK	C
Chloroethane	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:49	CPK	C
2-Chloroethylvinyl ether	ND		ug/L	10.0	1.9	EPA 624		9/1/18 14:49	CPK	C
Chloroform	4.8J	J	ug/L	5.0	1.1	EPA 624		9/1/18 14:49	CPK	C
Chloromethane	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:49	CPK	C
1,2-Dichlorobenzene	ND		ug/L	5.0	1.9	EPA 624		9/1/18 14:49	CPK	C
1,3-Dichlorobenzene	ND		ug/L	5.0	1.3	EPA 624		9/1/18 14:49	CPK	C
1,4-Dichlorobenzene	ND		ug/L	5.0	1.4	EPA 624		9/1/18 14:49	CPK	C
1,1-Dichloroethane	ND		ug/L	5.0	1.4	EPA 624		9/1/18 14:49	CPK	C
1,2-Dichloroethane	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:49	CPK	C
1,1-Dichloroethene	ND		ug/L	5.0	1.5	EPA 624		9/1/18 14:49	CPK	C
trans-1,2-Dichloroethene	ND		ug/L	5.0	1.3	EPA 624		9/1/18 14:49	CPK	C
1,2-Dichloropropane	ND		ug/L	5.0	1.2	EPA 624		9/1/18 14:49	CPK	C
cis-1,3-Dichloropropene	ND		ug/L	5.0	1.6	EPA 624		9/1/18 14:49	CPK	C
trans-1,3-Dichloropropene	ND		ug/L	5.0	1.5	EPA 624		9/1/18 14:49	CPK	C
1,3-Dichloropropene, Total	ND		ug/L	10.0	2.4	EPA 624		9/1/18 14:49	CPK	C
Ethylbenzene	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:49	CPK	C
Methylene Chloride	ND		ug/L	5.0	2.3	EPA 624		9/1/18 14:49	CPK	C
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:49	CPK	C
Tetrachloroethene	ND		ug/L	5.0	1.8	EPA 624		9/1/18 14:49	CPK	C
Toluene	7.5		ug/L	5.0	1.2	EPA 624		9/1/18 14:49	CPK	C
1,1,1-Trichloroethane	ND		ug/L	5.0	1.1	EPA 624		9/1/18 14:49	CPK	C
1,1,2-Trichloroethane	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:49	CPK	C
Trichloroethene	ND		ug/L	5.0	1.7	EPA 624		9/1/18 14:49	CPK	C
Trichlorofluoromethane	ND		ug/L	5.0	1.2	EPA 624		9/1/18 14:49	CPK	C
Vinyl Chloride	ND		ug/L	5.0	1.5	EPA 624		9/1/18 14:49	CPK	C

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	93.1		%	72 - 142	EPA 624		9/1/18 14:49	CPK	C

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706005** Date Collected: 8/30/2018 12:15 Matrix: Waste Water

Sample ID: **18-Influent C - Boiling-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
4-Bromofluorobenzene (S)	103		%	73 - 119		EPA 624			9/1/18 14:49	CPK	C
Dibromofluoromethane (S)	95.7		%	74 - 132		EPA 624			9/1/18 14:49	CPK	C
Toluene-d8 (S)	92.3		%	75 - 133		EPA 624			9/1/18 14:49	CPK	C
WET CHEMISTRY											
Cyanide, Total	0.0030J	J	mg/L	0.0050	0.0022	EPA 335.4	9/6/18 13:00	JXB	9/10/18 06:51	KXK	A
Oil/Grease Hexane Extractable	7.5		mg/L	2.5	0.8	EPA 1664B			9/4/18 10:45	MPP	B
Oil/Grease Silica Gel Treated	2.8		mg/L	2.5	0.7	EPA 1664B			9/4/18 10:45	MPP	B
Phenolics	0.018		mg/L	0.005	0.002	EPA 420.4	9/12/18 14:13	RXB	9/18/18 12:41	RXB	E

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706006** Date Collected: 8/30/2018 13:00 Matrix: Waste Water

Sample ID: **18-Influent C - Boiling-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES											
Acenaphthene	ND		ug/L	1.4	0.14	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Acenaphthylene	ND		ug/L	1.4	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Anthracene	ND		ug/L	1.4	0.14	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Benzidine	14.5		ug/L	7.6	3.0	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Benzo(a)anthracene	ND		ug/L	1.4	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Benzo(a)pyrene	ND		ug/L	1.4	0.21	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Benzo(b)fluoranthene	ND		ug/L	1.4	0.12	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Benzo(g,h,i)perylene	ND		ug/L	1.4	0.21	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Benzo(k)fluoranthene	ND		ug/L	1.4	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
4-Bromophenyl-phenylether	ND		ug/L	2.9	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Butylbenzylphthalate	2.3J	J	ug/L	2.9	0.11	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
4-Chloro-3-methylphenol	ND		ug/L	2.9	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
bis(2-Chloroethoxy)methane	ND		ug/L	2.9	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
bis(2-Chloroethyl)ether	ND		ug/L	2.9	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
bis(2-Chloroisopropyl)ether	ND		ug/L	2.9	0.27	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2-Chloronaphthalene	ND		ug/L	2.9	0.17	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2-Chlorophenol	ND		ug/L	2.9	0.31	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
4-Chlorophenyl-phenylether	ND		ug/L	2.9	0.13	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Chrysene	ND		ug/L	1.4	0.14	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Di-n-Butylphthalate	1.4J	J	ug/L	2.9	0.13	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Di-n-Octylphthalate	ND		ug/L	2.9	0.095	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Dibenzo(a,h)anthracene	ND		ug/L	1.4	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
3,3-Dichlorobenzidine	ND		ug/L	2.9	0.46	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2,4-Dichlorophenol	ND		ug/L	2.9	0.30	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Diethylphthalate	2.9		ug/L	2.9	0.17	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2,4-Dimethylphenol	ND		ug/L	2.9	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Dimethylphthalate	ND		ug/L	2.9	0.13	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2,4-Dinitrophenol	ND		ug/L	5.7	2.4	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2,4-Dinitrotoluene	ND		ug/L	2.9	0.12	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2,6-Dinitrotoluene	ND		ug/L	2.9	0.20	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
1,2-Diphenylhydrazine	ND		ug/L	2.9	0.25	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
bis(2-Ethylhexyl)phthalate	6.5		ug/L	2.9	0.21	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Fluoranthene	0.18J	J	ug/L	1.4	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Fluorene	ND		ug/L	1.4	0.19	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Hexachlorobenzene	ND		ug/L	2.9	0.22	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Hexachlorobutadiene	ND		ug/L	2.9	0.18	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Hexachlorocyclopentadiene	ND		ug/L	2.9	0.16	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706006** Date Collected: 8/30/2018 13:00 Matrix: Waste Water

Sample ID: **18-Influent C - Boiling-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachloroethane	ND		ug/L	2.9	0.29	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Indeno(1,2,3-cd)pyrene	ND		ug/L	1.4	0.11	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Isophorone	ND		ug/L	2.9	0.14	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2-Methyl-4,6-dinitrophenol	ND		ug/L	5.7	0.31	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Naphthalene	ND		ug/L	1.4	0.17	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Nitrobenzene	ND		ug/L	2.9	0.27	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2-Nitrophenol	ND		ug/L	2.9	0.43	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
4-Nitrophenol	ND		ug/L	2.9	1.0	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
N-Nitrosodimethylamine	ND		ug/L	2.9	0.61	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
N-Nitroso-di-n-propylamine	ND		ug/L	2.9	0.23	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
N-Nitrosodiphenylamine	ND		ug/L	2.9	0.17	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Pentachlorophenol	ND		ug/L	5.7	1.1	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Phenanthrene	0.19J	J	ug/L	1.4	0.12	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Phenol	2.8J	J	ug/L	7.6	0.22	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Pyrene	0.20J	J	ug/L	1.4	0.15	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
1,2,4-Trichlorobenzene	ND		ug/L	2.9	0.15	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2,4,6-Trichlorophenol	ND		ug/L	2.9	0.54	EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	92.8		%	47 - 128		EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2-Fluorobiphenyl (S)	73.8		%	52 - 118		EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
2-Fluorophenol (S)	44.7		%	20 - 87		EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Nitrobenzene-d5 (S)	87.7		%	27 - 139		EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Phenol-d5 (S)	31.3		%	10 - 81		EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Terphenyl-d14 (S)	96.3		%	46 - 133		EPA 625	9/4/18 10:30	MXL	9/5/18 13:20	DHF	B
Pesticides and PCBs											
Aldrin	ND		ug/L	0.019	0.0048	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
beta-BHC	ND		ug/L	0.019	0.0076	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
delta-BHC	ND		ug/L	0.019	0.0029	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
gamma-BHC	ND		ug/L	0.019	0.0029	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Chlordane	ND		ug/L	0.19	0.033	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
4,4'-DDD	ND		ug/L	0.019	0.0067	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
4,4'-DDE	ND		ug/L	0.019	0.0067	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
4,4'-DDT	ND		ug/L	0.019	0.0057	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Dieldrin	ND		ug/L	0.019	0.0029	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Endosulfan I	ND		ug/L	0.019	0.0029	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Endosulfan II	ND		ug/L	0.019	0.0057	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Endosulfan Sulfate	ND		ug/L	0.019	0.0038	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706006** Date Collected: 8/30/2018 13:00 Matrix: Waste Water

Sample ID: **18-Influent C - Boiling-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Endrin	ND		ug/L	0.019	0.0076	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Endrin Aldehyde	ND		ug/L	0.019	0.0095	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
alpha-HCH (alpha-BHC)	ND	1	ug/L	0.019	0.0019	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Heptachlor	ND		ug/L	0.019	0.0029	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Heptachlor Epoxide	ND		ug/L	0.019	0.0038	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Mirex	ND	2	ug/L	0.019	0.0038	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Total Polychlorinated Biphenyl	ND		ug/L	3.3	1.6	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Toxaphene	ND		ug/L	0.95	0.18	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Aroclor-1016	ND		ug/L	0.48	0.30	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Aroclor-1221	ND		ug/L	0.48	0.31	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Aroclor-1232	ND		ug/L	0.48	0.22	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Aroclor-1242	ND		ug/L	0.48	0.23	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Aroclor-1248	ND		ug/L	0.48	0.14	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Aroclor-1254	ND		ug/L	0.48	0.13	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Aroclor-1260	ND		ug/L	0.48	0.25	EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	49.9		%	30 - 150		EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Decachlorobiphenyl (S)	54.6		%	30 - 150		EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Tetrachloro-m-xylene (S)	97.1		%	36 - 112		EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
Tetrachloro-m-xylene (S)	64		%	36 - 112		EPA 608	9/5/18 11:30	CAC	9/11/18 05:00	RWS	D
WET CHEMISTRY											
Chloride	121		mg/L	10.0	1.2	EPA 300.0			8/31/18 11:07	CHW	H
METALS											
Antimony, Total	0.0010		mg/L	0.0010	0.00010	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Arsenic, Total	0.00078J	J	mg/L	0.0015	0.00032	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Beryllium, Total	0.000082 J	J	mg/L	0.00050	0.00004 0	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Cadmium, Total	0.00020		mg/L	0.00020	0.00012	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Chromium, Total	0.0026		mg/L	0.0010	0.00029	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Copper, Total	0.051		mg/L	0.0025	0.00038	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Lead, Total	0.014		mg/L	0.0010	0.00011	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Manganese, Total	0.16		mg/L	0.0025	0.00011	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Molybdenum, Total	0.011		mg/L	0.0010	0.00004 0	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Nickel, Total	0.0093		mg/L	0.0025	0.00012	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Selenium, Total	0.00049J	J	mg/L	0.0020	0.00015	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Silver, Total	0.00027J	J	mg/L	0.00050	0.00003 0	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1

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ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

Lab ID: **2335706006** Date Collected: 8/30/2018 13:00 Matrix: Waste Water

Sample ID: **18-Influent C - Boiling-A** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Thallium, Total	ND		mg/L	0.00050	0.000030	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Zinc, Total	0.11		mg/L	0.0025	0.00057	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:41	LXC	A1
Sub'd-EMSL Labs											
Asbestos	See attached					Subcontract			9/13/18 00:00	SUB	G

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2335706 WW/Influent Annual

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2335706001	1	18-Influent A - Potomac CS-A	EPA 624	Acrolein
The reporting limits for GCMS volatile analytes were raised due to the dilution of the sample caused by matrix.				
2335706002	1	18-Influent A - Potomac CS-A	EPA 608	alpha-HCH (alpha-BHC)
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. One or more analytes were outside the allowable range.				
2335706002	2	18-Influent A - Potomac CS-A	EPA 608	Mirex
The QC sample type LCSPES for method EPA 608 was outside the control limits for the analyte Mirex. The % Recovery was reported as 139 and the control limits were 50 to 130.				
2335706003	1	18-Influent B - Potomac SS-A	EPA 624	Acrolein
The reporting limits for GCMS volatile analytes were raised due to the dilution of the sample caused by matrix.				
2335706004	1	18-Influent B - Potomac SS-A	EPA 608	alpha-HCH (alpha-BHC)
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. One or more analytes were outside the allowable range.				
2335706004	2	18-Influent B - Potomac SS-A	EPA 608	Mirex
The QC sample type LCSPES for method EPA 608 was outside the control limits for the analyte Mirex. The % Recovery was reported as 139 and the control limits were 50 to 130.				
2335706005	1	18-Influent C - Boiling-A	EPA 624	Acrolein
The reporting limits for GCMS volatile analytes were raised due to the dilution of the sample caused by matrix.				
2335706006	1	18-Influent C - Boiling-A	EPA 608	alpha-HCH (alpha-BHC)
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. One or more analytes were outside the allowable range.				
2335706006	2	18-Influent C - Boiling-A	EPA 608	Mirex
The QC sample type LCSPES for method EPA 608 was outside the control limits for the analyte Mirex. The % Recovery was reported as 139 and the control limits were 50 to 130.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2335706 WW/Influent Annual

Lab ID	Sample ID	Analysis Method	Prep Method
2335706001	18-Influent A - Potomac CS-A	EPA 1664B	
2335706001	18-Influent A - Potomac CS-A	EPA 335.4	335/4500/9012B
2335706001	18-Influent A - Potomac CS-A	EPA 420.4	420.4/9066
2335706001	18-Influent A - Potomac CS-A	EPA 624	
2335706002	18-Influent A - Potomac CS-A	EPA 200.8	EPA TRMD
2335706002	18-Influent A - Potomac CS-A	EPA 300.0	
2335706002	18-Influent A - Potomac CS-A	EPA 608	EPA 608
2335706002	18-Influent A - Potomac CS-A	EPA 625	EPA 625
2335706002	18-Influent A - Potomac CS-A	Subcontract	
2335706003	18-Influent B - Potomac SS-A	EPA 1664B	
2335706003	18-Influent B - Potomac SS-A	EPA 335.4	335/4500/9012B
2335706003	18-Influent B - Potomac SS-A	EPA 420.4	420.4/9066
2335706003	18-Influent B - Potomac SS-A	EPA 624	
2335706004	18-Influent B - Potomac SS-A	EPA 200.8	EPA TRMD
2335706004	18-Influent B - Potomac SS-A	EPA 300.0	
2335706004	18-Influent B - Potomac SS-A	EPA 608	EPA 608
2335706004	18-Influent B - Potomac SS-A	EPA 625	EPA 625
2335706004	18-Influent B - Potomac SS-A	Subcontract	
2335706005	18-Influent C - Boiling-A	EPA 1664B	
2335706005	18-Influent C - Boiling-A	EPA 335.4	335/4500/9012B
2335706005	18-Influent C - Boiling-A	EPA 420.4	420.4/9066
2335706005	18-Influent C - Boiling-A	EPA 624	
2335706006	18-Influent C - Boiling-A	EPA 200.8	EPA TRMD
2335706006	18-Influent C - Boiling-A	EPA 300.0	
2335706006	18-Influent C - Boiling-A	EPA 608	EPA 608
2335706006	18-Influent C - Boiling-A	EPA 625	EPA 625
2335706006	18-Influent C - Boiling-A	Subcontract	

Analytical Laboratory Services, Inc.
Environmental • Industrial Hygiene • Field Services
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUS[TODY] / REQUEST FOR A[NALYSIS]

ALL SHADED AREAS MUST BE COM[PLETED BY THE] SAMPLER. INSTRUCTION[S]

* 2 3 3 5 7 0 6 *

COC #: 2335706 | zxzx of xyxy
ALSI Quote #: 141444 3+

Client Name: DCWASA - OTHERS
Address: 5000 Overlook Ave, SW
Washington, D.C. 20032
Contact: Elaine Wilson
Phone#: 202-787-4177
Project Name/#: WW/Influent Annual
Bill To: Accounts Payable Office- 4th Floor

TAT: [X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: ______ Approved By: ______
Email? [X]-Y
Fax? [ ]-Y No.:

	Container Type	PL	AG/CG	CG	PL	PL	AG	AG	AG	PL	
	Container Size	~~500 mL~~ 250	1L	40 mL	~~500 mL~~ 250	250 mL	1L	1L	~~1L~~ 125	1L	
	Preservative	NaOH	H2SO4	HCl	HNO3	None	None	None	H2SO4	None	

ANALYSES/METHOD REQUESTED +UW8-31ks

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Cyanide	TPH plus total O&G	VOC - 624	200.8 (As, Cd, Cr, Cu, Pb, Mn, Mo, Ni, Se, Ag, Zn, Sb, Be, Tl)	Chloride	Semivolatiles - EPA 625 - including TCDD dioxin	Pesticides/PCBs EPA 608	Total Phenolic Compounds	Asbestos		Sample/COC Comments
					Enter Number of Containers Per Sample or Field Results Below.										
18 - Influent A - Potomac CS - Annual	8/30/18	1135	G	WW	1	2 (initialed)	2					1			
18 - Influent A - Potomac CS - Annual	8/30/18	1230	C	WW				1	1	2	2		1		24-h composite
18 - Influent B - Potomac SS - Annual	8/30/18	1145	G	WW	1	2 (initialed)	2					1			
18 - Influent B - Potomac SS - Annual	8/30/18	1245	C	WW				1	1	2	2		1		24-h composite
18 - Influent C - Bolling - Annual	8/30/18	1215	G	WW	1	2 (initialed)	2					1			
18 - Influent C - Bolling - Annual	8/30/18	1300	C	WW				1	1	2	2		1		24-h composite

Receipt Information (completed by Receiving Lab)
Cooler Temp: 3°C Therm ID: 359
No. of Coolers: ______

	Y	N	Initial
Custody Seals Present?	✓		KH
(If present) Seals Intact?	✓		↓
Received on Ice?	✓		↓
COC/Labels Complete/Accurate?		X	(initialed)
Cont. In Good Cond.?	X		
Correct Containers?	X		
Correct Sample Volumes?	X		
Correct Preservation?	X		
Headspace/Volatiles?		X	

Courier/Tracking #: MDX80830005, 4

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther:

Project Comments: Need lowest detection limit available for all metals, report J Flags

LOGGED BY(signature): ______ DATE ______ TIME ______
REVIEWED BY(signature): ______ DATE ______ TIME ______

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	(signature)	8-30-18	1400	2	(signature)	8/30	1715
3		8/30	1600	4	COMMON COURIER / ALS COURIER (circled)		
5	COMMON COURIER / ALS COURIER (circled)			6	(signature)	8/30/2018	2200
7				8			
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ] [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ]
PWSID #
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY Rev 8/04

EMSL Analytical, Inc.

200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	041826819
Customer ID:	WRIG51
Customer PO:	2335706
Project ID:	

Attn:	ALS Environmental 34 Dogwood Lane Middletown, PA 17057	Phone: Fax: Collected: Received: Analyzed:	(717) 944-5541 (717) 944-1430 08/30/2018 09/05/2018 09/13/2018
Proj:	2335706		

Test Report: Determination of Asbestos Structures > 10µm in Water Performed by the 100.2 Method (EPA 600/R-94/134)

Sample ID Client / EMSL	Sample Filtration Date/Time	Original Sample Vol. Filtered (ml)	Effective Filter Area (mm^2)	Area Analyzed (mm^2)	ASBESTOS Asbestos Types	Fibers Detected	Analytical Sensitivity	Concentration	Confidence Limits
							MFL (million fibers per liter)		
2335706002 041826819-0001	9/5/2018 12:00 PM	0.50	1387	0.2580	None Detected	ND	11.00	<11.00	0.00 - 40.00
Sample ozonated prior to analysis due to lab receipt time exceeding 48hr method hold time. Due to excessive particulate the analytical sensitivity of 0.2 MFL as required by the method was not reached.									
2335706004 041826819-0002	9/5/2018 12:00 PM	1	1387	0.2580	Chrysotile	1	5.40	5.40	0.14 - 30.00
Sample ozonated prior to analysis due to lab receipt time exceeding 48hr method hold time. Due to excessive particulate the analytical sensitivity of 0.2 MFL as required by the method was not reached.									
2335706006 041826819-0003	9/5/2018 12:00 PM	0.50	1387	0.2580	None Detected	ND	11.00	<11.00	0.00 - 40.00
Sample ozonated prior to analysis due to lab receipt time exceeding 48hr method hold time. Due to excessive particulate the analytical sensitivity of 0.2 MFL as required by the method was not reached.									

Analyst(s)
William Nguyen (3)

Benjamin Ellis, Laboratory Manager
or Other Approved Signatory

Any questions please contact Benjamin Ellis.

Initial report from: 09/13/2018 13:43:22

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 041826819 — 1 of 1

ALS Quote #:

Client Name: ALS MDT	
Address: 34 Dogwood Lane Middletown PA 17057	
Contact: Susan Scherer	
Phone#: (717) 702-2245	
Project Name/#: 2335706	
Bill To: ALS-MDT	

TAT: ☐ Normal-Standard TAT is 10-12 business days. ☐ Rush-Subject to ALS approval and surcharges.

Date Required: 9/13/2018 Approved By:

Email? [x] -Y Susan.Scherer@ALSGlobal.com

Fax? ☐ -Y No.:

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Container Type	Container Size	Preservative	Asbestos by 100.2 (> 10um)	Ozonate based on 48 hour holding time exceedance							
					PL	1L	NONE	ANALYSES/METHOD REQUESTED								
					Enter Number of Containers Per Sample or Field Results Below.											
1) 2335706002	08/30/18	12:30	C	WW	1			X								
2) 2335706004	08/30/18	12:45	C	WW	1			X								
3) 2335706006	08/30/18	13:00	C	WW	1			X								

Receipt Information (completed by Receiving Lab)

Cooler Temp: ____ Therm ID: ____

No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

Sample/COC Comments

0.8 oc

RECEIVED EMSL CINNAMINSON N.J. 2018 SEP -5 A 10:58

SHIP TO:

EMSL Analytical Inc.

200 Route 130 North

Cinnaminson NJ 08077

ALS Field Services: ☐ Pickup ☐ Labor ☐ Composite Sampling ☐ Rental Equipment ☐ Other:

LOGGED BY(signature): Date: Time:

REVIEWED BY(signature): Date: Time:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature]	9/4/18	1306	2 [signature] FX	9/5	10:30
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [x] Standard ☐ CLP-like ☐ USACE ☐

Special Processing: USACE ☐ Navy ☐

State Samples Collected In: ☐ NY ☐ NJ ☐ PA ☐ NC ☐ MD ☐ Wash DC

Reportable to PADEP? Yes ☐ PWSID #

Sample Disposal: Lab ☐ Special ☐

EDDS: Format Type-

* G=Grab; C=Composite **Matrix - Al=Air, DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge, SO=Soil; WP=Wipe, WW=Wastewater

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 10/11

7731 3612 1181

OrderID: 041826819

ALS

Page 1 of 2

Thursday, September 20, 2018 3:22:48 PM

Page 27 of 28

ALS Environmental

041826819

PURCHASE ORDER

P.O. No: 2335706

FOR SUBCONTRACT ANALYSES

The above purchase order number must appear on all related correspondence and invoices.

Date: 9/4/2018
Contact: Susan Scherer
E-Mail: Susan.Scherer@alsglobal.com

Terms: Net 30

Attention:
Company: EMSL Analytical
Address:
Phone:
Fax:

Bill To: ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
Phone: 717-944-5541
Fax: 717-944-1430

Ship To: ALS Environmental
Holland MI
Phone:
Fax:

RECEIVED EMSL CINNAMINSON, N.J. 2018 SEP -5 A 10:53

Item/Description	Quantity	Unit Price	Extended Price
Asbestos in Water method 100.2	3	$78.75	$236.25
Ozonation	3	$50.00	$150.00
			$0.00
			$0.00
			$0.00
		Sales Tax:	N/A
		Shipping/Handling:	N/A
		Other:	N/A
		Total Order Amount:	$386.25

Comments:

ALS Group USA, Corp
www.alsglobal.com
A Campbell Brothers Limited Company

Biosolids Priority Pollutant Data

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

November 2, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Bio/Annual 10/18/18**	Workorder:	**2345345**
Purchase Order:	**190108**	Workorder ID:	**Bio/Annual 10/18/18**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Friday, October 19, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Susan J. Scherer
Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2345345 Bio/Annual 10/18/18

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2345345001	18-Digest BFP BOC OCT-DEC	Solid	10/18/2018 11:35	10/19/2018 19:30	Collected by Client
2345345002	18-Digest BFP BOC Annual	Solid	10/18/2018 11:35	10/19/2018 19:30	Collected by Client

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2345345 Bio/Annual 10/18/18

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2345345 Bio/Annual 10/18/18

Lab ID: **2345345001** Date Collected: 10/18/2018 11:35 Matrix: Solid

Sample ID: **18-Digest BFP BOC OCT-DEC** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	2550		ug/kg	126	58.2	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Benzene	24.6J	J	ug/kg	25.3	6.3	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Bromochloromethane	ND		ug/kg	25.3	6.3	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Bromodichloromethane	ND		ug/kg	25.3	9.0	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Bromoform	ND		ug/kg	25.3	6.6	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Bromomethane	ND		ug/kg	25.3	6.6	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
2-Butanone	842		ug/kg	126	40.5	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Carbon Disulfide	134		ug/kg	25.3	8.0	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Carbon Tetrachloride	ND		ug/kg	25.3	6.4	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Chlorobenzene	ND		ug/kg	25.3	6.4	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Chlorodibromomethane	ND		ug/kg	25.3	8.6	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Chloroethane	ND		ug/kg	63.2	10.7	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Chloroform	ND		ug/kg	25.3	6.7	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Chloromethane	ND		ug/kg	25.3	7.0	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
1,2-Dibromo-3-chloropropane	ND		ug/kg	63.2	36.7	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
1,2-Dibromoethane	ND		ug/kg	25.3	6.8	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
1,1-Dichloroethane	ND		ug/kg	25.3	6.3	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
1,2-Dichloroethane	ND		ug/kg	25.3	6.3	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
1,1-Dichloroethene	ND		ug/kg	25.3	6.6	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
cis-1,2-Dichloroethene	ND		ug/kg	25.3	6.3	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
trans-1,2-Dichloroethene	ND		ug/kg	25.3	6.6	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
1,2-Dichloropropane	ND		ug/kg	25.3	7.6	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
cis-1,3-Dichloropropene	ND		ug/kg	25.3	7.0	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
trans-1,3-Dichloropropene	ND		ug/kg	25.3	7.3	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Ethylbenzene	13.0J	J	ug/kg	25.3	8.6	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
2-Hexanone	ND		ug/kg	126	35.4	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
4-Methyl-2-Pentanone(MIBK)	ND		ug/kg	126	48.1	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Methylene Chloride	36.8		ug/kg	25.3	9.9	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Styrene	ND		ug/kg	25.3	6.3	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
1,1,2,2-Tetrachloroethane	ND		ug/kg	25.3	7.1	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Tetrachloroethene	ND		ug/kg	25.3	7.6	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Toluene	264		ug/kg	25.3	8.5	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Total Xylenes	177		ug/kg	75.9	17.7	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
1,1,1-Trichloroethane	ND		ug/kg	25.3	7.8	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
1,1,2-Trichloroethane	ND		ug/kg	25.3	7.1	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Trichloroethene	ND		ug/kg	25.3	6.3	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2345345 Bio/Annual 10/18/18

Lab ID: **2345345001** Date Collected: 10/18/2018 11:35 Matrix: Solid

Sample ID: **18-Digest BFP BOC OCT-DEC** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Vinyl Chloride	ND		ug/kg	25.3	6.3	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
o-Xylene	ND		ug/kg	25.3	7.3	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
mp-Xylene	177		ug/kg	50.6	10.5	SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	96.9		%	56 - 124		SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
4-Bromofluorobenzene (S)	103		%	51 - 128		SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Dibromofluoromethane (S)	105		%	62 - 123		SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
Toluene-d8 (S)	106		%	59 - 131		SW846 8260B	10/20/18 01:37	PDK	10/24/18 08:21	PDK	B2
DIOXIN SCREEN											
2,3,7,8-TCDD	ND	3	ug/kg	21.1	21.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 06:14	CGS	A
SEMIVOLATILES											
Acenaphthene	75.1J	J	ug/kg	150	18.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Acenaphthylene	ND		ug/kg	150	21.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Anthracene	ND		ug/kg	150	24.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Benzo(a)anthracene	132J	J	ug/kg	150	15.0	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Benzo(a)pyrene	147J	J	ug/kg	150	12.0	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Benzo(b)fluoranthene	243		ug/kg	150	15.0	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Benzo(g,h,i)perylene	ND		ug/kg	150	15.0	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Benzo(k)fluoranthene	100J	J	ug/kg	150	15.0	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	301	27.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Butylbenzylphthalate	1020		ug/kg	301	21.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Carbazole	270J	J	ug/kg	301	21.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	602	30.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
4-Chloroaniline	178J	J	ug/kg	602	36.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
bis(2-Chloroethoxy)methane	54.1J	J	ug/kg	301	27.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	301	39.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	301	45.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2-Chloronaphthalene	ND		ug/kg	301	18.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2-Chlorophenol	ND		ug/kg	602	24.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	301	24.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Chrysene	172		ug/kg	150	15.0	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
mp-Cresol	583J	J	ug/kg	602	24.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
o-Cresol	ND		ug/kg	602	33.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Di-n-Butylphthalate	279J	J	ug/kg	301	24.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Di-n-Octylphthalate	ND		ug/kg	301	21.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	150	18.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Dibenzofuran	40.8J	J	ug/kg	301	24.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A

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ANALYTICAL RESULTS

Workorder: 2345345 Bio/Annual 10/18/18

Lab ID: **2345345001** Date Collected: 10/18/2018 11:35 Matrix: Solid

Sample ID: **18-Digest BFP BOC OCT-DEC** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichlorobenzene	ND		ug/kg	301	27.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	301	21.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
1,4-Dichlorobenzene	ND		ug/kg	301	21.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	602	114	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2,4-Dichlorophenol	107J	J	ug/kg	602	24.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Diethylphthalate	ND		ug/kg	301	24.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2,4-Dimethylphenol	71.1J	J	ug/kg	602	45.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Dimethylphthalate	ND		ug/kg	301	21.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2,4-Dinitrophenol	ND		ug/kg	1200	120	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2,4-Dinitrotoluene	ND		ug/kg	301	27.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2,6-Dinitrotoluene	ND		ug/kg	301	36.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
bis(2-Ethylhexyl)phthalate	18100		ug/kg	301	21.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Fluoranthene	340		ug/kg	150	15.0	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Fluorene	69.1J	J	ug/kg	150	18.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Hexachlorobenzene	ND		ug/kg	301	33.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Hexachlorobutadiene	ND		ug/kg	301	30.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	602	33.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Hexachloroethane	ND		ug/kg	301	27.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Indeno(1,2,3-cd)pyrene	819		ug/kg	150	21.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Isophorone	ND		ug/kg	301	18.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	602	78.3	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2-Methylnaphthalene	ND		ug/kg	301	15.0	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Naphthalene	71.6J	J	ug/kg	150	18.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2-Nitroaniline	ND		ug/kg	602	36.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
3-Nitroaniline	ND		ug/kg	602	60.2	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
4-Nitroaniline	ND		ug/kg	602	24.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Nitrobenzene	ND		ug/kg	301	36.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2-Nitrophenol	ND		ug/kg	602	33.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
4-Nitrophenol	ND		ug/kg	602	42.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	301	45.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	301	24.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	301	24.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Pentachlorophenol	ND		ug/kg	602	78.3	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Phenanthrene	295		ug/kg	150	15.0	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Phenol	13500		ug/kg	602	30.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Pyrene	389		ug/kg	150	15.0	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	301	18.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2,4,5-Trichlorophenol	ND		ug/kg	602	36.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A

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ANALYTICAL RESULTS

Workorder: 2345345 Bio/Annual 10/18/18

Lab ID: **2345345001** Date Collected: 10/18/2018 11:35 Matrix: Solid

Sample ID: **18-Digest BFP BOC OCT-DEC** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
2,4,6-Trichlorophenol	ND		ug/kg	602	36.1	SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	49.1		%	19 - 132		SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2-Fluorobiphenyl (S)	58.2		%	40 - 110		SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
2-Fluorophenol (S)	49.2		%	26 - 116		SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Nitrobenzene-d5 (S)	49.1		%	38 - 112		SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Phenol-d5 (S)	50.5		%	35 - 111		SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
Terphenyl-d14 (S)	69.2		%	45 - 126		SW846 8270D	10/23/18 05:30	JTH	10/24/18 03:29	CGS	A
PCBs											
Total Polychlorinated Biphenyl	ND		mg/kg	0.85	0.16	SW846 8082A	10/23/18 03:20	JTH	10/24/18 01:14	EGO	A
Aroclor-1016	ND		mg/kg	0.094	0.017	SW846 8082A	10/23/18 03:20	JTH	10/24/18 01:14	EGO	A
Aroclor-1221	ND		mg/kg	0.094	0.0085	SW846 8082A	10/23/18 03:20	JTH	10/24/18 01:14	EGO	A
Aroclor-1232	ND		mg/kg	0.094	0.017	SW846 8082A	10/23/18 03:20	JTH	10/24/18 01:14	EGO	A
Aroclor-1242	ND		mg/kg	0.094	0.026	SW846 8082A	10/23/18 03:20	JTH	10/24/18 01:14	EGO	A
Aroclor-1248	ND		mg/kg	0.094	0.017	SW846 8082A	10/23/18 03:20	JTH	10/24/18 01:14	EGO	A
Aroclor-1254	0.078J	J	mg/kg	0.094	0.017	SW846 8082A	10/23/18 03:20	JTH	10/24/18 01:14	EGO	A
Aroclor-1260	ND		mg/kg	0.094	0.017	SW846 8082A	10/23/18 03:20	JTH	10/24/18 01:14	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	55.2		%	49 - 115		SW846 8082A	10/23/18 03:20	JTH	10/24/18 01:14	EGO	A
Tetrachloro-m-xylene (S)	53.4		%	27 - 137		SW846 8082A	10/23/18 03:20	JTH	10/24/18 01:14	EGO	A
PESTICIDES											
Aldrin	ND	1	ug/kg	24.1	7.8	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
beta-BHC	ND		ug/kg	24.1	2.6	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
delta-BHC	ND		ug/kg	24.1	1.8	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
gamma-BHC	ND		ug/kg	24.1	2.0	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
alpha-Chlordane	ND		ug/kg	24.1	2.6	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
gamma-Chlordane	ND		ug/kg	24.1	4.1	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
4,4'-DDD	ND		ug/kg	46.9	3.8	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
4,4'-DDE	ND		ug/kg	46.9	6.4	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
4,4'-DDT	ND		ug/kg	46.9	5.4	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Dieldrin	ND		ug/kg	46.9	5.4	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Endosulfan I	ND		ug/kg	24.1	3.0	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Endosulfan II	ND		ug/kg	46.9	9.8	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Endosulfan Sulfate	ND		ug/kg	46.9	3.1	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Endrin	ND		ug/kg	46.9	3.4	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Endrin Aldehyde	ND		ug/kg	46.9	5.1	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A

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ANALYTICAL RESULTS

Workorder: 2345345 Bio/Annual 10/18/18

Lab ID: **2345345001** Date Collected: 10/18/2018 11:35 Matrix: Solid

Sample ID: **18-Digest BFP BOC OCT-DEC** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Endrin Ketone	ND		ug/kg	46.9	6.5	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
alpha-HCH (alpha-BHC)	ND		ug/kg	24.1	2.1	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Heptachlor	ND		ug/kg	24.1	2.4	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Heptachlor Epoxide	ND		ug/kg	24.1	2.4	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Methoxychlor	ND		ug/kg	46.9	6.2	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Toxaphene	ND		ug/kg	497	82.3	SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	43.5		%	30 - 135		SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
Tetrachloro-m-xylene (S)	29.9	2	%	30 - 111		SW846 8081B	10/23/18 03:20	JTH	10/23/18 19:31	RWS	A
WET CHEMISTRY											
Cyanide, Total	1.2		mg/kg	0.74	0.26	SW846 9012B	10/23/18 15:30	JXB	10/23/18 17:24	JXB	A
Hexane Extractable Material	60300		mg/kg	596	200	SW846 9071B			10/23/18 06:15	MPP	A
Moisture	66.8		%	0.1	0.01	S2540G-11			10/22/18 13:37	AXD	
Total Solids	33.2		%	0.1	0.01	S2540G-11			10/22/18 13:37	AXD	

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2345345 Bio/Annual 10/18/18

Lab ID: **2345345002** Date Collected: 10/18/2018 11:35 Matrix: Solid

Sample ID: **18-Digest BFP BOC Annual** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Moisture	66.5		%	0.1	0.01	S2540G-11			10/22/18 13:37	AXD	
Phenolics	52.7		mg/kg	1.9	0.6	SW846 9066	11/1/18 07:45	C_D	11/1/18 13:26	C_D	A
Total Solids	33.5		%	0.1	0.01	S2540G-11			10/22/18 13:37	AXD	

Susan J. Scherer

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ANALYTICAL RESULTS

Workorder: 2345345 Bio/Annual 10/18/18

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2345345001	1	18-Digest BFP BOC OCT-DEC	SW846 8081B	Aldrin
This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.				
2345345001	2	18-Digest BFP BOC OCT-DEC	SW846 8081B	Tetrachloro-m-xylene
The surrogate Tetrachloro-m-xylene for method SW846 8081B was outside of control limits. The % Recovery was reported as 29.9 and the control limits were 30 to 111. This result was reported at a dilution of 5.				
2345345001	3	18-Digest BFP BOC OCT-DEC	SW846 8270D	2,3,7,8-TCDD
A SIM screen analysis was run for Dioxin and no peaks were observed.				

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2345345 Bio/Annual 10/18/18

Lab ID	Sample ID	Analysis Method	Prep Method
2345345001	18-Digest BFP BOC OCT-DEC	S2540G-11	
2345345001	18-Digest BFP BOC OCT-DEC	SW846 8081B	SW846 3546
2345345001	18-Digest BFP BOC OCT-DEC	SW846 8082A	SW846 3546
2345345001	18-Digest BFP BOC OCT-DEC	SW846 8260B	SW846 5035
2345345001	18-Digest BFP BOC OCT-DEC	SW846 8270D	SW846 3546
2345345001	18-Digest BFP BOC OCT-DEC	SW846 9012B	SW846 9012B
2345345001	18-Digest BFP BOC OCT-DEC	SW846 9071B	
2345345002	18-Digest BFP BOC Annual	S2540G-11	
2345345002	18-Digest BFP BOC Annual	SW846 9066	420.4/9066

SUB

Analytical Laboratory Services, Inc.
Environmental w Industrial Hygiene w Field Services
34 Dogwood Lane w Middletown, PA 17057 w 717.944.5541 w Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

* 2 3 4 5 3 4 5 *

5 | zxzx of xyxy

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: DCWASA - Others
Address: 5000 Overlook Ave, SW
Washington, D.C. 20032
Contact: Mark Ramirez
Phone#: 202-787-4002
Project Name/#: Bio/Annual
Bill To: Accounts Payable Office- 4th Floor

TAT [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y
Fax? [ ] -Y No.: _____

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Container Type	Container Size	Preservative	Cyanide, % solids, TPH & TOT O&G (9071), SemiVol (8270*), pesticides (8081)	VOC (SW846- 8260)	Asbestos	Phenols (SW846-9065)	Sample/COC Comments
					CG	CG	CG	CG	CG	CG		
					8 OZ	4 oz	8 OZ	4 OZ				
					None	None	None	None				
					Enter Number of Containers Per Sample or Field Results Below.							
18 - Digest BFP BOC OCT-DEC	10/18/18	1135	G	SL	1		1					*plus hexachlorobenzene, hexachlorobutadiene
18 - Digest BFP BOC Annual	10/18/18	1135	G	SL					1	1		and toxaphene
Also rec. 1 16oz jar w/no sample description but date, time, sampled by matt these samples -KM 10/19/18												

Receipt Information (completed by Receiving Lab)
Cooler Temp: 3°C Therm ID: 318
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			KM
(If present) Seals Intact?			
Received on ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #: MO18019004

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther: _____

Project Comments: *Run % solids and report data as mg/kg dry weight

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	10/19/18	930	2	10/19	1330
3	10/19		4 COMMON COURIER/ALS COURIER		
5 COMMON COURIER / ALS COURIER			6	10/19/2018	1930
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ] PWSID # _____
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type- _____

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Oi=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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Rev 8/04

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

October 30, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Revised Report - 10/30/2018 3:21:47 PM - See workorder comment section for explanation

Project Name:	**Biosolids 10/04/18**	Workorder:	**2342508**
Purchase Order:	**180018**	Workorder ID:	**Biosolids 10/04/18**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Thursday, October 4, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Susan J. Scherer
Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2342508 Biosolids 10/04/18

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2342508001	Digest BFP BOC	Solid	10/4/2018 08:00	10/4/2018 21:17	Collected by Client
2342508002	Digest BFP BOC	Solid	10/4/2018 10:30	10/4/2018 21:17	Collected by Client

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SAMPLE SUMMARY

Workorder: 2342508 Biosolids 10/04/18

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 2342508 Biosolids 10/04/18

Workorder Comments

This certificate of analysis was modified to include a re-analysis for total volatile solids based on the email request from Elaine Wilson on 10/24/18. SJS 10/24/18

The TVS result for the attached solids sample (73.3%) is not possible and is not consistent with our in-house lab result. Please have the supervisor check this result to make sure they used the proper numbers in the calculation. If you don't identify a lab error, please re-run the TVS for this sample (even though it is out of holding time). We are also going to schedule a pickup for tomorrow to submit a new TVS sample for this month.

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ANALYTICAL RESULTS

Workorder: 2342508 Biosolids 10/04/18

Lab ID: **2342508001** Date Collected: 10/4/2018 08:00 Matrix: Solid

Sample ID: **Digest BFP BOC** Date Received: 10/4/2018 21:17

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Ammonia-nitrogen, Total	5510		mg/kg	297	100	D6919-09	10/11/18 16:08	CMM	10/14/18 16:51	CMM	
Chloride	194J	J	mg/kg	294	2.6	300.0/9056A	10/9/18 05:41	CHW	10/9/18 13:24	CHW	A2
Moisture	65.9		%	0.1	0.01	S2540G-11			10/8/18 12:30	AXD	A
Moisture	66.1		%	0.1	0.01	S2540G-11			10/24/18 13:46	AXD	A
Neutralization Potential % CEC	6.22	1	%	1.62		AOAC 955.01			10/11/18 14:00	NJA	A
Nitrate-N	1.8J	J	mg/kg	29.4	1.2	300.0/9056A	10/9/18 05:41	CHW	10/9/18 13:24	CHW	A2
Phosphorus, Total	27700		mg/kg	722	82.9	EPA 365.1	10/8/18 12:30	KXK	10/9/18 06:23	KXK	A
Solids, Total Volatile	73.3		%	1.0	0.1	S2540G-11			10/10/18 08:34	AXD	A
Solids, Total Volatile	51.3	3	%	1.0	0.1	S2540G-11			10/25/18 12:39	AXD	A
Tot. Kjeldahl Nitrogen,(Moist)	14800		mg/kg	385	200	S4500NH3G-11	10/10/18 08:30	CMM	10/17/18 19:09	C_W	A
Total Kjeldahl Nitrogen	43800		mg/kg	1130	500	S4500NH3G-11	10/10/18 08:30	CMM	10/17/18 19:46	C_W	A
Total Solids	34.1		%	0.1	0.01	S2540G-11			10/8/18 12:30	AXD	A
Total Solids	33.9	2	%	0.1	0.01	S2540G-11			10/24/18 13:46	AXD	A
METALS											
Sulfur	14000		mg/kg	52.8	17.6	SW846 6010C	10/9/18 17:00	AHI	10/10/18 08:16	SRT	A3
Aluminum, Total	7980		mg/kg	106	34.3	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Antimony, Total	3.7		mg/kg	2.6	0.87	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Arsenic, Total	7.3		mg/kg	4.0	1.3	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Beryllium, Total	0.62J	J	mg/kg	1.3	0.44	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Boron, Total	22.5J	J	mg/kg	52.8	17.6	SW846 6010C	10/9/18 17:00	AHI	10/10/18 08:16	SRT	A3
Cadmium, Total	2.1		mg/kg	1.3	0.44	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Calcium, Total	22000		mg/kg	52.8	17.6	SW846 6010C	10/9/18 17:00	AHI	10/10/18 08:16	SRT	A3
Chromium, Total	74.0		mg/kg	2.6	0.87	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Copper, Total	439		mg/kg	6.6	2.1	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Iron, Total	98800		mg/kg	52.8	17.6	SW846 6010C	10/9/18 17:00	AHI	10/10/18 08:16	SRT	A3
Lead, Total	53.5		mg/kg	2.6	0.87	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Magnesium, Total	3290		mg/kg	52.8	17.6	SW846 6010C	10/9/18 17:00	AHI	10/10/18 08:16	SRT	A3
Manganese, Total	451		mg/kg	5.3	1.8	SW846 6010C	10/9/18 17:00	AHI	10/10/18 08:16	SRT	A3
Mercury, Total	0.56		mg/kg	0.14	0.046	SW846 7471B	10/10/18 10:45	AXC	10/10/18 14:22	AXC	A1
Molybdenum, Total	21.2		mg/kg	2.6	0.87	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Nickel, Total	28.9		mg/kg	6.6	2.1	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Potassium, Total	1110		mg/kg	264	88.2	SW846 6010C	10/9/18 17:00	AHI	10/10/18 08:16	SRT	A3
Selenium, Total	5.1J	J	mg/kg	6.6	2.1	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Silver, Total	6.1		mg/kg	2.6	0.87	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3
Thallium, Total	ND		mg/kg	15.8	5.3	SW846 6010C	10/9/18 17:00	AHI	10/10/18 08:16	SRT	A3

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2342508 Biosolids 10/04/18

Lab ID: **2342508001** Date Collected: 10/4/2018 08:00 Matrix: Solid

Sample ID: **Digest BFP BOC** Date Received: 10/4/2018 21:17

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Zinc, Total	714		mg/kg	6.6	2.1	SW846 6020A	10/9/18 17:00	AHI	10/11/18 17:14	MO	A3

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2342508 Biosolids 10/04/18

Lab ID: **2342508002** Date Collected: 10/4/2018 10:30 Matrix: Solid

Sample ID: **Digest BFP BOC** Date Received: 10/4/2018 21:17

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
PCBs											
Total Polychlorinated Biphenyl	ND		mg/kg	0.87	0.17	SW846 8082A	10/8/18 18:25	J1H	10/9/18 05:04	EGO	A
Aroclor-1016	ND		mg/kg	0.095	0.017	SW846 8082A	10/8/18 18:25	J1H	10/9/18 05:04	EGO	A
Aroclor-1221	ND		mg/kg	0.095	0.0087	SW846 8082A	10/8/18 18:25	J1H	10/9/18 05:04	EGO	A
Aroclor-1232	ND		mg/kg	0.095	0.017	SW846 8082A	10/8/18 18:25	J1H	10/9/18 05:04	EGO	A
Aroclor-1242	ND		mg/kg	0.095	0.026	SW846 8082A	10/8/18 18:25	J1H	10/9/18 05:04	EGO	A
Aroclor-1248	ND		mg/kg	0.095	0.017	SW846 8082A	10/8/18 18:25	J1H	10/9/18 05:04	EGO	A
Aroclor-1254	ND		mg/kg	0.095	0.017	SW846 8082A	10/8/18 18:25	J1H	10/9/18 05:04	EGO	A
Aroclor-1260	0.046J	J	mg/kg	0.095	0.017	SW846 8082A	10/8/18 18:25	J1H	10/9/18 05:04	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	53.3		%	49 - 115		SW846 8082A	10/8/18 18:25	J1H	10/9/18 05:04	EGO	A
Tetrachloro-m-xylene (S)	63.4		%	27 - 137		SW846 8082A	10/8/18 18:25	J1H	10/9/18 05:04	EGO	A
WET CHEMISTRY											
Moisture	66.7		%	0.1	0.01	S2540G-11			10/8/18 14:54	AXD	A
Total Solids	33.3		%	0.1	0.01	S2540G-11			10/8/18 14:54	AXD	A

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2342508 Biosolids 10/04/18

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2342508001	1	Digest BFP BOC	AOAC 955.01	Neutralization Potential % CEC
ALS-Middletown does not hold PADEP NELAP accreditation for this analyte by this method of analysis.				
2342508001	2	Digest BFP BOC	S2540G-11	Total Solids
Analyte was analyzed past the 7 day holding time.				
2342508001	3	Digest BFP BOC	S2540G-11	Solids, Total Volatile
Analyte was analyzed past the 7 day holding time.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2342508 Biosolids 10/04/18

Lab ID	Sample ID	Analysis Method	Prep Method
2342508001	Digest BFP BOC	300.0/9056A	300.0/9056A
2342508001	Digest BFP BOC	AOAC 955.01	
2342508001	Digest BFP BOC	D6919-09	In House
2342508001	Digest BFP BOC	EPA 365.1	EPA 365.1
2342508001	Digest BFP BOC	S2540G-11	
2342508001	Digest BFP BOC	S4500NH3G-11	S4500NH3D
2342508001	Digest BFP BOC	SW846 6010C	SW846 3051
2342508001	Digest BFP BOC	SW846 6020A	SW846 3051
2342508001	Digest BFP BOC	SW846 7471B	SW846 7471B
2342508002	Digest BFP BOC	S2540G-11	
2342508002	Digest BFP BOC	SW846 8082A	SW846 3546

Analytical Laboratory Services, Inc.
Environmental w Industrial Hygiene w Field Services
34 Dogwood Lane w Middletown, PA 17057 w 717.944.5541 w Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALSI

2342508

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: DCWASA-Others
Address: 5000 Overlook Ave, SW
Washington, D.C. 20032
Contact: Mark Ramirez
Phone#: 202-787-4002
Project Name/#: Bio/Twice per Month
Bill To: Accounts Payable Office- 4th Floor

TAT [X] Normal-Standard TAT is 7 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required: Approved By:
Email? [ ] -Y
Fax? [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Container Type	Container Size	Preservative	Al, B, Cd, Cu, Cr, Pb, Zn, Ni, Fe, Hg, Ag, Mn, Mo, Ca, Mg, S, K, Sb, Be, Ti, % CaCO3 Equiv., % TS, Chlorides, As, Se -use larger volume for lower RDL, Na*	TKN, TP, NH3 N, NO3 N, % TS, %TVS,	PCB - 8082						
					G	G	AG	AG							
					8 oz.	8 oz.	4 oz.	8 oz.							
					None	None	None	None							
					ANALYSES/METHOD REQUESTED										
					Enter Number of Containers Per Sample or Field Results Below.										
Digest BFP BOC	10/4/18	0800	G	SL	1	1									
Digest BFP BOC	10/4/18	1030	G	SL			1								

Cooler Temp: 3 Therm #1
No. of Coolers:
Custody Seals Present? Y
(if present) Seals Intact? Y
Received on Ice? Y
COC/Labels Complete/Accurate? Y
Cont. in Good Cond.? Y
Correct Containers? Y
Correct Sample Volumes? Y
Correct Preservation? Y
Headspace/Volatiles?
Courier/Tracking #: QD bbl
Sample/COC Cor

* Na - Additional Parameter

ALSI Field Services: o
oComposite Sampling o
oOther:

Project Comments: *Run % solids and report data as mg/kg dry weight

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1		10/4/18	1000	2		10/4	1336
3		10/4/18		4	COMMON COURIER / ALS COURIER		
5	COMMON COURIER / ALS COURIER			6		10/4/2018	2117
7				8			
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processi: USACE / Navy
Reportable to PADEP? Yes [ ]
PWSID #
Sample Disposi: Lab / Special
EDDS: Format Type-

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY

ALS

ALS Environmental

301 Fulling Mill Road - Middletown, PA 17057 - Phone: 717-944-5541 - Fax: 717-944-1430 - www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

December 31, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Bio/Annual Asbestos**	Workorder:	**3006542**
Purchase Order:	**190108**	Workorder ID:	**Bio/Annual Asbestos**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, December 18, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

301 Folling Mill Road - Middletown, PA 17057 - Phone: 717-944-5541 - Fax: 717-944-1430 - www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJ LA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

SAMPLE SUMMARY

Workorder: 3006542 Bio/Annual Asbestos

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3006542001	18-Digest BFP BOC Annual	Oil/Other	12/18/2018 09:35	12/18/2018 21:15	Collected by Client

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

PROJECT SUMMARY

Workorder: 3006542 Bio/Annual Asbestos

Workorder Comments

See attached subcontracted result from EMSL Analytical Inc for Asbestos Analysis of Soils via EPA 600/R-93/116 Method using PLM and Milling Prep. Quantitation using 400 Point Count Procedure. SJS 12/31/18

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3006542 Bio/Annual Asbestos

Lab ID: **3006542001** Date Collected: 12/18/2018 09:35 Matrix: Oil/Other

Sample ID: **18-Digest BFP BOC Annual** Date Received: 12/18/2018 21:15

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
SUBCONTRACTED ANALYSIS										
Asbestos	See attached					Subcontract		12/29/18 00:00	SUB	A

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

301 Fulling Mill Road - Middletown, PA 17057 - Phone: 717-944-5541 - Fax: 717-944-1430 - www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3006542 Bio/Annual Asbestos

Lab ID	Sample ID	Analysis Method	Prep Method
3006542001	18-Digest BFP BOC Annual	Subcontract	

Analytical Laboratory Services, Inc.

Environmental ▪ Industrial Hygiene ▪ Field Services

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ 717.944.5541 ▪ Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALSI

CO
AL

3006542

zxzx of xyxy

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: DCWASA - Others

Address: 5000 Overlook Ave, SW
Washington, D.C. 20032

Contact: Mark Ramirez

Phone#: 202-787-4002

Project Name/#: Bio/Annual

Bill To: Accounts Payable Office- 4th Floor

TAT [X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.

Date Required: Approved By:

Email? [X] -Y

Fax? [ ] -Y No.:

(Receiving Lab)

Cooler Temp: 2 °C Therm ID: 403

No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Container Type	Container Size	Preservative	Cyanide, % solids, TPH & TOT OandG (9071), Semivol (8270), pesticides (8081)	VOC (5W846-8260)	Asbestos	Phenols (SW846-9066)				Sample/COC Comments
					CG	8 OZ	None								
					CG	4 oz	None								
					CG	24 OZ	None								
					CG	4 OZ	None								
								Enter Number of Containers Per Sample or Field Results Below							
18 - Digest BFP BOC OCT-DEC			G	SL											*~~plus hexachlorobenzene, hexachlorobutadiene and toxaphene~~
18 - Digest BFP BOC Annual	12/18/18	0935	G	SL						1					one analysis only

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther:

Project Comments: *Run % solids and report data as mg/kg dry weight

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	12/18/18	1615	2	12/18/18	1615
3	12/18		4 COMMON COURIER / ALS COURIER		
5 COMMON COURIER / ALS COURIER			6	12/18/18	2115
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ] PWSID #

Sample Disposal: Lab [ ] Special [ ]

EDDS: Format Type-

*G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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ALS Environmental

Condition of Sample Receipt Form

Client: DCWASA - Others | Work Order #: | Initials: | Date: 12/18/18

1. Were airbills / tracking numbers present and recorded? Tracking number:	(NONE)	YES	NO
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	(N/A)	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken or leaking, frozen, etc.)		(YES)	NO
10. Were the samples received on ice?		(YES)	NO
11. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
12. Are the samples reportable? If yes, fill out Reportable Drinking Water questions below.		YES	(NO)
12a. Did the client provide a PWS ID#?	(N/A)	YES	NO
12b. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
12c. Did the client provide the sample location ID/Description?	(N/A)	YES	NO
12d. Did the client provide the sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #: 1

Temperature (°C): 2°C

Thermometer ID: 403

COMMENTS (Required for all NO responses above and any sample non-conformance):

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasbestos@EMSL.com

EMSL Order:	041837282
Customer ID:	WRIG51
Customer PO:	3006542
Project ID:	

Attention:	ALS Environmental 301 Fulling Mill Rd. Middletown, PA 17057	Phone:	(717) 944-5541
		Fax:	(717) 944-1430
		Received:	12/20/2018 10:30 AM
		Analysis Date:	12/29/2018
		Collected:	12/18/2018
Project:	3006542		

Test Report: Asbestos Analysis of Soils via EPA 600/R-93/116 Method using PLM and Milling Prep. Quantitation using 400 Point Count Procedure

			Non-Asbestos		Asbestos
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
3006542001 *041837282-0001*		Brown Fibrous Homogeneous	10% Cellulose	90.0% Non-fibrous (Other)	None Detected

Analyst(s)

Nancy Stelter (1)

Benjamin Ellis, Laboratory Manager
or other approved signatory

Initial report from: 12/29/2018 06:31:15

301 Fulling Mill Rd
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: 04 / 8 37282 — 1 of 1

ALS Quote #:

Client Name: ALS

Address: 301 Fulling Mill Road
Middletown PA 17057

Contact: Susan Scherer

Phone#: (717) 702-2245

Project Name/#: 3006542

Bill To: ALS

TAT [ ] Normal-Standard TAT is 10-12 business days.
[X] Rush-Subject to ALS approval and surcharges.

Date Required: 12/31/2018 Approved?

Email? [X] -Y susan.scherer@alsglobal.com

Fax? [ ] -Y No.:

	Container Type	CG									
	Container Size	4oz									
	Preservative	NONE									
ANALYSES/METHOD REQUESTED											
	*G or C	**Matrix	PLM BARB 435 Level A								
Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	Enter Number of Containers Per Sample or Field Results Below.								
1 3006542001	12/18/18	0935	G	S	1						
2											
3											
4											
5											
6											
7											
8											
9											
10											

Receipt Information (completed by Receiving Lab)

W.O. Temp: ____ Therm ID: ____

Courier/Tracking #:

Purchase Order #: 3006542

Project Comments:

ALS Field Services: ☐ Pickup ☐ Labor
☐ Composite Sampling ☐ Rental Equipment
Other: ____

Sample/COC Comments

RECEIVED
DEC 21 AM 8:25

SAMPLED BY (Please Print):

Sampler Comments:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	12/19/18	1430	2	12-20-18	10:40
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [X] Standard [ ] CLP-like [ ] USACE/DOD [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [X] DC [ ] other

Reportable to PADEP? Yes [ ] No [ ]

PWSID # ____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- ____

ALS

Additional Influent Toxic Organics Pollutant Data

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

April 11, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Wastewater (WW)**	Workorder:	**2305702**
Purchase Order:	**180018**	Workorder ID:	**WW/Influent Quarterly**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Thursday, March 29, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez , Accounts Payable-4th Floor

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2305702 WW/Influent Quarterly

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2305702001	18-1st qtr-Inf A-Potomac CS	Waste Water	3/28/2018 09:40	3/29/2018 21:40	Collected by Client
2305702002	18-1st qtr-Inf B-Potomac SS	Waste Water	3/28/2018 09:50	3/29/2018 21:40	Collected by Client
2305702003	18-1st qtr-Inf C-Bolling-	Waste Water	3/28/2018 10:10	3/29/2018 21:40	Collected by Client
2305702004	18-1st qtr-Inf A-Potomac CS	Waste Water	3/28/2018 10:45	3/29/2018 21:40	Collected by Client
2305702005	18-1st qtr-Inf B-Potomac SS	Waste Water	3/28/2018 10:50	3/29/2018 21:40	Collected by Client
2305702006	18-1st qtr-Inf C-Bolling	Waste Water	3/28/2018 11:10	3/29/2018 21:40	Collected by Client

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2305702 WW/Influent Quarterly

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305702 WW/Influent Quarterly

Lab ID: **2305702001** Date Collected: 3/28/2018 09:40 Matrix: Waste Water

Sample ID: **18-1st qtr-Inf A-Potomac CS** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Total	ND		mg/L	0.0050	0.0022	EPA 335.4	4/9/18 15:18	JXB	4/10/18 12:44	MNP	A
Oil/Grease Hexane Extractable	30.4		mg/L	2.3	0.7	EPA 1664B			4/3/18 08:30	JXS	B
Oil/Grease Silica Gel Treated	1.8J	J	mg/L	2.3	0.6	EPA 1664B			4/3/18 08:30	JXS	B

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305702 WW/Influent Quarterly

Lab ID: **2305702002** Date Collected: 3/28/2018 09:50 Matrix: Waste Water

Sample ID: **18-1st qtr-Inf B-Potomac SS** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Total	ND		mg/L	0.0050	0.0022	EPA 335.4	4/9/18 15:18	JXB	4/10/18 12:44	MNP	A
Oil/Grease Hexane Extractable	16.7		mg/L	2.3	0.7	EPA 1664B			4/3/18 08:30	JXS	B
Oil/Grease Silica Gel Treated	1.1J	J	mg/L	2.3	0.6	EPA 1664B			4/3/18 08:30	JXS	B

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305702 WW/Influent Quarterly

Lab ID: **2305702003** Date Collected: 3/28/2018 10:10 Matrix: Waste Water

Sample ID: **18-1st qtr-Inf C-Bolling-** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Total	ND		mg/L	0.0050	0.0022	EPA 335.4	4/9/18 15:18	JXB	4/10/18 12:44	MNP	A
Oil/Grease Hexane Extractable	10.0		mg/L	2.3	0.7	EPA 1664B			4/3/18 08:30	JXS	B
Oil/Grease Silica Gel Treated	1.5J	J	mg/L	2.3	0.6	EPA 1664B			4/3/18 08:30	JXS	B

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305702 WW/Influent Quarterly

Lab ID: **2305702004** Date Collected: 3/28/2018 10:45 Matrix: Waste Water

Sample ID: **18-1st qtr-Inf A-Potomac CS** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aldrin	ND		ug/L	0.019	0.0047	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
beta-BHC	ND		ug/L	0.019	0.0075	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
delta-BHC	ND		ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
gamma-BHC	ND		ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Chlordane	ND		ug/L	0.19	0.033	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
4,4'-DDD	ND		ug/L	0.019	0.0066	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
4,4'-DDE	ND		ug/L	0.019	0.0066	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
4,4'-DDT	ND	2	ug/L	0.019	0.0057	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Dieldrin	0.0046J	J	ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Endosulfan I	ND		ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Endosulfan II	ND		ug/L	0.019	0.0057	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Endosulfan Sulfate	ND		ug/L	0.019	0.0038	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Endrin	ND		ug/L	0.019	0.0075	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Endrin Aldehyde	ND		ug/L	0.019	0.0094	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
alpha-HCH (alpha-BHC)	ND		ug/L	0.019	0.0019	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Heptachlor	ND	3	ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Heptachlor Epoxide	ND		ug/L	0.019	0.0038	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Mirex	ND	1	ug/L	0.019	0.0038	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Total Polychlorinated Biphenyl	ND		ug/L	0.47	0.47	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Toxaphene	ND		ug/L	0.94	0.18	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Aroclor-1016	ND		ug/L	0.47	0.30	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Aroclor-1221	ND		ug/L	0.47	0.31	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Aroclor-1232	ND		ug/L	0.47	0.22	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Aroclor-1242	ND		ug/L	0.47	0.23	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Aroclor-1248	ND		ug/L	0.47	0.14	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Aroclor-1254	ND		ug/L	0.47	0.13	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Aroclor-1260	ND		ug/L	0.47	0.25	EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	59.6		%	30 - 150		EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
Tetrachloro-m-xylene (S)	53.4		%	36 - 112		EPA 608	4/4/18 13:00	ELS	4/5/18 18:33	RWS	B
METALS											
Arsenic, Total	0.00089J	J	mg/L	0.0015	0.00032	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:17	MO	A2
Cadmium, Total	0.00020		mg/L	0.00020	0.00012	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:17	MO	A2
Chromium, Total	0.0018		mg/L	0.0010	0.00029	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:17	MO	A2
Copper, Total	0.055		mg/L	0.0025	0.00038	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:17	MO	A2

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305702 WW/Influent Quarterly

Lab ID: **2305702004** Date Collected: 3/28/2018 10:45 Matrix: Waste Water

Sample ID: **18-1st qtr-Inf A-Potomac CS** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Iron, Total	2.1		mg/L	0.030	0.010	EPA 200.7	4/3/18 08:20	DXC	4/4/18 00:30	DAG	A1
Lead, Total	0.0023		mg/L	0.0010	0.00011	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:17	MO	A2
Manganese, Total	0.21		mg/L	0.0025	0.00011	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:17	MO	A2
Molybdenum, Total	0.0070		mg/L	0.0010	0.00004 0	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:17	MO	A2
Nickel, Total	0.0068		mg/L	0.0025	0.00012	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:17	MO	A2
Selenium, Total	0.00063J	J	mg/L	0.0020	0.00015	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:17	MO	A2
Silver, Total	0.00094		mg/L	0.00050	0.00003 0	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:17	MO	A2
Zinc, Total	0.11		mg/L	0.0025	0.00057	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:17	MO	A2

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305702 WW/Influent Quarterly

Lab ID: **2305702005** Date Collected: 3/28/2018 10:50 Matrix: Waste Water

Sample ID: **18-1st qtr-Inf B-Potomac SS** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aldrin	ND		ug/L	0.019	0.0047	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
beta-BHC	ND		ug/L	0.019	0.0075	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
delta-BHC	ND		ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
gamma-BHC	ND		ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Chlordane	ND		ug/L	0.19	0.033	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
4,4'-DDD	ND		ug/L	0.019	0.0065	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
4,4'-DDE	ND		ug/L	0.019	0.0065	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
4,4'-DDT	ND	3	ug/L	0.019	0.0056	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Dieldrin	ND		ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Endosulfan I	ND		ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Endosulfan II	ND		ug/L	0.019	0.0056	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Endosulfan Sulfate	ND		ug/L	0.019	0.0037	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Endrin	ND		ug/L	0.019	0.0075	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Endrin Aldehyde	ND		ug/L	0.019	0.0093	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
alpha-HCH (alpha-BHC)	ND		ug/L	0.019	0.0019	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Heptachlor	ND	2	ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Heptachlor Epoxide	ND		ug/L	0.019	0.0037	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Mirex	ND	1	ug/L	0.019	0.0037	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Total Polychlorinated Biphenyl	ND		ug/L	0.47	0.47	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Toxaphene	ND		ug/L	0.93	0.18	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Aroclor-1016	ND		ug/L	0.47	0.30	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Aroclor-1221	ND		ug/L	0.47	0.31	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Aroclor-1232	ND		ug/L	0.47	0.21	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Aroclor-1242	ND		ug/L	0.47	0.22	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Aroclor-1248	ND		ug/L	0.47	0.14	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Aroclor-1254	ND		ug/L	0.47	0.13	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Aroclor-1260	ND		ug/L	0.47	0.24	EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	69.5		%	30 - 150		EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
Tetrachloro-m-xylene (S)	29.6	4	%	36 - 112		EPA 608	4/4/18 13:00	ELS	4/5/18 18:55	RWS	B
METALS											
Arsenic, Total	0.00075J	J	mg/L	0.0015	0.00032	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:21	MO	A2
Cadmium, Total	0.00017J	J	mg/L	0.00020	0.00012	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:21	MO	A2
Chromium, Total	0.0029		mg/L	0.0010	0.00029	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:21	MO	A2
Copper, Total	0.060		mg/L	0.0025	0.00038	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:21	MO	A2

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ANALYTICAL RESULTS

Workorder: 2305702 WW/Influent Quarterly

Lab ID: **2305702005** Date Collected: 3/28/2018 10:50 Matrix: Waste Water

Sample ID: **18-1st qtr-Inf B-Potomac SS** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Iron, Total	1.8		mg/L	0.030	0.010	EPA 200.7	4/3/18 08:20	DXC	4/4/18 00:33	DAG	A1
Lead, Total	0.0029		mg/L	0.0010	0.00011	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:21	MO	A2
Manganese, Total	0.22		mg/L	0.0025	0.00011	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:21	MO	A2
Molybdenum, Total	0.0065		mg/L	0.0010	0.000040	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:21	MO	A2
Nickel, Total	0.0074		mg/L	0.0025	0.00012	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:21	MO	A2
Selenium, Total	0.00078J	J	mg/L	0.0020	0.00015	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:21	MO	A2
Silver, Total	0.00045J	J	mg/L	0.00050	0.000030	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:21	MO	A2
Zinc, Total	0.12		mg/L	0.0025	0.00057	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:21	MO	A2

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ANALYTICAL RESULTS

Workorder: 2305702 WW/Influent Quarterly

Lab ID: **2305702006** Date Collected: 3/28/2018 11:10 Matrix: Waste Water

Sample ID: **18-1st qtr-Inf C-Bolling** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aldrin	ND		ug/L	0.019	0.0048	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
beta-BHC	ND		ug/L	0.019	0.0077	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
delta-BHC	ND		ug/L	0.019	0.0029	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
gamma-BHC	ND		ug/L	0.019	0.0029	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Chlordane	ND		ug/L	0.19	0.034	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
4,4'-DDD	ND		ug/L	0.019	0.0067	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
4,4'-DDE	ND		ug/L	0.019	0.0067	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
4,4'-DDT	ND	3	ug/L	0.019	0.0058	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Dieldrin	ND		ug/L	0.019	0.0029	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Endosulfan I	ND		ug/L	0.019	0.0029	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Endosulfan II	ND		ug/L	0.019	0.0058	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Endosulfan Sulfate	ND		ug/L	0.019	0.0038	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Endrin	ND		ug/L	0.019	0.0077	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Endrin Aldehyde	ND		ug/L	0.019	0.0096	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
alpha-HCH (alpha-BHC)	ND		ug/L	0.019	0.0019	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Heptachlor	ND	2	ug/L	0.019	0.0029	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Heptachlor Epoxide	0.013J	J	ug/L	0.019	0.0038	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Mirex	ND	1	ug/L	0.019	0.0038	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Total Polychlorinated Biphenyl	ND		ug/L	0.48	0.48	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Toxaphene	ND		ug/L	0.96	0.18	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Aroclor-1016	ND		ug/L	0.48	0.31	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Aroclor-1221	ND		ug/L	0.48	0.32	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Aroclor-1232	ND		ug/L	0.48	0.22	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Aroclor-1242	ND		ug/L	0.48	0.23	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Aroclor-1248	ND		ug/L	0.48	0.14	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Aroclor-1254	ND		ug/L	0.48	0.13	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Aroclor-1260	ND		ug/L	0.48	0.25	EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	55		%	30 - 150		EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
Tetrachloro-m-xylene (S)	32.1	4	%	36 - 112		EPA 608	4/4/18 13:00	ELS	4/5/18 19:18	RWS	B
METALS											
Arsenic, Total	0.00076J	J	mg/L	0.0015	0.00032	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:25	MO	A2
Cadmium, Total	0.00015J	J	mg/L	0.00020	0.00012	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:25	MO	A2
Chromium, Total	0.0033		mg/L	0.0010	0.00029	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:25	MO	A2
Copper, Total	0.046		mg/L	0.0025	0.00038	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:25	MO	A2

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ANALYTICAL RESULTS

Workorder: 2305702 WW/Influent Quarterly

Lab ID: **2305702006** Date Collected: 3/28/2018 11:10 Matrix: Waste Water

Sample ID: **18-1st qtr-Inf C-Bolling** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Iron, Total	4.6		mg/L	0.030	0.010	EPA 200.7	4/3/18 08:20	DXC	4/4/18 00:36	DAG	A1
Lead, Total	0.0030		mg/L	0.0010	0.00011	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:25	MO	A2
Manganese, Total	0.17		mg/L	0.0025	0.00011	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:25	MO	A2
Molybdenum, Total	0.0073		mg/L	0.0010	0.000040	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:25	MO	A2
Nickel, Total	0.0070		mg/L	0.0025	0.00012	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:25	MO	A2
Selenium, Total	0.00061J	J	mg/L	0.0020	0.00015	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:25	MO	A2
Silver, Total	0.00030J	J	mg/L	0.00050	0.000030	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:25	MO	A2
Zinc, Total	0.090		mg/L	0.0025	0.00057	EPA 200.8	4/3/18 08:20	DXC	4/4/18 04:25	MO	A2

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2305702 WW/Influent Quarterly

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2305702004	1	18-1st qtr-Inf A-Potomac CS	EPA 608	Mirex
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 24% in the bracketing CCV.				
2305702004	2	18-1st qtr-Inf A-Potomac CS	EPA 608	4,4'-DDT
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 68% in the bracketing CCV.				
2305702004	3	18-1st qtr-Inf A-Potomac CS	EPA 608	Heptachlor
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 19% in the bracketing CCV.				
2305702005	1	18-1st qtr-Inf B-Potomac SS	EPA 608	Mirex
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 24% in the bracketing CCV.				
2305702005	2	18-1st qtr-Inf B-Potomac SS	EPA 608	Heptachlor
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 19% in the bracketing CCV.				
2305702005	3	18-1st qtr-Inf B-Potomac SS	EPA 608	4,4'-DDT
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 68% in the bracketing CCV.				
2305702005	4	18-1st qtr-Inf B-Potomac SS	EPA 608	Tetrachloro-m-xylene
The surrogate Tetrachloro-m-xylene for method EPA 608 was outside of control limits. The % Recovery was reported as 29.6 and the control limits were 36 to 112. This result was reported at a dilution of 1.				
2305702006	1	18-1st qtr-Inf C-Bolling	EPA 608	Mirex
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 24% in the bracketing CCV.				
2305702006	2	18-1st qtr-Inf C-Bolling	EPA 608	Heptachlor
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 19% in the bracketing CCV.				
2305702006	3	18-1st qtr-Inf C-Bolling	EPA 608	4,4'-DDT
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 68% in the bracketing CCV.				
2305702006	4	18-1st qtr-Inf C-Bolling	EPA 608	Tetrachloro-m-xylene
The surrogate Tetrachloro-m-xylene for method EPA 608 was outside of control limits. The % Recovery was reported as 32.1 and the control limits were 36 to 112. This result was reported at a dilution of 1.				

Analytical Laboratory Services, Inc.
Environmental w Industrial Hygiene w Field Services
34 Dogwood Lane w Middletown, PA 17057 w 717 944 5541 w Fax: 717 944 1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALSI

COC # *2305702*

ALSI G

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: DCWASA - Others
Address: 5000 Overlook Ave, SW
Washington, D C. 20032
Contact: Elaine Wilson
Phone#: 202-787-4177
Project Name/#: WW/Influent Quarterly
Bill To: Accounts Payable Office- 4th Floor

TAT [X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [X] -Y
Fax? [ ] -Y No.: _____

Container Type	PL	CG	PL	G						
Container Size	500mL	1L	125mL	1 L						
Preservative	NaOH	H2SO4	HNO3	None						

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Cyanide	TPH plus total O& G - 1664	Total Metals: 200.8 (As, Cd, Cr, Cu,Fe, Pb, Mn, Mo, Ni, Se, Ag, Zn)	PCBS - 608							Sample/COC Comments
					Enter Number of Containers Per Sample or Field Results Below.										
18-1st qtr-Infl A - Potomac CS	3/28/2018	940	G	WW	1	2									
18-1st qtr-Infl B - Potomac SS	3/28/2018	950	G	WW	1	2									
18-1st qtr-Infl C - Bolling	3/28/2018	1010	G	WW	1	2									
18-1st qtr-Infl A - Potomac CS	3/28/2018	1045	C	WW			1	2							24-h composite 3/27 to 3/28
18-1st qtr-Infl B - Potomac SS	3/28/2018	1050	C	WW			1	2							24-h composite 3/27 to 3/28
18-1st qtr-Infl C - Bolling	3/28/2018	1110	C	WW			1	2							24-h composite 3/27 to 3/28

Receipt Information (completed by Receiving Lab)
Cooler Temp: 2°C Therm ID: 318
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?	X		
COC/Labels Complete/Accurate?	X		
Cont. in Good Cond.?	X		
Correct Containers?	X		
Correct Sample Volumes?	X		
Correct Preservation?	X		
Headspace/Volatiles?			

Courier/Tracking #:

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther: _____

Project Comments: Need Lowest detection limit available for all metals, report J flags

LOGGED BY(signature): Date: Time:
REVIEWED BY(signature): Date: Time:

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1		3/28/18	1000	2		3/28	1527
3		3/29	1830	4			1630
5			1445	6		3/29	2146
7				8			
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ] [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ] PWSID # _____
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type-

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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Rev 8/04

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

June 13, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Wastewater (WW)**	Workorder:	**2317881**
Purchase Order:	**180018**	Workorder ID:	**WW/Influent Quarterly**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Thursday, May 31, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez , Accounts Payable-4th Floor

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2317881 WW/Influent Quarterly

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317881001	18-2nd Qtr-Infl A-Potomac CS	Waste Water	5/30/2018 08:40	5/31/2018 16:42	Collected by Client
2317881002	18-2nd Qtr-Infl B-Potomac CS	Waste Water	5/30/2018 08:45	5/31/2018 16:42	Collected by Client
2317881003	18-2nd Qtr-Infl C-Bolling	Waste Water	5/30/2018 09:30	5/31/2018 16:42	Collected by Client
2317881004	18-2nd Qtr-Infl A-Potomac CS	Waste Water	5/30/2018 09:10	5/31/2018 16:42	Collected by Client
2317881005	18-2nd Qtr-Infl B-Potomac SS	Waste Water	5/30/2018 09:15	5/31/2018 16:42	Collected by Client
2317881006	18-2nd Qtr-Infl C-Bolling	Waste Water	5/30/2018 09:30	5/31/2018 16:42	Collected by Client

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SAMPLE SUMMARY

Workorder: 2317881 WW/Influent Quarterly

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2317881 WW/Influent Quarterly

Lab ID: **2317881001** Date Collected: 5/30/2018 08:40 Matrix: Waste Water

Sample ID: **18-2nd Qtr-Infl A-Potomac CS** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Total	ND		mg/L	0.0050	0.0022	EPA 335.4	6/12/18 10:03	CTD	6/12/18 14:47	CTD	A
Oil/Grease Hexane Extractable	27.4		mg/L	2.2	0.7	EPA 1664B			6/4/18 11:40	MPP	B
Oil/Grease Silica Gel Treated	2.0J	J	mg/L	2.2	0.6	EPA 1664B			6/4/18 11:40	MPP	B

Amy K Borden

Ms. Amy K Borden
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317881 WW/Influent Quarterly

Lab ID: **2317881002** Date Collected: 5/30/2018 08:45 Matrix: Waste Water

Sample ID: **18-2nd Qtr-Infl B-Potomac CS** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Total	ND		mg/L	0.0050	0.0022	EPA 335.4	6/12/18 10:03	CTD	6/12/18 14:47	CTD	A
Oil/Grease Hexane Extractable	21.4		mg/L	2.2	0.7	EPA 1664B			6/4/18 11:40	MPP	B
Oil/Grease Silica Gel Treated	2.0J	J	mg/L	2.2	0.6	EPA 1664B			6/4/18 11:40	MPP	B

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ANALYTICAL RESULTS

Workorder: 2317881 WW/Influent Quarterly

Lab ID: **2317881003** Date Collected: 5/30/2018 09:30 Matrix: Waste Water

Sample ID: **18-2nd Qtr-Infl C-Bolling** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Total	ND		mg/L	0.0050	0.0022	EPA 335.4	6/12/18 10:03	CTD	6/12/18 14:47	CTD	A
Oil/Grease Hexane Extractable	24.5		mg/L	2.4	0.8	EPA 1664B			6/4/18 11:40	MPP	B
Oil/Grease Silica Gel Treated	17.1	J	mg/l	2.4	0.7	EPA 1664B			6/4/18 11:40	MPP	B

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ANALYTICAL RESULTS

Workorder: 2317881 WW/Influent Quarterly

Lab ID: **2317881004** Date Collected: 5/30/2018 09:10 Matrix: Waste Water

Sample ID: **18-2nd Qtr-Infl A-Potomac CS** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aroclor-1016	ND		ug/L	0.49	0.31	EPA 608	6/4/18 10:40	CAC	6/6/18 08:50	EGO	B
Aroclor-1221	ND		ug/L	0.49	0.32	EPA 608	6/4/18 10:40	CAC	6/6/18 08:50	EGO	B
Aroclor-1232	ND		ug/L	0.49	0.23	EPA 608	6/4/18 10:40	CAC	6/6/18 08:50	EGO	B
Aroclor-1242	ND		ug/L	0.49	0.24	EPA 608	6/4/18 10:40	CAC	6/6/18 08:50	EGO	B
Aroclor-1248	ND		ug/L	0.49	0.15	EPA 608	6/4/18 10:40	CAC	6/6/18 08:50	EGO	B
Aroclor-1254	ND		ug/L	0.49	0.14	EPA 608	6/4/18 10:40	CAC	6/6/18 08:50	EGO	B
Aroclor-1260	ND		ug/L	0.49	0.25	EPA 608	6/4/18 10:40	CAC	6/6/18 08:50	EGO	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	40.1	2	%	30 - 150		EPA 608	6/4/18 10:40	CAC	6/6/18 08:50	EGO	B
Tetrachloro-m-xylene (S)	76.7	1	%	36 - 112		EPA 608	6/4/18 10:40	CAC	6/6/18 08:50	EGO	B
METALS											
Arsenic, Total	0.00089J	J	mg/L	0.0015	0.00032	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:37	MO	A1
Cadmium, Total	0.00020		mg/L	0.00020	0.00012	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:37	MO	A1
Chromium, Total	0.0017		mg/L	0.0010	0.00029	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:37	MO	A1
Copper, Total	0.055		mg/L	0.0025	0.00038	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:37	MO	A1
Iron, Total	2.2		mg/L	0.060	0.020	EPA 200.7	6/2/18 10:00	AHI	6/4/18 14:09	SRT	A2
Lead, Total	0.0032		mg/L	0.0010	0.00011	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:37	MO	A1
Manganese, Total	0.24		mg/L	0.0025	0.00011	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:37	MO	A1
Mercury, Total	ND		mg/L	0.00020	0.00016	EPA 245.1	6/5/18 08:45	AXC	6/5/18 15:23	AXC	A3
Molybdenum, Total	0.0073		mg/L	0.0010	0.000040	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:37	MO	A1
Nickel, Total	0.0076		mg/L	0.0025	0.00012	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:37	MO	A1
Selenium, Total	0.00065J	J	mg/L	0.0020	0.00015	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:37	MO	A1
Silver, Total	0.00086		mg/L	0.00050	0.000030	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:37	MO	A1
Zinc, Total	0.14		mg/L	0.0025	0.00057	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:37	MO	A1

Amy K Borden

Ms. Amy K Borden
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317881 WW/Influent Quarterly

Lab ID: **2317881005** Date Collected: 5/30/2018 09:15 Matrix: Waste Water

Sample ID: **18-2nd Qtr-Infl B-Potomac SS** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aroclor-1016	ND		ug/L	0.50	0.32	EPA 608	6/4/18 10:40	CAC	6/6/18 09:02	EGO	B
Aroclor-1221	ND		ug/L	0.50	0.33	EPA 608	6/4/18 10:40	CAC	6/6/18 09:02	EGO	B
Aroclor-1232	ND		ug/L	0.50	0.23	EPA 608	6/4/18 10:40	CAC	6/6/18 09:02	EGO	B
Aroclor-1242	ND		ug/L	0.50	0.24	EPA 608	6/4/18 10:40	CAC	6/6/18 09:02	EGO	B
Aroclor-1248	ND		ug/L	0.50	0.15	EPA 608	6/4/18 10:40	CAC	6/6/18 09:02	EGO	B
Aroclor-1254	ND		ug/L	0.50	0.14	EPA 608	6/4/18 10:40	CAC	6/6/18 09:02	EGO	B
Aroclor-1260	ND		ug/L	0.50	0.26	EPA 608	6/4/18 10:40	CAC	6/6/18 09:02	EGO	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	43.4		%	30 - 150		EPA 608	6/4/18 10:40	CAC	6/6/18 09:02	EGO	B
Tetrachloro-m-xylene (S)	65.8	2	%	36 - 112		EPA 608	6/4/18 10:40	CAC	6/6/18 09:02	EGO	B
METALS											
Arsenic, Total	0.00059J	J	mg/L	0.0015	0.00032	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:41	MO	A1
Cadmium, Total	0.00019J	J	mg/L	0.00020	0.00012	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:41	MO	A1
Chromium, Total	0.0022		mg/L	0.0010	0.00029	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:41	MO	A1
Copper, Total	0.060		mg/L	0.0025	0.00038	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:41	MO	A1
Iron, Total	1.7		mg/L	0.060	0.020	EPA 200.7	6/2/18 10:00	AHI	6/4/18 14:13	SRT	A2
Lead, Total	0.0050		mg/L	0.0010	0.00011	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:41	MO	A1
Manganese, Total	0.13		mg/L	0.0025	0.00011	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:41	MO	A1
Mercury, Total	ND		mg/L	0.00020	0.00016	EPA 245.1	6/5/18 08:45	AXC	6/5/18 15:24	AXC	A3
Molybdenum, Total	0.0076		mg/L	0.0010	0.000040	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:41	MO	A1
Nickel, Total	0.0065		mg/L	0.0025	0.00012	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:41	MO	A1
Selenium, Total	0.00036J	J	mg/L	0.0020	0.00015	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:41	MO	A1
Silver, Total	0.00069		mg/L	0.00050	0.000030	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:41	MO	A1
Zinc, Total	0.14		mg/L	0.0025	0.00057	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:41	MO	A1

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2317881 WW/Influent Quarterly

Lab ID: **2317881006** Date Collected: 5/30/2018 09:30 Matrix: Waste Water

Sample ID: **18-2nd Qtr-Infl C-Bolling** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aroclor-1016	ND		ug/L	0.49	0.31	EPA 608	6/4/18 10:40	CAC	6/6/18 09:13	EGO	B
Aroclor-1221	ND		ug/L	0.49	0.32	EPA 608	6/4/18 10:40	CAC	6/6/18 09:13	EGO	B
Aroclor-1232	ND		ug/L	0.49	0.23	EPA 608	6/4/18 10:40	CAC	6/6/18 09:13	EGO	B
Aroclor-1242	ND		ug/L	0.49	0.24	EPA 608	6/4/18 10:40	CAC	6/6/18 09:13	EGO	B
Aroclor-1248	ND		ug/L	0.49	0.15	EPA 608	6/4/18 10:40	CAC	6/6/18 09:13	EGO	B
Aroclor-1254	ND		ug/L	0.49	0.14	EPA 608	6/4/18 10:40	CAC	6/6/18 09:13	EGO	B
Aroclor-1260	ND		ug/L	0.49	0.25	EPA 608	6/4/18 10:40	CAC	6/6/18 09:13	EGO	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	35	2	%	30 - 150		EPA 608	6/4/18 10:40	CAC	6/6/18 09:13	EGO	B
Tetrachloro-m-xylene (S)	76.9	1	%	36 - 112		EPA 608	6/4/18 10:40	CAC	6/6/18 09:13	EGO	B
METALS											
Arsenic, Total	0.0012J	J	mg/L	0.0015	0.00032	EPA 200.8	6/2/18 10:00	AHI	6/6/18 03:05	MO	A1
Cadmium, Total	0.00019J	J	mg/L	0.00020	0.00012	EPA 200.8	6/2/18 10:00	AHI	6/6/18 03:05	MO	A1
Chromium, Total	0.0038		mg/L	0.0010	0.00029	EPA 200.8	6/2/18 10:00	AHI	6/6/18 03:05	MO	A1
Copper, Total	0.061		mg/L	0.0025	0.00038	EPA 200.8	6/2/18 10:00	AHI	6/6/18 03:05	MO	A1
Iron, Total	4.6		mg/L	0.060	0.020	EPA 200.7	6/2/18 10:00	AHI	6/4/18 14:16	SRT	A2
Lead, Total	0.0039		mg/L	0.0010	0.00011	EPA 200.8	6/2/18 10:00	AHI	6/6/18 03:05	MO	A1
Manganese, Total	0.18		mg/L	0.0025	0.00011	EPA 200.8	6/2/18 10:00	AHI	6/6/18 03:05	MO	A1
Mercury, Total	ND		mg/L	0.00020	0.00016	EPA 245.1	6/5/18 08:45	AXC	6/5/18 15:25	AXC	A3
Molybdenum, Total	0.0082		mg/L	0.0010	0.000040	EPA 200.8	6/2/18 10:00	AHI	6/6/18 03:05	MO	A1
Nickel, Total	0.0069		mg/L	0.0025	0.00012	EPA 200.8	6/2/18 10:00	AHI	6/6/18 03:05	MO	A1
Selenium, Total	0.00075J	J	mg/L	0.0020	0.00015	EPA 200.8	6/2/18 10:00	AHI	6/6/18 03:05	MO	A1
Silver, Total	0.00033J	J	mg/L	0.00050	0.000030	EPA 200.8	6/2/18 10:00	AHI	6/6/18 03:05	MO	A1
Zinc, Total	0.11		mg/L	0.0025	0.00057	EPA 200.8	6/2/18 10:00	AHI	6/6/18 03:05	MO	A1

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2317881 WW/Influent Quarterly

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317881004	1	18-2nd Qtr-Infl A-Potomac CS	EPA 608	Tetrachloro-m-xylene
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 PCB analysis. This compound was biased high 16% in the bracketing CCV.				
2317881004	2	18-2nd Qtr-Infl A-Potomac CS	EPA 608	Decachlorobiphenyls
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 PCB analysis. This compound was biased low 20% in the bracketing CCV.				
2317881005	1	18-2nd Qtr-Infl B-Potomac SS	EPA 608	Pesticides and PCBs
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 PCB analysis. This compound was biased low 20% in the bracketing CCV.				
2317881005	2	18-2nd Qtr-Infl B-Potomac SS	EPA 608	Tetrachloro-m-xylene
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 PCB analysis. This compound was biased high 16% in the bracketing CCV.				
2317881006	1	18-2nd Qtr-Infl C-Bolling	EPA 608	Tetrachloro-m-xylene
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 PCB analysis. This compound was biased high 16% in the bracketing CCV.				
2317881006	2	18-2nd Qtr-Infl C-Bolling	EPA 608	Decachlorobiphenyls
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 PCB analysis. This compound was biased low 20% in the bracketing CCV.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2317881 WW/Influent Quarterly

Lab ID	Sample ID	Analysis Method	Prep Method
2317881001	18-2nd Qtr-Infl A-Potomac CS	EPA 1664B	
2317881001	18-2nd Qtr-Infl A-Potomac CS	EPA 335.4	335/4500/9012B
2317881002	18-2nd Qtr-Infl B-Potomac CS	EPA 1664B	
2317881002	18-2nd Qtr-Infl B-Potomac CS	EPA 335.4	335/4500/9012B
2317881003	18-2nd Qtr-Infl C-Bolling	EPA 1664B	
2317881003	18-2nd Qtr-Infl C-Bolling	EPA 335.4	335/4500/9012B
2317881004	18-2nd Qtr-Infl A-Potomac CS	EPA 200.7	EPA TRMD
2317881004	18-2nd Qtr-Infl A-Potomac CS	EPA 200.8	EPA TRMD
2317881004	18-2nd Qtr-Infl A-Potomac CS	EPA 245.1	EPA 245.1
2317881004	18-2nd Qtr-Infl A-Potomac CS	EPA 608	EPA 608
2317881005	18-2nd Qtr-Infl B-Potomac SS	EPA 200.7	EPA TRMD
2317881005	18-2nd Qtr-Infl B-Potomac SS	EPA 200.8	EPA TRMD
2317881005	18-2nd Qtr-Infl B-Potomac SS	EPA 245.1	EPA 245.1
2317881005	18-2nd Qtr-Infl B-Potomac SS	EPA 608	EPA 608
2317881006	18-2nd Qtr-Infl C-Bolling	EPA 200.7	EPA TRMD
2317881006	18-2nd Qtr-Infl C-Bolling	EPA 200.8	EPA TRMD
2317881006	18-2nd Qtr-Infl C-Bolling	EPA 245.1	EPA 245.1
2317881006	18-2nd Qtr-Infl C-Bolling	EPA 608	EPA 608

Analytical Laboratory Services, Inc.
Environmental w Industrial Hygiene w Field Services
34 Dogwood Lane w Middletown, PA 17057 w 717 944 5541 w Fax 717 944 1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALSI

COC ALSI * 2 3 1 7 8 8 1 * zxzx of xyxy

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: DCWASA - Others
Address: 5000 Overlook Ave. SW
Washington, D.C. 20032
Contact: Elaine Wilson
Phone#: 202-787-4177
Project Name/#: WW/Influent Quarterly
Bill To: Accounts Payable Office- 4th Floor

TAT [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y
Fax? [ ] -Y No.: _____

Container Type	PL	CG	PL	G						
Container Size	500mL	1L	125mL	1 L						
Preservative	NaOH	H2SO4	HNO3	None						

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Cyanide	TPH plus total O& G - 1664	Total Metals: 200.8 (As, Cd, Cr, Cu,Fe, Pb, Mn, Mo, Ni, Se, Ag, Zn)	PCBS - 608						Sample/COC Comments
					Enter Number of Containers Per Sample or Field Results Below.									
18-2nd qtr-Infl A - Potomac CS	5/30/2018	0840	G	WW	1	2								
18-2nd qtr-Infl B - Potomac SS	5/30/2018	0845	G	WW	1	2								
18-2nd qtr-Infl C - Bolling	5/30/2018	0930	G	WW	1	2								
18-2nd qtr-Infl A - Potomac CS	5/30/2018	0910	C	WW			1	2						24-h composite 5/29 to 5/30
18-2nd qtr-Infl B - Potomac SS	5/30/2018	0915	C	WW			1	2						24-h composite 5/29 to 5/30
18-2nd qtr-Infl C - Bolling	5/30/2018	0930	C	WW			1	2						24-h composite 5/29 to 5/30

Receipt Information (Completed by Receiving Lab)
Cooler Temp: 2°C Therm ID: 402
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?	✓		
COC/Labels Complete/Accurate?	✓		
Cont. in Good Cond.?	✓		
Correct Containers?	✓		
Correct Sample Volumes?	✓		
Correct Preservation?	✓		
Headspace/Volatiles?			

Courier/Tracking #:

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther: _____

Project Comments: Need Lowest detection limit available for all metals, report J flags

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] DC Water	5-31-18	900	2 [illegible]	5/31	1156
3 [illegible]	5/31	1642	4 [illegible] ALS	5/31/18	1642
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ] PWSID # _____
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type- _____

* G=Grab; C=Composite
** Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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October 31, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Wastewater (WW)**	Workorder:	**2345547**
Purchase Order:	**180018**	Workorder ID:	**WW/Influent Quarterly**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Friday, October 19, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Susan J. Scherer
Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2345547 WW/Influent Quarterly

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2345547001	18-4th qtr-Infl A-Potomac CS	Waste Water	10/18/2018 10:25	10/19/2018 19:30	Collected by Client
2345547002	18-4th qtr-Infl B-Potomac SS	Waste Water	10/18/2018 10:30	10/19/2018 19:30	Collected by Client
2345547003	18-4th qtr-Infl C-Boiling	Waste Water	10/18/2018 11:10	10/19/2018 19:30	Collected by Client
2345547004	18-4th qtr-Infl A-Potomac CS	Waste Water	10/18/2018 10:30	10/19/2018 19:30	Collected by Client
2345547005	18-4th qtr-Infl B-Potomac SS	Waste Water	10/18/2018 10:35	10/19/2018 19:30	Collected by Client
2345547006	18-4th qtr-Infl C-Boiling	Waste Water	10/18/2018 10:50	10/19/2018 19:30	Collected by Client

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SAMPLE SUMMARY

Workorder: 2345547 WW/Influent Quarterly

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2345547 WW/Influent Quarterly

Lab ID: **2345547001** Date Collected: 10/18/2018 10:25 Matrix: Waste Water

Sample ID: **18-4th qtr-Infl A-Potomac CS** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	3.8		ug/L	2.0	0.90	EPA KELADA		10/30/18 15:21	RXB	A
Oil/Grease Hexane Extractable	12.2		mg/L	2.2	0.7	EPA 1664B		10/24/18 20:45	AT	B
Oil/Grease Silica Gel Treated	0.67J	J	mg/L	2.2	0.6	EPA 1664B		10/24/18 20:45	AT	B

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2345547 WW/Influent Quarterly

Lab ID: **2345547002** Date Collected: 10/18/2018 10:30 Matrix: Waste Water

Sample ID: **18-4th qtr-Infl B-Potomac SS** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	3.7		ug/L	2.0	0.90	EPA KELADA		10/30/18 15:21	RXB	A
Oil/Grease Hexane Extractable	10.7		mg/L	2.2	0.7	EPA 1664B		10/24/18 20:45	AT	B
Oil/Grease Silica Gel Treated	0.78J	J	mg/L	2.2	0.6	EPA 1664B		10/24/18 20:45	AT	B

Susan J. Scherer

Ms. Susan J Scherer
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ANALYTICAL RESULTS

Workorder: 2345547 WW/Influent Quarterly

Lab ID: **2345547003** Date Collected: 10/18/2018 11:10 Matrix: Waste Water

Sample ID: **18-4th qtr-Infl C-Boiling** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	3.6		ug/L	2.0	0.90	EPA KELADA		10/30/18 15:21	RXB	A
Oil/Grease Hexane Extractable	8.5		mg/L	2.4	0.8	EPA 1664B		10/24/18 20:45	AT	B
Oil/Grease Silica Gel Treated	2.1J	J	mg/L	2.4	0.7	EPA 1664B		10/24/18 20:45	AT	B

Susan J. Scherer

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ANALYTICAL RESULTS

Workorder: 2345547 WW/Influent Quarterly

Lab ID: **2345547004** Date Collected: 10/18/2018 10:30 Matrix: Waste Water

Sample ID: **18-4th qtr-Infl A-Potomac CS** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aldrin	ND	1,2	ug/L	0.020	0.0051	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
beta-BHC	ND		ug/L	0.020	0.0082	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
delta-BHC	ND		ug/L	0.020	0.0031	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
gamma-BHC	ND		ug/L	0.020	0.0031	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Chlordane	ND		ug/L	0.20	0.036	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
4,4'-DDD	ND		ug/L	0.020	0.0071	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
4,4'-DDE	ND		ug/L	0.020	0.0071	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
4,4'-DDT	ND		ug/L	0.020	0.0061	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Dieldrin	ND		ug/L	0.020	0.0031	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Endosulfan I	ND		ug/L	0.020	0.0031	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Endosulfan II	ND		ug/L	0.020	0.0061	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Endosulfan Sulfate	ND		ug/L	0.020	0.0041	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Endrin	ND		ug/L	0.020	0.0082	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Endrin Aldehyde	ND		ug/L	0.020	0.010	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
alpha-HCH (alpha-BHC)	ND		ug/L	0.020	0.0020	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Heptachlor	ND		ug/L	0.020	0.0031	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Heptachlor Epoxide	ND		ug/L	0.020	0.0041	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Mirex	ND		ug/L	0.020	0.0041	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Total Polychlorinated Biphenyl	ND		ug/L	3.6	1.7	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Toxaphene	ND		ug/L	1.0	0.19	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Aroclor-1016	ND		ug/L	0.51	0.33	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Aroclor-1221	ND		ug/L	0.51	0.34	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Aroclor-1232	ND		ug/L	0.51	0.23	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Aroclor-1242	ND		ug/L	0.51	0.24	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Aroclor-1248	ND		ug/L	0.51	0.15	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Aroclor-1254	ND		ug/L	0.51	0.14	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Aroclor-1260	ND		ug/L	0.51	0.27	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	48.3		%	30 - 150	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Decachlorobiphenyl (S)	40.3		%	30 - 150	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Tetrachloro-m-xylene (S)	71.6		%	36 - 112	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B
Tetrachloro-m-xylene (S)	68.4		%	36 - 112	EPA 608	10/23/18 16:05	DXL	10/26/18 06:20	RWS	B

METALS											
Arsenic, Total	0.00093J	J	mg/L	0.0015	0.00032	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:36	LXC	A3
Cadmium, Total	0.00022		mg/L	0.00020	0.00012	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:36	LXC	A3

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ANALYTICAL RESULTS

Workorder: 2345547 WW/Influent Quarterly

Lab ID: **2345547004** Date Collected: 10/18/2018 10:30 Matrix: Waste Water

Sample ID: **18-4th qtr-Infl A-Potomac CS** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Chromium, Total	0.0014		mg/L	0.0010	0.00029	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:36	LXC	A3
Copper, Total	0.046		mg/L	0.0025	0.00038	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:36	LXC	A3
Iron, Total	1.9		mg/L	0.030	0.010	EPA 200.7	10/24/18 08:00	BMK	10/25/18 08:04	DAG	A1
Lead, Total	0.0018		mg/L	0.0010	0.00011	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:36	LXC	A3
Manganese, Total	0.23		mg/L	0.0025	0.00083	EPA 200.7	10/24/18 08:00	BMK	10/25/18 08:04	DAG	A1
Molybdenum, Total	0.011		mg/L	0.0010	0.000040	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:36	LXC	A3
Nickel, Total	0.0072		mg/L	0.0025	0.00012	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:36	LXC	A3
Selenium, Total	0.0010J	J	mg/L	0.0020	0.00015	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:36	LXC	A3
Silver, Total	0.0035		mg/L	0.00050	0.000030	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:36	LXC	A3
Zinc, Total	0.10		mg/L	0.0025	0.00057	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:36	LXC	A3

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ANALYTICAL RESULTS

Workorder: 2345547 WW/Influent Quarterly

Lab ID: **2345547005** Date Collected: 10/18/2018 10:35 Matrix: Waste Water

Sample ID: **18-4th qtr-Infl B-Potomac SS** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aldrin	ND	1,2	ug/L	0.020	0.0049	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
beta-BHC	ND		ug/L	0.020	0.0078	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
delta-BHC	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
gamma-BHC	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Chlordane	ND		ug/L	0.20	0.034	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
4,4'-DDD	ND		ug/L	0.020	0.0069	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
4,4'-DDE	ND		ug/L	0.020	0.0069	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
4,4'-DDT	ND		ug/L	0.020	0.0059	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Dieldrin	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Endosulfan I	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Endosulfan II	ND		ug/L	0.020	0.0059	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Endosulfan Sulfate	ND		ug/L	0.020	0.0039	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Endrin	ND		ug/L	0.020	0.0078	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Endrin Aldehyde	ND		ug/L	0.020	0.0098	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
alpha-HCH (alpha-BHC)	ND		ug/L	0.020	0.0020	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Heptachlor	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Heptachlor Epoxide	ND		ug/L	0.020	0.0039	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Mirex	ND		ug/L	0.020	0.0039	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Total Polychlorinated Biphenyl	ND		ug/L	3.4	1.7	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Toxaphene	ND		ug/L	0.98	0.19	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Aroclor-1016	ND		ug/L	0.49	0.31	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Aroclor-1221	ND		ug/L	0.49	0.32	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Aroclor-1232	ND		ug/L	0.49	0.23	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Aroclor-1242	ND		ug/L	0.49	0.24	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Aroclor-1248	ND		ug/L	0.49	0.15	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Aroclor-1254	ND		ug/L	0.49	0.14	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Aroclor-1260	ND		ug/L	0.49	0.25	EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	44.1		%	30 - 150		EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Decachlorobiphenyl (S)	55.9		%	30 - 150		EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Tetrachloro-m-xylene (S)	69.8		%	36 - 112		EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
Tetrachloro-m-xylene (S)	66.4		%	36 - 112		EPA 608	10/23/18 16:05	DXL	10/26/18 06:42	RWS	B
METALS											
Arsenic, Total	0.00074J	J	mg/L	0.0015	0.00032	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:40	LXC	A3
Cadmium, Total	0.00017J	J	mg/L	0.00020	0.00012	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:40	LXC	A3

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ANALYTICAL RESULTS

Workorder: 2345547 WW/Influent Quarterly

Lab ID: **2345547005** Date Collected: 10/18/2018 10:35 Matrix: Waste Water

Sample ID: **18-4th qtr-Infl B-Potomac SS** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Chromium, Total	0.0016		mg/L	0.0010	0.00029	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:40	LXC	A3
Copper, Total	0.049		mg/L	0.0025	0.00038	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:40	LXC	A3
Iron, Total	1.0		mg/L	0.030	0.010	EPA 200.7	10/24/18 08:00	BMK	10/25/18 08:08	DAG	A1
Lead, Total	0.0018		mg/L	0.0010	0.00011	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:40	LXC	A3
Manganese, Total	0.14		mg/L	0.0025	0.00083	EPA 200.7	10/24/18 08:00	BMK	10/25/18 08:08	DAG	A1
Molybdenum, Total	0.0074		mg/L	0.0010	0.000040	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:40	LXC	A3
Nickel, Total	0.0068		mg/L	0.0025	0.00012	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:40	LXC	A3
Selenium, Total	0.00077J	J	mg/L	0.0020	0.00015	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:40	LXC	A3
Silver, Total	0.00038J	J	mg/L	0.00050	0.000030	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:40	LXC	A3
Zinc, Total	0.11		mg/L	0.0025	0.00057	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:40	LXC	A3

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ANALYTICAL RESULTS

Workorder: 2345547 WW/Influent Quarterly

Lab ID: **2345547006** Date Collected: 10/18/2018 10:50 Matrix: Waste Water

Sample ID: **18-4th qtr-Infl C-Boiling** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aldrin	ND	1,2	ug/L	0.020	0.0049	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
beta-BHC	ND		ug/L	0.020	0.0078	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
delta-BHC	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
gamma-BHC	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Chlordane	ND		ug/L	0.20	0.034	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
4,4'-DDD	ND		ug/L	0.020	0.0069	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
4,4'-DDE	ND		ug/L	0.020	0.0069	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
4,4'-DDT	ND		ug/L	0.020	0.0059	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Dieldrin	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Endosulfan I	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Endosulfan II	ND		ug/L	0.020	0.0059	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Endosulfan Sulfate	ND		ug/L	0.020	0.0039	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Endrin	ND		ug/L	0.020	0.0078	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Endrin Aldehyde	ND		ug/L	0.020	0.0098	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
alpha-HCH (alpha-BHC)	ND		ug/L	0.020	0.0020	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Heptachlor	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Heptachlor Epoxide	ND		ug/L	0.020	0.0039	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Mirex	ND		ug/L	0.020	0.0039	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Total Polychlorinated Biphenyl	ND		ug/L	3.4	1.7	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Toxaphene	ND		ug/L	0.98	0.19	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Aroclor-1016	ND		ug/L	0.49	0.31	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Aroclor-1221	ND		ug/L	0.49	0.32	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Aroclor-1232	ND		ug/L	0.49	0.23	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Aroclor-1242	ND		ug/L	0.49	0.24	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Aroclor-1248	ND		ug/L	0.49	0.15	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Aroclor-1254	ND		ug/L	0.49	0.14	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Aroclor-1260	ND		ug/L	0.49	0.25	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	53.6		%	30 - 150	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Decachlorobiphenyl (S)	42.4		%	30 - 150	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Tetrachloro-m-xylene (S)	75		%	36 - 112	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B
Tetrachloro-m-xylene (S)	74.2		%	36 - 112	EPA 608	10/23/18 16:05	DXL	10/26/18 07:04	RWS	B

METALS											
Arsenic, Total	0.00094J	J	mg/L	0.0015	0.00032	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:43	LXC	A3
Cadmium, Total	0.00020J	J	mg/L	0.00020	0.00012	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:43	LXC	A3

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ANALYTICAL RESULTS

Workorder: 2345547 WW/Influent Quarterly

Lab ID: **2345547006** Date Collected: 10/18/2018 10:50 Matrix: Waste Water

Sample ID: **18-4th qtr-Infl C-Boiling** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Chromium, Total	0.0027		mg/L	0.0010	0.00029	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:43	LXC	A3
Copper, Total	0.041		mg/L	0.0025	0.00038	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:43	LXC	A3
Iron, Total	3.2		mg/L	0.030	0.010	EPA 200.7	10/24/18 08:00	BMK	10/25/18 08:11	DAG	A1
Lead, Total	0.0022		mg/L	0.0010	0.00011	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:43	LXC	A3
Manganese, Total	0.20		mg/L	0.0025	0.00083	EPA 200.7	10/24/18 08:00	BMK	10/25/18 08:11	DAG	A1
Molybdenum, Total	0.0075		mg/L	0.0010	0.000040	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:43	LXC	A3
Nickel, Total	0.0065		mg/L	0.0025	0.00012	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:43	LXC	A3
Selenium, Total	0.00048J	J	mg/L	0.0020	0.00015	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:43	LXC	A3
Silver, Total	0.00031J	J	mg/L	0.00050	0.000030	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:43	LXC	A3
Zinc, Total	0.085		mg/L	0.0025	0.00057	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:43	LXC	A3

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2345547 WW/Influent Quarterly

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2345547004	1	18-4th qtr-Infl A-Potomac CS	EPA 608	Aldrin
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. One or more analytes were outside the allowable range.				
2345547004	2	18-4th qtr-Infl A-Potomac CS	EPA 608	Aldrin
The QC sample type LCSPES for method EPA 608 was outside the control limits for the analyte Aldrin. The % Recovery was reported as 35.4 and the control limits were 42 to 122.				
2345547005	1	18-4th qtr-Infl B-Potomac SS	EPA 608	Aldrin
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. One or more analytes were outside the allowable range.				
2345547005	2	18-4th qtr-Infl B-Potomac SS	EPA 608	Aldrin
The QC sample type LCSPES for method EPA 608 was outside the control limits for the analyte Aldrin. The % Recovery was reported as 35.4 and the control limits were 42 to 122.				
2345547006	1	18-4th qtr-Infl C-Boiling	EPA 608	Aldrin
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. One or more analytes were outside the allowable range.				
2345547006	2	18-4th qtr-Infl C-Boiling	EPA 608	Aldrin
The QC sample type LCSPES for method EPA 608 was outside the control limits for the analyte Aldrin. The % Recovery was reported as 35.4 and the control limits were 42 to 122.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2345547 WW/Influent Quarterly

Lab ID	Sample ID	Analysis Method	Prep Method
2345547001	18-4th qtr-Infl A-Potomac CS	EPA 1664B	
2345547001	18-4th qtr-Infl A-Potomac CS	EPA KELADA	
2345547002	18-4th qtr-Infl B-Potomac SS	EPA 1664B	
2345547002	18-4th qtr-Infl B-Potomac SS	EPA KELADA	
2345547003	18-4th qtr-Infl C-Boiling	EPA 1664B	
2345547003	18-4th qtr-Infl C-Boiling	EPA KELADA	
2345547004	18-4th qtr-Infl A-Potomac CS	EPA 200.7	EPA TRMD
2345547004	18-4th qtr-Infl A-Potomac CS	EPA 200.8	EPA TRMD
2345547004	18-4th qtr-Infl A-Potomac CS	EPA 608	EPA 608
2345547005	18-4th qtr-Infl B-Potomac SS	EPA 200.7	EPA TRMD
2345547005	18-4th qtr-Infl B-Potomac SS	EPA 200.8	EPA TRMD
2345547005	18-4th qtr-Infl B-Potomac SS	EPA 608	EPA 608
2345547006	18-4th qtr-Infl C-Boiling	EPA 200.7	EPA TRMD
2345547006	18-4th qtr-Infl C-Boiling	EPA 200.8	EPA TRMD
2345547006	18-4th qtr-Infl C-Boiling	EPA 608	EPA 608

Analytical Laboratory Services, Inc.
Environmental ▪ Industrial Hygiene ▪ Field Services
34 Dogwood Lane ▪ Middletown, PA 17057 ▪ 717.944.5541 ▪ Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC ALS

* 2 3 4 5 5 4 7 *

zxzx of xyxy

Client Name: DCWASA - Others
Address: 5000 Overlook Ave, SW
Washington, D.C. 20032
Contact: Elaine Wilson
Phone#: 202-787-4177
Project Name/#: WW/Influent Quarterly
Bill To: Accounts Payable Office- 4th Floor

TAT [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y
Fax? [ ] -Y No.:

Container Type	PL	CG	PL	G						
Container Size	250 mL	1L	250 mL	1 L						
Preservative	NaOH	H2SO4	HNO3	None						

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Cyanide	TPH plus total O& G - 1664	Total Metals: 200.8 (As, Cd, Cr, Cu,Fe, Pb, Mn, Mo, Ni, Se, Ag, Zn)	PCBS - 608						Sample/COC Comments
					Enter Number of Containers Per Sample or Field Results Below.									
18-4th qtr-Infl A - Potomac CS	10/18/18	1025	G	WW	1	1								
18-4th qtr-Infl B - Potomac SS	10/18/18	1030	G	WW	1	1								
18-4th qtr-Infl C - Bolling	10/18/18	1110	G	WW	1	1								
18-4th qtr-Infl A - Potomac CS	10/18/18	1030	C	WW			1	2						24-h composite 10/17 to 10/18
18-4th qtr-Infl B - Potomac SS	10/18/18	1035	C	WW			1	2						24-h composite 10/17 to 10/18
18-4th qtr-Infl C - Bolling	10/18/18	1050	C	WW			1	2						24-h composite 10/17 to 10/18

Receipt Information (completed by Receiving Lab)

Cooler Temp: 3° Therm ID: 518
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			KM
(If present) Seals Intact?			N
Received on Ice?			N
COC/Labels Complete/Accurate?			N
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #: MD18101900354

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther: _____

Project Comments: Need Lowest detection limit available for all metals, report J flags

LOGGED BY(signature): Date: Time:
REVIEWED BY(signature): Date: Time:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	10-19-18	930	2	10/19	1300
3	10/19		4 COMMON COURIER / ALS COURIER		
5 COMMON COURIER / ALS COURIER			6	10/19/2018	2980
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ] PWSID # _____
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type- _____

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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Additional Effluent Toxic Organics Pollutant Data

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

April 11, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Wastewater (WW)**	Workorder:	**2305705**
Purchase Order:	**180018**	Workorder ID:	**Wastewater (WW)**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Thursday, March 29, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez , Accounts Payable-4th Floor

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2305705 Wastewater (WW)

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2305705001	18-1st Qtr-Outfall 002	Waste Water	3/28/2018 15:00	3/29/2018 21:40	Collected by Client
2305705002	18-1st Qtr-Outfall 002	Waste Water	3/28/2018 15:10	3/29/2018 21:40	Collected by Client

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2305705 Wastewater (WW)

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305705 Wastewater (WW)

Lab ID: **2305705001** Date Collected: 3/28/2018 15:00 Matrix: Waste Water

Sample ID: **18-1st Qtr-Outfall 002** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Total	0.0040J	J	mg/L	0.0050	0.0022	EPA 335.4	4/9/18 15:18	JXB	4/10/18 12:44	MNP	A
Oil/Grease Hexane Extractable	0.69J	J	mg/L	2.0	0.6	EPA 1664B			4/3/18 08:30	JXS	B
Oil/Grease Silica Gel Treated	ND		mg/L	2.0	0.6	EPA 1664B			4/3/18 08:30	JXS	B

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

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ANALYTICAL RESULTS

Workorder: 2305705 Wastewater (WW)

Lab ID: **2305705002** Date Collected: 3/28/2018 15:10 Matrix: Waste Water

Sample ID: **18-1st Qtr-Outfall 002** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aldrin	ND		ug/L	0.019	0.0047	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
beta-BHC	ND		ug/L	0.019	0.0075	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
delta-BHC	ND		ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
gamma-BHC	ND		ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Chlordane	ND		ug/L	0.19	0.033	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
4,4'-DDD	ND		ug/L	0.019	0.0065	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
4,4'-DDE	ND		ug/L	0.019	0.0065	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
4,4'-DDT	ND	3	ug/L	0.019	0.0056	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Dieldrin	ND		ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Endosulfan I	ND		ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Endosulfan II	ND		ug/L	0.019	0.0056	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Endosulfan Sulfate	ND		ug/L	0.019	0.0037	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Endrin	ND		ug/L	0.019	0.0075	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Endrin Aldehyde	ND		ug/L	0.019	0.0093	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
alpha-HCH (alpha-BHC)	ND		ug/L	0.019	0.0019	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Heptachlor	ND	2	ug/L	0.019	0.0028	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Heptachlor Epoxide	ND		ug/L	0.019	0.0037	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Mirex	ND	1	ug/L	0.019	0.0037	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Total Polychlorinated Biphenyl	ND		ug/L	0.47	0.47	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Toxaphene	ND		ug/L	0.93	0.18	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Aroclor-1016	ND		ug/L	0.47	0.30	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Aroclor-1221	ND		ug/L	0.47	0.31	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Aroclor-1232	ND		ug/L	0.47	0.21	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Aroclor-1242	ND		ug/L	0.47	0.22	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Aroclor-1248	ND		ug/L	0.47	0.14	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Aroclor-1254	ND		ug/L	0.47	0.13	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Aroclor-1260	ND		ug/L	0.47	0.24	EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	61.6		%	30 - 150		EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
Tetrachloro-m-xylene (S)	33.1	4	%	36 - 112		EPA 608	4/4/18 13:00	ELS	4/5/18 20:02	RWS	B
METALS											
Arsenic, Total	ND		mg/L	0.0015	0.00032	EPA 200.8	4/3/18 08:20	DXC	4/4/18 05:12	MO	A1
Cadmium, Total	ND		mg/L	0.00020	0.00012	EPA 200.8	4/3/18 08:20	DXC	4/4/18 05:12	MO	A1
Chromium, Total	ND		mg/L	0.0010	0.00029	EPA 200.8	4/3/18 08:20	DXC	4/4/18 05:12	MO	A1
Copper, Total	0.0048		mg/L	0.0025	0.00038	EPA 200.8	4/3/18 08:20	DXC	4/4/18 05:12	MO	A1

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305705 Wastewater (WW)

Lab ID: **2305705002** Date Collected: 3/28/2018 15:10 Matrix: Waste Water

Sample ID: **18-1st Qtr-Outfall 002** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Lead, Total	0.00018J	J	mg/L	0.0010	0.00011	EPA 200.8	4/3/18 08:20	DXC	4/4/18 05:12	MO	A1
Molybdenum, Total	0.0055		mg/L	0.0010	0.000040	EPA 200.8	4/3/18 08:20	DXC	4/4/18 05:12	MO	A1
Nickel, Total	0.0071		mg/L	0.0025	0.00012	EPA 200.8	4/3/18 08:20	DXC	4/4/18 05:12	MO	A1
Selenium, Total	0.00026J	J	mg/L	0.0020	0.00015	EPA 200.8	4/3/18 08:20	DXC	4/4/18 05:12	MO	A1
Silver, Total	ND		mg/L	0.00050	0.000030	EPA 200.8	4/3/18 08:20	DXC	4/4/18 05:12	MO	A1
Zinc, Total	0.014		mg/L	0.0025	0.00057	EPA 200.8	4/3/18 08:20	DXC	4/4/18 05:12	MO	A1

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305705 Wastewater (WW)

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2305705002	1	18-1st Qtr-Outfall 002	EPA 608	Mirex
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 24% in the bracketing CCV.				
2305705002	2	18-1st Qtr-Outfall 002	EPA 608	Heptachlor
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 19% in the bracketing CCV.				
2305705002	3	18-1st Qtr-Outfall 002	EPA 608	4,4'-DDT
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. This compound was biased low 68% in the bracketing CCV.				
2305705002	4	18-1st Qtr-Outfall 002	EPA 608	Tetrachloro-m-xylene
The surrogate Tetrachloro-m-xylene for method EPA 608 was outside of control limits. The % Recovery was reported as 33.1 and the control limits were 36 to 112. This result was reported at a dilution of 1.				

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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COC ALSI

2305705

zxzx of xyxy

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: DCWASA - Other
Address: 5000 Overlook Ave, SW
Washington, D.C. 20032
Contact: Elaine Wilson
Phone#: 202-787-4177
Project Name/#: WW/Effluent Quarterly
Bill To: Accounts Payable Office- 4th Floor

TAT [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [X] -Y
Fax? [ ] -Y No.: _____

Container Type	CG	PL	PL	G						
Container Size	1L	500 mL	500 mL	1L						
Preservative	H2SO4	NaOH	HNO3	None						

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TPH plus total O & G - 1664	Cyanide	Total Metals: 200.8 (As, Cd, Cr, Cu, Pb, Mo, Ni, Se, Ag, Zn)	PCBs - 608						
					Enter Number of Containers Per Sample or Field Results Below.									
18-1st Qtr-Outfall 002	3/28/2018	1500	G	WW	2	1								
18-1st Qtr-Outfall 002	3/28/2018	1510	C	WW			1	2						

Receipt Information (completed by Receiving Lab)
Cooler Temp: 2°C Therm ID: 318
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(If present) Seals Intact?			
Received on Ice?	X		
COC/Labels Complete/Accurate?	X		
Cont. in Good Cond.?	X		
Correct Containers?	X		
Correct Sample Volumes?	X		
Correct Preservation?	X		
Headspace/Volatiles?			

Courier/Tracking #:

Sample/COC Comments
24-h composite 3/27 to 3/28

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther: _____

Project Comments: Need lowest detection limit available for all metals, report J Flags

LOGGED BY(signature): Date: Time:
REVIEWED BY(signature): Date: Time:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	3/29	1000	2	3/29	1307
3	3/29	1530	4		
5		2140	6	3/29	2140
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ] FWSID # _____
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type: _____

*G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

June 13, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Wastewater (WW)**	Workorder:	**2317879**
Purchase Order:	**180018**	Workorder ID:	**WW/Effluent Quarterly**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Thursday, May 31, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez , Accounts Payable-4th Floor

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2317879 WW/Effluent Quarterly

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317879001	18-2nd Qtr-Outfall 002	Waste Water	5/30/2018 10:35	5/31/2018 16:42	Collected by Client
2317879002	18-2nd Qtr-Outfall 002	Waste Water	5/30/2018 09:50	5/31/2018 16:42	Collected by Client

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2317879 WW/Effluent Quarterly

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2317879 WW/Effluent Quarterly

Lab ID: **2317879001** Date Collected: 5/30/2018 10:35 Matrix: Waste Water

Sample ID: **18-2nd Qtr-Outfall 002** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Total	0.0050		mg/L	0.0050	0.0022	EPA 335.4	6/12/18 10:03	CTD	6/12/18 14:47	CTD	A
Oil/Grease Hexane Extractable	ND		mg/L	2.0	0.6	EPA 1664B			6/4/18 11:40	MPP	B
Oil/Grease Silica Gel Treated	ND		mg/L	2.0	0.6	EPA 1664B			6/4/18 11:40	MPP	B

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2317879 WW/Effluent Quarterly

Lab ID: **2317879002** Date Collected: 5/30/2018 09:50 Matrix: Waste Water

Sample ID: **18-2nd Qtr-Outfall 002** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aldrin	ND		ug/L	0.019	0.0046	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
beta-BHC	ND		ug/L	0.019	0.0074	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
delta-BHC	ND		ug/L	0.019	0.0028	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
gamma-BHC	ND		ug/L	0.019	0.0028	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Chlordane	ND		ug/L	0.19	0.032	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
4,4'-DDD	ND		ug/L	0.019	0.0065	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
4,4'-DDE	ND		ug/L	0.019	0.0065	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
4,4'-DDT	ND		ug/L	0.019	0.0056	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Dieldrin	ND		ug/L	0.019	0.0028	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Endosulfan I	ND		ug/L	0.019	0.0028	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Endosulfan II	ND		ug/L	0.019	0.0056	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Endosulfan Sulfate	ND		ug/L	0.019	0.0037	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Endrin	ND		ug/L	0.019	0.0074	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Endrin Aldehyde	ND		ug/L	0.019	0.0093	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
alpha-HCH (alpha-BHC)	ND		ug/L	0.019	0.0019	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Heptachlor	ND		ug/L	0.019	0.0028	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Heptachlor Epoxide	ND		ug/L	0.019	0.0037	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Mirex	ND		ug/L	0.019	0.0037	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Total Polychlorinated Biphenyl	ND		ug/L	3.2	1.6	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Toxaphene	ND		ug/L	0.93	0.18	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Aroclor-1016	ND		ug/L	0.46	0.30	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Aroclor-1221	ND		ug/L	0.46	0.31	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Aroclor-1232	ND		ug/L	0.46	0.21	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Aroclor-1242	ND		ug/L	0.46	0.22	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Aroclor-1248	ND		ug/L	0.46	0.14	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Aroclor-1254	ND		ug/L	0.46	0.13	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Aroclor-1260	ND		ug/L	0.46	0.24	EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	65.4		%	30 - 150		EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
Tetrachloro-m-xylene (S)	58.2		%	36 - 112		EPA 608	6/4/18 20:35	TXC	6/8/18 00:09	RWS	C
METALS											
Arsenic, Total	ND		mg/L	0.0015	0.00032	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:33	MO	A1
Cadmium, Total	ND		mg/L	0.00020	0.00012	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:33	MO	A1
Chromium, Total	0.00030J	J	mg/L	0.0010	0.00029	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:33	MO	A1
Copper, Total	0.0043		mg/L	0.0025	0.00038	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:33	MO	A1

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ANALYTICAL RESULTS

Workorder: 2317879 WW/Effluent Quarterly

Lab ID: **2317879002** Date Collected: 5/30/2018 09:50 Matrix: Waste Water

Sample ID: **18-2nd Qtr-Outfall 002** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Lead, Total	ND		mg/L	0.0010	0.00011	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:33	MO	A1
Molybdenum, Total	0.0056		mg/L	0.0010	0.000040	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:33	MO	A1
Nickel, Total	0.0063		mg/L	0.0025	0.00012	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:33	MO	A1
Selenium, Total	ND		mg/L	0.0020	0.00015	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:33	MO	A1
Silver, Total	ND		mg/L	0.00050	0.000030	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:33	MO	A1
Zinc, Total	0.012		mg/L	0.0025	0.00057	EPA 200.8	6/2/18 10:00	AHI	6/4/18 06:33	MO	A1

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2317879 WW/Effluent Quarterly

Lab ID	Sample ID	Analysis Method	Prep Method
2317879001	18-2nd Qtr-Outfall 002	EPA 1664B	
2317879001	18-2nd Qtr-Outfall 002	EPA 335.4	335/4500/9012B
2317879002	18-2nd Qtr-Outfall 002	EPA 200.8	EPA TRMD
2317879002	18-2nd Qtr-Outfall 002	EPA 608	EPA 608

Analytical Laboratory Services, Inc.
Environmental • Industrial Hygiene • Field Services
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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALSI

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC zxzx of xyxy
ALSI
2317879

Client Name: DCWASA - Other
Address: 5000 Overlook Ave, SW
Washington, D.C. 20032
Contact: Elaine Wilson
Phone#: 202-787-4177
Project Name/#: WW/Effluent Quarterly
Bill To: Accounts Payable Office- 4th Floor

TAT: [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required: ____ Approved By: ____
Email? [x] -Y
Fax? [ ] -Y No.: ____

Container Type					CG	PL	PL	G
Container Size					1L	500 mL	500 mL	1L
Preservative					H2SO4	NaOH	HNO3	None

ANALYSES/METHOD REQUESTED — Enter Number of Containers Per Sample or Field Results Below.

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TPH plus total O & G - 1664	Cyanide	Total Metals: 200.8 (As, Cd, Cr, Cu, Pb, Mo, Ni, Se, Ag, Zn)	PCBs - 608	Sample/COC Comments
18-2nd Qtr-Outfall 002	5/30/18	1035	G	WW	2	1			
18-2nd Qtr-Outfall 002	5/30/18	950	C	WW			1	2	24-h composite 5/29 to 5/30

Receipt Information (completed by Receiving Lab)
Cooler Temp: 2°C Therm ID: 402
No. of Coolers: ____

	Y	N	Initial
Custody Seals Present?		✓	QM
(if present) Seals Intact?			
Received on Ice?	✓		
COC/Labels Complete/Accurate?	✓		
Cont. in Good Cond.?	✓		
Correct Containers?	✓		
Correct Sample Volumes?	✓		
Correct Preservation?	✓		
Headspace/Volatiles?			

Courier/Tracking #:

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther: ____

Project Comments: Need lowest detection limit available for all metals, report J Flags

LOGGED BY(signature): ____ DATE ____ TIME ____
REVIEWED BY(signature): ____ DATE ____ TIME ____

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature]	5/31/18	930	2	[signature]	5/31	1156
3	[signature]	5/31	1642	4	[signature] ALS	5/31/18	1642
5				6			
7				8			
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ]
PWSID #
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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Rev 8/04

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DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY | 5000 OVERLOOK AVENUE, SW | WASHINGTON, DC 20032

November 2, 2018

Ms. Clarissa Poole, State Coordinator
Environmental Protection Agency, Region 3
Water Management Division
1650 Arch Street
Mail Code: 3WP60
Philadelphia, PA 19103-2029

RE: NPDES Permit DC0021199 - October 2018 DMR Attachment

Dear Ms. Poole:

Enclosed is an attachment to the Blue Plains Discharge Monitoring Report for October 2018. DC Water staff collected outfall 002 quarterly effluent samples for local limits on August 30, 2018. Results for cyanide, oil and grease, and PCBs were consistent with previous analyses. However, results for metals were reported at values that were 500 times the normal effluent concentrations for some parameters. The laboratory verified that reporting units and quality control data were acceptable but evidence supports that there may have been a sample collection or sample receipt error as discussed on page 4 of lab report 2335766. The sample had already been discarded so re-analysis was not an option. A comparison of the effluent data with the influent and process data for that day shows that the effluent concentrations exceed the influent concentrations and are not consistent with decreasing concentrations through the treatment process as shown in the attached table and lab report 2335705. These data clearly show that the final effluent (outfall 002) metals data for August 30, 2018, cannot be accurate.

We resampled the effluent metals for 4th quarter 2018 on October 18, 2018, and results are in the expected concentrations as noted on the attached table. DC Water also retained an effluent composite sample from July 12, 2018, which had been preserved for metals and kept in the refrigerator that is still within the six month holding time for metals. This sample will be submitted to the laboratory for total metals analysis so that we have valid 3rd quarter 2018 metals results. This laboratory report will be included with the DMR in January 2019.

If there are any questions, please contact Ms. Elaine Wilson, Manager, Water Quality & Pretreatment at (202) 787-4177.

Sincerely yours,

Aklile Tesfaye, P.E., DEE
Assistant General Manager, Blue Plains

Enclosure

Metals Data (mg/L) for Blue Plains on August 30, 2018

Parameter	Influent A	Influent B	Influent C	E Grit Inf	E Prim Eff	W Grit Inf	W Prim Eff	E Sec Eff	W Sec Eff	Nit Eff	Outfall 002 (8/30/18)	Outfall 002 (10/18/18)
Arsenic	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0015	**<0.03**	<0.0015
Cadmium	<0.0002	0.00024	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**<0.004**	<0.0002
Chromium	0.0013	0.0027	0.0026	0.0052	0.0012	0.0027	0.002	<0.001	<0.001	<0.001	**0.52**	<0.001
Copper	0.04	0.069	0.051	0.044	0.017	0.046	0.021	0.0039	0.0037	0.0032	**3.1**	0.004
Lead	0.0045	0.011	0.014	0.0045	<0.001	0.002	0.001	<0.001	<0.001	<0.001	**0.092**	<0.001
Molybdenum	0.011	0.0095	0.011	0.0095	0.0091	0.011	0.012	0.0089	0.011	0.0084	**0.022**	0.008
Nickel	0.0082	0.011	0.0093	0.0073	0.0064	0.0058	0.0062	0.0065	0.0062	0.0065	**0.14**	0.0058
Selenium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	**<0.04**	<0.002
Silver	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**0.03**	<0.0005
Zinc	0.092	0.16	0.11	0.11	0.035	0.089	0.034	0.041	0.038	0.0088	**3.0**	0.0076

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November 2, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Revised Report - 11/2/2018 10:53:58 AM - See workorder comment section for explanation

Project Name:	**Wastewater (WW)**	Workorder:	**2335766**
Purchase Order:	**180018**	Workorder ID:	**WW/Effluent Quarterly**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 30, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2335766 WW/Effluent Quarterly

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2335766001	18-3rd Qtr-Outfall 002	Waste Water	8/30/2018 11:05	8/30/2018 22:00	Collected by Client
2335766002	18-3rd Qtr-Outfall 002	Waste Water	8/30/2018 11:10	8/30/2018 22:00	Collected by Client

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SAMPLE SUMMARY

Workorder: 2335766 WW/Effluent Quarterly

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
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-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
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-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
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Cntr	Analysis was performed using this container
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LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
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NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 2335766 WW/Effluent Quarterly

Sample Comments

Lab ID: 2335766002 **Sample ID:** 18-3rd Qtr-Outfall 002 **Sample Type:** SAMPLE

The EPA Method 200.8 Total Metals data were reviewed on 10/31/18 by the ALS-Middletown QA Manager. The ICAL and associated QC were all within method criteria. The sample digestion log was inspected, and the sample bottle ID verified in the bar code system. This confirmed that the bottle labeled with sample number 2335766002 was the sample digested, analyzed, and reported as sample 2335766002. It was noted that due to the appearance of the sample, the sample was digested at a 1/2 dilution. This is unusual for an effluent sample, and is inconsistent with historical records for this quarterly sampling event. It was also noted that the sample was analyzed at a 1/10 dilution during analysis, again due to the appearance of the sample. Again, this is unusual for this effluent sample, historically. Dilutions were not required for analysis of the quarterly effluent sample in the past.

Upon review of several past quarterly sampling events, the results for the quarterly samples were all very consistent, and much lower than the results for sample 2335766002. Upon further review of the associated influent and process control samples collected that same day, 8/31/18, all influent and process sample concentrations for total metals were lower than any of the reported concentrations from effluent sample 2335766002. This inconsistency is further evidence that supports the inconsistencies observed when compared to historical data.

It is the opinion of the laboratory, that the evidence found, while not definitive as there is no clear evidence found in the documentation, supports the possibility that the sample analyzed and reported as sample 2335766002 was mislabeled during sample collection or receipt, and was not the effluent sample. SM 11/1/18

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2335766 WW/Effluent Quarterly

Lab ID: **2335766001** Date Collected: 8/30/2018 11:05 Matrix: Waste Water

Sample ID: **18-3rd Qtr-Outfall 002** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY											
Cyanide, Total	0.0060	1	mg/L	0.0050	0.0022	EPA 335.4	9/7/18 13:00	JXB	9/10/18 06:51	KXK	A
Oil/Grease Hexane Extractable	ND		mg/L	2.0	0.6	EPA 1664B			9/4/18 10:45	MPP	B
Oil/Grease Silica Gel Treated	ND		mg/L	2.0	0.6	EPA 1664B			9/4/18 10:45	MPP	B

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2335766 WW/Effluent Quarterly

Lab ID: **2335766002** Date Collected: 8/30/2018 11:10 Matrix: Waste Water

Sample ID: **18-3rd Qtr-Outfall 002** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aldrin	ND		ug/L	0.020	0.0049	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
beta-BHC	ND		ug/L	0.020	0.0079	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
delta-BHC	ND		ug/L	0.020	0.0030	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
gamma-BHC	ND		ug/L	0.020	0.0030	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Chlordane	ND		ug/L	0.20	0.034	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
4,4'-DDD	ND		ug/L	0.020	0.0069	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
4,4'-DDE	ND		ug/L	0.020	0.0069	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
4,4'-DDT	ND		ug/L	0.020	0.0059	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Dieldrin	ND		ug/L	0.020	0.0030	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Endosulfan I	ND		ug/L	0.020	0.0030	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Endosulfan II	ND		ug/L	0.020	0.0059	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Endosulfan Sulfate	0.012J	J	ug/L	0.020	0.0039	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Endrin	ND		ug/L	0.020	0.0079	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Endrin Aldehyde	ND		ug/L	0.020	0.0099	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
alpha-HCH (alpha-BHC)	ND		ug/L	0.020	0.0020	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Heptachlor	ND		ug/L	0.020	0.0030	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Heptachlor Epoxide	ND		ug/L	0.020	0.0039	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Mirex	ND	11	ug/L	0.020	0.0039	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Total Polychlorinated Biphenyl	ND		ug/L	3.4	1.7	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Toxaphene	ND		ug/L	0.99	0.19	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Aroclor-1016	ND		ug/L	0.49	0.32	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Aroclor-1221	ND		ug/L	0.49	0.33	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Aroclor-1232	ND		ug/L	0.49	0.23	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Aroclor-1242	ND		ug/L	0.49	0.24	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Aroclor-1248	ND		ug/L	0.49	0.15	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Aroclor-1254	ND		ug/L	0.49	0.14	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Aroclor-1260	ND		ug/L	0.49	0.26	EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	72		%	30 - 150		EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Decachlorobiphenyl (S)	78.9		%	30 - 150		EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Tetrachloro-m-xylene (S)	86.5		%	36 - 112		EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
Tetrachloro-m-xylene (S)	79.7		%	36 - 112		EPA 608	9/5/18 11:30	CAC	9/11/18 00:02	RWS	B
METALS											
Arsenic, Total	0.0096J	J,1	mg/L	0.030	0.0064	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:45	LXC	A1
Cadmium, Total	ND	2	mg/L	0.0040	0.0024	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:45	LXC	A1

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ANALYTICAL RESULTS

Workorder: 2335766 WW/Effluent Quarterly

Lab ID: **2335766002** Date Collected: 8/30/2018 11:10 Matrix: Waste Water

Sample ID: **18-3rd Qtr-Outfall 002** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Chromium, Total	0.52	3	mg/L	0.020	0.0058	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:45	LXC	A1
Copper, Total	3.1	4	mg/L	0.050	0.0076	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:45	LXC	A1
Lead, Total	0.092	5	mg/L	0.020	0.0022	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:45	LXC	A1
Molybdenum, Total	0.022	6	mg/L	0.020	0.00080	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:45	LXC	A1
Nickel, Total	0.14	7	mg/L	0.050	0.0024	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:45	LXC	A1
Selenium, Total	0.0057J	J,8	mg/L	0.040	0.0030	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:45	LXC	A1
Silver, Total	0.030	9	mg/L	0.010	0.00060	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:45	LXC	A1
Zinc, Total	3.0	10	mg/L	0.050	0.011	EPA 200.8	9/4/18 09:15	DXC	9/6/18 06:45	LXC	A1

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ANALYTICAL RESULTS

Workorder: 2335766 WW/Effluent Quarterly

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2335766001	1	18-3rd Qtr-Outfall 002	EPA 335.4	Cyanide, Total
The recovery of the Matrix Spike (MS) associated to this analyte was outside of the control limits. The LCS was within established control limits. The failed recovery of the MS may be due to sample matrix interferences.				
2335766002	1	18-3rd Qtr-Outfall 002	EPA 200.8	Arsenic, Total
Please refer to case narrative for further information regarding a data discrepancy investigation for the Total Metals analysis by EPA Method 200.8 for this sample on p.4 of this report. SM 11/1/18				
2335766002	2	18-3rd Qtr-Outfall 002	EPA 200.8	Cadmium, Total
Please refer to case narrative for further information regarding a data discrepancy investigation for the Total Metals analysis by EPA Method 200.8 for this sample on p.4 of this report. SM 11/1/18				
2335766002	3	18-3rd Qtr-Outfall 002	EPA 200.8	Chromium, Total
Please refer to case narrative for further information regarding a data discrepancy investigation for the Total Metals analysis by EPA Method 200.8 for this sample on p.4 of this report. SM 11/1/18				
2335766002	4	18-3rd Qtr-Outfall 002	EPA 200.8	Copper, Total
Please refer to case narrative for further information regarding a data discrepancy investigation for the Total Metals analysis by EPA Method 200.8 for this sample on p.4 of this report. SM 11/1/18				
2335766002	5	18-3rd Qtr-Outfall 002	EPA 200.8	Lead, Total
Please refer to case narrative for further information regarding a data discrepancy investigation for the Total Metals analysis by EPA Method 200.8 for this sample on p.4 of this report. SM 11/1/18				
2335766002	6	18-3rd Qtr-Outfall 002	EPA 200.8	Molybdenum, Total
Please refer to case narrative for further information regarding a data discrepancy investigation for the Total Metals analysis by EPA Method 200.8 for this sample on p.4 of this report. SM 11/1/18				
2335766002	7	18-3rd Qtr-Outfall 002	EPA 200.8	Nickel, Total
Please refer to case narrative for further information regarding a data discrepancy investigation for the Total Metals analysis by EPA Method 200.8 for this sample on p.4 of this report. SM 11/1/18				
2335766002	8	18-3rd Qtr-Outfall 002	EPA 200.8	Selenium, Total
Please refer to case narrative for further information regarding a data discrepancy investigation for the Total Metals analysis by EPA Method 200.8 for this sample on p.4 of this report. SM 11/1/18				
2335766002	9	18-3rd Qtr-Outfall 002	EPA 200.8	Silver, Total
Please refer to case narrative for further information regarding a data discrepancy investigation for the Total Metals analysis by EPA Method 200.8 for this sample on p.4 of this report. SM 11/1/18				
2335766002	10	18-3rd Qtr-Outfall 002	EPA 200.8	Zinc, Total
Please refer to case narrative for further information regarding a data discrepancy investigation for the Total Metals analysis by EPA Method 200.8 for this sample on p.4 of this report. SM 11/1/18				
2335766002	11	18-3rd Qtr-Outfall 002	EPA 608	Mirex
The QC sample type LCSPES for method EPA 608 was outside the control limits for the analyte Mirex. The % Recovery was reported as 139 and the control limits were 50 to 130.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2335766 WW/Effluent Quarterly

Lab ID	Sample ID	Analysis Method	Prep Method
2335766001	18-3rd Qtr-Outfall 002	EPA 1664B	
2335766001	18-3rd Qtr-Outfall 002	EPA 335.4	335/4500/9012B
2335766002	18-3rd Qtr-Outfall 002	EPA 200.8	EPA TRMD
2335766002	18-3rd Qtr-Outfall 002	EPA 608	EPA 608

Analytical Laboratory Services, Inc.
Environmental ▪ Industrial Hygiene ▪ Field Services
34 Dogwood Lane ▪ Middletown, PA 17057 ▪ 717.944.5541 ▪ Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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COC ALS

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* 2 3 3 5 7 6 6 *

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: DCWASA - Other
Address: 5000 Overlook Ave, SW
Washington, D.C. 20032
Contact: Elaine Wilson
Phone#: 202-787-4177
Project Name/#: WW/Effluent Quarterly
Bill To: Accounts Payable Office- 4th Floor

TAT [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y
Fax? [ ] -Y No.: _____

Container Type	CG	PL	PL	G						
Container Size	1L	~~500 mL~~ 1L	~~500 mL~~ 1L	1L						
Preservative	H2SO4	NaOH	HNO3	None						

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TPH plus total O & G - 1664	Cyanide	Total Metals: 200.8 (As, Cd, Cr, Cu, Pb, Mo, Ni, Se, Ag, Zn)	PCBs - 608						Sample/COC Comments
					Enter Number of Containers Per Sample or Field Results Below									
18-3rd Qtr-Outfall 002	8-30-18	1105	G	WW	2	1								
18-3rd Qtr-Outfall 002	8-30-18	1110	C	WW			1	2						24-h composite 8/29 to 8/30

Receipt Information (Completed by Receiving Lab)

Cooler Temp: 3 °C Therm ID: 359
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. In Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #: MA808830003,4

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther: _____

Project Comments: Need lowest detection limit available for all metals, report J Flags

LOGGED BY(signature): Date: Time:
REVIEWED BY(signature): Date: Time:

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1		8-30-18	1400	2		8/30	1400
3		8/30	1900	4	COMMON COURIER/ALS COURIER		
5	COMMON COURIER/ALS COURIER			6		8/30/2018	2300
7				8			
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ] PWSID # _____
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type: _____

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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October 31, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Wastewater (WW)**	Workorder:	**2345548**
Purchase Order:	**180018**	Workorder ID:	**WW/Effluent Quarterly**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Friday, October 19, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Susan J. Scherer
Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2345548 WW/Effluent Quarterly

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2345548001	18-4th Qtr- Outfall 002	Waste Water	10/18/2018 11:45	10/19/2018 19:30	Collected by Client
2345548002	18-4th Qtr- Outfall 003	Waste Water	10/18/2018 11:05	10/19/2018 19:30	Collected by Client

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SAMPLE SUMMARY

Workorder: 2345548 WW/Effluent Quarterly

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2345548 WW/Effluent Quarterly

Lab ID: **2345548001** Date Collected: 10/18/2018 11:45 Matrix: Waste Water

Sample ID: **18-4th Qtr- Outfall 002** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
WET CHEMISTRY										
Cyanide, Total	8.7		ug/L	2.0	0.90	EPA KELADA		10/30/18 15:21	RXB	A
Oil/Grease Hexane Extractable	ND		mg/L	2.0	0.6	EPA 1664B		10/24/18 20:45	AT	B
Oil/Grease Silica Gel Treated	ND		mg/L	2.0	0.6	EPA 1664B		10/24/18 20:45	AT	B

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2345548 WW/Effluent Quarterly

Lab ID: **2345548002** Date Collected: 10/18/2018 11:05 Matrix: Waste Water

Sample ID: **18-4th Qtr- Outfall 003** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Pesticides and PCBs											
Aldrin	ND	1,2	ug/L	0.020	0.0049	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
beta-BHC	ND		ug/L	0.020	0.0078	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
delta-BHC	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
gamma-BHC	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Chlordane	ND		ug/L	0.20	0.034	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
4,4'-DDD	ND		ug/L	0.020	0.0069	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
4,4'-DDE	ND		ug/L	0.020	0.0069	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
4,4'-DDT	ND		ug/L	0.020	0.0059	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Dieldrin	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Endosulfan I	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Endosulfan II	ND		ug/L	0.020	0.0059	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Endosulfan Sulfate	ND		ug/L	0.020	0.0039	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Endrin	ND		ug/L	0.020	0.0078	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Endrin Aldehyde	ND		ug/L	0.020	0.0098	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
alpha-HCH (alpha-BHC)	ND		ug/L	0.020	0.0020	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Heptachlor	ND		ug/L	0.020	0.0029	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Heptachlor Epoxide	ND		ug/L	0.020	0.0039	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Mirex	ND		ug/L	0.020	0.0039	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Total Polychlorinated Biphenyl	ND		ug/L	3.4	1.7	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Toxaphene	ND		ug/L	0.98	0.19	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Aroclor-1016	ND		ug/L	0.49	0.31	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Aroclor-1221	ND		ug/L	0.49	0.32	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Aroclor-1232	ND		ug/L	0.49	0.23	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Aroclor-1242	ND		ug/L	0.49	0.24	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Aroclor-1248	ND		ug/L	0.49	0.15	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Aroclor-1254	ND		ug/L	0.49	0.14	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Aroclor-1260	ND		ug/L	0.49	0.25	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	81.1		%	30 - 150	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Decachlorobiphenyl (S)	80.6		%	30 - 150	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Tetrachloro-m-xylene (S)	73.7		%	36 - 112	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B
Tetrachloro-m-xylene (S)	85.4		%	36 - 112	EPA 608	10/23/18 16:05	DXL	10/25/18 23:03	RWS	B

METALS											
Arsenic, Total	ND		mg/L	0.0015	0.00032	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:47	LXC	A2
Cadmium, Total	ND		mg/L	0.00020	0.00012	EPA 200.8	10/29/18 10:15	BMK	10/30/18 01:47	LXC	A2

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ANALYTICAL RESULTS

Workorder: 2345548 WW/Effluent Quarterly

Lab ID: **2345548002** Date Collected: 10/18/2018 11:05 Matrix: Waste Water

Sample ID: **18-4th Qtr- Outfall 003** Date Received: 10/19/2018 19:30

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Chromium, Total	ND		mg/L	0.0010	0.00029	EPA 200.8	10/29/18 10:15 BMK	10/30/18 01:47	LXC	A2
Copper, Total	0.0040		mg/L	0.0025	0.00038	EPA 200.8	10/29/18 10:15 BMK	10/30/18 01:47	LXC	A2
Lead, Total	ND		mg/L	0.0010	0.00011	EPA 200.8	10/29/18 10:15 BMK	10/30/18 01:47	LXC	A2
Molybdenum, Total	0.0080		mg/L	0.0010	0.000040	EPA 200.8	10/29/18 10:15 BMK	10/30/18 01:47	LXC	A2
Nickel, Total	0.0058		mg/L	0.0025	0.00012	EPA 200.8	10/29/18 10:15 BMK	10/30/18 01:47	LXC	A2
Selenium, Total	0.00032J	J	mg/L	0.0020	0.00015	EPA 200.8	10/29/18 10:15 BMK	10/30/18 01:47	LXC	A2
Silver, Total	ND		mg/L	0.00050	0.000030	EPA 200.8	10/29/18 10:15 BMK	10/30/18 01:47	LXC	A2
Zinc, Total	0.0076		mg/L	0.0025	0.00057	EPA 200.8	10/29/18 10:15 BMK	10/30/18 01:47	LXC	A2

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2345548 WW/Effluent Quarterly

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2345548002	1	18-4th Qtr- Outfall 003	EPA 608	Aldrin
The QC sample type LCSPES for method EPA 608 was outside the control limits for the analyte Aldrin. The % Recovery was reported as 35.4 and the control limits were 42 to 122.				
2345548002	2	18-4th Qtr- Outfall 003	EPA 608	Aldrin
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 15% of the initial calibration for the 608 analysis. One or more analytes were outside the allowable range.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2345548 WW/Effluent Quarterly

Lab ID	Sample ID	Analysis Method	Prep Method
2345548001	18-4th Qtr- Outfall 002	EPA 1664B	
2345548001	18-4th Qtr- Outfall 002	EPA KELADA	
2345548002	18-4th Qtr- Outfall 003	EPA 200.8	EPA TRMD
2345548002	18-4th Qtr- Outfall 003	EPA 608	EPA 608

Analytical Laboratory Services, Inc.
Environmental w Industrial Hygiene w Field Services
34 Dogwood Lane w Middletown, PA 17057 w 717.944.5541 w Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALSI

CC
AL

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ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: DCWASA - Other
Address: 5000 Overlook Ave, SW
Washington, D.C. 20032
Contact: Elaine Wilson
Phone#: 202-787-4177
Project Name/#: WW/Effluent Quarterly
Bill To: Accounts Payable Office- 4th Floor

TAT [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y
Fax? [ ] -Y No.:

Container Type	CG	PL	PL	G						
Container Size	1L	250 mL	250 mL	1L						
Preservative	H2SO4	NaOH	HNO3	None						

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TPH plus total O & G - 1664	Cyanide	Total Metals: 200.8 (As, Cd, Cr, Cu, Pb, Mo, Ni, Se, Ag, Zn)	PCBs - 608							Sample/COC Comments
					Enter Number of Containers Per Sample or Field Results Below.										
18-4th Qtr-Outfall 002	10/18/18	1145	G	WW	1	1									
18-4th Qtr-Outfall 002	10/18/18	1105	C	WW			1	2							24-h composite 10/17 to 10/18

Receipt Information (completed by Receiving Lab)
Cooler Temp: 3 °C Therm ID: 318
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?	✓		KM
(If present) Seals Intact?	✓		
Received on Ice?	✓		
COC/Labels Complete/Accurate?	✓		
Cont. in Good Cond.?	✓		
Correct Containers?	✓		
Correct Sample Volumes?	✓		
Correct Preservation?	✓		
Headspace/Volatiles?			

Courier/Tracking #: MD18101900 3,4

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther: _____

Project Comments: Need lowest detection limit available for all metals, report J Flags

LOGGED BY(signature): Date: Time:
REVIEWED BY(signature): Date: Time:

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	DCWater	10/18	930	2		10/19	13
3		10/19		4	COMMON COURIER / ALS COURIER		
5	COMMON COURIER / ALS COURIER			6		10/19/2018	1930
7				8			
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ]
PWSID # _____
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type-

*G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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Additional Biosolids Toxic Organics Pollutant Data

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April 6, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Biosolids 03/28/18**	Workorder:	**2305257**
Purchase Order:	**180018**	Workorder ID:	**Biosolids 03/28/18**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Thursday, March 29, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez , Accounts Payable-4th Floor

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2305257 Biosolids 03/28/18

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2305257001	Digest BFP BOC 1st Qtr 2018	Solid	3/28/2018 14:50	3/29/2018 21:40	Collected by Client

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 2305257 Biosolids 03/28/18

Sample Comments

Lab ID: 2305257001 **Sample ID:** Digest BFP BOC 1st Qtr 2018 **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

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ANALYTICAL RESULTS

Workorder: 2305257 Biosolids 03/28/18

Lab ID: **2305257001** Date Collected: 3/28/2018 14:50 Matrix: Solid

Sample ID: **Digest BFP BOC 1st Qtr 2018** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	834		ug/kg	53.0	24.4	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Benzene	13.8		ug/kg	10.6	2.7	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Bromochloromethane	ND		ug/kg	10.6	2.7	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Bromodichloromethane	ND		ug/kg	10.6	3.8	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Bromoform	ND		ug/kg	10.6	2.8	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Bromomethane	ND		ug/kg	10.6	2.8	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
2-Butanone	293		ug/kg	53.0	17.0	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Carbon Disulfide	38.6		ug/kg	10.6	3.3	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Carbon Tetrachloride	ND		ug/kg	10.6	2.7	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Chlorobenzene	ND		ug/kg	10.6	2.7	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Chlorodibromomethane	ND		ug/kg	10.6	3.6	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Chloroethane	ND		ug/kg	26.5	4.5	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Chloroform	ND		ug/kg	10.6	2.8	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Chloromethane	ND		ug/kg	10.6	2.9	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
1,2-Dibromo-3-chloropropane	ND		ug/kg	26.5	15.4	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
1,2-Dibromoethane	ND		ug/kg	10.6	2.9	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
1,1-Dichloroethane	ND		ug/kg	10.6	2.7	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
1,2-Dichloroethane	ND		ug/kg	10.6	2.7	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
1,1-Dichloroethene	ND		ug/kg	10.6	2.8	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
cis-1,2-Dichloroethene	ND		ug/kg	10.6	2.7	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
trans-1,2-Dichloroethene	ND		ug/kg	10.6	2.8	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
1,2-Dichloropropane	ND		ug/kg	10.6	3.2	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
cis-1,3-Dichloropropene	ND		ug/kg	10.6	2.9	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
trans-1,3-Dichloropropene	ND		ug/kg	10.6	3.1	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Ethylbenzene	11.8		ug/kg	10.6	3.6	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
2-Hexanone	16.7J	J	ug/kg	53.0	14.8	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
4-Methyl-2-Pentanone(MIBK)	41.8J	J	ug/kg	53.0	20.1	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Methylene Chloride	105	6,7	ug/kg	10.6	4.1	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Styrene	ND		ug/kg	10.6	2.7	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
1,1,2,2-Tetrachloroethane	ND		ug/kg	10.6	3.0	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Tetrachloroethene	ND		ug/kg	10.6	3.2	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Toluene	85.2		ug/kg	10.6	3.6	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Total Xylenes	82.8		ug/kg	31.8	7.4	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
1,1,1-Trichloroethane	ND		ug/kg	10.6	3.3	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
1,1,2-Trichloroethane	ND		ug/kg	10.6	3.0	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Trichloroethene	ND		ug/kg	10.6	2.7	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305257 Biosolids 03/28/18

Lab ID: **2305257001** Date Collected: 3/28/2018 14:50 Matrix: Solid

Sample ID: **Digest BFP BOC 1st Qtr 2018** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Vinyl Chloride	ND		ug/kg	10.6	2.7	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
o-Xylene	ND		ug/kg	10.6	3.1	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
mp-Xylene	82.8		ug/kg	21.2	4.4	SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	85.1		%	56 - 124		SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
4-Bromofluorobenzene (S)	84.9		%	51 - 128		SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Dibromofluoromethane (S)	95.5		%	62 - 123		SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
Toluene-d8 (S)	94.8		%	59 - 131		SW846 8260B	3/30/18 14:11	PDK	4/4/18 23:57	CJG	A2
DIOXIN SCREEN											
2,3,7,8-TCDD	ND	12	ug/kg	21.4	21.4	SW846 8270D	4/5/18 04:40	JTH	4/6/18 00:46	CGS	A
SEMIVOLATILES											
Acenaphthene	43.8J	J	ug/kg	153	18.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Acenaphthylene	ND		ug/kg	153	21.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Anthracene	ND		ug/kg	153	24.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Benzo(a)anthracene	76.1J	J	ug/kg	153	15.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Benzo(a)pyrene	ND		ug/kg	153	12.2	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	153	15.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Benzo(g,h,i)perylene	ND		ug/kg	153	15.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	153	15.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	305	27.5	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Butylbenzylphthalate	1150		ug/kg	305	21.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Carbazole	246J	J	ug/kg	305	21.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	611	30.5	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
4-Chloroaniline	ND		ug/kg	611	36.6	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	305	27.5	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	305	39.7	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	305	45.8	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2-Chloronaphthalene	ND		ug/kg	305	18.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2-Chlorophenol	ND		ug/kg	611	24.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	305	24.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Chrysene	94.2J	J	ug/kg	153	15.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
mp-Cresol	490J	J	ug/kg	611	24.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
o-Cresol	ND		ug/kg	611	33.6	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Di-n-Butylphthalate	504		ug/kg	305	24.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Di-n-Octylphthalate	ND		ug/kg	305	21.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	153	18.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Dibenzofuran	41.4J	J	ug/kg	305	24.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305257 Biosolids 03/28/18

Lab ID: **2305257001** Date Collected: 3/28/2018 14:50 Matrix: Solid

Sample ID: **Digest BFP BOC 1st Qtr 2018** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichlorobenzene	ND		ug/kg	305	27.5	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	305	21.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
1,4-Dichlorobenzene	ND		ug/kg	305	21.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	611	116	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2,4 Dichlorophenol	139J	J	ug/kg	611	24.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Diethylphthalate	ND		ug/kg	305	24.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2,4-Dimethylphenol	ND		ug/kg	611	45.8	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Dimethylphthalate	58.6J	J	ug/kg	305	21.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2,4-Dinitrophenol	ND		ug/kg	611	122	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2,4-Dinitrotoluene	ND		ug/kg	305	27.5	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2,6-Dinitrotoluene	ND		ug/kg	305	36.6	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
bis(2-Ethylhexyl)phthalate	25100		ug/kg	1220	85.5	SW846 8270D	4/5/18 04:40	JTH	4/6/18 11:57	GEC	A
Fluoranthene	220		ug/kg	153	15.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Fluorene	52.9J	J	ug/kg	153	18.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Hexachlorobenzene	ND		ug/kg	305	33.6	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Hexachlorobutadiene	ND		ug/kg	305	30.5	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Hexachlorocyclopentadiene	ND		ug/kg	611	33.6	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Hexachloroethane	ND		ug/kg	305	27.5	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Indeno(1,2,3-cd)pyrene	855		ug/kg	153	21.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Isophorone	ND		ug/kg	305	18.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	611	79.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2-Methylnaphthalene	95.8J	J	ug/kg	305	15.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Naphthalene	80.9J	J	ug/kg	153	18.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2-Nitroaniline	ND		ug/kg	611	36.6	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
3-Nitroaniline	ND		ug/kg	611	61.1	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
4-Nitroaniline	ND		ug/kg	611	24.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Nitrobenzene	ND		ug/kg	305	36.6	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2-Nitrophenol	ND		ug/kg	611	33.6	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
4-Nitrophenol	ND		ug/kg	611	42.8	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	305	45.8	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	305	24.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	305	24.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Pentachlorophenol	ND		ug/kg	611	79.4	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Phenanthrene	241		ug/kg	153	15.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Phenol	19700		ug/kg	611	30.5	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Pyrene	252		ug/kg	153	15.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	305	18.3	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2,4,5-Trichlorophenol	ND		ug/kg	611	36.6	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305257 Biosolids 03/28/18

Lab ID: **2305257001** Date Collected: 3/28/2018 14:50 Matrix: Solid

Sample ID: **Digest BFP BOC 1st Qtr 2018** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
2,4,6-Trichlorophenol	ND		ug/kg	611	36.6	SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	30		%	19 - 132		SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2,4,6-Tribromophenol (S)	29		%	19 - 132		SW846 8270D	4/5/18 04:40	JTH	4/6/18 11:57	GEC	A
2-Fluorobiphenyl (S)	39	10	%	40 - 110		SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
2-Fluorobiphenyl (S)	40.3		%	40 - 110		SW846 8270D	4/5/18 04:40	JTH	4/6/18 11:57	GEC	A
2-Fluorophenol (S)	33		%	26 - 116		SW846 8270D	4/5/18 04:40	JTH	4/6/18 11:57	GEC	A
2-Fluorophenol (S)	31.6		%	26 - 116		SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Nitrobenzene-d5 (S)	34.3		%	38 - 112		SW846 8270D	4/5/18 04:40	JTH	4/6/18 11:57	GEC	A
Nitrobenzene-d5 (S)	33.5	9	%	38 - 112		SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Phenol-d5 (S)	33.6		%	35 - 111		SW846 8270D	4/5/18 04:40	JTH	4/6/18 11:57	GEC	A
Phenol-d5 (S)	31.8	8	%	35 - 111		SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Terphenyl-d14 (S)	41.9	11	%	45 - 126		SW846 8270D	4/5/18 04:40	JTH	4/5/18 14:51	CGS	A
Terphenyl-d14 (S)	43.4		%	45 - 126		SW846 8270D	4/5/18 04:40	JTH	4/6/18 11:57	GEC	A
PESTICIDES											
Aldrin	ND		ug/kg	25.6	8.3	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
beta-BHC	ND		ug/kg	25.6	2.7	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
delta-BHC	ND		ug/kg	25.6	2.0	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
gamma-BHC	ND		ug/kg	25.6	2.1	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
alpha-Chlordane	ND		ug/kg	25.6	2.7	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
gamma-Chlordane	ND		ug/kg	25.6	4.4	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
4,4'-DDD	ND		ug/kg	49.7	4.1	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
4,4'-DDE	ND		ug/kg	49.7	6.8	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
4,4'-DDT	ND	1	ug/kg	49.7	5.7	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Dieldrin	ND		ug/kg	49.7	5.7	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Endosulfan I	ND		ug/kg	25.6	3.2	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Endosulfan II	ND		ug/kg	49.7	10.4	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Endosulfan Sulfate	ND		ug/kg	49.7	3.3	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Endrin	ND		ug/kg	49.7	3.6	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Endrin Aldehyde	ND		ug/kg	49.7	5.4	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Endrin Ketone	ND		ug/kg	49.7	6.9	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
alpha-HCH (alpha-BHC)	ND		ug/kg	25.6	2.3	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Heptachlor	ND		ug/kg	25.6	2.6	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Heptachlor Epoxide	ND		ug/kg	25.6	2.6	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Methoxychlor	ND	2	ug/kg	49.7	6.6	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Toxaphene	ND		ug/kg	527	87.4	SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2305257 Biosolids 03/28/18

Lab ID: **2305257001** Date Collected: 3/28/2018 14:50 Matrix: Solid

Sample ID: **Digest BFP BOC 1st Qtr 2018** Date Received: 3/29/2018 21:40

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Decachlorobiphenyls (S)	53.8		%	30 - 135		SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
Tetrachloro-m-xylene (S)	69.7		%	30 - 111		SW846 8081B	4/2/18 02:50	JTH	4/5/18 01:13	RWS	A
WET CHEMISTRY											
Cyanide, Total	2.9		mg/kg	0.75	0.27	SW846 9012B	4/4/18 14:15	JXB	4/5/18 09:09	MNP	A
Hexane Extractable Material	78600		mg/kg	615	200	SW846 9071B			4/3/18 13:00	MPP	A
Moisture	67.5		%	0.1	0.01	S2540G-11			4/2/18 10:30	AXD	
Silica Gel Treated HEM	11100		mg/kg	615	100	SW846 9071B			4/3/18 13:00	MPP	A
Total Solids	32.5		%	0.1	0.01	S2540G-11			4/2/18 10:30	AXD	

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ANALYTICAL RESULTS

Workorder: 2305257 Biosolids 03/28/18

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2305257001	1	Digest BFP BOC 1st Qtr 2018	SW846 8081B	4,4'-DDT
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 20% of the initial calibration for the 8081 analysis. This compound was biased low 36% in the bracketing CCV.				
2305257001	2	Digest BFP BOC 1st Qtr 2018	SW846 8081B	Methoxychlor
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 20% of the initial calibration for the 8081 analysis. This compound was biased low 31% in the bracketing CCV.				
2305257001	6	Digest BFP BOC 1st Qtr 2018	SW846 8260B	Methylene Chloride
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 163 and the control limits were 68 to 133.				
2305257001	7	Digest BFP BOC 1st Qtr 2018	SW846 8260B	Methylene Chloride
The QC sample type LCSD for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The % Recovery was reported as 166 and the control limits were 68 to 133.				
2305257001	8	Digest BFP BOC 1st Qtr 2018	SW846 8270D	Phenol-d5
The surrogate Phenol-d5 for method SW846 8270D was outside of control limits. The % Recovery was reported as 31.8 and the control limits were 35 to 111. This result was reported at a dilution of 1.				
2305257001	9	Digest BFP BOC 1st Qtr 2018	SW846 8270D	Nitrobenzene-d5
The surrogate Nitrobenzene-d5 for method SW846 8270D was outside of control limits. The % Recovery was reported as 33.5 and the control limits were 38 to 112. This result was reported at a dilution of 1.				
2305257001	10	Digest BFP BOC 1st Qtr 2018	SW846 8270D	2-Fluorobiphenyl
The surrogate 2-Fluorobiphenyl for method SW846 8270D was outside of control limits. The % Recovery was reported as 39 and the control limits were 40 to 110. This result was reported at a dilution of 1.				
2305257001	11	Digest BFP BOC 1st Qtr 2018	SW846 8270D	Terphenyl-d14
The surrogate Terphenyl-d14 for method SW846 8270D was outside of control limits. The % Recovery was reported as 41.9 and the control limits were 45 to 126. This result was reported at a dilution of 1.				
2305257001	12	Digest BFP BOC 1st Qtr 2018	SW846 8270D	2,3,7,8-TCDD
A SIM screen analysis was run for Dioxin and no peaks were observed.				

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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2305257

7 zxzx of xyxy

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: DCWASA-Others
Address: 5000 Overlook Ave, SW
Washington, D C. 20032
Contact: Mark Ramirez
Phone#: 202-787-4002
Project Name/#: Bio/Quarterly
Bill To: Accounts Payable Office- 4th Floor

TAT [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? [x] -Y
Fax? [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Cyanide, % solids	Total O&G plus TPH - SW9071	VOC (SW 8260)	semi-volatiles (SW846-8270) - including TCDD dioxin (see comments)	Pesticides (SW846-8081)					Sample/COC Comments
Container Type					AG	AG	AG	AG	AG					
Container Size					4 OZ	4 OZ	4 OZ	8 OZ	8 OZ					
Preservative					None	None	None	None	None					
					Enter Number of Containers Per Sample or Field Results Below.									
														*plus hexachlorobenzene, hexachlorobutadiene
Digest BFP BOC 1st Qtr 2018	3/28/2018	1450	G	SL	1	1	1	1/2	1					and toxaphene

Cooler Temp: 1°C Therm ID: 318
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther: _____

Project Comments: *Run % solids and report data as mg/kg dry weight

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	3/29	1000	2	3/29	1507
3	3/29	1830	4		
5		2140	6	3/29	2140
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ]
PWSID #
Sample Disposal: Lab [ ] Special [ ]
EDDS: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY

Rev 8/04

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

June 21, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Biosolids 05/31/18**	Workorder:	**2317831**
Purchase Order:	**180018**	Workorder ID:	**Biosolids 05/31/18**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Thursday, May 31, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Amy K Borden (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez , Accounts Payable-4th Floor

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Amy K Borden

Ms. Amy K Borden
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2317831 Biosolids 05/31/18

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317831001	Digest BFP BOCA 2nd Qtr 2018	Solid	5/30/2018 10:20	5/31/2018 16:42	Collected by Client

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2317831 Biosolids 05/31/18

Lab ID: **2317831001** Date Collected: 5/30/2018 10:20 Matrix: Solid

Sample ID: **Digest BFP BOCA 2nd Qtr 2018** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
Acetone	9840		ug/kg	123	56.5	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Benzene	7.2J	J	ug/kg	24.5	6.1	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Bromochloromethane	ND		ug/kg	24.5	6.1	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Bromodichloromethane	ND		ug/kg	24.5	8.7	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Bromoform	ND		ug/kg	24.5	6.4	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Bromomethane	ND		ug/kg	24.5	6.4	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
2-Butanone	3040		ug/kg	123	39.3	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Carbon Disulfide	332		ug/kg	24.5	7.7	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Carbon Tetrachloride	ND		ug/kg	24.5	6.3	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Chlorobenzene	ND		ug/kg	24.5	6.3	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Chlorodibromomethane	ND		ug/kg	24.5	8.3	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Chloroethane	ND		ug/kg	61.4	10.4	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Chloroform	ND		ug/kg	24.5	6.5	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Chloromethane	ND		ug/kg	24.5	6.8	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
1,2-Dibromo-3-chloropropane	ND		ug/kg	61.4	35.6	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
1,2-Dibromoethane	ND		ug/kg	24.5	6.6	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
1,1-Dichloroethane	ND		ug/kg	24.5	6.1	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
1,2-Dichloroethane	ND		ug/kg	24.5	6.1	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
1,1-Dichloroethene	ND		ug/kg	24.5	6.4	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
cis-1,2-Dichloroethene	ND		ug/kg	24.5	6.1	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
trans-1,2-Dichloroethene	ND		ug/kg	24.5	6.4	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
1,2-Dichloropropane	ND		ug/kg	24.5	7.4	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
cis-1,3-Dichloropropene	ND		ug/kg	24.5	6.8	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
trans-1,3-Dichloropropene	ND		ug/kg	24.5	7.1	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Ethylbenzene	13.2J	J	ug/kg	24.5	8.3	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
2-Hexanone	ND		ug/kg	123	34.4	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
4-Methyl-2-Pentanone(MIBK)	ND		ug/kg	123	46.6	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Methylene Chloride	155		ug/kg	24.5	9.6	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Styrene	ND		ug/kg	24.5	6.1	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
1,1,2,2-Tetrachloroethane	ND		ug/kg	24.5	6.9	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Tetrachloroethene	ND		ug/kg	24.5	7.4	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Toluene	127		ug/kg	24.5	8.2	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Total Xylenes	74.4		ug/kg	73.6	17.2	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
1,1,1-Trichloroethane	ND		ug/kg	24.5	7.6	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
1,1,2-Trichloroethane	ND		ug/kg	24.5	6.9	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Trichloroethene	ND		ug/kg	24.5	6.1	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2

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ANALYTICAL RESULTS

Workorder: 2317831 Biosolids 05/31/18

Lab ID: **2317831001** Date Collected: 5/30/2018 10:20 Matrix: Solid

Sample ID: **Digest BFP BOCA 2nd Qtr 2018** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Vinyl Chloride	ND		ug/kg	24.5	6.1	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
o-Xylene	ND		ug/kg	24.5	7.1	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
mp-Xylene	74.4		ug/kg	49.1	10.2	SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	84		%	56 - 124		SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
4-Bromofluorobenzene (S)	87		%	51 - 128		SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Dibromofluoromethane (S)	83.7		%	62 - 123		SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
Toluene-d8 (S)	91.4		%	59 - 131		SW846 8260B	6/1/18 01:52	TMP	6/5/18 14:23	TMP	A2
SEMIVOLATILES											
Acenaphthene	44.4J	J	ug/kg	146	17.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Acenaphthylene	ND		ug/kg	146	20.5	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Anthracene	45.0J	J	ug/kg	146	23.4	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Benzo(a)anthracene	128J	J	ug/kg	146	14.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Benzo(a)pyrene	165		ug/kg	146	11.7	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Benzo(b)fluoranthene	240		ug/kg	146	14.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Benzo(g,h,i)perylene	ND		ug/kg	146	14.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Benzo(k)fluoranthene	74.3J	J	ug/kg	146	14.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
4-Bromophenyl-phenylether	ND		ug/kg	293	26.3	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Butylbenzylphthalate	1050		ug/kg	293	20.5	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Carbazole	197J	J	ug/kg	293	20.5	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
4-Chloro-3-methylphenol	ND		ug/kg	585	29.3	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
4-Chloroaniline	165J	J	ug/kg	585	35.1	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
bis(2-Chloroethoxy)methane	ND		ug/kg	293	26.3	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
bis(2-Chloroethyl)ether	ND		ug/kg	293	38.0	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	293	43.9	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2-Chloronaphthalene	ND		ug/kg	293	17.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2-Chlorophenol	ND		ug/kg	585	23.4	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
4-Chlorophenyl-phenylether	ND		ug/kg	293	23.4	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Chrysene	163		ug/kg	146	14.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
mp-Cresol	396J	J	ug/kg	585	23.4	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
o-Cresol	ND		ug/kg	585	32.2	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Di-n-Butylphthalate	518		ug/kg	293	23.4	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Di-n-Octylphthalate	ND	10	ug/kg	293	20.5	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Dibenzo(a,h)anthracene	ND		ug/kg	146	17.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Dibenzofuran	45.3J	J	ug/kg	293	23.4	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
1,2-Dichlorobenzene	ND		ug/kg	293	26.3	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
1,3-Dichlorobenzene	ND		ug/kg	293	20.5	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A

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ANALYTICAL RESULTS

Workorder: 2317831 Biosolids 05/31/18

Lab ID: **2317831001** Date Collected: 5/30/2018 10:20 Matrix: Solid

Sample ID: **Digest BFP BOCA 2nd Qtr 2018** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
1,4-Dichlorobenzene	ND		ug/kg	293	20.5	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
3,3-Dichlorobenzidine	ND		ug/kg	585	111	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2,4-Dichlorophenol	85.6J	J	ug/kg	585	23.4	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Diethylphthalate	ND		ug/kg	293	23.4	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2,4-Dimethylphenol	ND		ug/kg	585	43.9	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Dimethylphthalate	ND		ug/kg	293	20.5	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2,4-Dinitrophenol	ND		ug/kg	1170	117	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2,4-Dinitrotoluene	ND		ug/kg	293	26.3	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2,6-Dinitrotoluene	ND		ug/kg	293	35.1	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
bis(2-Ethylhexyl)phthalate	14800		ug/kg	293	20.5	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Fluoranthene	323		ug/kg	146	14.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Fluorene	42.7J	J	ug/kg	146	17.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Hexachlorobenzene	ND		ug/kg	293	32.2	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Hexachlorobutadiene	ND		ug/kg	293	29.3	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Hexachlorocyclopentadiene	ND		ug/kg	585	32.2	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Hexachloroethane	ND		ug/kg	293	26.3	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	146	20.5	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Isophorone	ND		ug/kg	293	17.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	585	76.1	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2-Methylnaphthalene	79.6J	J	ug/kg	293	14.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Naphthalene	73.6J	J	ug/kg	146	17.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2-Nitroaniline	ND		ug/kg	585	35.1	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
3-Nitroaniline	ND		ug/kg	585	58.5	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
4-Nitroaniline	ND		ug/kg	585	23.4	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Nitrobenzene	ND		ug/kg	293	35.1	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2-Nitrophenol	ND		ug/kg	585	32.2	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
4-Nitrophenol	ND		ug/kg	585	41.0	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
N-Nitrosodimethylamine	ND		ug/kg	293	43.9	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
N-Nitroso-di-n-propylamine	ND		ug/kg	293	23.4	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
N-Nitrosodiphenylamine	ND		ug/kg	293	23.4	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Pentachlorophenol	ND		ug/kg	585	76.1	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Phenanthrene	261		ug/kg	146	14.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Phenol	6380		ug/kg	585	29.3	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Pyrene	357		ug/kg	146	14.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
1,2,4-Trichlorobenzene	ND		ug/kg	293	17.6	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2,4,5-Trichlorophenol	ND		ug/kg	585	35.1	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2,4,6-Trichlorophenol	ND		ug/kg	585	35.1	SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
DIOXIN SCREEN											

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2317831 Biosolids 05/31/18

Lab ID: **2317831001** Date Collected: 5/30/2018 10:20 Matrix: Solid

Sample ID: **Digest BFP BOCA 2nd Qtr 2018** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
2,3,7,8-TCDD	ND	5	ug/kg	20.5	20.5	SW846 8270D	6/1/18 04:00	JTH	6/5/18 07:31	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	28.4		%	19 - 132		SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2-Fluorobiphenyl (S)	36.1	8	%	40 - 110		SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
2-Fluorophenol (S)	27.3		%	26 - 116		SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Nitrobenzene-d5 (S)	27	7	%	38 - 112		SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Phenol-d5 (S)	29.8	6	%	35 - 111		SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
Terphenyl-d14 (S)	37	9	%	45 - 126		SW846 8270D	6/1/18 04:00	JTH	6/1/18 14:50	GEC	A
PESTICIDES											
Aldrin	ND		ug/kg	25.4	8.2	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
beta-BHC	ND		ug/kg	25.4	2.7	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
delta-BHC	ND		ug/kg	25.4	1.9	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
gamma-BHC	ND		ug/kg	25.4	2.1	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
alpha-Chlordane	29.4		ug/kg	25.4	2.7	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
gamma-Chlordane	ND		ug/kg	25.4	4.3	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
4,4'-DDD	ND		ug/kg	49.2	4.0	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
4,4'-DDE	15.0J	J	ug/kg	49.2	6.7	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
4,4'-DDT	ND	3	ug/kg	49.2	5.7	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Dieldrin	14.0J	J	ug/kg	49.2	5.7	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Endosulfan I	ND		ug/kg	25.4	3.1	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Endosulfan II	ND		ug/kg	49.2	10.3	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Endosulfan Sulfate	ND		ug/kg	49.2	3.3	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Endrin	ND		ug/kg	49.2	3.6	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Endrin Aldehyde	ND		ug/kg	49.2	5.4	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Endrin Ketone	ND	1	ug/kg	49.2	6.9	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
alpha-HCH (alpha-BHC)	ND	2	ug/kg	25.4	2.2	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Heptachlor	ND		ug/kg	25.4	2.5	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Heptachlor Epoxide	8.7J	J	ug/kg	25.4	2.5	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Methoxychlor	ND	4	ug/kg	49.2	6.6	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Toxaphene	ND		ug/kg	522	86.5	SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	55.6		%	30 - 135		SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
Tetrachloro-m-xylene (S)	58		%	30 - 111		SW846 8081B	6/1/18 02:30	JTH	6/4/18 23:26	RWS	A
WET CHEMISTRY											
Cyanide, Total	3.3		mg/kg	0.71	0.25	SW846 9012B	6/5/18 11:33	CTD	6/5/18 14:10	KXK	A
Hexane Extractable Material	65600		mg/kg	603	200	SW846 9071B			6/6/18 13:15	MPP	A

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ANALYTICAL RESULTS

Workorder: 2317831 Biosolids 05/31/18

Lab ID: **2317831001** Date Collected: 5/30/2018 10:20 Matrix: Solid

Sample ID: **Digest BFP BOCA 2nd Qtr 2018** Date Received: 5/31/2018 16:42

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Moisture	67.1		%	0.1	0.01	S2540G-11			6/1/18 09:57	AXD	A
Phenolics	22.6		mg/kg	2.6	0.8	SW846 9066	6/7/18 08:00	C_D	6/12/18 09:04	C_D	A
Silica Gel Treated HEM	10800		mg/kg	603	100	SW846 9071B			6/6/18 13:15	MPP	A
Total Solids	32.9		%	0.1	0.01	S2540G-11			6/1/18 09:57	AXD	A

Amy K Borden

Ms. Amy K Borden
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2317831 Biosolids 05/31/18

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317831001	1	Digest BFP BOCA 2nd Qtr 2018	SW846 8081B	Endrin Ketone
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 20% of the initial calibration for the 8081 analysis. This compound was biased low 28% in the bracketing CCV.				
2317831001	2	Digest BFP BOCA 2nd Qtr 2018	SW846 8081B	alpha-HCH (alpha-BHC)
This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.				
2317831001	3	Digest BFP BOCA 2nd Qtr 2018	SW846 8081B	4,4'-DDT
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 20% of the initial calibration for the 8081 analysis. This compound was biased low 48% in the bracketing CCV.				
2317831001	4	Digest BFP BOCA 2nd Qtr 2018	SW846 8081B	Methoxychlor
Method criteria requires continuing calibration verification (CCV) standards be less than or equal to 20% of the initial calibration for the 8081 analysis. This compound was biased low 37% in the bracketing CCV.				
2317831001	5	Digest BFP BOCA 2nd Qtr 2018	SW846 8270D	2,3,7,8-TCDD
A SIM screen analysis was run for Dioxin and no peaks were observed.				
2317831001	6	Digest BFP BOCA 2nd Qtr 2018	SW846 8270D	Phenol-d5
The surrogate Phenol-d5 for method SW846 8270D was outside of control limits. The % Recovery was reported as 29.8 and the control limits were 35 to 111. This result was reported at a dilution of 1.				
2317831001	7	Digest BFP BOCA 2nd Qtr 2018	SW846 8270D	Nitrobenzene-d5
The surrogate Nitrobenzene-d5 for method SW846 8270D was outside of control limits. The % Recovery was reported as 27 and the control limits were 38 to 112. This result was reported at a dilution of 1.				
2317831001	8	Digest BFP BOCA 2nd Qtr 2018	SW846 8270D	2-Fluorobiphenyl
The surrogate 2-Fluorobiphenyl for method SW846 8270D was outside of control limits. The % Recovery was reported as 36.1 and the control limits were 40 to 110. This result was reported at a dilution of 1.				
2317831001	9	Digest BFP BOCA 2nd Qtr 2018	SW846 8270D	Terphenyl-d14
The surrogate Terphenyl-d14 for method SW846 8270D was outside of control limits. The % Recovery was reported as 37 and the control limits were 45 to 126. This result was reported at a dilution of 1.				
2317831001	10	Digest BFP BOCA 2nd Qtr 2018	SW846 8270D	Di-n-Octylphthalate
The QC sample type CCV for method SW846 8270D was outside the control limits for the analyte Di-n-Octylphthalate. The % Recovery was reported as 77.5 and the control limits were 80 to 120.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2317831 Biosolids 05/31/18

Lab ID	Sample ID	Analysis Method	Prep Method
2317831001	Digest BFP BOCA 2nd Qtr 2018	S2540G-11	
2317831001	Digest BFP BOCA 2nd Qtr 2018	SW846 8081B	SW846 3546
2317831001	Digest BFP BOCA 2nd Qtr 2018	SW846 8260B	SW846 5035
2317831001	Digest BFP BOCA 2nd Qtr 2018	SW846 8270D	SW846 3546
2317831001	Digest BFP BOCA 2nd Qtr 2018	SW846 9012B	SW846 9012B
2317831001	Digest BFP BOCA 2nd Qtr 2018	SW846 9066	420.4/9066
2317831001	Digest BFP BOCA 2nd Qtr 2018	SW846 9071B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

CC / AL | * 2 3 1 7 8 3 1 * | zxzx of xyxy

Client Name:	DCWASA-OTHER
Address:	5000 Overlook Ave, SW, Washington, D.C. 20032
Contact:	Elaine Wilson
Phone#:	202-787-4177
Project Name/#:	Bio/Quarterly
Bill To:	Accounts Payable Office- 4th Floor

TAT: [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALSI approval and surcharges.

Date Required: ______ Approved By: ______

Email? [x] -Y

Fax? [ ] -Y No.:

	Cyanide, % solids	TPH & O&G- SW 846-9071	VOC (SW846- 8260)	semi-volatiles (SW846-8270) - including TCDD dioxin (see comments)	Pesticides (SW846-8081)	Phenols (SW846-9066, Asbestos				
Container Type	CG	CG	CG	AG	AG					
Container Size	8 OZ	8 OZ	4 oz	8 OZ	8 OZ					
Preservative	None	None	None	None	None					

ANALYSES/METHOD REQUESTED — Enter Number of Containers Per Sample or Field Results Below.

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Cyanide, % solids	TPH & O&G- SW 846-9071	VOC (SW846- 8260)	semi-volatiles (SW846-8270) - including TCDD dioxin (see comments)	Pesticides (SW846-8081)	Phenols (SW846-9066, Asbestos	Sample/COC Comments
Digest BFP BOCA 2nd Qtr 2018	5/30/2018	1020	G	SL	1	1	1	1*	1		*plus hexachlorobenzene, hexachlorobutadiene and toxaphene

Sample Receipt Information (completed by Receiving Lab)

Cooler Temp: 4°C Therm ID: 402

No. of Coolers: ______

	Y	N	Initial
Custody Seals Present?		✓	QM
(If present) Seals Intact?			
Received on Ice?	✓		
COC/Labels Complete/Accurate?	✓		
Cont. in Good Cond.?	✓		
Correct Containers?	✓		
Correct Sample Volumes?	✓		
Correct Preservation?	✓		
Headspace/Volatiles?			

Courier/Tracking #:

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther:

Project Comments: *Run % solids and report data as mg/kg dry weight

LOGGED BY(signature): [signature] Date: 5/31/18 Time: [illegible]

REVIEWED BY(signature):

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature]	5-31-18	930	2	[signature]	5/31	1156
3	[signature]	5/31/18	1642	4	QM ALS	5/31/18	1642
5				6			
7				8			
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ] [ ]

State Samples Collected In: [ ] NY [ ] NJ [ ] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ]

PWSID #

Sample Disposal: Lab [ ] Special [ ]

EDDS: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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September 6, 2018

Ms. Elaine Wilson
DC WASA
5000 Overlook Avenue, S.W.
Washington, DC 20032

Certificate of Analysis

Project Name:	**Digest BFP BOC**	Workorder:	**2335751**
Purchase Order:	**180018**	Workorder ID:	**Digest BFP BOC**

Dear Ms. Wilson:

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 30, 2018.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Ryan Maisano , Mr. Mark Ramirez

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2335751 Digest BFP BOC

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2335751001	Digest BFP BOC 3rd Qtr 2018	Solid	8/30/2018 11:00	8/30/2018 22:00	Collected by Client

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2335751 Digest BFP BOC

Lab ID: **2335751001** Date Collected: 8/30/2018 11:00 Matrix: Solid

Sample ID: **Digest BFP BOC 3rd Qtr 2018** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acetone	724		ug/kg	80.7	37.1	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Benzene	7.7J	J	ug/kg	16.1	4.0	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Bromochloromethane	ND		ug/kg	16.1	4.0	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Bromodichloromethane	ND		ug/kg	16.1	5.7	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Bromoform	ND		ug/kg	16.1	4.2	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Bromomethane	ND		ug/kg	16.1	4.2	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
2-Butanone	200		ug/kg	80.7	25.8	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Carbon Disulfide	31.2		ug/kg	16.1	5.1	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Carbon Tetrachloride	ND		ug/kg	16.1	4.1	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Chlorobenzene	ND		ug/kg	16.1	4.1	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Chlorodibromomethane	ND		ug/kg	16.1	5.5	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Chloroethane	ND		ug/kg	40.3	6.9	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Chloroform	ND		ug/kg	16.1	4.3	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Chloromethane	ND		ug/kg	16.1	4.4	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
1,2-Dibromo-3-chloropropane	ND		ug/kg	40.3	23.4	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
1,2-Dibromoethane	ND		ug/kg	16.1	4.4	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
1,1-Dichloroethane	ND		ug/kg	16.1	4.0	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
1,2-Dichloroethane	ND		ug/kg	16.1	4.0	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
1,1-Dichloroethene	ND		ug/kg	16.1	4.2	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
cis-1,2-Dichloroethene	ND		ug/kg	16.1	4.0	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
trans-1,2-Dichloroethene	ND		ug/kg	16.1	4.2	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
1,2-Dichloropropane	ND		ug/kg	16.1	4.8	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
cis-1,3-Dichloropropene	ND		ug/kg	16.1	4.4	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
trans-1,3-Dichloropropene	ND		ug/kg	16.1	4.7	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Ethylbenzene	ND		ug/kg	16.1	5.5	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
2-Hexanone	ND		ug/kg	80.7	22.6	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
4-Methyl-2-Pentanone(MIBK)	ND		ug/kg	80.7	30.7	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Methylene Chloride	26.4		ug/kg	16.1	6.3	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Styrene	ND		ug/kg	16.1	4.0	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
1,1,2,2-Tetrachloroethane	ND		ug/kg	16.1	4.5	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Tetrachloroethene	ND		ug/kg	16.1	4.8	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Toluene	105		ug/kg	16.1	5.4	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Total Xylenes	66.0		ug/kg	48.4	11.3	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
1,1,1-Trichloroethane	ND		ug/kg	16.1	5.0	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
1,1,2-Trichloroethane	ND		ug/kg	16.1	4.5	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2
Trichloroethene	14.1J	J	ug/kg	16.1	4.0	SW846 8260B	8/31/18 12:42 TMP	9/6/18 00:33	TMP	A2

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2335751 Digest BFP BOC

Lab ID: **2335751001** Date Collected: 8/30/2018 11:00 Matrix: Solid

Sample ID: **Digest BFP BOC 3rd Qtr 2018** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Vinyl Chloride	ND		ug/kg	16.1	4.0	SW846 8260B	8/31/18 12:42	TMP	9/6/18 00:33	TMP	A2
o-Xylene	ND		ug/kg	16.1	4.7	SW846 8260B	8/31/18 12:42	TMP	9/6/18 00:33	TMP	A2
mp-Xylene	66.0		ug/kg	32.3	6.7	SW846 8260B	8/31/18 12:42	TMP	9/6/18 00:33	TMP	A2
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	111		%	56 - 124		SW846 8260B	8/31/18 12:42	TMP	9/6/18 00:33	TMP	A2
4-Bromofluorobenzene (S)	70.3		%	51 - 128		SW846 8260B	8/31/18 12:42	TMP	9/6/18 00:33	TMP	A2
Dibromofluoromethane (S)	112		%	62 - 123		SW846 8260B	8/31/18 12:42	TMP	9/6/18 00:33	TMP	A2
Toluene-d8 (S)	111		%	59 - 131		SW846 8260B	8/31/18 12:42	TMP	9/6/18 00:33	TMP	A2
SEMIVOLATILES											
Acenaphthene	61.9J	J	ug/kg	147	17.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Acenaphthylene	ND		ug/kg	147	20.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Anthracene	46.3J	J	ug/kg	147	23.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Benzo(a)anthracene	134J	J	ug/kg	147	14.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Benzo(a)pyrene	ND		ug/kg	147	11.8	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Benzo(b)fluoranthene	ND		ug/kg	147	14.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Benzo(g,h,i)perylene	ND		ug/kg	147	14.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Benzo(k)fluoranthene	ND		ug/kg	147	14.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
4-Bromophenyl-phenylether	ND		ug/kg	295	26.5	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Butylbenzylphthalate	2990		ug/kg	295	20.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Carbazole	277J	J	ug/kg	295	20.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
4-Chloro-3-methylphenol	ND		ug/kg	589	29.5	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
4-Chloroaniline	149J	J	ug/kg	589	35.3	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
bis(2-Chloroethoxy)methane	ND		ug/kg	295	26.5	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
bis(2-Chloroethyl)ether	ND		ug/kg	295	38.3	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	295	44.2	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2-Chloronaphthalene	ND		ug/kg	295	17.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2-Chlorophenol	ND		ug/kg	589	23.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
4-Chlorophenyl-phenylether	ND		ug/kg	295	23.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Chrysene	169		ug/kg	147	14.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
mp-Cresol	979		ug/kg	589	23.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
o-Cresol	ND		ug/kg	589	32.4	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Di-n-Butylphthalate	443		ug/kg	295	23.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Di-n-Octylphthalate	ND		ug/kg	295	20.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Dibenzo(a,h)anthracene	ND		ug/kg	147	17.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Dibenzofuran	45.1J	J	ug/kg	295	23.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
1,2-Dichlorobenzene	ND		ug/kg	295	26.5	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
1,3-Dichlorobenzene	ND		ug/kg	295	20.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A

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ANALYTICAL RESULTS

Workorder: 2335751 Digest BFP BOC

Lab ID: **2335751001** Date Collected: 8/30/2018 11:00 Matrix: Solid

Sample ID: **Digest BFP BOC 3rd Qtr 2018** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
1,4-Dichlorobenzene	ND		ug/kg	295	20.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
3,3-Dichlorobenzidine	ND		ug/kg	589	112	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2,4-Dichlorophenol	105J	J	ug/kg	589	23.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Diethylphthalate	ND		ug/kg	295	23.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2,4-Dimethylphenol	ND		ug/kg	589	44.2	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Dimethylphthalate	ND		ug/kg	295	20.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2,4-Dinitrophenol	ND		ug/kg	1180	118	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2,4-Dinitrotoluene	ND		ug/kg	295	26.5	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2,6-Dinitrotoluene	ND		ug/kg	295	35.3	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
bis(2-Ethylhexyl)phthalate	20300		ug/kg	295	20.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Fluoranthene	386		ug/kg	147	14.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Fluorene	71.4J	J	ug/kg	147	17.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Hexachlorobenzene	ND		ug/kg	295	32.4	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Hexachlorobutadiene	ND		ug/kg	295	29.5	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Hexachlorocyclopentadiene	ND		ug/kg	589	32.4	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Hexachloroethane	ND		ug/kg	295	26.5	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	147	20.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Isophorone	ND		ug/kg	295	17.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	589	76.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2-Methylnaphthalene	ND		ug/kg	295	14.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Naphthalene	62.0J	J	ug/kg	147	17.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2-Nitroaniline	ND		ug/kg	589	35.3	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
3-Nitroaniline	ND		ug/kg	589	58.9	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
4-Nitroaniline	ND		ug/kg	589	23.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Nitrobenzene	ND		ug/kg	295	35.3	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2-Nitrophenol	ND		ug/kg	589	32.4	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
4-Nitrophenol	ND		ug/kg	589	41.2	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
N-Nitrosodimethylamine	ND		ug/kg	295	44.2	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
N-Nitroso-di-n-propylamine	195J	J	ug/kg	295	23.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
N-Nitrosodiphenylamine	ND		ug/kg	295	23.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Pentachlorophenol	ND		ug/kg	589	76.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Phenanthrene	302		ug/kg	147	14.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Phenol	12700		ug/kg	589	29.5	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Pyrene	399		ug/kg	147	14.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
1,2,4-Trichlorobenzene	ND		ug/kg	295	17.7	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2,4,5-Trichlorophenol	ND		ug/kg	589	35.3	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2,4,6-Trichlorophenol	ND		ug/kg	589	35.3	SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
DIOXIN SCREEN											

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ANALYTICAL RESULTS

Workorder: 2335751 Digest BFP BOC

Lab ID: **2335751001** Date Collected: 8/30/2018 11:00 Matrix: Solid

Sample ID: **Digest BFP BOC 3rd Qtr 2018** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
2,3,7,8-TCDD	ND	3	ug/kg	20.6	20.6	SW846 8270D	9/4/18 12:40	J1H	9/5/18 17:37	DHF	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	33.9		%	19 - 132		SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2-Fluorobiphenyl (S)	55.2		%	40 - 110		SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
2-Fluorophenol (S)	41.8		%	26 - 116		SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Nitrobenzene-d5 (S)	57.7		%	38 - 112		SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Phenol-d5 (S)	43.6		%	35 - 111		SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
Terphenyl-d14 (S)	62.7		%	45 - 126		SW846 8270D	9/4/18 12:40	J1H	9/5/18 10:11	DHF	A
PESTICIDES											
Aldrin	ND		ug/kg	24.4	7.9	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
beta-BHC	ND		ug/kg	24.4	2.6	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
delta-BHC	ND		ug/kg	24.4	1.9	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
gamma-BHC	ND		ug/kg	24.4	2.0	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
alpha-Chlordane	ND		ug/kg	24.4	2.6	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
gamma-Chlordane	ND		ug/kg	24.4	4.2	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
4,4'-DDD	ND		ug/kg	47.3	3.9	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
4,4'-DDE	ND		ug/kg	47.3	6.5	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
4,4'-DDT	ND		ug/kg	47.3	5.5	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Dieldrin	ND		ug/kg	47.3	5.5	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Endosulfan I	ND		ug/kg	24.4	3.0	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Endosulfan II	ND		ug/kg	47.3	9.9	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Endosulfan Sulfate	ND		ug/kg	47.3	3.2	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Endrin	ND		ug/kg	47.3	3.4	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Endrin Aldehyde	ND		ug/kg	47.3	5.2	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Endrin Ketone	ND		ug/kg	47.3	6.6	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
alpha-HCH (alpha-BHC)	ND	2	ug/kg	24.4	2.2	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Heptachlor	ND		ug/kg	24.4	2.4	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Heptachlor Epoxide	ND		ug/kg	24.4	2.4	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Methoxychlor	ND		ug/kg	47.3	6.3	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Toxaphene	ND		ug/kg	502	83.2	SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyl (S)	32.5		%	30 - 135		SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
Tetrachloro-m-xylene (S)	33.6		%	30 - 111		SW846 8081B	9/3/18 15:10	J1H	9/5/18 04:20	RWS	A
WET CHEMISTRY											
Cyanide, Total	1.6	1	mg/kg	0.75	0.27	SW846 9012B	9/5/18 13:30	JXB	9/5/18 14:36	JXB	A
Hexane Extractable Material	45600		mg/kg	591	200	SW846 9071B			9/4/18 13:30	MPP	A

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ANALYTICAL RESULTS

Workorder: 2335751 Digest BFP BOC

Lab ID: **2335751001** Date Collected: 8/30/2018 11:00 Matrix: Solid

Sample ID: **Digest BFP BOC 3rd Qtr 2018** Date Received: 8/30/2018 22:00

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	Cntr
Moisture	66.5		%	0.1	0.01	S2540G-11		9/4/18 11:27	AXD	A
Total Solids	33.5		%	0.1	0.01	S2540G-11		9/4/18 11:27	AXD	A

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2335751 Digest BFP BOC

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2335751001	1	Digest BFP BOC 3rd Qtr 2018	SW846 9012B	Cyanide, Total
The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits.				
2335751001	2	Digest BFP BOC 3rd Qtr 2018	SW846 8081B	alpha-HCH (alpha-BHC)
This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.				
2335751001	3	Digest BFP BOC 3rd Qtr 2018	SW846 8270D	2,3,7,8-TCDD
A SIM screen analysis was run for Dioxin and no peaks were observed.				

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2335751 Digest BFP BOC

Lab ID	Sample ID	Analysis Method	Prep Method
2335751001	Digest BFP BOC 3rd Qtr 2018	S2540G-11	
2335751001	Digest BFP BOC 3rd Qtr 2018	SW846 8081B	SW846 3546
2335751001	Digest BFP BOC 3rd Qtr 2018	SW846 8260B	SW846 5035
2335751001	Digest BFP BOC 3rd Qtr 2018	SW846 8270D	SW846 3546
2335751001	Digest BFP BOC 3rd Qtr 2018	SW846 9012B	SW846 9012B
2335751001	Digest BFP BOC 3rd Qtr 2018	SW846 9071B	

Analytical Laboratory Services, Inc.
Environmental ▪ Industrial Hygiene ▪ Field Services
34 Dogwood Lane ▪ Middletown, PA 17057 ▪ 717.944.5541 ▪ Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALSI

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

CO
ALS

2335751

zxzx of xyxy

Client Name: District of Columbia Water and Sewer Authority
Address: 5000 Overlook Ave, SW
Washington, D.C. 20032
Contact: Mark Ramirez
Phone#: 202-787-4002
Project Name/#: Bio/Quarterly
Bill To: Accounts Payable Office- 4th Floor

TAT ☐ Normal-Standard TAT is 10-12 business days.
☐ Rush-Subject to ALSI approval and surcharges.
Date Required: _____ Approved By: _____
Email? ☐ -Y _____
Fax? ☐ -Y No.: _____

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Container Type	Container Size	Preservative	Cyanide, % solids	Total O&G plus TPH - SW9071	VOC (SW 8260)	semi-volatiles (SW846-8270) - including TCDD dioxin (see comments)	Pesticides (SW846-8081)
					CG	8 OZ	None					
					CG	8 OZ	None					
					CG	8 oz	None					
					AG	8oz	None					
					AG	8oz	None					
					Enter Number of Containers Per Sample or Field Results Below.							
Digest BFP BOC 3rd Qtr 2018	8/30/2018	1100	G	SL	1	1	1	1*	1			

ANALYSES/METHOD REQUESTED

Receipt Information (completed by Receiving Lab)
Cooler Temp: 4°C Therm ID: 359
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?	✓		Kan
(if present) Seals Intact?	✓		↓
Received on Ice?	✓		↓
COC/Labels Complete/Accurate?		✓	↓
Cont. in Good Cond.?	✓		
Correct Containers?	✓		
Correct Sample Volumes?	✓		
Correct Preservation?	✓		
Headspace/Volatiles?			

Courier/Tracking #: MD1808300015,4

Sample/COC Comments
*plus hexachlorobenzene, hexachlorobutadiene and toxaphene
*6 total containers
WW 8-31-18

ALSI Field Services: oPickup oLabor oComposite Sampling oRental Equipment oOther: _____

Project Comments: *Run % solids and report data as mg/kg dry weight

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	8-30	1400	2	8/30	1957
3	8/30	1600	4 COMMON COURIER / ALS COURIER		
5 COMMON COURIER / ALS COURIER			6	8/30/2018	2200
7			8		
9			10		

Data Deliverables: ☐ Standard ☐ CLP-like ☐ USACE ☐
Special Processing: USACE ☐ Navy ☐ ☐
State Samples Collected In: ☐ NY ☐ NJ ☐ PA ☐ NC ☐
Reportable to PADEP? Yes ☐ PWSID # _____
Sample Disposal: Lab ☐ Special ☐
EDDS: ~~Format Type~~ _____

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Oil=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER MAILING PINK - FILE GOLDENROD - CUSTOMER COPY Rev 8/04

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