

FACT SHEET

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 3
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029
NPDES Permit No. DC0000094**

The United States Environmental Protection Agency (EPA) is Proposing the Reissuance of a National Pollutant Discharge Elimination System (NPDES) Permit to Discharge Pollutants Pursuant to the Provisions of the Clean Water Act (CWA) For:

**Pepco Benning Service Center
701 Ninth Street, NW Room 6220
Washington, DC 20068**

**FACILITY LOCATION:
3400 Benning Road NE
Washington, D.C. 20019**

**RECEIVING WATER:
Anacostia River**

ACTION TO BE TAKEN:

EPA is finalizing the reissuance of the NPDES permit for Pepco Benning Service Center. The final permit is intended to replace the 2009 permit which was administratively continued past the June 19, 2014 expiration date. The reissued permit takes effect on June 1, 2021.

On November 30, 2020 EPA offered a draft permit for public notice and comment. The comment period closed on December 30, 2020. EPA received nineteen (19) comments from the permittee and six (6) comments from the District of Columbia's Department of Energy and Environment. See Attachment 5 to this fact sheet for the Response to Comments document. In considering all of these comments and incorporating some of them into final permit language, EPA determined that the changes were not substantive enough to justify a second public notice and comment period.

EPA received a Clean Water Act Section 401 certification from the District Department of Energy and Environment on January 22, 2021. The certification contained conditions that were incorporated into the final permit in accordance with Clean Water Act Section 401, 33 U.S.C. § 1341, and federal regulations at 40 C.F.R. §§ 121.10 and 121.12.

1. Discharges authorized by this permit must comply with the District of Columbia Water Pollution Control Act § 8-103.06 to ensure that District waters, waters in adjacent and downstream states, and the beneficial uses of these waters will not be harmed or degraded by the discharges.

2. Discharges authorized by this permit must comply with §§ 1104.1 and 1104.8 of Chapter 11 of Title 21 District of Columbia Municipal Regulations to attain and maintain designated uses of the District of Columbia waters.
3. To comply with the District's monitoring and reporting requirements, the permittee shall notify the Associate Director, Inspection and Enforcement Division any noncompliance of this permit. All information shall be provided orally within 24 hours from the time the permittee becomes aware of the violation in accordance with District of Columbia Water Pollution Control Act § 8-103-08(a)(1).
4. To comply with the District's inspection and enforcement requirements, the permittee shall allow the District to inspect the permitted facility in accordance with District of Columbia Water Pollution Control Act § 8-103-15.

Changes made to the permit as a result of comments received

1. In Part III.C. of the permit (pg 25), the statement "but is not limited to, a bathymetry survey and water modeling of the receiving stream, plum mapping survey, and any other" was changed to "including where appropriate a bathymetry survey and water quality modeling of the receiving stream and a plume mapping survey."
2. In Part III.E.1.f of the permit (pg 28), for clarity purposes, the sentence "The Limitations and Monitoring section in Part I of this permit requires monitoring for certain parameters at Outfalls 013 and 101 for which acute toxicity testing is required. These parameters shall be analyzed on samples taken on the same day as the samples used for toxicity testing." was changed to "Samples used for toxicity testing shall be taken on the same day as samples taken for compliance with requirements under the Limitations and Monitoring section in Part I of this permit."
3. In Part III.F.3 of the permit (pg 28), for clarity purposes, the sentence " The SWPPP shall include best management practices (BMPs) in accordance with Part III.G of this permit for on-site activities that will minimize the discharge of pollutants in stormwater to waters of the District." was changed to "The SWPPP shall incorporate the facility's Best Management Practices (BMP) Plan in accordance with Part III.G of this permit."
4. In Part III.F.4.g.iii of the permit (pg 32), the following phrase was removed "Any records of the collection and analysis of samples" because it is duplicative of the previous item no. ii.
5. Part III.G.4.b.I.ii of the permit (pg 33), the abbreviation "etc" was removed at the end of the sentence and instead the following statement was added for clarification: "the evaluation should include a prediction of the direction, rate of flow, and total quantity of pollutants that could be discharged from the facility."
6. Part III.G.9 of the permit (pg 34), incorrectly references Part II, Section G and it should be Part III, therefore, the permit was changed accordingly.
7. The word "placeholder" was removed from Part III.I of the permit.

Table of Contents

1.0	Facility Summary	4
2.0	Special Conditions in the 2009 Permit.....	8
3.0	Special Conditions in the Current Permit	11
4.0	Receiving Water Characterization	13
5.0	Basis for Effluent Limitations	18
6.0	Water Quality Based Effluent Limitations (WQBELs)	19
7.0	Reasonable Potential Analysis	19
8.0	RP Discussion	26
9.0	Endangered Species Protection	28
10.0	National Historic Preservation Act	28
11.0	Anti-Backsliding	28
12.0	Antidegradation Statement.....	29
	Attachment 1. Current and Historical Buildings.....	31
	Attachment 2. Aerial view of the Pepco Benning Road Service Center as of 2018.	33
	Attachment 3. Site Drainage Area Map and corresponding monitoring points and outfalls.	34
	Attachment 4. Sub-drainage areas.....	35
	Attachment 5. Response to Comments	36

1.0 Facility Summary

1.1 Site Description

Potomac Electric Power Company (Pepco), owns the Benning Service Center (Site or Facility) in Washington, DC, a service center for Pepco's electric transmission and distribution system. The Site was formerly also the location of the Benning Generating Station, but the power plant was shut down in June 2012, and the power plant buildings were demolished in 2014 and 2015. Process wastewater and stormwater originating from the former power plant was permitted under National Pollutant Discharge Elimination System (NPDES) permit no. DC0000094, which authorized discharges via Outfalls 013 and 101 to the Anacostia River. Following the shutdown and demolition of the power plant, the effluent discharged from the site via Outfalls 013 and 101 consists only of stormwater. Pepco continues to sample and analyze stormwater in accordance with the facility's NPDES permit.

The Benning Service Center is located at 3400 Benning Road N.E., Washington, D.C. Occupying approximately 77 acres, the Benning facility is composed of three electric substations and a variety of administration, operation and maintenance activities, including office facilities, fleet services maintenance and a transformer maintenance shop, that support Pepco's electric transmission and distribution system throughout the Washington, D.C. area.

The facility's current NPDES Permit was issued June 19, 2009 (the 2009 permit). At that time, a steam electric generating station was still in operation at the site and, therefore, the permit listed the facility name as the "Benning Generating Station." In the intervening period, however, the generating station has been shut down, decommissioned, and removed from the site. The power plant ceased operations in June 2012. Two large cooling towers were dismantled and removed from the site in 2013. The remaining power plant buildings and structures were demolished and removed from the site in 2014 and 2015. The concrete basins for the cooling towers were removed in 2017, and two stormwater treatment basins were constructed within the footprints of the basins. In addition to the cooling towers and main power plant building, structures removed from the site since the permit was last renewed including the main smoke stacks, several large above-ground fuel storage tanks, two fuel oil pump houses, and several large station transformers. See Attachment 1 for a depiction of current and historical buildings at the site and Attachment 2 for an aerial view of the site as of 2018. The facility name has been updated to "Pepco Benning Service Center" to reflect the current activities at the site.

1.2 Discharge Description

The nature of the effluent discharges from the Benning facility has also changed significantly since the 2009 NPDES permit renewal. The process water discharges at the Site have ceased as a result of the generating station shutdown and removal. Discharges of stormwater occur at the facility via Outfalls 013, 101, 014, 015, 016, 005, 006, and 401.

1.2.1 Outfalls Discharging through the D.C. Municipal Separate Storm Sewer System (MS4) to the Anacostia River

Discharges from Outfalls 014, 015, 016, 005, 006, and 401 ("MS4 outfalls") were previously authorized under the District's MS4 permit (NPDES no. DC0000221). The Permittee analyzed one sample at each of the MS4 outfalls in 2020 at the request of the District Department of Energy and Environment (DOEE) and submitted these results to EPA and DOEE. Sampling data at these outfalls showed concentrations of

some pollutants to be above the District's water quality standard for that pollutant. A monitoring only requirement is included in the permit to collect data which will better characterize the stormwater discharges from these outfalls. The permit also includes a reopener clause at each MS4 outfall that states the permit may be reopened and modified if the monitoring data show that effluent limits or additional requirements are necessary to meet water quality standards.

The following table summarizes the drainage areas, internal and external outfalls, and operations contributing to the flow at each active outfall. See Attachment 3 for the site drainage area map and Attachment 4 for the sub drainage areas.

Outfall Number	Average Flow (mgd)	Drainage Area (acres)	Operations Contributing Flow	
013	1.01	50.27	Sub Drainage Area (SDA) 02	runoff from east side of former power plant, yard drains and internal roadways
			SDA 06	runoff from yard drains and roadways, Buildings 29, 35, 36, and 65, Substation 45 and overflow from fueling island bio-retention ponds and transformer storage area
			SDA 07	runoff from lay down area, transformer storage area and yard drains
			SDA 08	overflow from bio-retention ponds within former cooling tower basins
			SDA 10	runoff from laydown and material storage areas
			SDA 11	runoff from Building 68, transformer storage areas, yard drains and internal roadways
			SDA 12	runoff from Building 44, parking lot, material storage, transformer / drum storage areas, yard drains and internal roadways
			SDA 13	substation 41 transformer containment discharge
			SDA 14	runoff from Building 59, south side of Building 75, and parking lots
			SDA 15	runoff from Buildings 41, 42, 60, 61 and south side of Building 40, laydown areas, and internal roadways
			SDA 16	runoff from Building 88, transformer storage, laydown areas, and internal roadways
			SDA 17	runoff from Building 57 and south side of Building 54, parking lots, transformer / drum storage areas
			SDA 18	runoff from east side of Building 59 and parking lot
			SDA 19	runoff from south side of Building 42 and parking lot
			SDA 20	runoff from Substation 41, Buildings 45, 66 and 67, laydown areas, transformer storage, bio-retention planters, and internal roadways
			SDA 21	runoff from north side of Building 56, parking lots, and internal roadways
			SDA 22	runoff from laydown areas and parking lot
			SDA 24	runoff from Building 56, north side of Building 54 and parking lot
			SDA 28	runoff from Substation 7 building, parking lot and internal roadways
			SDA 29	runoff from Building 38 and yard drains
			SDA 30	runoff from laydown areas, yard drains and internal roadways
			SDA 31	runoff from laydown areas and internal roadways
			SDA 32	runoff from north side of Building 75, southwest corner of Building 88, parking lot and internal roadways

Outfall Number	Average Flow (mgd)	Drainage Area (acres)	Operations Contributing Flow	
			SDA 33	runoff from laydown areas
101	0.14	4.38	Stormwater collected in drop inlets on the west side of the Benning facility connected to a separate underground storm drain system.	
014	0.28	2.42	Runoff from the northeast side of property including roadways and storage areas (SDA 23)	
015	0.43	4.34	Runoff from Substation 7 and roadways all collect in Water Quality Structure prior to discharge (SDA 27)	
016	0.26	2.27	Runoff from internal roadways and building 32 (SDA 5)	
005	0.07	0.59	Runoff from parking area (SDA 25)	
006	0.28	2.27	Runoff from parking areas and Benning Road entrance (SDA 9)	
401	0.14	1.12	Runoff from Substation 7 (SDA 26)	

The following table is a list of outfalls and monitoring points that have been removed from the permit.

Outfall/Monitoring point	Discharge Description	Status	Reason
201 (internal discharge to Outfall 013)	Stormwater from former power plant area, demineralized wash water, discharge associated with former ash settling tank, former tank drainage areas, and hydrostatic	Eliminated except for stormwater collected in drop inlets near the former power plant which flows through the structure for the former oil/water separator and then to outfall 013	Discharges associated with the power plant that has been demolished.
202 and 203 (internal discharges to Outfall 013)	Cooling tower blow down and basin wash water units 15 and 16	Eliminated	No longer applicable. Plant has been demolished.
003 (internal discharge to Outfall 013)	Oil/water separator for treatment of stormwater removed from Pepco equipment vaults around the city	To be eliminated with permit reissuance.	Following treatment at the oil/water separator, stormwater from off-site equipment vaults will be sent to either DC Water or shipped offsite.
406	Oil/water separator flows from inlet nos. 59, 61, 62, 63, 97, and 57.	Eliminated	No longer applicable. Plant has been demolished.

1.3 Stormwater Best Management Practices (BMPs)

Pepco employs a number of BMPs and other measures to manage and treat stormwater discharges at the Benning facility including the use of filters, screens, and absorbent booms at all storm drain inlets. These

measures would be continued under and incorporated into the renewed permit. Pepco first employed many of these BMPs pursuant to a Total Maximum Daily Load (“TMDL”) Implementation Plan required under the 2009 NPDES permit, special condition in Part VII.C in that permit. That plan was to be implemented in three phases: stormwater inlet maintenance, metals management, and future recommendations for additional BMPs and low impact development structures. AMEC Foster Wheeler, *Benning Service Center Phase 3 TMDL Implementation Plan for Compliance with the NPDES Permit* (Dec. 2014) (“Phase 3 Compliance Plan”). Pepco completed implementation of the first two phases of control measures to reduce metal concentrations in stormwater as of December 2012, and then identified supplemental actions to further reduce metal levels in stormwater discharges in the Phase 3 Compliance Plan submitted to EPA in late 2014. These supplemental actions included identifying and addressing potentially significant contributors to metals in stormwater; evaluating and enhancing existing stormwater inlet controls; investigating potential groundwater infiltration to the storm drain system; conducting targeting storm drain inlet sampling to identify areas with the greatest metals loading and opportunities for additional controls; and updating the facility’s Stormwater Pollution Prevention Plan (SWPPP).

Requirements to implement and maintain additional stormwater system BMPs and to install and operate a stormwater treatment system at the Benning facility were mandated under a Consent Decree entered into by Pepco and the United States, on behalf of EPA, on May 19, 2017. Consent Decree, *United States v. Pepco*, Civil No. 1:15-cv-01845-JEB, Doc. 18 (D.D.C. May 19, 2017). In accordance with the Consent Decree, Pepco has continued to implement these various BMPs and has installed a stormwater treatment system for stormwater flows at certain “hot spots” at the facility (i.e., areas identified as contributing relatively higher contaminant loads to stormwater). The consent decree with EPA is discussed in more detail in section 1.4 below.

1.4 2017 Consent Decree with EPA

On May 19, 2017 EPA and Pepco entered into a Consent Decree (CD) to address Pepco’s violations of its Clean Water Act (CWA) NPDES permit limits and requirements for stormwater discharges from the facility to the Anacostia River under the 2009 permit. The CD outlines compliance requirements (Section VI of the CD) in five key areas: stormwater best management practices, treatment system, corporate practices and recordkeeping, stormwater pollution prevention plan, and sampling. The CD also includes specific reporting requirements (Section X.68 of the CD) and stipulated penalties for exceeding permit limits (Section XI.78 of the CD).

The CD also required Pepco to undergo a stormwater mitigation project (Section VIII of the CD) or “Stormwater Retention Project” by constructing various stormwater controls designed to capture, retain, and filter or treat stormwater that currently drains to Outfall 101. This was to be completed before June 30, 2018. Pepco reported in the second quarter 2018 status report that the Stormwater Retention Project described in Section VIII of the Consent Decree was not technically feasible and has paid the stipulated penalty for not implementing this project. Instead, Pepco is evaluating alternative options for treating stormwater discharges to Outfall 101. It should be noted that evaluating alternative options for treating stormwater discharges at Outfall 101 is not required under the terms and conditions of the Consent Decree or current permit. For more information see the CD which is included in the permit’s administrative record.

1.5 2011 Consent Decree with District Department of Energy and Environment

The Pepco Benning Road Facility is one of several properties along the Anacostia River that are suspected sources of contamination. On December 1, 2011, Pepco entered into a Consent Decree with the District

of Columbia to resolve claims for liability under the Resource Conservation and Recovery Act, and under Section 107 of the Comprehensive Environmental Response, Compensation, and Liability Act, and under Section 401(a)(2) of the District of Columbia Brownfield Revitalization Act of 2000. The District's Consent Decree with Pepco is part of the District's larger effort to address contamination in and along the lower Anacostia River. As part of this Decree Pepco agreed to perform a Remedial Investigation and Feasibility Study (RI/FS) at Pepco's Benning Road facility and a segment of the Anacostia River that is adjacent to the site. A final Remedial Investigation Report was submitted to DOEE on February 28, 2020 and can be accessed on DOEE's website here: <https://doee.dc.gov/page/pepco-benning-road-facility-plans-and-deliverables>. More information about the RI/FS can be found in the RI/FS Scope of Work which can also be found on DOEE's website. For more information see the District's CD which is included in the permit's administrative record. DOEE's consent decree does not affect the conditions and requirements of this permit.

1.6 Environmental Justice (EJ)

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies¹. EPA has this goal for all communities and persons across the United States. EPA is committed to providing an environment where all people enjoy the same degree of protection from environmental and health hazards and equal access to the decision-making process to maintain a healthy environment in which to live, learn, and work. Although the power plant has been shut down for many years, historical operations at the site have led to ongoing public engagement between Pepco and the surrounding community and local action groups making this permit a candidate for environmental justice considerations. EPA's Office of Environmental Justice is working with community stakeholders in D.C. to constructively and collaboratively address community concerns related to the reissuance of this NPDES permit.

2.0 Special Conditions in the 2009 Permit

The 2009 permit contained eight special conditions listed in Part VII. The current permit also contains Special Conditions which are discussed below in Section 3.0.

2.1 Special Condition A. PCB sampling and Limits

Under the 2009 Permit, the permittee was required to analyze for PCBs using EPA approved Method 608 over the permit term to ensure compliance with the "no discharge" PCB limit in Part I of the permit. The permittee was required to submit annually to EPA the laboratory reports showing the actual recorded values of PCBs and the results of the EPA Method 608 quality control checks. The permittee was required to report on the DMR a value of zero if the result was below the minimum level (ML) of detection for the test. The permittee was also required to test samples using Method 1668B² for screening purposes. If the results of the samples tested using Method 1668B are at or above the detection limit, the testing was to be continued during the life of the permit. A review of the lab data sheets from 2014-2018

¹ Chapter 11 of EPA's Permit Writers Manual, 2010.

² Method 1668 is not an EPA-approved test method under 40 C.F.R. Part 136 and therefore is not used for compliance purposes. Although Method 1668 is not an EPA-approved method, it was developed by EPA and can detect PCB congeners at much lower concentrations. Method 1668 is generally used for studies and screening purposes because of its low detection levels.

showed some samples that were tested using Method 1668C³ had PCBs above the specified detection limit. It should be noted that the detection limits for Method 1668C are expressed in picograms per liter (pg/L), and 1 pg is equivalent to 0.000001 micrograms (µg).

The permittee was also required to submit a PCB Source Tracking and Pollutant Minimization Plan to determine the source or sources of the PCB discharge and identify possible measures and controls for each potential source.⁴ The permittee found potential PCB sources to be areas that are used to store or process transformers, capacitors, or hydraulic equipment and areas that had historic spills or leaks, some of which drain to Outfalls 013 and 101. The permittee has implemented BMPs in these areas of potential sources of PCBs. The DMR data submitted over the last permit term show PCBs are not detected at or above 1 µg/L at Outfalls 013 and 101. The data submitted annually using Method 1668, the more sensitive method, has lower detection levels and shows PCBs present at several orders of magnitude lower than with method 608. The permittee has met the requirements in the 2009 Permit of this special condition.

2.2 Special Condition B. Monitoring at Outfall 013

The 2009 Permit required the permittee to monitor for Outfall 013 at a manhole (currently named Manhole #33) located prior to where the 54-inch pipe discharges to the Anacostia River. The permittee was also required to note the date, time and all other conditions specified in Part A. of the permit as well as the tidal conditions at the time of monitoring. The permittee has met the requirements of this special condition.

2.3 Special Condition C. Best Management Practices (BMPs)

The 2009 Permit required the permittee to maintain stormwater BMPs in the facility's SWPPP which are intended to be managed at internal monitoring points or other internal positions as required to reduce pollutant loads. The permittee has met the requirements of this special condition.

2.4 Special Condition D. Iron

No later than 12 months after the effective date of the 2009 permit, the permittee was required to conduct a study to determine the source(s) of iron released in the facility's stormwater discharge and identify a pollutant minimization strategy to reduce the presence of iron in their stormwater discharge. Within 3 years of the 2009 permit effective date, the BMPs were required to be identified and installed to ensure the iron concentrations were at or below 1.0 mg/L. On July 19, 2010, Pepco submitted an Iron Source Tracking Study and Pollutant Minimization Plan to EPA. The study identified potential sources of iron and various pollutant minimization measures at each identified source. More detail on the Iron Source Tracking and Minimization Plan can be found in the plan itself which is in the permit's administrative record. Although the permittee has met the requirements of this special condition, iron levels in the

³ The 2009 permit required the use of Method 1668B (published January 2009), however, the permittee used Method 1668C (published April 2010). The "C" version of Method 1668 revises and improves the quality control acceptance criteria in EPA Method 1668B to allow the upper recovery limit for some congeners to be above 100 percent as well as other changes which are summarized in the method document named "Method 1668C Chlorinated Biphenyl Congeners in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS" which can be found in the permit's administrative record. Both Method 1668B and 1668C are acceptable methods for purposes of this Permit, with Method 1668C being a more refined method, and can be used in determining chlorinated biphenyl congeners in wastewater matrices. See the permit's administrative record for more information on this Method 1668C.

⁴ See the permit's administrative record for more detail on the PCB Source Tracking and Pollutant Minimization Plan.

stormwater discharge at Outfalls 013 and 101 continue on occasion to be above the District's Water Quality Criterion of 1.0 mg/L.

2.5 Special Condition E. TMDL Implementation Plan

No later than one year after the effective date of the 2009 permit the permittee was required to submit a TMDL Implementation Plan that describes all previous, on-going, and future efforts by the permittee to meet pollutant reduction loads required by the Anacostia River TMDLs for TSS, iron, copper, lead, and zinc as well as cadmium and nickel (non-TMDL metals). On July 19, 2010, Pepco submitted a TMDL Implementation Plan to EPA. The Plan identified potential sources of heavy metal and TSS pollutants and an implementation schedule which included evaluating additional stormwater control measures and recommending new activities to achieve TMDL goals. The plan called for implementation in three phases. Phase I included storm drain inlet maintenance. Phase II included metals management such as removing unnecessary stored metal, improving good housekeeping measures such as repair and maintenance of secondary containment structures and covering dumpsters. Phase III included future recommendations for additional BMPs and low impact development structures, if necessary, to meet the permit requirements.

The Phase I and Phase II control measures were designed and implemented between 2010 and 2012. These measures were effective in achieving significant reductions in metal concentrations in stormwater discharged from the facility compared to the baseline concentrations prior to the 2009 permit renewal. In particular, based on the stormwater sampling conducted in January 2013 following the completion of Phase I and Phase II control measures, copper concentrations were reduced by 73 percent and zinc concentrations were reduced by 87 percent. Despite these reductions, the BMPs employed to that point were not sufficient to meet the new numeric permit limits for copper and zinc. As a result, Pepco implemented Phase III of the TMDL Implementation Plan in accordance with a supplemental compliance plan submitted to USEPA in December 2014.

Although the permittee has met the requirements of this special condition, heavy metals in the stormwater discharge at Outfall 101 continue to be above the District's Water Quality Criteria. This is addressed in the current permit in Part I.C and I.D and discussed in more detail below in section 7.0.

2.6 Special Condition F. TMDL Based Limits

This special condition outlined the new TMDL limits imposed in the 2009 permit. No action was required by the permittee.

2.7 Special Condition G. Temperature

This special condition in the 2009 permit pertained to the temperature limit for the discharge from the cooling tower blowdown units that have since been demolished. Therefore, this condition has not been included in the current permit.

2.8 Special Condition H. Manhole K

This special condition required the permittee to submit to EPA and the District Department of Energy and Environment a plan and implementation schedule to retrofit manhole K into a reliable monitoring point for Outfall 101. The permittee has met the requirements of this special condition by developing a

protocol for collecting a composite sample from multiple inlets in the vicinity of the former generating plant that were deemed representative of the stormwater discharge through Outfall 101. Following the demolition of the generating plant, the permittee has closed all inlets draining to Outfall 101 except for Inlet 87, which will be the designated monitoring point under the new permit.

3.0 Special Conditions in the Current Permit

3.1 Special Condition A. Compliance Schedule for Outfall 101 (Part III.A)

The current permit provides a twelve (12) month compliance schedule for Outfall 101 to allow the permittee time to come into compliance with the new limits set forth in Part I.B.4 of the permit. A reasonable potential analysis was conducted at this outfall (discussed in more detail in Section 7.0 below) and showed the discharge has the reasonable potential to cause or contribute to an exceedance of water quality criteria for some pollutants. Therefore, in accordance with 40 C.F.R § 122.44(d)(1)(iii), effluent limits were imposed in the permit at this outfall. Because these limits are new permit limits at this outfall, 40 C.F.R § 122.47 and the District of Columbia's Municipal Regulations Title 21 Section 21-1105.9 allows the permit to include a compliance schedule to allow time for the permittee to come into compliance with the new limits.

It should be noted that there are two sets of effluent limits in the permit. The effluent limits in Part I.C of the permit are the most stringent effluent limits calculated without including a dilution factor and the effluent limits in Part I.D of the permit are less stringent effluent limits calculated using a dilution factor. The reason for calculating two sets of limits are discussed in more detail below in Section 7.3. Beginning 24 months after the permit effective date, the permittee will be required to meet the more stringent limits in the event the permittee does not submit a mixing zone study, also discussed in more detail below in Section 7.3.

3.2 Special Condition B. Additional Monitoring Requirements (Part III.B)

3.2.1 Special Condition B.1. TMDL Pollutant Monitoring Requirements (Part III.B.1)

There are no sampling data for some of the Anacostia River TMDL pollutants, as such, this special condition requires the permittee to conduct additional monitoring of the TMDL pollutants listed in this part to ensure consistency with the assumptions and requirements of the Anacostia River TMDLs for Organics and Metals. If the results from the additional monitoring set forth in Part III.B.I of the permit show that four consecutive quarters of monitoring values for any parameter do not exceed the District's applicable water quality standard, monitoring may be discontinued for that parameter.

3.2.2 Special Condition B.2. TMDL Pollutant Source Tracking (Part III.B.2)

EPA assumes there is not a presence of the TMDL pollutants in this discharge, however, if the results from the additional monitoring set forth in Part III.B.1 of the permit show pollutant concentrations to be at or above the District's applicable water quality criteria, this special condition requires the permittee to take action. This special condition requires the permittee to enact controls to reduce concentrations to below the applicable water quality standard. If four consecutive quarters of monitoring data for any TMDL pollutant does not exceed the District's applicable water quality standard, monitoring may be discontinued for that parameter. EPA determined that evaluating four consecutive quarters of monitoring data for TMDL pollutants instead of the average of four quarters as specified in EPA's Multi-Sector

General Permit is a more conservative approach to addressing water quality impairments of the Anacostia River.

3.2.3 Special Condition B.3. Reopener (Part III.B.3)

This special condition is a reopener clause that allows the permit to be reopened and modified should the District of Columbia's Water Quality Standards be revised and/or if there are any changes to the TMDLs that are applicable to this permit.

3.2.4 Special Condition C. Water Quality Modeling Study (Part III.C)

When conducting the reasonable potential (RP) analysis for the pollutants of concern for this discharge, EPA had no information on how the effluent mixes with the receiving stream. Therefore, EPA assumed complete mixing of the effluent with the receiving stream and applied a dilution factor when conducting the RP analysis (see Section 7.0 for more information on the RP analysis). Under complete mixing conditions, applying a dilution factor to the discharge gives the permittee relief from meeting water quality standards at the end of the pipe. However, because complete mixing is assumed, EPA is giving the permittee the option to conduct a water quality modeling study to confirm this assumption or, if there is incomplete mixing, to determine a mixing zone in the receiving stream. This special condition gives the permittee twenty-four months to conduct this modeling study and submit these results to EPA. If needed, the permit will be reopened to impose new requirements based on the results of the study. If the permittee chooses not to conduct a modeling study, then the dilution factors will be removed and end-of-pipe effluent limits in Part III.C. of the permit will go into effect.

3.2.5 Special Condition D. Conditions Applicable to PCB Monitoring and Limits (Part III.D)

This special condition was carried over from the 2009 permit. This condition outlines specific monitoring and reporting requirements for PCBs. Over the previous permit term, the permittee submitted PCB monitoring data using both the 40 CFR Part 136 method, Method 608, and the more sensitive Method 1668 which is not in Part 136. The sampling results periodically showed a presence of PCBs in the discharge using Method 1668. Because the permittee has transformers on site, sampling of PCBs remains in the permit and this special condition outlines PCB specific requirements.

3.2.6 Special Condition E. Whole Effluent Toxicity (Part III.E)

The 2009 permit required acute Whole Effluent Toxicity (WET) testing at Outfalls 013 and 101 once during the permit term. The permittee submitted acute WET test results to EPA as required by the permit, however, the WET tests were conducted on 100% effluent without a dilution series. The EPA Acute WET test method under 40 CFR Part 136 (EPA-821-R-02-012) requires 5 effluent test concentrations and does not recommend a single effluent concentration because a dose-response relationship needs to be established to adequately determine effluent toxicity using the LC50. Therefore, Part III.E of the permit requires one acute WET test to be conducted on samples taken at Outfall 013 and at Outfall 101 using a general dilution series with a control. This special condition includes detailed testing and reporting requirements as well as actions to be taken should there be an endpoint failure. EPA does not anticipate test failures, however, if there is an endpoint failure, the permittee is required to initiate a re-test for the test species with the failure. If the re-test passes, the permittee is not required to conduct further WET monitoring at that outfall. If the re-test fails, this confirms toxicity and Part III.E.5 requires the permittee

to initiate a Phase I Toxicity Reduction Evaluation (TRE) as well as initiate quarterly WET testing for both species until there are four consecutive passing results at that outfall (Part III.E.2.e).

3.2.7 Special Condition F. Storm Water Pollution Prevention Plan (Part III.F)

This special condition outlines specific requirements for the management of stormwater to minimize the discharge of pollutants in the facility's stormwater discharge.

3.2.8 Special Condition G. Best Management Practices for Hazardous and Toxic Wastes (Part III.G)

This special condition applies to all permittees who use, manufacture, store, handle or discharge any pollutant listed as toxic under Section 307(a)(1) of the Clean Water Act or any pollutant listed as hazardous under Section 311 of the Act and who have ancillary manufacturing operations which could result in significant amounts of these pollutants reaching waters of the United States. This special condition is included in the permit because of the potential to discharge PCBs and PAHs, pollutants that are listed under Section 311 of the Clean Water Act.

3.2.9 Special Condition H. Benchmark Monitoring (Part III.H)

The permit includes benchmark monitoring for some pollutants at Outfalls 013 and 101. This special condition requires the permittee to take a corrective action if a sampling result exceeds the benchmark value in the permit. The benchmark value is not an effluent limitation; therefore, a benchmark exceedance is not a permit violation. However, if a corrective action is required as a result of a benchmark exceedance, failure to conduct a corrective action is a permit violation.

4.0 Receiving Water Characterization

4.1 303(d) Status of the Upper Anacostia River

The permittee discharges to the Upper Anacostia River. Based on the District's 2018 Integrated Report, the Anacostia River is not on the 303(d) list but has Total Maximum Daily Loads (TMDLs) for various pollutants. The applicable TMDLs are discussed in Section 4.2 below.

OUTFALL NO.	LATITUDE	LONGITUDE	RECEIVING WATER	DESIGNATED USES
013	38° 53' 60" N	76° 57' 30" W	ANACOSTIA RIVER	A, B, C, D, E
101	38° 53' 46" N	76° 57' 36" W	ANACOSTIA RIVER	A, B, C, D, E
005	38° 53' 51.9" N	76° 57' 0.0" W	ANACOSTIA RIVER	A, B, C, D, E
006	38° 53' 47.9" N	76° 57' 26" W	ANACOSTIA RIVER	A, B, C, D, E
014	38° 54' 0.0" N	76° 57' 11.4" W	ANACOSTIA RIVER	A, B, C, D, E
015	38° 53' 58.3" N	76° 57' 9.1" W	ANACOSTIA RIVER	A, B, C, D, E
016	38° 53' 48.5" N	76° 57' 31.2" W	ANACOSTIA RIVER	A, B, C, D, E
401	38° 53' 54.6" N	76° 57' 4.0" W	ANACOSTIA RIVER	A, B, C, D, E

Classifications of the District's Waters, Defined:

Class A – Primary Contact Recreation

Class B – Secondary Contact Recreation

Class C – Protection and propagation fish, shellfish and wildlife

Class D – Protection of human health related to consumption of fish and shellfish

Class E – Navigation

4.2 Total Maximum Daily Loads (TMDLs)

Federal regulations at 40 C.F.R. §122.44(d)(1)(vii)(B) require that NPDES permits be consistent with assumptions and requirements of wasteload allocations (WLAs) in TMDLs. This permit includes effluent limits that are consistent with the assumptions and requirements of the TMDLs. Each TMDL applicable to this discharge is discussed in detail below.

TMDLs applicable to this discharge:

Anacostia Watershed TMDLs	Chesapeake Bay TMDLs (Established 2010)
Trash, approved 2010	Total Nitrogen (TN), Total Phosphorus (TP), TSS that address Dissolved Oxygen (DO), pH, Chlorophyll <i>a</i> impairments
Total Suspended Solids (TSS), approved 2007	
Nutrients/Biological Oxygen Demand (BOD) approved 2008	
Copper (Cu) and Zinc (Zn) approved 2003	
Chlordane, DDD, DDE, DDT, Dieldrin, Heptachlor Epoxide, and PAHs approved 2003	
Polychlorinated Biphenyls (PCBs), approved 2007	

4.2.1 TMDL for Trash for the Anacostia River Watershed (approved 2010)

The trash TMDL identifies both point and non-point sources of trash in the Anacostia River. The point sources identified in the TMDL are primarily from Municipal Separate Storm Sewer Systems (MS4) and Combined Sewer Systems (CSS). The TMDL has a “Other Facilities” category which addresses industrial facilities such as Pepco and includes these facilities in the aggregate.⁵ The permittee has trash cans located throughout the property, with more trash cans located near buildings and work areas. There is a large part of the property where there are no trash cans, however the property isn’t being used in these areas and the storm drains are adequately covered to prevent trash from entering the system.

4.2.2 Anacostia River Basin TMDL for Sediment/TSS (approved 2007)

The TMDL for Sediment/TSS requires an 85% reduction of the loading caps for both the Maryland and DC tidal and non-tidal waters. The TMDL does not assign a wasteload allocation to this facility and states “because most of the flow from the Pepco-Benning facility is stormwater, it is included as part of the urban loads in the TMDL analysis.” The TMDL’s technical memorandum for point sources identifies this facility’s loads which are included in the DC MS4 loads for TSS. When the baseline loads for TSS were calculated, the TMDL included Pepco’s discharge at the time which included TSS effluent limits at Outfalls 003 and 013 and internal monitoring points (IMPs) 201 and 010. The TSS effluents limits at these outfalls and internal monitoring points were 30 mg/L and 100 mg/L for the average monthly and daily maximum, respectively. However, discharges from Outfall 003 and internal monitoring points 201 and 010 no longer occur. Because this outfall and IMPs are no longer discharging and Outfall 101 did not have TSS limits in the 2009 permit, but has TSS limits of 100 mg/L in this permit, EPA believes the load transfer from Outfall 003 to Outfall 101 remains consistent with the assumptions and requirements of the TMDL for TSS.

⁵ See section 3.1 of the TMDL of Trash for the Anacostia River Watershed

The maximum daily effluent limit of 100 mg/L at Outfall 013 will remain in the permit to be consistent with the assumptions and requirements of the TMDL for TSS.

4.2.3 Anacostia River Basin TMDL for Nutrients/BOD (Approved 2008)

The TMDL for Nutrients/Biological Oxygen Demand identifies this facility as an insignificant source of BOD and that TN and TP are not applicable. Part 2.2.5 of the TMDL identifies this facility as discharging BOD from a hydrostatic testing tank and that “discharges from the tank only occur, at most, once or twice a year; in the last two years, no discharges have occurred.” However, the TMDL Technical Memorandum dated April 25, 2008 assigns this facility a wasteload allocation of 501 lbs/year for BOD which is based on maximum reported flow and an assumed maximum concentration of 30 mg/L. The 2009 permit included BOD limits for internal discharge point 201 (which discharged to Outfall 013) because this discharge point consisted of hydrostatic tank test water and wash water. The cleaning of these tanks is an activity that is no longer applicable since the generating plant was decommissioned and demolished. The tank wash waters are no longer applicable to this discharge and monitoring for BOD is not required. According to the permit application, internal discharge point 201 currently consists of only water from the oil/water separator. This water from the oil/water separator consists of stormwater runoff from sub-drainage area 2 and sub-drainage area 6 and yard drains. (See Attachment 2 at the end of the fact sheet).

4.2.4 Anacostia River Basin TMDL for Arsenic, Copper, Lead, and Zinc (Approved August 2003)

The TMDL for arsenic requires an 85% reduction of loads for stormwater discharges (Section 6.1.3 of the TMDL). The permittee was not required to monitor for arsenic; therefore, no discharge data is available for this pollutant. While Arsenic is not expected to be a pollutant of concern for this discharge, the permittee is required to submit sampling data for the TMDL parameters listed in Part III.B.1 of the permit to determine if there is a presence of these pollutants in the discharge. If arsenic is detected at levels above the District’s Water Quality Criterion, Special Condition in Part III.B.2 requires the permittee to take measures to determine the source of arsenic and enact controls to reduce arsenic loadings to the Anacostia River. This approach is consistent with the TMDL for arsenic (Section 8.2.4).

The TMDLs for copper, lead, and zinc require a 1% reduction of loads for stormwater discharges (Section 6.2.3 of the TMDL) and allows reductions for NPDES point sources to be determined on a facility-by-facility basis (Section 8.2.4). In most cases for storm water discharges, reductions are required in the form of Best Management Practices or BMPs. The permittee has implemented BMPs and other pollution control measures to reduce the discharge of heavy metals to the Anacostia River at Outfalls 013 and 101. Additionally, as mentioned in Section 2.5 of this fact sheet, the permittee submitted a TMDL Implementation Plan that identified potential BMPs that are designed to reduce pollutant loads in the stormwater runoff. The permittee continues to reevaluate the BMPs where necessary to further the goal of attaining total load reductions for TMDL metals. Both the current permit and CD require BMPs be checked for effectiveness and determine if additional controls are needed. The current permit contains a standard reopener clause that allows the permit to be reopened if monitoring data shows reasonable potential to cause or contribute to an exceedance of water quality criteria.

4.2.5 Anacostia River Basin TMDLs for Chlordane, DDD, DDE, DDT, Dieldrin, Heptachlor Epoxide, and PAHs (approved 2003)

The TMDL requires reductions for these pollutants for stormwater discharges. The permittee was not required to monitor for these pollutants during the last permit term, however, there are monitoring data for these pollutants that were collected as part of the remedial investigation discussed in Section 1.5 of this fact sheet. The data showed a presence of some TMDL pollutants in the discharge, however, because the data are over seven years old the permittee will be required to submit quarterly sampling data for the TMDL parameters listed in Part III.B.1 of the permit to determine if there continues to be a presence of these pollutants in the discharge. If any of these pollutants are detected at levels above the District's Water Quality Criteria, Special Condition in Part III.B.2 requires the permittee to take measures to determine the source and enact controls to reduce loadings to the Anacostia River. This approach is consistent with the assumptions and requirements of the TMDL (Section 8.2.4 of the TMDL). Part III.B.3 of the permit also includes a reopener clause to allow EPA to reopen the permit in the event that monitoring data demonstrates that additional water quality-based effluent limitations are needed. In addition, the permittee may seek modification of the permit in the event that EPA's approval of the TMDL is vacated and/or the TMDL is withdrawn, replaced or superseded.

4.2.6 TMDL for Total PCBs for Tidal Portions of the Potomac and Anacostia Rivers (approved 2007)

The TMDL requires a 99.9% reduction in PCBs for the upper Anacostia river segment. The jurisdictions (Maryland and D.C.) involved in the development of the TMDL have agreed to an adaptive implementation strategy for NPDES permits to comply with the wasteload allocation provisions of the TMDL as authorized by 40 C.F.R. § 122.44(k). This implementation strategy focused on requiring data collection in NPDES permits and the use of non-numeric WQBELs (BMPs). The TMDL recommended, and the regulatory authorities agreed, PCB sampling in NPDES permit should be performed using the most current version of EPA Method 1668, or other equivalent methods capable of providing low-detection level, congener specific results.

The 2009 permit required monitoring of PCB congeners at Outfalls 013 and 101 using both EPA Method 608 and Method 1668. The test results obtained using test Method 608 were reported on the DMRs because 40 C.F.R. § 122.41(j)(4) requires monitoring for reporting purposes be conducted according to test procedures approved under 40 C.F.R. Part 136. The test results obtained using test Method 1668 were submitted as a separate report along with the annual laboratory reports. As discussed in Section 2.1 of this fact sheet, the permittee was required to analyze for PCBs over the permit term to ensure compliance with the "no discharge" PCB limit in Part I of the permit. The permittee was required to submit annually to EPA the laboratory reports showing the actual recorded values of PCBs even if those results are below 1 µg/L. The permittee was required to report on the DMR a value of zero if the result was below this minimum level (ML) of 1 µg/L. The permittee reported zero on their DMRs for PCBs in their discharge over the last permit term. The data over the last permit term show no reportable levels of PCBs at or above 1 µg/L at Outfalls 013 and 101 using Method 608.

As indicated in Section 2.1 of this fact sheet, the previous permit also required the permittee to submit a PCB Source Tracking and Pollutant Minimization Plan. The permittee submitted the Plan on July 19, 2010 which identified potential sources of PCBs with proposed measures and controls for each potential pollutant source.⁶ A review of the lab data sheets from 2014-2018 showed some samples that were tested using Method 1668C had PCBs above the specified detection limit. Because of this and the fact that the facility stores and maintains transformers on site, annual PCB monitoring has been retained in the permit.

⁶ For more information on the study and pollutant minimization plan, see Table 4 of the Plan which is located in the permit's Administrative Record.

4.2.7 The 2010 Chesapeake Bay TMDL

EPA established the Chesapeake Bay TMDL for nitrogen, phosphorus, and sediment (Bay TMDL) in 2010 as a result of significant involvement and investment by the Chesapeake Bay Program (CBP) partnership. See EPA's website for more information on the development of the Bay TMDL: <https://www.epa.gov/chesapeake-bay-tmdl/chesapeake-bay-tmdl-document>. The Bay TMDL identified 478 individual wasteload allocations (WLAs) for significant wastewater facilities across the 92 river segments and identified aggregate WLAs for non-significant wastewater facilities. The CBP partners, including the District, have been implementing the Bay TMDL since 2010; most recently, the Bay states developed Phase III Watershed Implementation Plans (WIPs) to provide further information on how they intend to continue implementing the Bay TMDL.⁷

4.2.7.1 The District's 2019 Phase III Watershed Implementation Plan (WIP)

The District's Phase III WIP, which was finalized in 2019, describes the District's strategy for continuing to reduce nitrogen, phosphorus, and sediment in the Chesapeake Bay. The District's Phase III WIP guides the District's continued implementation of the Bay TMDL and outlines the various pollutant reduction strategies the District plans to implement to meet planning targets. These planning targets were calculated by EPA and agreed to by the CBP partnership. As part of its Phase III WIP, the District developed local planning goals for various source sectors, including individually permitted wastewater point sources.

Chapter 6 of the District's Phase III WIP includes planning goals for individually permitted municipal and industrial facilities. The planning goals for these facilities are based on existing permit limits at the time of WIP development and DMR data for the specific progress reporting period of July 2017 through June 2018. These data were used as inputs to the Chesapeake Assessment Scenario Tool⁸ (CAST), which is a CBP partnership load estimator tool that provides estimates of load reductions for sources such as wastewater. States, federal agencies, and local governments use the results from CAST to identify which pollutant reduction strategies provide the greatest reduction in TN, TP, and TSS loads and to determine if WLAs are being met. DOEE used CAST to estimate load reductions and set planning goals for the nonsignificant permitted facilities in the District. See Table 6-5 of the District's Phase III WIP.

In an effort to better understand how the District's Phase III WIP planning goals for the nonsignificant permitted facilities are intended to implement the Bay TMDL aggregate WLAs, EPA Region 3 consulted with DOEE and the Chesapeake Bay Program Office. After several discussions, EPA Region 3 understands that the planning goals for the facilities listed in Table 6-5 of the District's Phase III WIP are not intended to be incorporated into NPDES permits as effluent limits. The District's Phase III WIP and the WLAs of the Bay TMDL both have the ultimate goal of reducing pollutant loadings into the Bay by 2025.

⁷ As described on EPA's website <https://www.epa.gov/chesapeake-bay-tmdl/chesapeake-bay-watershed-implementation-plans-wips>, the Watershed Implementation Plans are the roadmap for how the Bay jurisdictions, in partnership with federal and local governments, will achieve the Bay TMDL allocations.

⁸ For more information about CAST visit <https://cast.chesapeakebay.net/about>.

4.2.7.2 Nonsignificant Dischargers and the Bay TMDL

The Chesapeake Bay TMDL categorizes Pepco as a non-significant industrial discharger and includes this facility in the aggregate wasteload allocations for Total Nitrogen (TN), Total Phosphorus (TP), and TSS. Section 8.3.3 of the Bay TMDL acknowledges that due to the lack of information from nonsignificant discharges included in the aggregate, information on these discharges may be based on default assumptions regarding flow and concentrations. The TMDL expects these facilities to provide, at minimum, TN, TP, and TSS monitoring data to verify the loads do not contribute to any exceedance of the individual or aggregate WLA.

4.2.7.3 Justification of the TN, TP, and TSS limits

TN and TP

This facility is categorized as a non-significant discharger of TN and TP and is included in the Bay TMDL's aggregate wasteload allocation for these pollutants. The permittee has not monitored for TN and TP so there are no discharge data for these two parameters to verify the assumptions of the TMDL for nonsignificant dischargers. Because this facility is not expected to be a significant source of TN and TP, the current permit requires monitoring only for TN and TP. EPA may reopen the permit to include TN and/or TP limits based upon an evaluation of the monitoring data. After two years, the permittee can submit a request to EPA to modify the permit to remove this monitoring requirement.

TSS

Section 4.5.2 of the Bay TMDL states that discharges from industrial facilities represent a *de minimis* source of sediment. The aggregate WLA for sediment was established based on the TSS effluent limits for each facility included in the aggregate. At the time the Bay TMDL was approved, this facility's permit included average monthly and daily maximum TSS effluent limits of 30 mg/L and 100 mg/L, respectively, for Outfall 013. Therefore, consistent with the assumptions of the Bay TMDL, the maximum daily effluent limit for TSS of 100 mg/L will be retained in this permit at Outfall 013. There were no TSS limits in the 2009 permit for Outfall 101 so the 100 mg/L limit was also applied to this outfall. From June 2015 to June 2019, the permittee has reported an average TSS concentration of 24.5 mg/L at Outfall 013 and is therefore expected to meet this limit upon permit reissuance. The permittee is also expected to meet this limit at Outfall 101 in accordance with the compliance schedule.

Although the previous permit contained concentration limits for both average monthly and daily maximum frequencies, EPA has determined that effluent limits expressed as a monthly average are not appropriate for intermittent or non-continuous discharges. Therefore, the effluent limits are expressed as maximum daily limits, consistent with 40 C.F.R. §122.45(e).

5.0 Basis for Effluent Limitations

In general, the Clean Water Act (Act) requires compliance with all applicable statutory and regulatory requirements, including effluent limitations based on the capabilities of technologies available to control pollutants (i.e., technology-based effluent limits) and limitations that are protective of the water quality standards of the receiving water (i.e., water quality-based effluent limits). Typically, technology-based

effluent limitations or TBELs are developed for all applicable pollutants of concern (40 C.F.R § 122.44(a)). Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the Clean Water Act. EPA has not promulgated technology-based effluent limitation guidelines (ELGs) for the category or class of this discharge. As such, there are no TBELs included in the permit with the exception of TSS. The TSS effluent limits are carried over from the 2009 permit and are TBELs that were calculated based on best professional judgement (BPJ).

Water quality-based effluent limitations, or WQBELs, are developed where TBELs are not adequate to meet water quality standards in the receiving water (§122.44(d)). This permit contains water quality-based effluent limits to ensure compliance with all applicable water quality standards.

6.0 Water Quality Based Effluent Limitations (WQBELs)

40 C.F.R. § 122.44(d)(1)(i) requires limitations to be established in permits to control all pollutants or pollutant parameters that are or may be discharged at a level that *cause*, have the *reasonable potential (RP) to cause*, or *contribute* to an excursion above any state water quality standard (WQS), including state narrative water quality criteria. The WQBELs in this permit will be as stringent as necessary to ensure that the designated uses of the Anacostia River are protected, maintained, and/or attained. EPA assessed the reasonable potential (RP) for the discharge from this facility to cause, have the RP to cause, or contribute to an exceedance of the District's applicable WQS. EPA used the *Technical Support Document for Water Quality-based Toxics Control* (TSD) approach to conduct that analysis.

6.1 pH and Oil & Grease

The pH and Oil & Grease effluent limits for Outfall 013 and Outfall 101 are WQBELs adopted from District's WQS for those parameters, specified in Section 21-1104.8 of the District of Columbia's Water Quality Standards Regulations.

6.2 Iron, Copper, Lead, Zinc, Cadmium, and Nickel

The iron, copper, lead, zinc, cadmium, and nickel effluent limits are calculated WQBELs and discussed in more detail below in Section 7.0.

6.3 TSS

As discussed in Section 4.2 above, the TSS limits in the permit are based on TMDL assumptions and requirements.

7.0 Reasonable Potential Analysis

A reasonable potential analysis was conducted on all data submitted to EPA to determine if the discharge shows the potential to exceed in-stream water quality criteria. 40 C.F.R § 122.44(d)(1)(iii) requires effluent limitations be established in permits when it is determined that a discharge will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including narrative criteria. Procedures in the TSD were used in the RP analysis. All data collected over the 2009 permit term were evaluated, which includes data reported on the permittee's DMRs, application data, and additional data submitted to EPA over the 2009 permit term. For pollutants in which the RP

analysis shows the potential to exceed in-stream water quality values, water quality-based effluent numbers must be calculated as required at 40 C.F.R. § 122.44(d).

The District of Columbia water quality criteria for copper, lead, zinc, cadmium, and nickel are expressed as dissolved. EPA is assuming a 1:1 translator using a conservative approach to convert the total dissolved metals criterion to total recoverable effluent limits, consistent with EPA Metal Translator Guidance.

A default hardness value of 100 mg/L was used to calculate the hardness dependent water quality criteria.

7.1 Parameters of Concern

The permittee has two active outfalls discharging to the Anacostia River, Outfall 013 and Outfall 101. The parameters of concern for this facility are copper, iron, cadmium, lead, zinc, nickel, Total Suspended Solids (TSS), pH, and WET. A parameter of concern is defined as a pollutant with quantifiable values reported to EPA. A parameter is considered a candidate for a RP analysis when the reported quantifiable values are at or above water quality criteria after accounting for variability.

The TSS limits are TBELs from the 2009 permit based on BPJ and are being carried over to this permit in order to be consistent with the assumptions and requirements of the Anacostia and Chesapeake Bay TMDLs.

7.2 Five-step TSD approach to Reasonable Potential Analysis

Using the TSD approach, the following is a description of the 5 steps used to conduct the RP analysis at Outfall 004.

- 1) Determine the total number of effluent data values (n) for the pollutant of interest and identify the highest value of the dataset for that parameter.
- 2) Determine the coefficient of variation (CV) of the dataset. The CV is equal to the standard of deviation divided by the long-term average. The default CV for fewer than 10 data values is 0.6, as specified in Box 3-2 of the TSD.
- 3) Determine the appropriate confidence level for the RP analysis. For this permit, EPA used the 99th confidence level, recommended by the TSD in section 5.5.4.
- 4) Determine the RP multiplier, using Table 3-1 of the TSD. Generally, if n is greater than 20, the multiplier is calculated per section 3.3.2 of the TSD. However, the RP multiplier was calculated for all pollutants regardless of the number of samples. The highest value from the data set is then multiplied by the RP multiplier. Use this value with the appropriate dilution to project a maximum receiving water concentration (MRWC).

Before projecting the maximum receiving water concentration, EPA calculates an “adjusted effluent concentration” or AEC to determine if the pollutant of concern is a candidate for completing reasonable potential analysis. If the pollutant does not exceed the water quality criterion (WQC) after applying the multiplying factor to the highest effluent concentration, then that pollutant does not continue with the RP analysis to completion. The AEC is calculated by multiplying the highest effluent concentration (HEC) by the reasonable potential multiplier (RPM) which is the first part in Step 4 above.

If the $AEC > WQC$ then the pollutant should continue with the RP analysis and the projected MRWC is calculated which is in the second part of Step 4.

- 5) Compare the projected maximum receiving water concentration (MRWC) to the applicable standard. EPA finds reasonable potential when the projected MRWC is greater than the ambient criterion.

TSD Steps 1-4

Outfall 013							
Parameter of concern	# of samples	Highest Effluent Concentration	CV	RP Multiplier	Adjusted Effluent Concentration	DC WQC	Continue with RP Analysis?
Cadmium (µg/L)	12	0.34	0.60	2.82	0.957	1.79	NO
Copper (µg/L)	21	23.0	0.82	2.86	65.9	13.44	YES
Iron (mg/L)	20	3.64	1.32	4.53	16.5	1.00	YES
Lead (µg/L)	18	13.0	0.74	2.82	36.7	64.6	NO
Nickel (mg/L)	17	0.01	0.67	2.68	0.03	0.468	NO
Zinc (µg/L)	22	175	0.72	2.54	445	117.2	YES
Oil & Grease (mg/L)	12	7.0	0.58	2.04	14.3	10.0	YES

Outfall 101							
Parameter of concern	# of samples	Highest Effluent Concentration	CV	RP Multiplier	Adjusted Effluent Concentration	DC WQC	Continue with RP Analysis?
Cadmium (µg/L)	13	1.12	0.39	2.63	2.95	1.79	YES
Copper (µg/L)	19	270	0.74	3.05	824.6	13.44	YES
Iron (mg/L)	19	12.0	0.72	2.99	35.9	1.00	YES
Lead (µg/L)	18	220	0.91	3.94	866	64.6	YES
Nickel (µg/L)	19	198	0.73	3.04	602	468.2	YES
Zinc (µg/L)	19	553	0.76	3.16	1749	117.2	YES
Oil & Grease (mg/L)	9	2.80	0.60	2.09	5.84	10.0	NO

Step 4, continued. Calculate the Maximum Receiving Water Concentration (MRWC):

$$\text{MRWC} = ((\text{AEC} - \text{IBC}/\text{DF}) + \text{IBC}), \text{ where}$$

AEC – Adjusted Effluent Concentration

IBC – Instream Background Concentration

DF – Dilution Factor – see calculation after the table in Step 5 below

EPA obtained Anacostia River instream background concentrations for copper and zinc that were collected by the DC Department of Energy and Environment (DOEE). These background concentrations were used in the RP analysis.

TSD Step 5.

Outfall 013						
Parameter of concern	Adjusted Effluent Concentration	Instream Background Concentration	Dilution Factor	MRWC	WQC	RP?
Copper (µg/L)	65.9	7.2 µg/L	1.6	44.08	13.44	YES
Iron (mg/L)	16.5	Not available	1.6	10.36	1.00	YES
Zinc (µg/L)	445	15.7 µg/L	1.6	285.4	117.2	YES

Oil & Grease (mg/L)	14.3	Not available	1.6	8.98	10.0	NO
Outfall 101						
Parameter of concern	Adjusted Effluent Concentration	Instream Background Concentration	Dilution Factor	MRWC	WQC	RP?
Cadmium (µg/L)	2.95	Not available	9.6	0.306	1.79	NO
Copper (µg/L)	824.6	7.2 µg/L	9.6	92.0	13.44	YES
Iron(mg/L)	35.9	Not available	9.6	3.72	1.00	YES
Lead (µg/L)	865.7	Not available	9.6	89.8	64.58	YES
Nickel (µg/L)	602.2	Not available	9.6	62.45	468.2	YES
Zinc (µg/L)	1749.1	15.7 µg/L	9.6	195.5	117.2	YES
Oil & Grease (mg/L)	5.84	Not available	9.6	0.606	10.0	NO

7.3 Dilution Factor Calculation (DF):

A calculated dilution factor of 1.6 for Outfall 013 and 9.6 for Outfall 101 was applied to these discharges based on the default assumption of complete mixing of the effluent with the receiving water. The dilution factors affect the outcome of the RP analysis and the calculation of water quality-based effluent limits (WQBELs). EPA's assumption of complete mixing is only applied to the WQBELs in the permit for a 24-month term. Within this time, the permittee has the option of submitting a water quality modeling study to provide site specific information on how the effluent mixes with the receiving stream. This information can be used to re-evaluate the discharge and re-calculate the WQBELs using the results from the site-specific water modeling study.

If EPA does not receive a mixing zone study within 24 months of the permit effective date, the limits in Part I Section C of the permit go into effect. These limits in Part I.C are end-of-pipe limits that do not include dilution. If EPA receives the mixing zone study within 24 months of the permit effective date, the limits in Part I Section D go into effect which are the same limits in Part I. B of the permit and include the dilution factors listed above. EPA will reevaluate the discharge based on the site specific mixing information and may reopen the permit to incorporate any changes that may result in the evaluation.

If the mixing zone study is submitted....	Applicable effluent limits....
Within 24-months of permit effective date	Effluent limits in Part I.D apply
After 24-months of permit effective date	Effluent limits in Part I.C apply

The dilution factor was calculated based on the discharge flow and the 7Q10 stream flow of the Anacostia River. EPA followed a conservative approach to the calculation by using 1/3 of the 7Q10 flow of the Anacostia River⁹. The USGS calculated the 1Q10 and 7Q10 of the Anacostia River to be 14 cfs¹⁰.

Therefore, 14 cfs x 33% = 4.67 cfs is the 1Q10 of the Anacostia River which is used for the purposes of calculation the dilution factors.

Dilution Factor Calculation is:

$$(\text{Max effluent flow} + \text{stream flow}) / \text{Max effluent flow}$$

⁹ This approach was based on Chapter 21 section 1105.7(f) of the DC WQS regulations which does not allow a discharge's mixing zone to occupy more than one third (1/3) of the width of the waterway.

¹⁰ 7Q10 flow was calculated manually by a hydrologist at USGS Maryland-Delaware-District of Columbia Water Science Center in Baltimore, Maryland. This can be found in the permit's administrative record.

$$DF_{013} = (7.9 \text{ cfs} + 4.67) \text{ cfs} / 7.9 \text{ cfs} = \mathbf{1.59}$$

$$DF_{101} = (0.54 \text{ cfs} + 4.67) \text{ cfs} / 0.54 \text{ cfs} = \mathbf{9.64}$$

Effluent Flow:

	Annual Reported Average	Max Monthly
Outfall 013 Flow (MGD)	1.00	5.10
Outfall 013 Flow (cfs)	1.56	7.89
Outfall 101 Flow (MGD)	0.140	0.349
Outfall 101 Flow (cfs)	0.216	0.540

Stream Flow:

	Condition	Receiving Water Flow, cfs	Allowable % of river flow	Dilution Factor Outfall 013	Dilution Factor Outfall 101
Aquatic Life - Chronic (cfs)	7Q10	14	33%	1.6	9.6
Aquatic Life – Acute (cfs)	1Q10	14	33%	1.6	9.6

7.4 Developing a Water-Quality Based Effluent Limit:

For those pollutants where there was a reasonable potential to cause or contribute to an exceedance of applicable WQSs, the second step is the development of WQBEL for each pollutant. The procedure for this is described at Section 5.4 of the TSD.

1. Compute the Wasteload Allocation (WLA): $WLA = ((WQC - IBC) * DF) + IBC$, where

WQC – Water Quality Criterion

IBC – Instream Background Concentration

DF – Dilution Factor

Outfall 013				
Parameter of Concern	Water Quality Criterion	Instream Background Concentration	Dilution Factor	Wasteload Allocation
Copper (µg/L)	13.44	7.2	1.6	17.1
Iron (mg/L)	1.00	Not available	1.6	1.59
Zinc (µg/L)	117.2	15.7	1.6	177.2
Outfall 101				
Parameter of Concern	Water Quality Criterion	Instream Background Concentration	Dilution Factor	Wasteload Allocation
Copper (µg/L)	13.44	7.2	9.6	67.36
Iron (mg/L)	1.00	Not available	9.6	9.64
Lead (µg/L)	64.6	Not available	9.6	622.74
Zinc (µg/L)	117.2	15.7	9.6	994.2

2. Calculate the Long-Term Average (LTA). The long-term average calculation is based on the 99th confidence level as reflected with the z score of 2.326.

$$LTA = WLA * e^{(0.5 * \sigma^2 - 2.326 * \sigma)}$$

$$\text{Sigma square } (\sigma^2) = \ln(CV^2 + 1)$$

$$\text{Sigma } (\sigma) = \text{square root of } \sigma^2$$

Outfall 013					
Pollutant	Z	CV	σ^2	σ	LTA
Copper (µg/L)	2.326	0.82	0.51	0.71	4.20
Iron (mg/L)	2.326	1.32	1.01	1.00	0.25
Zinc (µg/L)	2.326	0.72	0.4175	0.6461	48.6

Outfall 101					
Pollutant	Z	CV	σ^2	σ	LTA
Copper (µg/L)	2.326	0.74	0.435	0.659	18.062
Iron (mg/L)	2.326	0.72	0.420	0.648	2.634
Lead (µg/L)	2.326	0.91	0.605	0.778	138.068
Zinc (µg/L)	2.326	0.76	0.460	0.678	258.409

3. Calculate the Maximum Daily Limits (MDL) permit limits:

i. $MDL = LTA * e^{(2.326*\sigma - 0.5*\sigma^2)}$

$\sigma^2 = \ln(CV^2 + 1)$

$\sigma = \text{square root of } \sigma^2$

The MDL is based on the 99th confidence level with the z score of 2.326 as recommended by the TSD¹¹.

Outfall 013						
Pollutant	Z	CV	σ^2	σ	LTA	MDL
Copper (µg/L)	2.326	0.82	0.51	0.71	4.20	17.1
Iron (mg/L)	2.326	1.32	1.01	1.00	0.25	1.59
Zinc (µg/L)	2.326	0.72	0.4175	0.6461	48.6	177.2

Outfall 101						
Pollutant	Z	CV	σ^2	σ	LTA	MDL
Copper (µg/L)	2.326	0.74	0.435	0.659	18.06	67.4
Iron (mg/L)	2.326	0.72	0.420	0.648	2.63	9.6
Lead (µg/L)	2.326	0.91	0.605	0.778	138.1	622.7
Zinc (µg/L)	2.326	0.74	0.435	0.659	258.4	994.2

7.5 RP analysis with *no dilution factor*

The RP analysis was also conducted without a dilution factor in the event a site-specific mixing study is not conducted and submitted to EPA for review. The same equations outlined above were used in the “no dilution” RP analysis, the only difference is the dilution factor for both outfalls is one, or no dilution. Calculate the Maximum Receiving Water Concentration (MRWC) and determine RP:

¹¹ Refer to section 5.5.4 of the TSD

TSD Step 5. *No dilution factor*

Outfall 013 – No dilution						
Parameter of concern	Adjusted Effluent Concentration	Instream Background Concentration	Dilution Factor	MRWC	WQC	RP?
Copper (µg/L)	66	7.2 µg/L	1	65.9	13.44	YES
Iron (mg/L)	16	Not available	1	16.5	1.00	YES
Zinc (µg/L)	445	15.7 µg/L	1	42.4	117.2	YES
Lead (µg/L)	36.7	Not available	1	36.7	64.6	NO
Oil & Grease (mg/L)	14	Not available	1	1.97	10.0	YES
Outfall 101 – No dilution						
Parameter of concern	Adjusted Effluent Concentration	Instream Background Concentration	Dilution Factor	MRWC	WQC	RP?
Cadmium (µg/L)	2.95	Not available	1	2.95	1.79	YES
Copper (µg/L)	824.6	7.2 µg/L	1	824.6	13.44	YES
Iron (mg/L)	35.9	Not available	1	35.9	1.00	YES
Lead (µg/L)	865.7	Not available	1	865.7	64.6	YES
Nickel (µg/L)	602.2	Not available	1	602.2	468.2	YES
Zinc (µg/L)	1749.1	15.7 µg/L	1	1749.1	117.2	YES
Oil & Grease (mg/L)	5.84	Not available	1	0.637	10.0	NO

Developing a Water-Quality Based Effluent Limit without applying dilution

Compute the Wasteload Allocation (WLA):

Outfall 013 – No dilution				
Parameter of Concern	Water Quality Criterion	Instream Background Concentration	Dilution Factor	Wasteload Allocation
Copper (µg/L)	13.44	7.2	1	13.44
Iron (mg/L)	1.00	Not available	1	1.00
Zinc (µg/L)	117.2	15.7	1	117.2
Oil & Grease (mg/L)	10.0	Not available	1	10.0
Outfall 101 – No dilution				
Parameter of Concern	Water Quality Criterion	Instream Background Concentration	Dilution Factor	Wasteload Allocation
Cadmium (µg/L)	1.79	Not available	1	1.79
Copper (µg/L)	13.44	7.2	1	13.44
Iron (mg/L)	1.00	Not available	1	1.00
Lead (µg/L)	64.6	Not available	1	64.6
Nickel (µg/L)	468.2	Not available	1	468.2
Zinc (µg/L)	117.2	15.7	1	117.2

Calculate the Long-Term Average (LTA) and Maximum Daily Permit Limits without applying dilution:

Outfall 013 – No dilution						
Pollutant	Z	CV	σ^2	σ	LTA	MDL
Copper ($\mu\text{g/L}$)	2.326	0.82	0.510	0.714	3.29	13.44
Iron (mg/L)	2.326	1.32	1.01	1.00	0.160	1.00
Zinc ($\mu\text{g/L}$)	2.326	0.72	0.418	0.646	32.1	117.2
Oil & Grease (mg/L)	2.326	0.87	0.290	0.539	3.30	10.0
Outfall 101 – No dilution						
Pollutant	Z	CV	σ^2	σ	LTA	MDL
Cadmium ($\mu\text{g/L}$)	2.326	0.39	0.140	0.375	0.904	2.01
Copper ($\mu\text{g/L}$)	2.326	0.74	0.435	0.659	3.60	13.44
Iron (mg/L)	2.326	0.72	0.420	0.648	0.273	1.00
Lead ($\mu\text{g/L}$)	2.326	0.91	0.605	0.778	14.3	64.6
Nickel ($\mu\text{g/L}$)	2.326	0.73	0.432	0.657	126.0	468.2
Zinc ($\mu\text{g/L}$)	2.326	0.76	0.460	0.678	30.5	117.2

8.0 RP Discussion

Pepco proposed to include benchmark monitoring values rather than set Daily Maximum Limits in the permit for the pollutants of concern. These benchmarks would trigger additional stormwater controls if the average of four-quarters of monitoring samples exceeds the applicable benchmarks, following the same approach as under EPA's Multi-Sector General Permit (MSGP). EPA believes this approach is not appropriate for this discharge because various pollutants were found to have RP to exceed water quality criteria and the site has a long history of discharging metals via these outfalls to the Anacostia River which is impaired and has TMDLs for metals. EPA determined benchmark monitoring was appropriate for the pollutants with reportable concentrations but do not demonstrate RP. The 2015 MSGP evaluates benchmark monitoring results using the average of four quarterly samples, however, this approach was not applied to the benchmark monitoring in the permit because, as stated above, this facility has a history of these pollutants in their discharge and the receiving waterbody is impaired for these pollutants. The benchmark values were calculated in accordance with Section 5.4 of the TSD. The benchmark value is not an effluent limitation; a benchmark exceedance, therefore, is not a permit violation. However, if a corrective action is required as a result of a benchmark exceedance, failure to conduct a corrective action is a permit violation.

As discussed above in Section 5.0, the TSS effluent limits are carried over from the 2009 permit and are TBELs that were calculated based on best professional judgement (BPJ). The TSS limits are being carried over to be consistent with the TMDL assumptions and requirements

Since stormwater discharges are intermittent events, EPA determined that effluent limits expressed as an average monthly is not appropriate, therefore, only maximum daily limits were included in the permit which is consistent with 40 C.F.R. §122.45(e).

8.1 Outfall 013 Copper, iron, cadmium, lead, zinc, nickel, and oil & grease

With Dilution Factor

Copper, iron, and zinc exhibited RP when dilution was applied, therefore, effluent limits were imposed in the permit for these pollutants. If the permittee does not submit a water quality modeling study within 24 months of the permit effective date, then the end-of-pipe limits (i.e. no dilution) calculated in Section 7.5 of this fact sheet go into effect for all parameters at Outfall 013 that have the potential to cause or contribute to an exceedance of criteria.

There was no RP for cadmium, lead, and nickel when dilution was applied to the analysis, therefore no limits are warranted for these pollutants, however, a benchmark monitoring and reporting requirement was imposed because these pollutants have a history of being present in the discharge.

There was no RP for oil & grease to cause or contribute to an excursion of DC's WQS when a dilution factor was applied, however, because of the industrial activities occurring on the site, oil & grease continues to be a pollutant of concern for this discharge. Therefore, the permit limits for oil & grease will remain in the permit at Outfall 013. The oil & grease limit is adopted from the District's WQS as specified in Section 21-1104.8 of the District of Columbia's Water Quality Standard Regulations.

Without Dilution Factor

Copper, iron, zinc, and oil & grease exhibited RP when no dilution was factored into the analysis. Effluent limits were calculated for all pollutants except oil & grease and included in Part I.C of the permit. There was no RP for oil & grease to cause or contribute to an excursion of DC's WQS when no dilution was factored into the analysis, however, because of the industrial activities occurring on the site, oil & grease continues to be a pollutant of concern for this discharge. Therefore, the permit limits for oil & grease will remain in the permit at Outfall 013. The oil & grease limit is adopted from District's WQS as specified in Section 21-1104.8 of the District of Columbia's Water Quality Standards Regulations. The effluent limits in Part I.C will go into effect if EPA does not receive a mixing zone study within 24-months of the permit effective date.

8.2 Outfall 101 Copper, iron, cadmium, lead, zinc, nickel, and Oil & Grease

With Dilution Factor

Copper, iron, lead, and zinc showed reasonable potential to cause or contribute to an excursion of water quality criteria when dilution was applied, therefore, limits were calculated and imposed in the permit for these pollutants.

There was no RP for cadmium, and nickel when dilution was applied to the analysis, however, a benchmark monitoring and reporting requirement was imposed because this pollutant has a history of being present in the discharge. If the permittee does not submit a water quality modeling study within 24 months of the permit effective date, then the end-of-pipe limits (i.e. no dilution) calculated in Section 7.5 of this fact sheet go into effect for all parameters at Outfall 101 that have the potential to cause or contribute to an exceedance of criteria. These limits are included in Part I.C of the permit.

There was no RP for oil & grease to cause or contribute to an excursion of DC's WQS when a dilution factor was applied, however, because of the industrial activities occurring on the site, oil & grease continues to be a pollutant of concern for this discharge. Therefore, the permit limits for oil & grease will remain in the permit at Outfall 101.

Without Dilution Factor

Cadmium, copper, iron, lead, nickel, and zinc showed reasonable potential to cause or contribute to an excursion of water quality criteria when no dilution was applied, therefore, limits were calculated and imposed in the permit for these pollutants and included in Part I.C of the permit.

There was no RP for oil & grease to cause or contribute to an excursion of DC's WQS when no dilution was factored into the analysis, however, because of the industrial activities occurring on the site, Oil & Grease continues to be a pollutant of concern for this discharge. Therefore, the permit limits for Oil & Grease will remain in the permit at Outfall 101.

9.0 Endangered Species Protection

EPA requested an official species list from the U.S. Fish and Wildlife Service (USFWS) using their *Information for Planning and Consultation* tool found on their website at: <https://ecos.fws.gov/ipac> to determine if there are any federally listed threatened or endangered species or their designated critical habitat(s) that will be affected by this discharge. The USFWS has identified one threatened species located within the boundary of the discharge, the Northern Long-eared Bat (*Myotis septentrionalis*), and no critical habitats near the facility or the discharge. EPA has determined that this permit action is not likely to have an effect on the Northern Long-eared Bat. Therefore, no Biological Assessment or further section 7 consultation with the U.S. Fish and Wildlife Service is required.

For listed species or critical habitats that fall under the jurisdiction of The National Oceanic and Atmospheric Administration Fisheries (also known as National Marine Fisheries Service) EPA has made a "no effect" determination. A "no effect" determination means there will be no direct or indirect effects to listed species or critical habitat from this proposed action.

10.0 National Historic Preservation Act

The National Historic Preservation Act of 1966, and implementing regulations (36 C.F.R. Part 800) requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation, or designee, the opportunity to comment on such undertakings. See Section 106, 54 U.S.C. § 306108. EPA notified the District of Columbia State Historic Preservation Office (DC SHPO) that it is proposing to reissue NPDES permit no. DC0000094 and that EPA has determined that this permit does not have the potential to affect historic properties. See 36 C.F.R. § 800.3(1).

11.0 Anti-Backsliding

Section 402(o) of the CWA and 40 CFR §122.44(l) prohibit the renewal, reissuance or modification of an existing NPDES permit that contains effluent limits, permit conditions, or standards that are less stringent than those established in the existing permit, unless certain exceptions are met. The 2009 permit contained Water Quality Based Effluent Limits (WQBELs) at Outfall 013 for copper, lead, zinc, cadmium, and iron which are less stringent than the WQBELs in the current permit. Therefore, an anti-backsliding analysis was conducted in accordance with CWA Section 402(o)(1). Where the effluent limitation under consideration is water quality-based, Section 401(o)(1) states that such backsliding may occur only in compliance with the requirements of Section 303(d)(4) of the CWA.

CWA Section 303(d)(4) addresses relaxation of water quality-based effluent limits under two circumstances: where the receiving water is not attaining the applicable water quality standards (WQS) (CWA Section 303(d)(4)(A)) and where the receiving water is attaining the applicable WQS (CWA Section 303(d)(4)(B)). The current permit contains less stringent effluent limits for pollutants where the WQS is being attained for some pollutants and not attained for others. These two circumstances are discussed separately below.

CWA Section 303(d)(4)(A)) Standard not attained

The current permit contains WQBELs for copper and zinc at Outfall 013 that are less stringent than the WQBELs in the previous 2009 permit. The Anacostia River is not attaining the applicable WQS for copper and zinc triggering an anti-backsliding review under CWA Section 303(d)(4)(A). The revised WQBELs for copper and zinc were calculated using critical conditions, which is a combination of worst-case assumptions of stream and effluent flow. These WQBELs reflect the allowable effluent load that will meet the WQS outside of the mixing zone. In other words, it is the maximum allowable pollutant load that the Anacostia River can accept outside the mixing zone without causing an excursion of the WQS. These WQBELs are protective of water quality standards at critical conditions and conditions that are less than critical. Therefore, the relaxation of the effluent limits for copper and zinc is consistent with the exception to the prohibition to backsliding found at CWA Section 303(d)(4)(A) because the cumulative effect of the revised WQBELs for copper and zinc will assure the attainment of the applicable WQS.

CWA Section 303(d)(4)(B)) Standard attained

The WQBELs from the 2009 permit for cadmium, lead, and nickel were removed because the reasonable potential analysis did not show a reasonable potential to cause or contribute to an exceedance of the applicable WQS for these pollutants. While a WQBEL for iron remains in the permit, the new WQBEL for iron is less stringent than the WQBEL in the 2009 permit. The Anacostia River has been determined to be attaining the applicable WQS for cadmium, lead, iron, and nickel triggering an anti-backsliding review under CWA Section 303(d)(4)(B). Because the standards are being attained, the relaxation of the WQBELs is consistent with the exception to the prohibition against backsliding found at CWA Section 303(d)(4)(B) providing it is also consistent with the District's antidegradation policy. The Anacostia River is a Tier 1 designated waterbody. The District of Columbia's Municipal Regulations Title 21 Section 21-1102.1 define a Tier 1 designation as "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." The relaxation of the effluent limits is consistent with the District's Tier 1 antidegradation policy because the discharge is meeting the water quality standards for these pollutants thereby maintaining the existing instream water uses of the Anacostia River. Because the discharge is meeting water quality standards for cadmium, lead, iron, and nickel, and the District's antidegradation policy is being met, the removal of these limits is consistent with the exception to the prohibition to backsliding found at CWA Section 303(d)(4)(B).

12.0 Antidegradation Statement

The Anacostia River is a Tier 1 protected water. The current permit contains water quality-based effluent limits sufficient to maintain and protect the water quality necessary to protect existing uses. Discharges from this facility therefore will not downgrade the water quality of Anacostia River.

13.0 Clean Water Act Section 401 Certification

In accordance with CWA 401(a)(1), EPA requested a water quality certification from the District of Columbia, via DOEE, to ensure compliance with the District's WQS.

401 Certification request to DOEE: December 1, 2020

401 Certification received from DOEE: January 22, 2021

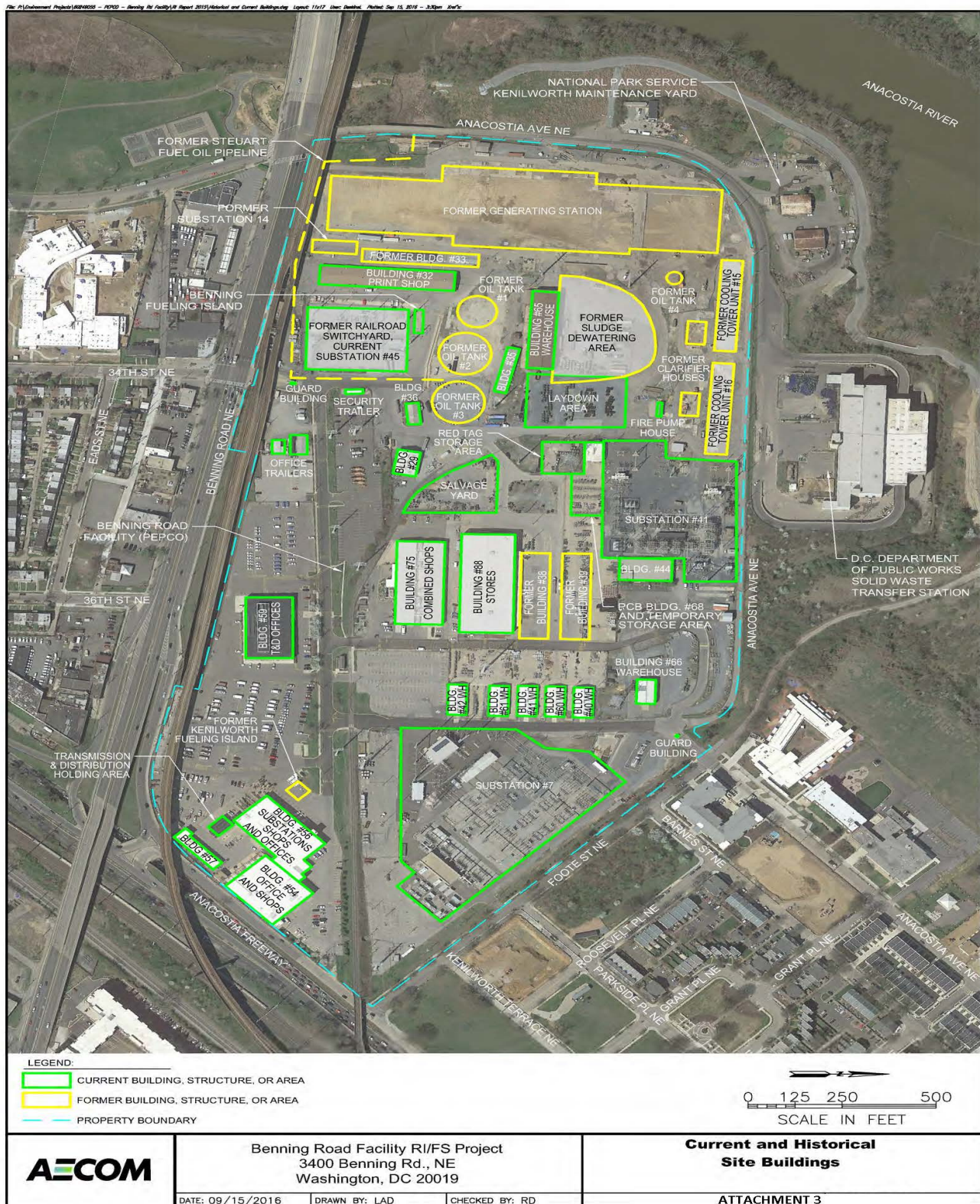
401 Notification letter sent to MDE: February 4, 2021

401 Notification letter received from MDE: N/A

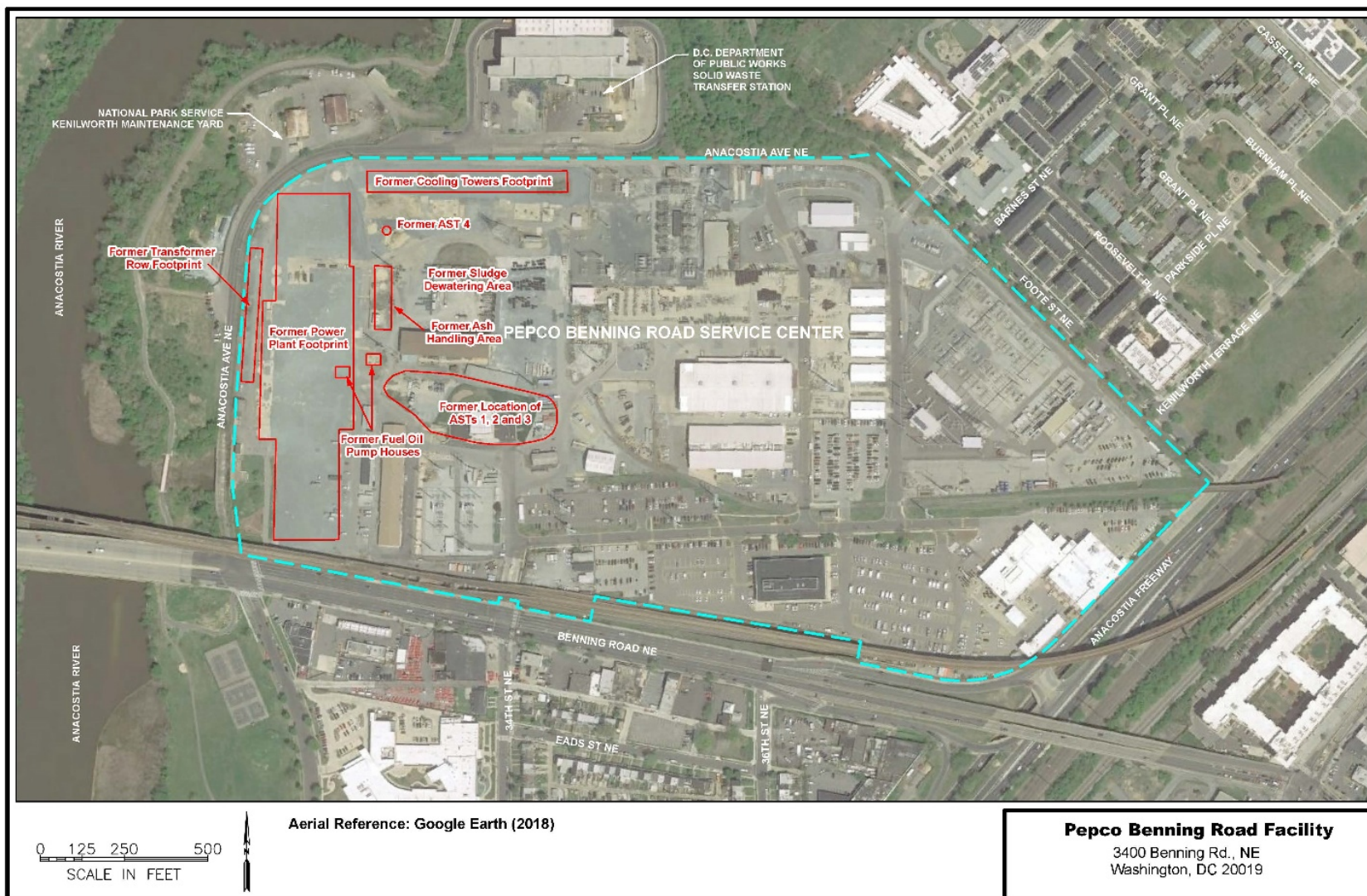
401 Notification letter sent to VADEQ: February 4, 2021

401 Notification letter received from VADEQ: N/A

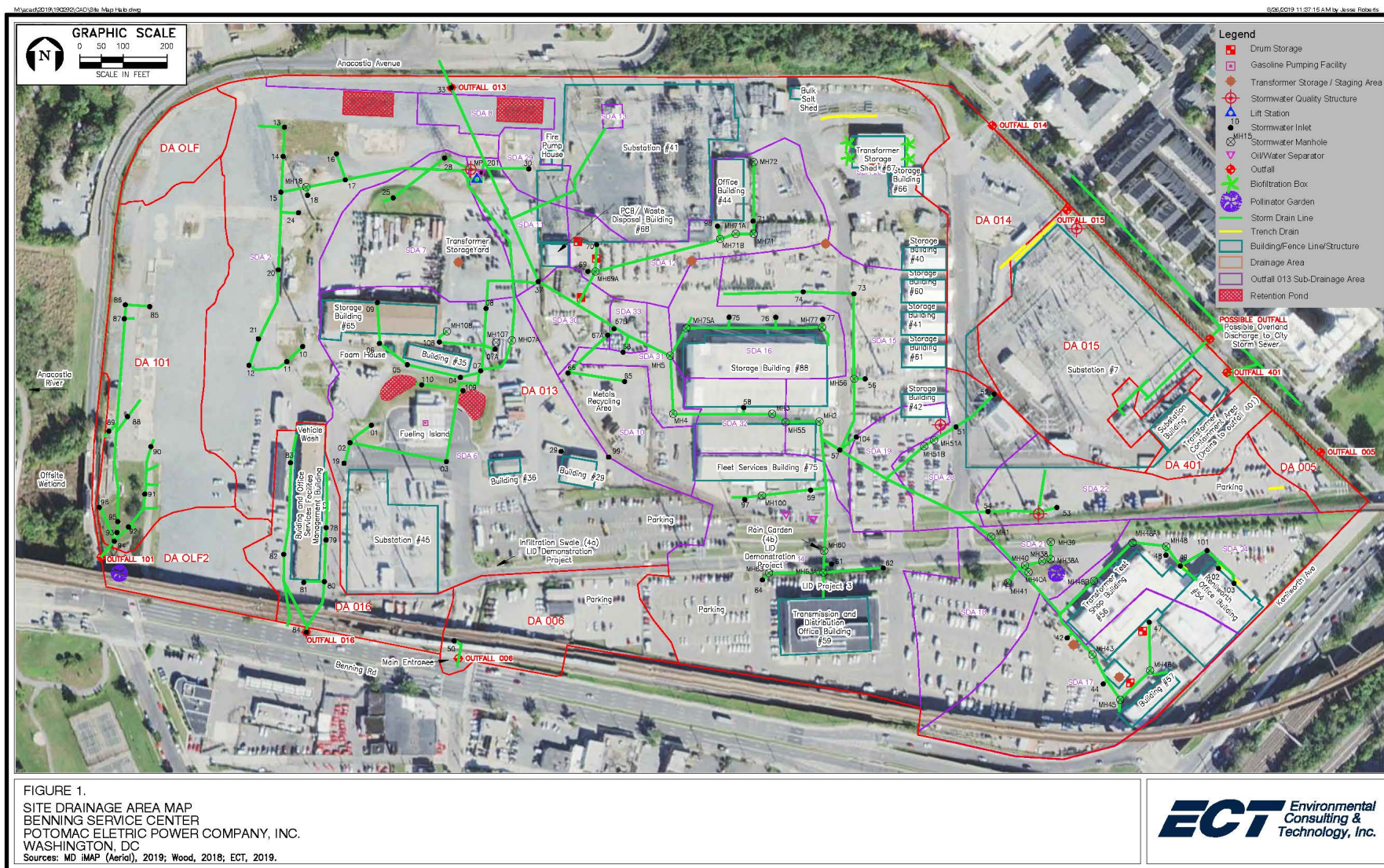
Attachment 1. Current and Historical Buildings



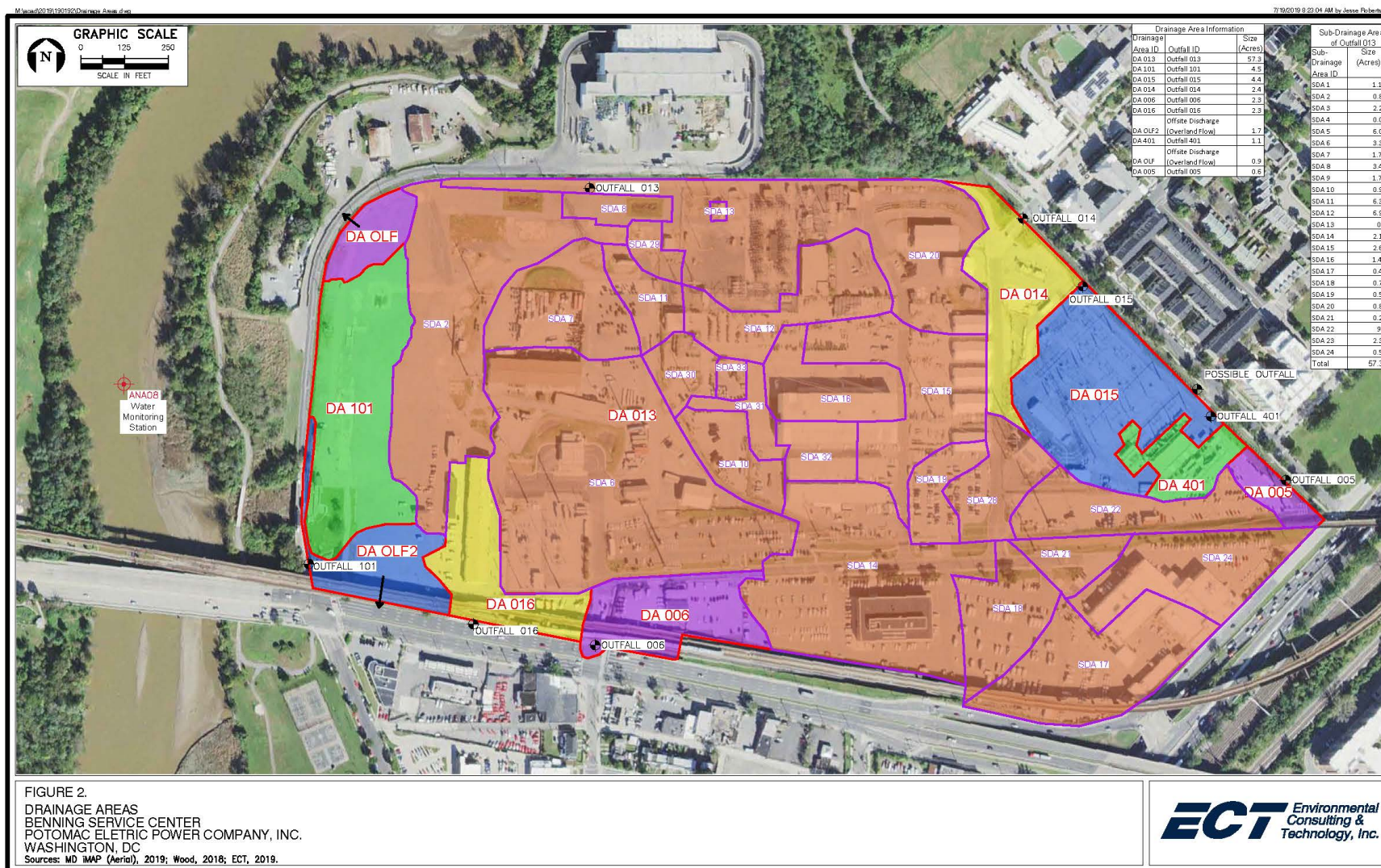
Attachment 2. Aerial view of the Pepco Benning Road Service Center as of 2018.



Attachment 3. Site Drainage Area Map and corresponding monitoring points and outfalls.



Attachment 4. Sub-drainage areas



Attachment 5. Response to Comments

RESPONSE TO COMMENTS

**NPDES Permit No. DC0000094
Pepco Benning Service Center
3400 Benning Road
Washington, D.C. 20019**

The U.S. Environmental Protection Agency's Region 3 (EPA) is issuing a Final National Pollutant Discharge Elimination System (NPDES) Permit to Potomac Electric Power Company for Pepco Benning Service Center. This permit is being issued under the Federal Clean Water Act (CWA), 33 U.S.C., §§ 1251 et. seq.

In accordance with the provisions of 40 CFR §124.17, this document presents EPA's responses to comments received on the draft NPDES Permit No. DC0000094 (the Draft Permit). The Response to Comments explains and supports EPA's determinations that form the basis of the final permit (the Final Permit). From November 30, 2020 through December 30, 2020, EPA solicited public comments on the Draft Permit for the reissuance of a NPDES permit to discharge stormwater from Outfalls 013, 101, 014, 015, 016, 005, 006, and 401 to the Anacostia River.

EPA received and has considered 19 comments from the permittee and 6 comments from the District Department of Energy and Environment.

Although EPA's decision-making process has benefited from the comments submitted, the information and arguments presented did not raise any substantial new questions concerning the permit that warrants EPA exercising its discretion to reopen the public comment period. EPA did, however, make certain changes in response to the public comments EPA received on the Draft Permit and Draft Fact Sheet. Based on the Draft Permit and Fact Sheet, and the comments thereto, EPA issues the Final Permit as a "logical outgrowth" of the Draft Permit that was available for public comment.

A copy of the Final Permit and this response to comments document will be posted on the EPA Region 3 web site: <https://www.epa.gov/npdes-permits/district-columbia-npdes-permits>. A copy of the Final Permit may be also obtained by emailing or calling Carissa Moncavage at Telephone: (215) 814-5798; Email moncavage.carissa@epa.gov

Comments from Pepco dated December 29, 2020

The following comments were either comments embedded in the PDF of the draft permit, or actual edits that were made in the PDF document itself. Therefore, the following comments were paraphrased from the embedded edits and notes (collectively "comments") submitted on the PDFs. The actual comments can be found in the permit's administrative record:

1. In Part I.F.9 of the permit (pg 15), Pepco recommended removing "minimum of one storm event" from the first sentence: "Sampling to satisfy the monitoring requirements set forth in Part I and III of this permit shall be conducted during a minimum of one storm event."

EPA's response: EPA believes including this condition provides clarity to the number of sampling events that are expected to be sampled. This sentence will remain in the permit.

2. In Part III.A of the permit (pg 24), Pepco recommended removing the following statement "Reports of compliance or non-compliance with, and progress reports on interim and final requirements contained in the above compliance schedule, if any, shall be postmarked no later than 14 days following each schedule date."

EPA's response: This statement is a regulatory requirement under 40 CFR 122.47(a)(4) and, therefore, will remain in the permit as is.

3. In Part III.C. of the permit (pg 25), Pepco recommended changing the statement "but is not limited to, a bathymetry survey and water modeling of the receiving stream, plum mapping survey, and any other" to "including where appropriate a bathymetry survey and water quality modeling of the receiving stream and a plume mapping survey."

EPA's response: EPA agrees with this change and has revised the permit accordingly.

4. In Part III.E.1.f of the permit (pg 28), Pepco recommended changing this section from "The Limitations and Monitoring section in Part I of this permit requires monitoring for certain parameters at Outfalls 013 and 101 for which acute toxicity testing is required. These parameters shall be analyzed on samples taken on the same day as the samples used for toxicity testing." to read "Samples used for toxicity testing shall be taken on the same day as samples taken for compliance with requirements under the Limitations and Monitoring section in Part I of this permit."

EPA's response: The intent of this requirement is to ensure that the WET samples are taken on the same day that the samples for the pollutants listed in Part I of the permit are taken. The purpose of collecting these samples concurrently is to help identify potential causes of toxicity should there be a failure. EPA agrees the wording is confusing and will change it accordingly.

5. In Part III.F.3 of the permit (pg 28), Pepco recommended changing the language from "The SWPPP shall include best management practices (BMPs) in accordance with Part III.G of this permit for on-site activities that will minimize the discharge of pollutants in stormwater to waters of the District." to "The SWPPP shall incorporate the facility's Best Management Practices (BMP) Plan in accordance with Part III.G of this permit."

EPA's response: EPA agrees with this recommendation and has revised the permit accordingly.

6. In Part III.F.4.g.iii of the permit (pg 32), Pepco recommended removing the phrase "Any records of the collection and analysis of samples" because it is duplicative of the previous item no. ii.

EPA's response: EPA agrees with this recommendation and has revised the permit accordingly.

7. Part III.G.2 of the permit (pg 33), Pepco recommended including the phrase "principally PCBs and PAHs" in the last paragraph to read:
The permittee shall review and update its Best Management Practices (BMP) plan which prevents, or minimizes the potential for the release of toxic substances, **principally PCBs and PAHs**, from

ancillary activities to the waters of the United States through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage. (emphasis added)

EPA's response: The intent of this permit condition is to minimize or prevent the potential release of all toxic substances. EPA believes that identifying these two pollutants does not provide clarity or value to this permit condition. Therefore, this permit condition will remain unchanged.

8. Part III.G.4.b.I.ii of the permit (pg 33), Pepco recommended omitting “etc” at the end of the sentence and instead include “the evaluation should include a prediction of the direction, rate of flow, and total quantity of pollutants that could be discharged from the facility.” The permittee points out that this language was taken from Exhibit 9-1 of EPA's NPDES Permit Writers Manual.

EPA's response: EPA agrees with this addition and has revised the permit accordingly.

9. Part III.G.9 of the permit (pg 34), the permittee pointed out that this section incorrectly references Part II, Section G and it should be Part III.

EPA'S response: EPA agrees this is an error and has revised the permit accordingly.

10. Part III.I of the permit (pg 35), Pepco recommended removing the word “Placeholder” at the beginning of this section.

EPA's response: EPA has completed its Endangered Species Act evaluation and has made a final determination in regard to the effects of this discharge on endangered species. Therefore, the “placeholder” statement will be removed and this section will be updated to reflect EPA's ESA effects determination.

11. The permittee pointed out several discrepancies in the fact sheet between the flows on the RP spreadsheet and the flows for Outfalls 013 and 101 starting on pages 5 of the fact sheet.

EPA's response: The flows listed in the RP spreadsheet are the correct flows, therefore, the fact sheet has been changed accordingly.

12. The permittee noted that the flow rates for the outfalls discharging to the MS4 (Outfalls 014, 015, 016, 005, 006, and 401) have no identified source and appear to be high relative to Outfall 101.

EPA's response: The flows listed in the fact sheet starting on page 6 were taken from the fact sheet from the previous permit. The fact sheet from the previous permit is included in the permit's administrative record.

13. The permittee recommended removing the following bolded statements from Section 3.2.4 of the fact sheet (pg 12)

When conducting the reasonable potential (RP) analysis for the pollutants of concern for this discharge, **EPA had no information on how the effluent mixes with the receiving stream.** Therefore, EPA assumed complete mixing of the effluent with the receiving stream and applied a dilution factor when conducting the RP analysis (see Section 7.0 for more information on the RP analysis). Under complete mixing conditions, applying a

dilution factor to the discharge gives the permittee relief from meeting water quality standards at the end of the pipe. **However, because complete mixing is assumed**, EPA is giving the permittee the option to conduct a water quality modeling study to confirm this assumption or, if there is incomplete mixing, to determine a mixing zone in the receiving stream.

EPA's response: EPA does not agree with the recommendation to remove these two statements as these statements provide context to the reasoning for the assumptions used in the RP analysis.

14. In Section 4.2 of the fact sheet (pg 14) "Total Maximum Daily Loads (TMDLs)", the permittee noted that Section 4.2.6 addresses the TMDL for PCBs, however that TMDL was not referenced in the table under Section 4.2.

EPA's response: The PCB TMDL was inadvertently omitted from the TMDL table in Section 4.2 of the fact sheet. Therefore, EPA revised the table to include the PCB TMDL for the Anacostia River.

15. In Section 4.2.3 of the fact sheet (pg 15), the permittee recommended changed the word "facility" to "generating plant":

The cleaning of these tanks is an activity that is no longer applicable since the **facility** was decommissioned and demolished.

EPA's response: EPA agrees that the generating plant was decommissioned and not the facility, therefore, the fact sheet has been revised to reflect this change.

16. In section 7.3 of the fact sheet (pg 22), the permittee recommended changing "1Q10" to "stream flow" and adding "used for purposed of calculating dilution factors" to the following statement:
Therefore, $14 \text{ cfs} \times 33\% = 4.67 \text{ cfs}$ is the 1Q10 of the Anacostia River

EPA's response: EPA does agree with replacing 1Q10 with "stream flow," however, EPA has added the phrase "stream flow" after 1Q10 for clarity. EPA agrees that adding "for the purposes of calculating the dilution factors" provides clarity to this statement and has revised the fact sheet. The revised statement on pg 22 of the fact sheet now reads:

Therefore, $14 \text{ cfs} \times 33\% = 4.67 \text{ cfs}$ is the 1Q10 **stream flow** of the Anacostia River **which is used for the purposes of calculation the dilution factors**.

17. The permittee pointed out several errors to the long term averages (LTA) and maximum daily loads (MDL) listed on the tables on pages 24-25. They noted that these values do not accurately reflect the values shown on the RP spreadsheet or the limits specified in the draft permit.

EPA's response: EPA cross checked the numbers on the RP spreadsheet with the numbers in the fact sheet and permit, it appears that the numbers listed in the fact sheet are incorrect. EPA changed the LTA and MDL values on the fact sheet to reflect the correct values on the RP spreadsheet.

18. In Section 9.0 “Endangered Species Protection” of the fact sheet (pg 28), the permittee recommended the following statement be added to this section:
“EPA has made a determination that the proposed action will have “no effect” on threatened or endangered species or their critical habitat.”

EPA’s response: The permittee’s recommendation inaccurately describes EPA’s ESA determination, therefore, the fact sheet will not be revised to include the permittee’s recommendation and will instead include a “not likely to cause an effect” determination that was inadvertently omitted from the fact sheet. In reviewing this section of the fact sheet, EPA noticed that it also inadvertently omitted the one threatened species that was found to be located within the boundary of this discharge and listed on the U.S. Fish and Wildlife Service’s species list, the Northern Long-eared Bat. EPA revised Section 9.0 of the fact sheet to include the threatened species identified in the species list provided by the U.S. Fish and Wildlife Service.

19. In section 13.0 “Clean Water Act Section 401 Certification” of the fact sheet (pg 29), the permittee suggested that there is no basis for notifying downstream states in accordance with Clean Water Act Section 401(a)(2). The permittee included the following note in the fact sheet:

“Note: Given the stringent Water Quality Standards established by the District of Columbia and the inclusion of WQBELs in this permit, there does not appear to be any basis for EPA to conclude that the discharge to be authorized by this permit may affect the quality of the waters of Maryland or Virginia (or any other state). Absent such a determination, there is no requirement under 33 U.S.C. 1341(a)(2) for EPA to issue the notices highlighted above.”

EPA’s response: EPA respectfully disagrees with the permittee’s comment and has notified the neighboring jurisdictions of EPA’s action and requested a response in accordance with the Clean Water Act and implementing regulations. As EPA issues NPDES permits in the District of Columbia, Section 401(a)(2) of the CWA and the implementing regulations apply to EPA’s issuance of permit no. DC0000094. See 33 U.S.C. § 1341(a)(2) and 40 C.F.R. § 121.12; see also CWA Sections 402(a)(3), 402(b)(3), and 402(b)(5), 33 U.S.C. §§ 1342(a)(3), (b)(3) & (b)(5). Those provisions of the statute and regulations require EPA to notify neighboring jurisdictions if EPA determines that the discharge authorized by a federally-issued permit may affect water quality in the neighboring jurisdiction. EPA has exercised its authority under Section 401(a)(2) of the CWA and has determined that the discharges authorized by permit no. DC0000094 may affect the quality of waters within the jurisdiction of Maryland and Virginia. These notifications can be found in the permit’s administrative record. EPA did not receive a response from Virginia or Maryland in regard to the 401(a)(2) letters that were sent to these neighboring jurisdictions.

Comments from the District of Columbia’s Department of Energy and Environment, dated December 23, 2020

Comments below are as received; they have not been edited.

20. Draft permit: Section B.3. Outfall 101

Inlet 87 is upgradient of most of the drainage area for Outfall 101. Numerous additional outfalls and storm inlets exist downstream of this location which receive drainage from areas that were formerly part of the operational Pepco power generation facility. CCTV mapping of the sewer system did not instill confidence in the facility maps of the drainage system or its current state of functionality. Existing pipes are damaged, caved in, and/or clogged in many areas and allow infiltration from areas with a known history of contamination. Unless the pipe from Inlet 87 to Outfall 101 is proven to be in working condition and all pipes feeding into this pipe are sealed from within the pipe this sampling location would likely not capture all potential discharges to Outfall 101. DOEE recommends that Pepco completes the drainage area and pipe investigation before all sampling locations are removed from reporting.

EPA's response: EPA asked Pepco to assist in addressing this comment as they are most familiar with their stormwater pipes and facility. Pepco provided the following response in return: The piping from Inlet 87 was inspected in September 2020 and confirmed to be in working condition. No other inlets or pipes feed into the piping that runs from Inlet 87 to the manhole where it empties into the existing discharge canal that is connected to Outfall 101. The piping from Inlet 88 terminates at the same manhole that empties into the discharge channel. Inlet 88 has been sealed and it was confirmed that the piping from Inlet 88 no longer contributes any flow to the manhole. Inlets I-85, I-86, I-89 and I-90 have all been sealed. None of these inlets, or the associated piping, currently contributes flow to outfall 101. The only remaining access points to the storm drain system (I-92, I-93, I-94, I-95 and I-96) are located in a vegetated area and situated above grade so they do not collect stormwater runoff. These structures have been re-designated as "access points."

EPA finds this response adequately addresses this comment.

21. Draft permit: Section E.1. Outfall 014 Monitoring Requirements

I am uncertain what samples the following statement refers to:

"Samples from each sampling location will be composited into one sample for analysis"

This sample location only has one listed sampling location. Please clarify what is being composited and from what locations.

EPA's response: EPA asked Pepco for clarification on the sampling locations for Outfall 014. Pepco provided the following response: The composite sample from Inlets 80 and 82 is for Outfall 016, not Outfall 014. The stormwater flow to Outfall 014 consists of two separate surface streams as it exits the site (along the opposing curbs for the entrance road) and therefore a composite sample will be taken consisting of both flows leaving the site.

EPA finds this response addresses this comment.

22. Draft Permit: Section E.3. Outfall 016

This section contains the same statement identified above. Is it the intention of the permit that the discharge from these different Outfall locations be composited into one sample?

EPA's response: EPA asked Pepco for clarification on the sampling locations for Outfall 016. Pepco provided the following response: The sampling for outfall 016 consists of a composite from

stormwater inlets 80 and 82 which are representative of the flows from the inlets within drainage area 05 prior to being combined at outfall 016.

Because the sampling locations in the draft permit were verified by Pepco, no changes to the draft permit were needed.

23. Draft Permit Section E.6. Outfall 401

Drainage area to Outfall 401 contains a substation building and a transformer containment area. This area is surrounded by a very low berm with piping and valves that can be opened/closed to allow discharge. Should this Outfall also contain monitoring requirements for Oil and Grease?

EPA's response: EPA asked Pepco to confirm the industrial activity in the drainage area of Outfall 401. Pepco provided the following response: Drainage Area 26 which feeds outfall 401 is comprised of portions of two separate operational areas. One area consists of a portion of an employee parking lot. No service vehicles are parked at this area. The other area consists of the southern portion of Substation 7. Stormwater in this area of the substation consists of (a) drainage from a diked area within which substation transformers and oil retention pits are situated and (b) roof drainage from the substation control building. The oil retention pits are designed not to discharge if oil is present. No maintenance activities are performed within Drainage Area 26.

EPA finds this response adequately addresses this comment.

24. Various Effluent Standards for Outfall 013

EPA Region III worked with DOEE to create updated/revised effluent standards based on TMDL and Reasonable Potential Analysis. However, some of the new effluent standards included in the permit are higher than Maximum Daily Load effluent standards in the previous permit. DOEE does not contend the new standards but does suggest Region III include language explaining why the effluent standards have increased for some parameters and why this is acceptable in light of anti-backsliding regulations.

EPA's response: EPA agrees that a more thorough anti-backsliding explanation is appropriate in the fact sheet. Therefore, EPA has included a more detailed discussion of the anti-backsliding analysis that was conducted on the new permit limits.

25. Draft Fact Sheet DC WQC

Calculations described in the fact sheet are compared to DC WQC. For some of these parameters calculation of the DC WQC include a value for hardness. DOEE recommends Region III explain what values were used for these calculations and how they were derived as part of the fact sheet.

EPA's response: EPA used a default hardness value of 100 mg/L to calculate the hardness dependent water quality criteria, which is a conservative value when calculating the hardness dependent metals criteria. Background data for the Anacostia river showed a hardness value of 263 mg/L. EPA asked DOEE in an email dated July 9, 2020 about this seemingly high hardness value and DOEE stated that a hardness measurement of 263 mg/L is indicative of stream impairment. DOEE recommended using the default hardness value of 100 mg/L in calculating the water quality criteria. EPA agreed with this recommendation because it does result in a more conservative criterion for the applicable metals, thereby more protective of the Anacostia River.

A statement was added to page 20 of the fact sheet that explains the use of the default hardness value in the hardness based criteria calculations.

FACT SHEET ADDENDUM



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 3
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

NPDES Permit No. DC0000094 Modification No. 1

The United States Environmental Protection Agency (EPA) is Proposing the Major Modification of a National Pollutant Discharge Elimination System (NPDES) Permit to Discharge Pollutants Pursuant to the Provisions of the Clean Water Act (CWA) For:

**Pepco Benning Service Center
701 Ninth Street, NW Room 6220
Washington, DC 20068**

**FACILITY LOCATION:
3400 Benning Road NE
Washington, D.C. 20019**

**RECEIVING WATER:
Anacostia River**

ACTION TO BE TAKEN:

EPA finalized the permit modification for Pepco Benning Service Center. Two sections of the permit were modified and discussed in more detail below. The permit modification becomes effective on the issuance date.

On March 28, 2022, EPA offered a draft permit modification for public notice and comment. The comment period closed on April 27, 2022. EPA did not receive comments on the draft permit during or after the public comment period.

The following two sections of the permit were modified:

1. Part I Section E.5. Sampling location for Outfall 006

The permittee has requested a change in the sampling location for Outfall 006 after reviewing drainage area maps for this outfall. The drainage map in the currently effective permit shows Substation 45 as part of Outfall 013's drainage area. See NPDES Permit No. DC0000094 April 11, 2021 Fact Sheet, Attachments 3 and 4. After reissuance of the permit, the Permittee reviewed the Substation 45 drawings, conducted field verification on September 16, 2021, and determined that Substation 45 discharges into Outfall 006. In light of this new information, the Outfall 006 sampling location will be re-located to a manhole in the entrance road to the facility that collects stormwater flow from both the existing overland discharge from Drainage Area 09 (DA 09) and Substation 45.

2. Part I Section F.1. Additional Monitoring and Reporting Requirements for PCBs

Part I Section F.1 of the permit included a typographical error regarding the frequency of PCB monitoring at the outfalls. The permit includes different monitoring frequencies for PCBs at two

out of eight outfalls. Outfalls 013 and 101 have an annual PCB monitoring frequency whereas Outfalls 014, 015, 016, 005, 006, and 401 have a quarterly monitoring frequency. However, Part I Section F of the permit incorrectly states “[t]he minimum sampling frequency is once per quarter for all pollutants except for PCBs, for which sampling is required once per year.” Because the monitoring frequencies for PCBs at Outfalls 014, 015, 016, 005, 006, and 401 have a quarterly monitoring frequency, this permit modification will clarify the statement in Part I Section F.1 to show that the PCB monitoring frequency is either annual or quarterly depending on the outfall.

All other provisions in the permit remain unchanged.



FINAL FACT SHEET ADDENDUM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 3

**1600 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19103-2852**

**NPDES Permit No. DC0000094
Modification No.2**

The United States Environmental Protection Agency (EPA) is Proposing the Major Modification of a National Pollutant Discharge Elimination System (NPDES) Permit to Discharge Pollutants Pursuant to the Provisions of the Clean Water Act (CWA) For:

Pepco Benning Service Center – East

**FACILITY LOCATION:
3400 Benning Road NE – East
Washington, D.C. 20019**

**RECEIVING WATER:
Anacostia River**

ACTION TO BE TAKEN:

In accordance with 40 CFR §§ 122.62(a)(2) and 122.63(a), EPA is modifying the NPDES permit for Pepco Benning Service Center based on new information that was not available at the time of permit reissuance and to correct typographical errors.

On September 11, 2024, the U.S. Environmental Protection Agency Region 3 (EPA) provided public notice for a major modification of Potomac Electric Power Company's (Pepco) National Pollutant Discharge Elimination System (NPDES) Permit, permit No. DC0000094, for Pepco Benning Service Center - East. EPA solicited public comments on the Draft Major Modification from September 11, 2024, through October 10, 2024. As discussed in more detail in the Fact Sheet and in the Response to Comments at the end of this fact sheet, the modification removed Outfall 101 from this permit and incorporated requirements of the Anacostia Toxics TMDL, which was approved by EPA in March 2024.

Summary

The permittee has requested a permit modification to remove Outfall 101 from this permit (NPDES permit no. DC0000094) in anticipation of the sale of the portion of the site containing that outfall. In advance of the potential sale, the site was divided into an east side and west side. For NPDES permitting purposes, the parcel that is intended to be sold has been named “Benning Service Center – West” (also referred to as “Lot 800”) and the parcel that Pepco intends to maintain ownership of after the sale is named Benning Service Center – East. As such, the facility location name for this permit was changed to “Benning Service Center – East” in this proposed modification action.

In addition to the request to remove Outfall 101 from this permit, the permittee has also requested to add periodic fire hydrant testing to the permit. This will result in periodic discharges of potable water at some or all of the outfalls. EPA has approved this request, however, the permittee will be required to notify DOEE at least twenty-four (24) hours prior to testing and to dechlorinate the fire hydrant flushings prior to discharging to the Anacostia River.

A separate permit application was submitted by Pepco for NPDES permit coverage of Outfall 101. Separating DC0000094 into two different permits is intended to facilitate transfer of the NPDES permit covering Outfall 101 from Pepco to the future owner of Lot 800 (Outfall 101). Outfall 101 will be authorized to discharge under NPDES permit no. DC0000390 and will be issued concurrently with this permit modification.

The following sections of the permit are being modified:

1. Part I Sections B.3, B.4, B.5, C.3, D.3, and D.4. Monitoring requirements for Outfall 101.
The permittee has requested removal of Outfall 101 in anticipation of the sale of the “Lot 800” portion of the site. A separate permit application was submitted for Outfall 101 for NPDES permit coverage for this outfall. A draft permit under new Permit no. DC0000390 will cover discharges from Outfall 101 and will be issued concurrently with this permit modification. See the draft fact sheet and draft permit for Permit no. DC0000390 for the details of that permitting action.
2. Removed all references to Outfall 101 throughout the permit:
 - a. Part I. Section F. Additional Monitoring Requirements
 - i. Part I.F.5.a. Benchmark Monitoring
 - ii. Part I.F.8 sampling location
 - iii. Part I.F.9 qualifying rain events
3. Removed Part III Section A. Compliance Schedule for Outfall 101.
This section was removed from the permit because it included a compliance schedule for Outfall 101 which is no longer applicable to this permit.
4. Part III Section B.1 Additional Monitoring Requirements for Total Maximum Daily Loads (TMDLs).
The permit required quarterly monitoring of the TMDL pollutants (Arsenic, DDT, DDD, DDE, Chlordane, Dieldrin, Total PAHs, Total Heptachlor Epoxide) for outfalls 014, 015, 016, 005, 006, and 401. If the data did not exceed the District’s water quality standard for that pollutant after four consecutive quarters, monitoring for that TMDL pollutant can be discontinued. Therefore,

monitoring for Arsenic, DDT, DDD, DDE, Chlordane, Dieldrin, Total PAHs, Total Heptachlor Epoxide was removed for these outfalls.

Individual effluent limits were added for Outfall 013 based on the Anacostia Toxics TMDLs approved in March 2024. The additional monitoring requirements for this special condition for Outfall 013 were no longer applicable because this condition was based on the previous TMDL which has now been replaced. The new effluent limits for Outfall 013 were included in the permit instead.

5. Part III Section J. Definitions and Abbreviations.
Updated definition for “drainage system” to include all outfalls, not just 013 and 101.
6. Part I. F.5. Additional Monitoring and Reporting Requirements.
Added clarifying language on how to report non-detects.
7. Incorporated effluent limits based on the recently approved TMDLs for organics and metals (approved 2024).

Arsenic, Chlordane, DDT, Dieldrin, Heptachlor Epoxide, PAH 2 and PAH 3 TMDLs

The 2024 TMDL assigns WLAs for Arsenic, Chlordane, DDT, Dieldrin, Heptachlor Epoxide, PAH 2 and PAH 3. The draft permit that was offered for public notice and comment on September 11, 2024 contained the assigned wasteload allocations for these pollutants.

PAH 2 and PAH 3 had a requirement to report the highest concentration for any compound within each PAH grouping on the DMRs. After considering the comment submitted by the permittee (see comment no. 1 in the Response to Comments at the end of this fact sheet) and the assumptions and requirements of the TMDL, EPA determined that monitoring for the individual PAH compounds and comparing the highest effluent concentration to the respective criteria concentration for that individual PAH compound is an approach that is consistent with the assumptions and requirements of the TMDL. As such, effluent limitations for PAH groupings have been replaced in the final permit with a report only requirement for PAH 2 and PAH 3 and effluent limitations for each individual PAH compound based on its respective water quality criteria. This approach was also applied to the other TMDL pollutants (arsenic, chlordane, DDT, dieldrin, and heptachlor epoxide) and changed in the final permit accordingly. These changes were made to the final permit modification along with clarifying the title of this table in Part I Section B.3 and B.4.

8. Part III.C. in the 2021 permit

The permittee submitted a site specific mixing zone study which evaluated how the effluent discharged at Outfall 013 mixes with the receiving stream. Because this study was submitted it is no longer applicable and therefore removed from the permit. The mixing study suggested new dilution factors, which were incorporated into this permit modification. A new reasonable potential analysis was then conducted using these site specific dilution factors.

9. Re-evaluated Reasonable Potential Analysis

The 2021 permit included dilution factors that were based on a calculation using the discharge flow and receiving waterbody flow. EPA included a provision in the 2021 permit allowing the permittee to submit a mixing zone study to evaluate to what extent the discharge mixes with the receiving stream. If a site specific mixing zone study was not submitted to EPA within two years from the permit effective date, the effluent limits and benchmark values determined using the calculated dilution factor would be replaced with end-of-pipe limits. The site specific mixing study, submitted within the requisite timeframe, resulted in a different dilution factor for Outfall 013. As a result, a reasonable potential (RP) analysis was re-evaluated using the new dilution factor from the site specific study. The RP analysis was conducted on DMR data from the last four years (2020-2024) to determine if the discharge shows the potential to exceed in-stream water quality criteria using the new dilution factors. 40 CFR § 122.44(d)(1)(iii) requires effluent limitations be established in permits when it is determined that a discharge will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including narrative criteria. Procedures in the TSD were used in the RP analysis. For pollutants in which the RP analysis shows the potential to exceed in-stream water quality values, water quality-based effluent numbers must be calculated as required at 40 CFR § 122.44(d).

The District of Columbia water quality criteria for copper, lead, zinc, cadmium, and nickel are expressed as dissolved. EPA is assuming a 1:1 translator using a conservative approach to convert the total dissolved metals criterion to total recoverable effluent limits, consistent with EPA Metal Translator Guidance.

A default hardness value of 100 mg/L was used to calculate the hardness dependent water quality criteria.

9.1 Parameters of Concern

Outfall 013 discharges to the Anacostia River. The parameters of concern for this facility are copper, iron, cadmium, lead, zinc, nickel, Total Suspended Solids (TSS), and pH. A parameter of concern is defined as a pollutant with quantifiable values reported to EPA. A parameter is considered a candidate for a RP analysis when the reported quantifiable values are at or above water quality criteria after accounting for variability.

The TSS limits are TBELs from the 2009 permit based on BPJ and have been carried over to this permit in order to be consistent with the assumptions and requirements of the Anacostia and Chesapeake Bay TMDLs.

9.2 Five-step TSD approach to Reasonable Potential Analysis

Using the TSD approach, the following is a description of the 5 steps used to conduct the RP analysis at Outfall 013.

- 1) Determine the total number of effluent data values (n) for the pollutant of interest and identify the highest value of the dataset for that parameter.

- 2) Determine the coefficient of variation (CV) of the dataset. The CV is equal to the standard of deviation divided by the long-term average. The default CV for fewer than 10 data values is 0.6, as specified in Box 3-2 of the TSD.
- 3) Determine the appropriate confidence level for the RP analysis. For this permit, EPA used the 99th confidence level, recommended by the TSD in section 5.5.4.
- 4) Determine the RP multiplier, using Table 3-1 of the TSD. Generally, if n is greater than 20, the multiplier is calculated per section 3.3.2 of the TSD. However, the RP multiplier was calculated for all pollutants regardless of the number of samples. The highest value from the data set is then multiplied by the RP multiplier. Use this value with the appropriate dilution to project a maximum receiving water concentration (MRWC).

Before projecting the maximum receiving water concentration, EPA calculates an “adjusted effluent concentration” or AEC to determine if the pollutant of concern is a candidate for completing reasonable potential analysis. If the pollutant does not exceed the water quality criterion (WQC) after applying the multiplying factor to the highest effluent concentration, then that pollutant does not continue with the RP analysis to completion. The AEC is calculated by multiplying the highest effluent concentration (HEC) by the reasonable potential multiplier (RPM) which is the first part in Step 4 above.

If the AEC > WQC then the pollutant should continue with the RP analysis and the projected MRWC is calculated which is in the second part of Step 4.

- 5) Compare the projected maximum receiving water concentration (MRWC) to the applicable standard. EPA finds reasonable potential when the projected MRWC is greater than the ambient criterion.

TSD Steps 1-4

Outfall 013							
Parameter of concern	# of samples	Highest Effluent Concentration	CV	RP Multiplier	Adjusted Effluent Concentration	DC WQC	Continue with RP Analysis?
Cadmium (µg/L)	15	0.60	0.82	3.77	2.26	1.79	YES
Copper (µg/L)	15	55.60	1.42	5.94	330	13.44	YES
Iron (µg/L)	15	2240	1.03	4.22	9451	1000	YES
Lead (µg/L)	15	46.5	1.07	4.41	205	64.6	YES
Nickel (µg/L)	10	37.6	0.60	3.02	113	468	NO
Zinc (µg/L)	15	169.0	0.80	3.28	555	117.2	YES
Oil & Grease (mg/L)	15	5.40	0.41	1.66	9.0	10.0	YES

Step 4, continued. Calculate the Maximum Receiving Water Concentration (MRWC):

$$\text{MRWC} = ((\text{AEC} - \text{IBC}/\text{DF}) + \text{IBC}, \text{ where}$$

AEC – Adjusted Effluent Concentration

IBC – Instream Background Concentration

DF – Dilution Factor – see calculation after the table in Step 5 below

EPA obtained Anacostia River instream background concentrations for copper and zinc that were collected by the DC Department of Energy and Environment (DOEE). These background concentrations were used in the RP analysis.

TSD Step 5.

Outfall 013						
Parameter of concern	Adjusted Effluent Concentration	Instream Background Concentration	Dilution Factor	MRWC	WQC	RP?
Cadmium (µg/L)	2.26	Not available	2.2	1.03	1.79	NO
Copper (µg/L)	330	7.2 µg/L	2.2	154.01	13.44	YES
Iron (µg/L)	9451	Not available	2.2	4295.96	1000.00	YES
Lead (µg/L)	205	Not available	2.2	93.14	64.58	YES
Nickel (µg/L)	113	Not available	2.2	52	468	NO
Zinc (µg/L)	555	15.7 µg/L	2.2	261	117.2	YES
Oil & Grease (mg/L)	9.0	Not available	2.2	4.1	10.0	NO

9.3 Developing a Water-Quality Based Effluent Limit:

For those pollutants where there was a reasonable potential to cause or contribute to an exceedance of applicable WQs, the step after the RP analysis is the development of WQBEL for each pollutant. The procedure for this is described at Section 5.4 of the TSD.

1. Compute the Wasteload Allocation (WLA): $WLA = ((WQC - IBC) * DF) + IBC$, where

WQC – Water Quality Criterion

IBC – Instream Background Concentration

DF – Dilution Factor

Outfall 013				
Parameter of Concern	Water Quality Criterion	Instream Background Concentration	Dilution Factor	Wasteload Allocation
Copper (µg/L)	13.44	7.2	2.2	21
Iron (µg/L)	1000	Not available	2.2	2200
Lead (µg/L)	64.6	Not available	2.2	142
Zinc (µg/L)	117.2	15.7	2.2	239

2. Calculate the Long-Term Average (LTA). The long-term average calculation is based on the 99th confidence level as reflected with the z score of 2.326.

$$LTA = WLA * e^{(0.5 * \sigma^2 - 2.326 * \sigma)}$$

$$\text{Sigma square } (\sigma^2) = \ln(CV^2 + 1)$$

$$\text{Sigma } (\sigma) = \text{square root of } \sigma^2$$

Outfall 013					
Pollutant	Z	CV	σ^2	σ	LTA
Copper (µg/L)	2.326	1.42	1.10	1.05	3.16

Outfall 013					
Pollutant	Z	CV	σ^2	σ	LTA
Iron (mg/L)	2.326	1.03	0.721	0.849	438
Lead ($\mu\text{g/L}$)	2.326	1.07	0.765	0.875	27.2
Zinc ($\mu\text{g/L}$)	2.326	0.80	0.492	0.701	60.0

3. Calculate the Maximum Daily Limits (MDL) permit limits:

i. $\text{MDL} = \text{LTA} * e^{(2.326*\sigma - 0.5*\sigma^2)}$

$\sigma^2 = \ln(\text{CV}^2 + 1)$

$\sigma = \text{square root of } \sigma^2$

The MDL is based on the 99th confidence level with the z score of 2.326 as recommended by the TSD¹.

Outfall 013							
Pollutant	Z	CV	σ^2	σ	LTA	Maximum Daily Limit	2021 Effluent Limit
Copper ($\mu\text{g/L}$)	2.326	1.42	1.10	1.05	3.16	21	17.1
Iron ($\mu\text{g/L}$)	2.326	1.03	0.721	0.849	438	2,200	1,591
Lead ($\mu\text{g/L}$)	2.326	1.07	0.765	0.875	27.2	142	102.8 (benchmark value)
Zinc ($\mu\text{g/L}$)	2.326	0.80	0.492	0.701	60.0	239	177.2

Because the limits for copper, iron, and zinc are less stringent in this modification action than in the previous permit, an anti-backsliding analysis was conducted in accordance with Section 402(o) of the Clean Water Act (CWA) and 40 CFR § 122.44(l).

Section 402(o) of the Clean Water Act (CWA) and 40 CFR §122.44(l)

Section 402(o) of the CWA and 40 CFR §122.44(l) prohibit the renewal, reissuance or modification of an existing NPDES permit that contains effluent limits, permit conditions, or standards that are less stringent than those established in the existing permit, unless certain exceptions are met. The 2021 permit imposed Water Quality Based Effluent Limitations (WQBELs) at Outfall 013 for copper, iron, and zinc. The 2021 permit also contained benchmark monitoring for cadmium, lead, and nickel.

Nickel and Cadmium

The revised RP analysis using the new dilution factors still showed no reasonable potential to cause or contribute to an exceedance of nickel and cadmium water quality standards; therefore, benchmark monitoring will continue in the permit for these two parameters.

Copper, Iron, Lead, Zinc

¹ Refer to section 5.5.4 of the TSD

The revised RP analysis using the new dilution factors showed a reasonable potential to cause or contribute to an exceedance of copper, iron, lead, and zinc water quality standards; therefore, effluent limits for these parameters were imposed in the permit.

CWA Section 303(d)(4) addresses relaxation of water quality-based effluent limits under two circumstances: where the receiving water is not attaining the applicable water quality standards (WQS) (CWA Section 303(d)(4)(A)) and where the receiving water is attaining the applicable WQS (CWA Section 303(d)(4)(B)). The permit contains less stringent effluent limits where the WQS is being attained; therefore, CWA Section 303(d)(4)(B) applies and is discussed in more detail below. CWA Section 303(d)(4)(B) Standard attained for copper, iron, and zinc

There was reasonable potential to exceed the district's water quality standard for copper, iron, lead, and zinc and the incorporation of the new dilution factors resulted in less stringent limits for these pollutants.

Because the Anacostia is attaining for copper, iron, lead and zinc, the relaxation of the limits and benchmark values is consistent with the exception to the prohibition against backsliding found at CWA Section 303(d)(4)(B) providing it is also consistent with the District's antidegradation policy. The Anacostia River is a Tier 1 designated waterbody. The District of Columbia's Municipal Regulations Title 21 Section 21-1102.1 define a Tier 1 designation as "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." The relaxation of the effluent limits is consistent with the District's Tier 1 antidegradation policy because the discharge is meeting the water quality standards for copper, iron, and zinc thereby maintaining the existing instream water uses of the Anacostia River.

Anti-backsliding regulatory provisions at 40 CFR § 122.44(l)

The regulations at 40 CFR § 122.44(l)(1) restrict the relaxation of final effluent limitations and the relaxation of standards or conditions contained in existing permits. Thus, this regulation, in effect, addresses all types of backsliding not addressed in the CWA provisions (e.g., backsliding from limitations derived from effluent guidelines, from new source performance standards, from existing case-by-case limitations to new case-by-case limitations, and from conditions such as monitoring requirements that are not effluent limitations).

Lead

The 2021 permit contained benchmark values for lead; however, the reasonable potential analysis using the new dilution factor showed a reasonable potential to cause or contribute to an exceedance of the water quality standard for lead. As a result, an effluent limit for lead was calculated and imposed in the permit. The lead effluent limit was based on new information that was not available at the time the 2021 permit was issued thus meeting the anti-backsliding exception found at 40 CFR 122.44(l)(2)(i)(B)(1).

Cadmium and Nickel

The 2021 permit contained benchmark values for cadmium and nickel. The new reasonable potential analysis still showed no RP for cadmium and nickel; however, the benchmark values are

less stringent because the new dilution factors were used to determine these values. The new dilution factors constitutes information that was not available at the time the 2021 permit was issued thus meeting the anti-backsliding exception found at 40 CFR 122.44(l)(2)(i)(B)(1).

10. Added fire hydrant testing to all outfalls per Pepco's request.

All other provisions in the permit remain unchanged.

Appendix A

RESPONSE TO COMMENTS

NPDES Permit No. DC0000094
Pepco Benning Service Center - East
3400 Benning Road
Washington, D.C. 20019

On September 11, 2024, the U.S. Environmental Protection Agency Region 3 (EPA) provided public notice for a major modification of Potomac Electric Power Company's (Pepco) National Pollutant Discharge Elimination System (NPDES) Permit, permit No. DC0000094, for Pepco Benning Service Center - East. EPA solicited public comments on the Draft Major Modification from September 11, 2024, through October 10, 2024. As discussed in more detail in the Fact Sheet and in the Response to Comments below, the modification removed Outfall 101 from this permit and incorporated requirements of the Anacostia Toxics TMDL, which was approved by EPA in March 2024.

EPA received 5 comments from the permittee and 7 comments from the District Department of Energy and Environment during the public comment period. In accordance with the provisions of 40 CFR § 124.17, this document presents EPA's responses to comments received on the draft NPDES Permit No. DC0000094 (the Draft Permit). The following is a summary of the comments EPA received and EPA's responses to those comments, including which provisions of the draft permit have been changed in the final permit decision and the reasons for those changes.

A copy of the Final Permit and this response to comments document will be posted on the EPA Region 3 web site: <https://www.epa.gov/npdes-permits/district-columbia-npdes-permits>. A copy of the Final Permit may be also obtained contacting Carissa Moncavage at (215) 814-5798 or moncavage.carissa@epa.gov

Comments from Pepco dated October 10, 2024

1. Comment: In Section B.3. Outfall 013 – TMDL Pollutant Monitoring and Reporting Requirements Pepco requests clarification regarding the reporting requirements for the PAH2 and PAH3 groupings. As currently drafted, the permit would require Pepco to report the highest measured value for any constituent within each PAH grouping, but the maximum daily concentration is set equal to the lowest water quality standard for any constituent within the PAH grouping. Accordingly, there could be a scenario where the reported value exceeds the limit for a PAH grouping even though no measured value for any individual constituent exceeds the corresponding water quality standard. Pepco also requests clarifications on the requirement in footnote No.3 to report the Waste Load Allocation (WLA) annually with respect to (a) how the WLA shall be calculated annually, and (b) whether this requirement applies to just the PAH2 grouping, as footnote No. 3 would suggest, or to all Anacostia Toxics TMDL parameters. Pepco proposes the annual mass loading should be calculated based on the measured concentration in each calendar quarter multiplied by calculated flow during the quarter based on rainfall data. In addition, since this is an annual loading calculation Pepco recommends including the previous

year's WLA numbers in the following year's 1st Quarter DMRs so that the WLAs represent a calendar year.

EPA's response:

In the TMDL report, DOEE grouped certain pollutants within the TMDL model to align with the modeling platform, minimize unnecessary modeling complexity, and maintain consistency with the original 2003 TMDLs. These groupings are included in Table 1-3 of the TMDL. DDD, DDE, and DDT were grouped together, and the most stringent criterion of the three was used as the TMDL endpoint. Additionally, PAHs were divided into groups based on benzene ring structure and the most stringent criterion in each group was used as the TMDL endpoint. The PAH 2 group represents PAHs with four rings and the PAH 3 group represents PAHs with five and six rings. In the TMDL report, the most stringent applicable criteria are in bold and highlighted in yellow (see page 25 of the TMDL report) and represent criteria that were used as TMDL endpoints on which the TMDL allocations were based. As a result, EPA included in the draft permit max daily concentrations for the PAH groupings that were based on the TMDL endpoints for those pollutants. In response to this comment, EPA determined that monitoring for the individual PAH compounds and comparing the effluent concentration to the respective criteria concentration for that individual PAH compound is an approach that is consistent with assumptions and requirements of the TMDL. As such, effluent limitations for the PAH groupings have been removed in the draft permit and replaced with effluent limitations for each individual PAH compound based on its respective water quality criteria. This approach was also applied to the other TMDL pollutants (arsenic, chlordane, DDT, dieldrin, and heptachlor epoxide) and changed in the final permit accordingly. Additionally, the permit limits for the PAHs are lower than the method can detect; therefore, for those parameters that have an effluent limit below the laboratory's minimum level, compliance with the permit limits will be determined by comparing the sample result to minimum level specified in the lab data sheets. If the sample result is below the minimum level then the permittee is deemed to be in compliance with the permit. This approach is consistent with Section 5.7.3 of EPA's Technical Support Document for Water Quality Based Toxics Control.

2. Comment: The arsenic TMDL limit calculated in the Fact Sheet (page 4) is 5.873449 g/yr, whereas the draft permit specifies the TMDL Waste Load Allocation as 5.6 g/yr. Pepco believes that the Permit should be changed to reflect the figure calculated in the Fact Sheet (5.873449, rounded up to 5.9).

EPA's response: EPA agrees that 5.6 g/yr is an error and the correct WLA in the permit should be 5.873449 g/yr or 5.9 g/yr; however, as indicated above the WLAs were replaced by the water quality criteria for the TMDL pollutants, which is an approach consistent with the assumptions and requirements of the TMDL.

3. Comment: Pepco requests that a schedule of compliance be included in the permit for the new limits based on the Anacostia TMDL specified in Section B.3. TMDL monitoring data collected at Outfall 013 over the last several years indicate that many of the new TMDL limits cannot be met with existing site stormwater treatment systems. In some cases, the monitoring data is orders of magnitude higher than the TMDL limit. Pepco submitted a compliance schedule which includes interim milestone requirements and dates for achievement of the new limits.

4. Comment: Pepco requests clarification on Part III, Section C. m. on how frequently the Method 1668 reports should be submitted to EPA and DOEE. Previous Method 1668 PCB lab reports, under Permit No. DC0000094, were submitted annually and Pepco requests that same frequency be included in this condition.

EPA's response: The PCB lab reports were submitted annually because the permit required annual sampling. EPA changed the frequency of PCB sampling, as such, the lab reports should be attached to the DMRs. No changes have been made as a result of this comment.

5. Comment: It is Pepco's understanding that the fact that the Whole Effluent Toxicity (WET) Testing provisions in Part III, Section D of the draft Permit will remain in Permit No. DC0000094 as modified, despite the fact that WET Testing was successfully conducted for Outfall 013 following initial issuance of the Permit, does not indicate that such WET Testing must be conducted again during the current Permit term. If EPA believes that this provision creates any ambiguity on this point, Pepco requests clarification be added to the Fact Sheet to confirm that the WET Testing obligation need not be satisfied again during the current Permit term, despite the proposed modification.

EPA's response: Part III.D.a of the permit states "The permittee shall conduct acute toxicity testing, *if applicable in Part I Section B of the permit*, (emphasis added) in accordance with procedures outline in..." There is no requirement in Part I Section B of the permit to conduct WET testing, therefore, this section is not applicable. No changes have been made as a result of this comment.

Comments from the District of Columbia's Department of Energy and Environment, dated October 9, 2024

Comments below are as received; they have not been edited.

Draft Fact Sheet DC0000094

6. Comment: Page 3; #4 (Part III Section B.1 Additional Monitoring Requirements for Total Maximum Daily Loads (TMDLs) :

Although it is procedural that if the data did not exceed the District's water quality standard for the 8 listed pollutants after four consecutive quarters that their monitoring can be discontinued, the new TMDLs could be better supported if monitoring requirements are eased incrementally (say, semi-annually and then annually) instead of removed entirely until reevaluation as part of the next permit.

EPA's response: The reduction in monitoring for TMDL pollutants was a requirement in the existing permit for outfalls 014, 015, 016, 005, 006, and 401. The TMDLs do not identify these outfalls as sources and the benchmark monitoring was imposed in the permit to verify that these outfalls are not discharging the TMDL pollutants above the applicable water quality standards. The permittee has successfully demonstrated that they are not discharging the TMDL pollutants

above their respective water quality standards; therefore, monitoring can be discontinued in accordance with the permit provision. EPA will re-evaluate these pollutants at the next permit reissuance. No changes have been made as a result of this comment.

7. Comment: Page 4; #7: Re-apportionment of the WLAs to each permit as function of the respective drainage areas associated with each outfall (#013 and #101) is sound and consistent with current practice. Please also verify the drainage areas, especially for PEPCO – West.

EPA's response: The drainage areas used in the WLA calculations for Outfalls 013 and 101 were provided by the permittee. EPA has verified the drainage area calculations for the Pepco – West permit (DC0000390) are correct. No changes have been made as a result of this comment.

Draft NPDES Permit Number DC0000094

8. Comment: Page 10, Section F. Additional Monitoring and Reporting Requirements Item #2: Part I identifies PCB sampling as required quarterly under the new permit. However, this section states PCB sampling occurs yearly. Please update this section to reflect sampling requirements under Part I.

EPA's response: In response to this comment, EPA revised Part I.F.2 of the permit to reflect quarterly monitoring frequency of PCBs as required in Part I.B. When making this revision, EPA also noticed that the Table of Contents was not updated to reflect the revisions made to Part I.B and that Part I.F should be labeled Part I.C because it comes after Part I.B. As a result, EPA also revised the final permit to rename Part I.F as Part I.C and updated the Table of Contents accordingly.

9. Comment: Page 21. Part III. Special Conditions. Section A. Additional Monitoring Requirements. 2. Periodic discharges from fire system testing. DOEE requests language requiring discharge be free of visible turbidity or discoloration as part of the discharge requirements for fire system testing.

EPA's response: The following statement was added to Part II.A.2 of the permit: These discharges must be free of visible turbidity or discoloration.

10. Comment: Page 22, Section C. Conditions Applicable to PCB Monitoring and Limits, Item #5: DOEE recommends that if PCB is not detected after four quarters of sampling using Method 1668, the sampling should reduce to once every six months or once per year (as opposed to discontinuing).

EPA's response: 40 CFR 122.62(a) and (b) provide the circumstances under which a permit may be modified and when a permit is modified, only the conditions subject to modification are reopened. Part III Section C of the permit was not a condition that was reopened in this modification; therefore, it cannot be changed with this modification. EPA will consider revising this provision at the next permit reissuance. No changes have been made as a result of this comment.

11. Comment: Page 21, Section B. Water Quality Modeling Study: Delete “were” and insert “where” – as in “.... including where appropriate a bathymetry survey”.

EPA’s response: 40 CFR 122.62(a) and (b) provide the circumstances under which a permit may be modified and when a permit is modified, only the conditions subject to modification are reopened. However, because this is a typographical error, making this change would be considered a minor modification under 40 CFR 122.63(a). In an email dated November 15, 2024, the permittee provided consent to correct this typographical error. This email can be found in the permit modification’s administrative record, document number 29.

12. Comment: Did EPA verify that the mixing zone study and dilution factors used to calculate the reasonable potential analysis (in both permits) meet the mixing zone requirements specified in the District of Columbia Surface Water Quality Standards Chapter 21 Section 1105.7(f) *“Within the estuary, the cross-sectional area occupied by a mixing zone shall not exceed ten percent (10%) of the numerical value of the cross-sectional area of the waterway, and the width of the mixing zone shall not occupy more than one third (1/3) of the width of the waterway”*.

EPA’s response: EPA reviewed the mixing zone study submitted by Pepco and also participated in calls with the permittee to get clarification as to whether the study was consistent with the requirements in the District of Columbia Surface Water Quality Standards Chapter 21 Section 1105. EPA looked at the model parameters as well as the model assumptions and determined it meets these requirements. No changes were made as a result of this comment.